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Evaluating the Mediating Effects of Self-Regulation, Self-Efficacy on Goal Achievement and Scheduled Time for Physical Activity

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Abstract

Background. Physical activity among elementary school children plays a fundamental role in supporting metabolic health, learning readiness, and long-term psychological well-being. The widespread occurrence of sedentary lifestyles, combined with insufficient adherence to recommended physical activity levels, suggests that interventions should extend beyond structured programs and consider students' psychological preparedness.

Objectives. The present study aimed to examine how self-regulation and self-efficacy function as mediating factors linking achievement goals with students' participation in scheduled physical activity at the elementary level.

Materials and Methods. This quantitative study involved 240 fourth- to sixth-grade students from public elementary schools in Surabaya City, aged 10-12 years. Data were collected using closed-ended questionnaires measuring achievement goals, self-regulation, self-efficacy, and scheduled time for physical activity. Partial Least Squares Structural Equation Modeling (PLS-SEM) was applied for data analysis, utilizing the SmartPLS 4.0 software.

Results. The analysis revealed that all achievement goal dimensions had significant effects on self-regulation and self-efficacy. Self-efficacy demonstrated a strong positive influence on scheduled time for physical activity, whereas self-regulation showed a significant negative effect. The findings indicate that each dimension of achievement goals influences participation in scheduled physical activity indirectly by way of self-regulation and self-efficacy. The research model substantially explained the variance in scheduled time for physical activity and demonstrated adequate predictive relevance.

Conclusions. The findings confirm that strengthening self-belief more strongly determines the sustainability of scheduled physical activity among elementary school students than overly strict behavioral regulation. These results support the development of physical education interventions focused on achieving goals and enhancing self-efficacy to foster sustainable physical activity habits from the elementary school years.

Keywords: achievement goals, elementary school students, physical activity, self-efficacy, self-regulation.

Introduction

Physical activity in elementary school children is consistently recognized as essential for metabolic health, cognitive functioning, and long-term psychological well-being (Marsigliante et al., 2023). International health authorities recommend at least 60 minutes of moderate-to-vigorous physical activity daily; however, more than 80% of children and adolescents worldwide fail to meet this standard (Benavente-Marín et al., 2024). Insufficient activity is associated with lower cognitive performance, weaker self-regulatory capacity, and reduced academic engagement (Pesce et al., 2020).

Although schools provide structured physical education and scheduled activity programs, sustained adherence to

daily physical activity remains consistently low. This gap suggests that program availability and goal orientation alone are insufficient to ensure long-term behavioral maintenance. The inconsistency between structured provision and persistent engagement reveals a conceptual limitation in prevailing motivational and school-based intervention models. Rapid digitalization intensifies this discrepancy. Increased screen exposure reduces opportunities for movement during and after school hours (Throuvala et al., 2021) and predicts stronger sedentary tendencies established early in life (Schwarzfischer et al., 2019). The central scientific problem therefore concerns the psychological processes through which structured opportunities and motivational orientations are converted into sustained adherence within institutional time structures.

Elementary schools represent a strategic setting for intervention because scheduled programs can institutionalize movement routines (Clark et al., 2019). However, participation often declines once external monitoring decreases (Sansano-Nadal et al., 2019). This limitation indicates that prevailing approaches emphasize program structure and technical skill development while insufficiently addressing the psychological mechanisms that sustain autonomous engagement over time (Baena-Morales et al., 2024).

Self-regulation and self-efficacy are central psychological determinants of sustained behavior. Self-regulation involves goal setting, behavioral monitoring, and adaptive adjustment (Koole et al., 2012). It enables students to manage time, resist distractions, and persist in physical activity despite competing academic demands (Cao & Jiang, 2025). Self-efficacy reflects confidence in one's capability to successfully perform and maintain activity (Voskuil & Robbins, 2015). Higher self-efficacy predicts persistence and resilience in structured programs (Peng et al., 2025). While both constructs are established predictors of activity behavior, they are frequently modeled as direct antecedents rather than as psychological mechanisms that transmit motivational influence into sustained adherence. As a result, existing models often remain descriptively associative and do not fully specify how motivational orientation is transformed into maintained scheduled behavior.

Achievement goals guide motivation and give behavior meaning (Standage et al., 2003). Achieving goals boosts confidence and builds consistency (Spring et al., 2021). However, models rarely show how reaching goals leads to regular physical activity through step-by-step psychological changes. Most research focuses on motivation alone rather than linking it to a broader explanation (Yu et al., 2022). Studies testing these ideas in Asian elementary students are also scarce (Poon et al., 2022). This fragmentation restricts theoretical clarity regarding the pathway connecting goal orientation, regulatory processes, efficacy beliefs, and sustained behavioral adherence in structured school contexts.

The conceptual gap, therefore, lies in the absence of an integrated mediation model explaining how achievement goals are converted into sustained scheduled physical activity through self-regulation and self-efficacy. Addressing this gap moves beyond descriptive associations and advances theoretical clarification of the psychological pathway linking motivation and behavioral maintenance.

Scheduled physical activity in schools refers to planned and recurrent movement sessions embedded within the institutional timetable (Siedentop, 2009). Adherence to such scheduling reflects successful behavioral regulation and efficacy beliefs (Williams & French, 2011). Sustained adherence, rather than momentary participation, constitutes the critical behavioral outcome of interest.

The present study examines a mediation model in which achievement goals predict adherence to scheduled physical activity indirectly through self-regulation and self-efficacy among elementary students in Surabaya. The scientific novelty lies in empirically testing a theoretically sequenced psychological mechanism that resolves the contradiction between structured program availability and low sustained adherence.

This study addresses the following research questions: (1) To what extent does the proposed mediation model receive empirical support within a predictive structural framework? (2) Do self-regulation and self-efficacy significantly mediate the relationship between achievement goals and adherence to scheduled physical activity? (3) Do self-regulation and self-efficacy independently predict increases in students' physical activity duration?

Materials and Methods

Study Participants

The study involved 240 elementary students (114 boys, 126 girls) aged 10-12 (average age 11.04 ± 0.72). All participated in Physical Education, Sports, and Health (PJOK) classes and volunteered. Recruited from public schools in Surabaya, Indonesia, students represented a middle socioeconomic background. The sample included Grades 4-6. Cluster sampling at the school level ensured feasible administration and representation across upper elementary grades.

Study Organization

Ethical clearance and institutional permission were obtained prior to data collection. Questionnaires were administered during scheduled PJOK sessions without classroom teachers present to minimize social desirability bias. Students were informed that participation was voluntary and unrelated to academic evaluation. Responses were collected anonymously and treated confidentially. Written informed consent was obtained from parents or legal guardians of all participating students, and student assent was secured prior to questionnaire administration. The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request. This research received no external funding.

The study employed a cross-sectional predictive design to examine the hypothesized mediation relationships among achievement goals, self-regulation, self-efficacy, and scheduled physical activity. The research used short surveys covering student background, achievement goals, self-regulation, self-efficacy, and scheduled physical activity. Surveys took about 40 minutes. Closed questions were used to ensure consistent answers for analysis (Ranganathan & Caduff, 2023).

Achievement goal orientation was measured using the 2×2 Achievement Goal Scale (Guan et al., 2007). This 21-item tool asks about experiences in physical education classes, using a seven-point scale. It assesses four areas: striving to improve, avoiding doing poorly, trying to outperform others, and avoiding worse outcomes than others.

Self-regulation and self-efficacy were assessed using adapted components of the Motivated Strategies for Learning Questionnaire (Pintrich & Groot, 1990). The instrument included 18 items equally distributed across both constructs. Responses were recorded on a seven-point agreement scale. Self-regulation items reflect persistence, monitoring, and strategy use, whereas self-efficacy items measure confidence in successfully completing physical education tasks relative to peers.

Scheduled physical activity was assessed using the short form of the International Physical Activity Questionnaire (Saglam et al., 2010). The instrument includes seven items capturing frequency, duration, and intensity of physical activity during the previous seven days.

The IPAQ-SF was selected because it allows standardized estimation of moderate-to-vigorous physical activity (MVPA) duration and has demonstrated acceptable reliability across diverse populations. Although originally developed for adults, prior research has applied adapted or supervised versions of IPAQ-SF in adolescent and upper-elementary samples when supported by structured administration procedures. In the present study, items were simplified linguistically and administered under researcher guidance to ensure comprehension among 10-12-year-old participants. This approach enhances response accuracy while maintaining comparability of MVPA estimates.

Statistical Analysis

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. PLS-SEM was selected because the study aims to test a predictive mediation framework involving multiple latent constructs and indirect pathways (Cepeda-Carrion et al., 2019).

Convergent validity was assessed through indicator loadings (> 0.70) and Average Variance Extracted (AVE > 0.50) (Hair et al., 2019). Discriminant validity was evaluated using the Fornell-Larcker criterion, cross-loadings, and the Heterotrait-Monotrait Ratio (HTMT < 0.90) (Henseler et al., 2014). Measurement consistency was verified using Composite Reliability (CR) and Cronbach's Alpha (CA), with coefficients surpassing the recommended minimum of 0.70, indicating dependable internal consistency (Hair et al., 2019). The evaluation procedures were conducted sequentially: the structural model was examined only after all measurement criteria were satisfied, ensuring consistency between measurement quality and structural interpretation.

After confirming validity and reliability, structural paths were estimated to test direct and indirect effects. Bootstrapping with 5,000 resamples was used to assess statistical significance of path coefficients and mediation effects. A significance threshold of $p < 0.05$ was applied (Fangqi et al., 2023). Model evaluation in PLS-SEM primarily emphasizes predictive accuracy and explained variance. Accordingly, R^2 values and bootstrapped path coefficients constituted the main criteria for structural interpretation.

Model fit was evaluated using the Standardized Root Mean Square Residual (SRMR < 0.08) and the Normed Fit Index (NFI > 0.90) (Shmueli et al., 2019). These indices were reported as supplementary global indicators, consistent with the predictive orientation of PLS-SEM rather than strict covariance-based fit assessment. Interpretation of mediation followed a direct-indirect comparison framework, distinguishing full, partial, or non-significant mediation based on the significance and magnitude of bootstrapped indirect effects.

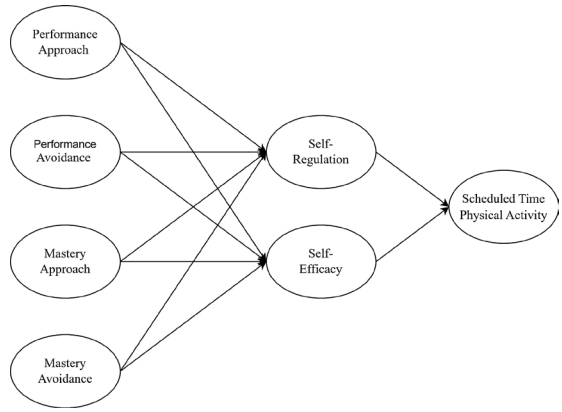

Fig. 1. Results of Hypothesized Path Model

The hypothesized structural model included four achievement goal orientations mastery approach, mastery avoidance, performance approach, and performance avoidance as exogenous variables. Paths were specified from each goal orientation to self-regulation and to self-efficacy. Additional paths were defined from self-regulation to scheduled physical activity and from self-efficacy to scheduled physical activity. In this framework, self-regulation and self-efficacy were modeled as parallel mediators linking achievement goals to adherence to scheduled physical activity, consistent with the study's theoretical assumptions. Indirect effects were examined separately for each goal orientation through both mediators. Direct paths from achievement goals to scheduled physical activity were retained in order to determine whether the mediation pattern was partial or full.

Results

Descriptive statistics were calculated for all study variables (N = 240), including mean, standard deviation, range, skewness, kurtosis, and 95% confidence intervals.

Overall, the constructs demonstrated balanced score distributions. Performance Approach (M = 24.0; SD = 6.45) and Mastery Approach (M = 20.6; SD = 5.48) were within expected empirical ranges. Scheduled Time Physical Activity averaged 112.4 minutes per week (SD = 28.04).

Skewness values ranged from -0.054 to 0.328 and kurtosis values from -0.323 to 0.450, indicating no substantial deviation from normal distribution. Confidence intervals were relatively narrow, suggesting stable parameter estimation.

These distributional characteristics indicate that the dataset was suitable for PLS-SEM analysis, which does

Table 1. Results of Data Description

Characteristics	N	M	SD	Min	Max	Skewness	Kurtosis	95% Confidence Interval	
								Lower	Upper
Performance Approach	240	24.0	6.45	7.00	42.0	0.098	-0.098	23.2	24.9
Performance Avoidance	240	19.0	5.24	6.00	35.0	0.058	-0.294	18.4	19.7
Mastery Approach	240	20.6	5.48	6.00	33.0	-0.054	-0.176	19.9	21.3
Mastery Avoidance	240	17.6	5.14	7.00	35.0	0.328	-0.232	16.9	18.2
Self-Regulation	240	35.0	9.49	12.00	59.0	-0.051	-0.323	33.8	36.2
Self-Efficacy	240	31.2	8.15	12.00	62.0	0.223	0.450	30.2	32.3
Scheduled Time Physical Activity	240	112.4	28.04	44.00	188.0	0.147	-0.118	108.9	116.0

not require strict multivariate normality assumptions. The hypothesized relationships among achievement goal orientations, self-regulation, self-efficacy, and scheduled physical activity were examined using PLS-SEM.

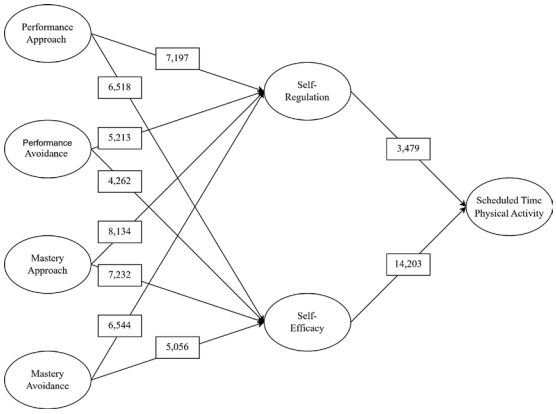

Fig. 2. Results of Relationship Path Model

All four achievement goal orientations demonstrated significant positive effects on self-regulation and self-efficacy (T = 4.262-8.134; $p < 0.001$). Self-efficacy showed a strong positive association with Scheduled Time Physical Activity ($\beta = 0.918$; T = 14.203; $p < 0.001$).

Self-regulation demonstrated a negative but statistically significant association with Scheduled Time Physical Activity ($\beta = -0.258$; T = 3.479; $p = 0.001$).

Table 2. Results of Model Fit

Model fit	SRMR	d_ULS	d_G	Chi-square	NFI
Saturated model	0.099	12.445	n/a	∞	n/a
Estimated model	0.166	34.960	n/a	∞	n/a

Model fit indices are presented in Table 2. The SRMR value for the estimated model was 0.166, exceeding the commonly referenced threshold of 0.08.

Within the PLS-SEM framework, SRMR is treated as a descriptive global index rather than a strict confirmatory criterion. Structural evaluation in this study therefore emphasizes path coefficients, explained variance (R^2), and predictive relevance (Q^2), in accordance with the predictive orientation of the method.

The increase in d_ULS between the saturated and estimated models reflects structural constraints imposed by the hypothesized mediation pathways. This value is reported for completeness and does not serve as the primary criterion for structural interpretation in PLS-SEM.

All achievement goal dimensions significantly predicted both self-regulation and self-efficacy ($\beta = 0.228$-0.373; $p < 0.001$). Mastery Approach exhibited the strongest effect on self-regulation ($\beta = 0.373$), whereas Mastery Approach and Performance Approach showed comparatively stronger effects on self-efficacy. Among the mediators, self-efficacy emerged as the most influential predictor of Scheduled Time Physical Activity ($f^2 = 0.309$), indicating a substantial practical contribution within the model. In contrast, self-regulation demonstrated a negative effect on Scheduled Time Physical Activity ($\beta = -0.258$; $f^2 = 0.024$).

The negative coefficient of self-regulation requires cautious interpretation. Simultaneous estimation of self-regulation and self-efficacy as parallel mediators may reduce the unique variance attributed to self-regulation, particularly given the strong positive association observed for self-efficacy. Negative coefficients may occur in multivariate models when substantial shared variance exists between theoretically related constructs.

Measurement context should also be considered. Self-regulation items were adapted from academic learning settings, and stronger academic regulatory tendencies in elementary students may reflect prioritization of structured study behaviors over discretionary physical activity under time constraints. The observed negative association is therefore interpreted as a context-specific statistical outcome within a cross-sectional predictive framework rather than evidence of a detrimental effect of self-regulation.

Bootstrapping results confirmed significant indirect effects of all achievement goal orientations on Scheduled Time Physical Activity ($\beta = 0.141$-0.215; $p < 0.001$).

The Mastery Approach ($\beta = 0.215$) and Performance Approach ($\beta = 0.206$) produced larger indirect effects than avoidance orientations.

These findings indicate that the influence of achievement goals on scheduled physical activity operates primarily through psychological mediating processes, with self-efficacy demonstrating the dominant indirect contribution.

Table 3. Results of Path Coefficients

Characteristics	Original sample	Sample mean	Standard deviation	T statistics	p
Performance Approach -> Self-Regulation	0.319	0.319	0.044	7.197	0.000
Performance Approach -> Self-Efficacy	0.313	0.313	0.048	6.518	0.000
Performance Avoidance -> Self-Regulation	0.267	0.267	0.051	5.213	0.000
Performance Avoidance -> Self-Efficacy	0.228	0.229	0.054	4.262	0.000
Mastery Approach -> Self-Regulation	0.373	0.374	0.046	8.134	0.000
Mastery Approach -> Self-Efficacy	0.339	0.341	0.047	7.232	0.000
Mastery Avoidance -> Self-Regulation	0.301	0.302	0.046	6.544	0.000
Mastery Avoidance -> Self-Efficacy	0.241	0.244	0.048	5.056	0.000
Self-Regulation -> Scheduled Time Physical Activity	-0.258	-0.258	0.074	3.479	0.001
Self-Efficacy -> Scheduled Time Physical Activity	0.918	0.919	0.065	14.203	0.000

Table 4. Results of Indirect Effects Histogram

Characteristics	Original Sample	Sample mean	Standard deviation	T Statistics	p
Performance Approach → Scheduled Time Physical Activity	0.206	0.205	0.038	5.457	0.000
Performance Avoidance → Scheduled Time Physical Activity	0.141	0.142	0.039	4.569	0.000
Mastery Approach → Scheduled Time Physical Activity	0.215	0.216	0.037	5.853	0.000
Mastery Avoidance → Scheduled Time Physical Activity	0.144	0.146	0.038	3.813	0.000

Table 5. Results of Coefficient of Determination and Predictive Relevance

Characteristics	R^2	Q^2
Self-Regulation	0.434	0.412
Self-Efficacy	0.352	0.327
Scheduled Time Physical Activity	0.483	0.153

The model explained 43.4% of the variance in Self-Regulation (R^2 = 0.434), 35.2% of the variance in Self-Efficacy (R^2 = 0.352), and 48.3% of the variance in Scheduled Time Physical Activity (R^2 = 0.483). The predictive relevance values ($Q^2 > 0$) indicate predictive capability, particularly for Self-Regulation (Q^2 = 0.412) and Self-Efficacy (Q^2 = 0.327). Predictive relevance for Scheduled Time Physical Activity was lower (Q^2 = 0.153), suggesting moderate predictive strength. Taken together, the R^2 and Q^2 values demonstrate meaningful explanatory and predictive capacity within the proposed mediation model.

Table 6. Result of Variance Inflation Factor and Effect Size

Characteristics	VIF	f^2
Performance Approach -> Self-Regulation	1.011	0.177
Performance Approach -> Self-Efficacy	1.011	0.150
Performance Avoidance -> Self-Regulation	1.006	0.125
Performance Avoidance -> Self-Efficacy	1.006	0.080
Mastery Approach -> Self-Regulation	1.013	0.243
Mastery Approach -> Self-Efficacy	1.013	0.176
Mastery Avoidance -> Self-Regulation	1.005	0.159
Mastery Avoidance -> Self-Efficacy	1.005	0.090
Self-Regulation -> Scheduled Time Physical Activity	5.269	0.024
Self-Efficacy -> Scheduled Time Physical Activity	5.269	0.309

Variance Inflation Factor (VIF) values for paths linking achievement goals to mediators were low (1.005-1.013), indicating no multicollinearity concerns.

However, VIF values for the paths from Self-Regulation and Self-Efficacy to Scheduled Time Physical Activity were 5.269. Although below the critical threshold of 10, these values indicate moderate collinearity between the parallel mediators and necessitate cautious interpretation of their individual path estimates.

The duplicate explanatory sentence regarding collinearity has been removed to avoid redundancy. Effect sizes (f^2) ranged from 0.024 to 0.309. Self-efficacy demonstrated the largest effect on Scheduled Time Physical Activity (f^2 = 0.309), whereas the contribution of self-regulation was small (f^2 = 0.024).

Discussion

The present investigation was based on the proposition that several dimensions of achievement goals, including mastery oriented, performance oriented, and avoidance related tendencies, play an important role in shaping scheduled time physical activity through the intermediary functions of self-efficacy and self-regulation (Erturan et al., 2020). Results from descriptive examination indicated that the Performance Approach orientation obtained the highest mean score among participants (M = 24.0), reflecting its prominence within the sample (Tajeddini, 2016). This pattern suggests that externally driven motives related to demonstrating competence continue to influence individuals' involvement in planned physical activity (Teixeira et al., 2012).

Structural path analysis showed that all achievement goal dimensions were significantly associated with improvements in participants' self-efficacy and self-regulatory capacity

(Bouffard et al., 2005). The findings highlight goal orientation as a psychological foundation that supports behavioral regulation processes in sport and physical activity contexts (Biddle et al., 2008). Additional analysis revealed that the Mastery Approach exerted the strongest influence on self-regulation, as indicated by a path coefficient of $\beta = 0.373$ (Tee et al., 2021). This result is consistent with theoretical perspectives proposing that an emphasis on skill development promotes autonomous control and sustained behavioral regulation (Mcdonald, 2014).

The relationship between Self-Efficacy and Scheduled Time Physical Activity demonstrated a highly dominant effect, with a coefficient of $\beta = 0.918$ (Abasi et al., 2016). This finding reinforces prior empirical evidence identifying self-efficacy as the strongest predictor of various health-related behaviors (Schwarzer & Renner, 2000). The analysis also revealed a negative association between Self-Regulation and the duration of scheduled physical activity ($\beta = -0.258$) (Wang et al., 2019). Previous theoretical discussions have suggested that intensive regulatory effort may, under certain conditions, be cognitively demanding and difficult to sustain over time (Hagger et al., 2010). In structured contexts, highly regulated behavioral patterns may also reduce flexibility when external constraints emerge (Lord et al., 2010).

However, within the present multivariate model, this association may also reflect statistical suppression due to the strong concurrent contribution of self-efficacy as a parallel mediator. Substantial conceptual overlap between regulatory processes and efficacy beliefs may reduce the unique explanatory contribution of self-regulation. Therefore, the observed coefficient should be interpreted cautiously and not as evidence that self-regulation inherently impedes physical activity engagement.

Despite this negative relationship, the indirect effects of all achievement goal dimensions on physical activity remained positive and significant (Mouratidis et al., 2009). These results indicate that strong initial motivation can compensate for limitations in self-regulation through enhanced self-efficacy pathways (Trautner & Schwinger, 2020). The significance of the findings is further reflected in the role of Self-Efficacy as the primary mediator, exhibiting the largest effect size ($f^2 = 0.309$) (Lee et al., 2022). The model explained 48.3% of the variance in Scheduled Time Physical Activity, demonstrating meaningful explanatory capacity within a social cognitive framework rather than constituting definitive validation (Olson & Mcauley, 2015).

The practical implications of these findings suggest that efforts to increase the duration of physical activity should prioritize strengthening beliefs in personal capability rather than focusing solely on behavioral control mechanisms (Plotnikoff et al., 2013). Model stability is further supported by positive Predictive Relevance (Q^2) values across all endogenous variables, indicating the model's suitability for application in similar populations (Sharma et al., 2019). The relevance of these results is particularly salient given the low levels of physical activity adherence observed in modern societies (Rhodes et al., 2009).

Health practitioners and sport coaches may facilitate the application of these findings by designing programs that emphasize gradual achievement or small wins to build participants' self-efficacy (Jackson, 2010). Mastery-oriented approaches should be prioritized by emphasizing individual self-improvement rather than interparticipant competition to support long-term psychological stability (Ford & Smith, 2007). Flexibility in physical activity program design is also essential to mitigate the adverse effects of overly restrictive cognitive self-regulation (Buckley et al., 2014). The use of digital applications that provide immediate positive feedback may represent an effective strategy for sustaining approach-based motivation (Erhel & Jamet, 2013).

Future research should focus on a deeper exploration of the mechanisms underlying Self-Regulation's negative influence on physical activity duration (Hall & Fong, 2015). Longitudinal designs would provide more comprehensive insights into the dynamic relationships between achievement goals and physical activity behavior across the lifespan (Conroy et al., 2011). Integrating environmental variables, such as social support and the availability of physical facilities, may further enhance the model's predictive power beyond internal psychological factors (Yanos & Moos, 2007). The validity of future findings may also be strengthened by using objective data sources, such as motion sensors, to complement self-reported measures of physical activity duration (Sallis & Saelens, 2000). Overall, self-efficacy emerged as the primary mediator linking various achievement goal dimensions to the duration of scheduled physical activity. In contrast, excessive self-regulation may hinder the consistency of active behavior.

Conclusions

The results indicate that all achievement goal dimensions make a meaningful contribution to the formation of self-efficacy and self-regulation, both of which function as mediating mechanisms in students' participation in scheduled physical activity. Self-efficacy emerged as the most influential mediator associated with extended duration of physical activity. A negative yet statistically significant association was observed for self-regulation, which appears to reflect contextual and analytical dynamics rather than a detrimental role of regulatory processes per se. This finding highlights the importance of balancing structured behavioral control with adaptive flexibility in structured physical activity contexts. Overall, strengthening students' efficacy beliefs may represent a key pathway for sustaining engagement in scheduled physical activity, while achievement goal orientations provide the motivational foundation through which such beliefs are cultivated in elementary school settings.

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Conflict of interest

The authors report no potential conflicts of interest related to this study.

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Оцінка опосередкованого впливу саморегуляції та самоефективності щодо досягнення цілей і запланованого часу на фізичну активність

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Реферат. Стаття: 10 с., 6 табл., 2 рис., 54 джерел.

Обґрунтування. Фізична активність дітей молодшого шкільного віку відіграє фундаментальну роль у підтримці метаболічного здоров'я, готовності до навчання та довгострокового психологічного благополуччя. Широке розповсюдження малорухливого способу життя у поєднанні з недостатнім дотриманням рекомендованих рівнів фізичної активності свідчить про те, що інтервенції мають виходити за межі структурованих програм і враховувати психологічну готовність учнів.

Мета. Дане дослідження мало на меті вивчити, як саморегуляція та самоефективність функціонують як медіативні фактори, що пов'язують цілі досягнення із залученням учнів початкової школи до запланованої фізичної активності.

Матеріали та методи. У цьому кількісному дослідженні взяли участь 240 учнів 4–6 класів державних початкових шкіл міста Сурабая віком 10–12 років. Збір даних проводився за допомогою опитувальників закритого типу з метою оцінки цілей досягнення, саморегуляції, самоефективності та запланованого часу на фізичну активність. Для аналізу даних було застосовано моделювання структурними рівняннями методом найменших квадратів (PLS-SEM) за допомогою програмного забезпечення SmartPLS 4.0.

Результати. Аналіз виявив, що всі виміри цілей досягнення мали значущий вплив на саморегуляцію та самоефективність. Самоефективність продемонструвала сильний позитивний вплив на запланований час для фізичної активності, тоді як саморегуляція виявила значущий негативний ефект. Отримані дані вказують на те, що кожен вимір цілей досягнення опосередковано впливає на залучення до запланованої фізичної активності через саморегуляцію та самоефективність. Дослідницька модель суттєво пояснила дисперсію запланованого часу для фізичної активності та продемонструвала належну прогностичну релевантність

Висновки. Результати дослідження підтверджують, що зміцнення віри у власні сили є вагомішим чинником сталості дотримання графіку фізичної активності серед учнів початкової школи, ніж надмірно сувора поведінкова регуляція. Ці дані обґрунтовують доцільність розроблення інтервенцій у сфері фізичного виховання, орієнтованих на досягнення цілей та підвищення самоефективності, задля формування стійких звичок до фізичної активності, починаючи з молодшого шкільного віку.

Ключові слова: цілі досягнення, учні початкової школи, фізична активність, самоефективність, саморегуляція.

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