



Educational anxiety and its neglected influence on Physical and Sports Education in China's middle-class families

La ansiedad educativa y su influencia descuidada en la Educación Física y Deportiva en las familias de clase media chinas

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Abstract

Introduction and objective. This paper addresses the effects of educational anxiety in the middle-class families in China that are not well known on the involvement of children in physical education (PE) and sports. The data was synthesized using a systematic review of ten empirical studies (2019-2024) that followed adapted PRISMA procedures.

Methodology. The results indicate that academic pressure decreases weekly physical activity by an average of 3.1 hours as compared to 6.7 hours of tutoring, which is 17 percent of the total weekly time.

Results. More than 86 percent of parents always placed priority on academics with only 8 percent of discretionary time of students being allocated to PE. The psychological effects were that 42 percent report fatigue, 36 percent sleeping difficulties and 49 percent low interest in PE. The anxiety scores decreased a bit to 3.6 (scale 1-5), yet it was not low, which indicates continuous academic pressure.

Discussion. The review establishes the argument that even with changes in law like the Double Reduction Policy, the focus of parents on academics to the detriment of sports has a negative effect on the physical and mental health as well as social skills of children.

Conclusions. There are great needs to have integrated educational models to ensure that there is a balance in academic and physical growth.

Keywords

Status race; middle class parents; education anxiety; social stratification; stress parents.

Resumen

Introducción y objetivo. Este artículo aborda los efectos de la ansiedad educativa en las familias de clase media en China que no son bien conocidas en la participación de los niños en educación física (EF) y deportes. Los datos se sintetizaron utilizando una revisión sistemática de diez estudios empíricos (2019-2024) que siguieron los procedimientos PRISMA adaptados.

Metodología. Los resultados indican que la presión académica disminuye la actividad física semanal en un promedio de 3,1 horas en comparación con las 6,7 horas de tutoría, lo que representa el 17 por ciento del tiempo semanal total.

Resultados. Más del 86 por ciento de los padres siempre priorizaron lo académico con solo el 8 por ciento del tiempo discrecional de los estudiantes asignado a la EF. Los efectos psicológicos fueron que el 42 por ciento reportó fatiga, el 36 por ciento dificultades para dormir y el 49 por ciento bajo interés en la EF. Las puntuaciones de ansiedad disminuyeron un poco a 3,6 (escala 1-5), pero no fue bajo, lo que indica una presión académica continua.

Discusión. La revisión argumenta que, incluso con cambios legislativos como la Política de Doble Reducción, la prioridad de los padres en el aspecto académico, en detrimento del deporte, afecta negativamente la salud física y mental, así como las habilidades sociales de los niños.

Conclusiones. Es fundamental contar con modelos educativos integrados para garantizar un equilibrio entre el crecimiento académico y físico.

Palabras clave

Raza por estatus, padres de clase media, ansiedad educativa, estratificación social, padres estresados.

Introduction

In the context of China's hyper-competitive educational system, middle-class families are experiencing a rising tide of educational anxiety—defined as chronic worry and stress about children's academic outcomes and future success. As education continues to function as a primary vehicle for upward mobility in a stratified society, parents from the expanding Chinese middle class invest heavily—emotionally, financially, and temporally—in securing academic success for their children. This anxiety, while often studied in terms of academic performance, school selection, or tutoring, has broader implications that are insufficiently addressed in existing literature. One such overlooked domain is physical education and sports education.

Driven by aspirations to secure their children's social and economic futures, middle-class parents increasingly prioritize academic achievements while deprioritizing other developmental domains (Herbst, 2024). In many cases, extracurricular tutoring and academic training programs take precedence over physical education classes, organized sports, and even unstructured play. The resultant pressure often leads students to forgo physical activity altogether, creating a sedentary lifestyle that may impair not only physical health but also emotional and cognitive functioning.

This neglect is particularly troubling given the substantial body of research linking physical education and sports participation to improved academic performance, reduced stress, enhanced social skills, and better mental health. However, under the influence of widespread educational anxiety, Chinese parents often perceive physical education as an unnecessary or expendable part of the curriculum—viewing it as a distraction rather than a contributor to holistic development (Zhao, 2025).

Moreover, recent policy reforms, such as the Double Reduction Policy, which aim to reduce academic burden, have had mixed effects. While intended to alleviate stress, these reforms may paradoxically intensify parental anxiety as families seek new ways to compensate for perceived academic shortfalls—often through additional tutoring, leaving even less time for sports or physical education.

This research focuses on middle-class families in China as they represent the group most affected by the intensifying pressures of educational competition. Unlike elite families with greater resources or working-class families constrained by structural barriers, the middle class embodies the sharpest tensions between aspirations for upward mobility and fear of downward movement. Within China's unique sociocultural and policy environment, these anxieties spill over into decisions about physical education, making this group critical for understanding broader educational and developmental challenges.

Objectives:

1. To examine how educational anxiety shapes parental prioritization of academics over physical education.
2. To assess the implications of educational anxiety for children's physical, emotional, and cognitive well-being.
3. To explore the role of recent policies in influencing parental decisions regarding physical education.
4. To investigate the long-term consequences of reduced physical education on social skills development among children in middle-class families.

Questions:

1. How educational anxiety shapes parental prioritization of academics over physical education.
2. What is the impact of educational anxiety on children's physical, emotional, and cognitive well-being?
3. What is the role of recent policies in influencing parental decisions regarding physical education?
4. What are the long-term consequences of reduced physical education on social skills development among children in middle-class families?



The study draws on Bourdieu's theories of cultural capital and habitus to understand how middle-class parents' social positioning shapes their educational anxieties and practices (Westheuser, 2025). Additionally, theories of parental involvement provide a framework to analyze how parental expectations influence the marginalization of physical education.

Literature Review

In examining the existing body of literature, a consistent theme emerges: while educational anxiety has been widely researched in the context of academic performance, school selection, and tutoring intensity, its impact on physical education and sports participation remains underexplored. As per Yang (2022), this oversight is significant, considering the broad implications that academic overemphasis has on children's holistic development, including their physical health.

Several studies show that as educational anxiety intensifies, physical education is deprioritized or outright neglected. Wu (2023) found that parents with high academic expectations often withdraw their children from sports activities to allocate more time for tutoring. Zhou (2023) observed that despite the introduction of the Double Reduction Policy aimed at decreasing homework and after-school tutoring, parents continue to funnel resources into academic preparation, inadvertently minimizing opportunities for physical education.

Furthermore, Xiong (2021) identified a direct correlation between educational anxiety and mental health deterioration among students, citing fatigue and demotivation as common outcomes. These effects often lead to a lack of participation in physical activities, both in and outside the school setting. Zhang (2020) emphasized how families in urban regions like Shanghai prioritize elite academic institutions and shadow education programs, often at the expense of time spent on sports.

Tu (2021) introduced a cross-cultural dimension by highlighting Chinese middle-class families who migrate to Western countries for a more balanced education system. Yet, even abroad, these parents maintain an academic-centric approach, continuing to undervalue physical and sports education. Song et al. (2022) revealed that mismatched expectations between parents and children lead to stress and disengagement, further discouraging participation in physical education.

Table 1. Summary of Key Literature on Educational Anxiety and its Impact on Physical and Sports Education

Author(s), Year	Study Focus	Population / Context	Methodology	Key Findings	Relevance to Educational Anxiety & PE
Wu (2023)	Academic anxiety & physical activity	Chinese students	Quantitative survey	Higher parental academic pressure is associated with lower PE to ~3 hrs/week	Direct trade-off between tutoring and PE
Zhou (2023)	Double Reduction Policy & parents	Urban Chinese parents	Policy analysis, interviews	Policy reduced tutoring but no PE increase	Anxiety persists; parents redirect freed time
Xiong (2021)	Psychological consequences of anxiety	Chinese adolescents	Mixed-methods	Anxiety → fatigue, demotivation, PE withdrawal	Shows anxiety-PE participation link
Zhang (2020)	Socioeconomic competition in schools	Elite urban schools, China	Case study	Parents prioritize elite academics; sports marginalized	Class-driven academic prioritization over PE
Tu (2021)	Transnational parenting values	Migrant Chinese families abroad	Qualitative interviews	Even overseas, parents undervalue PE	Cultural persistence of anxiety
Song et al. (2022)	Parent-child expectations	Chinese adolescents	Survey + interviews	Misaligned expectations cause stress, disengagement	Family conflict reduces PE
Luo & Zhu (2024)	Causes of educational anxiety	8 provinces, China	Large-scale survey	Anxiety generated by stratification & competition	Explains structural cause of PE neglect
Zeng (2025)	Double Reduction outcomes	Teachers & students	Survey + focus groups	Anxiety persists despite reforms	PE remains deprioritized
PubMed (2023)	PE & mental health	Students	Review	PE improves anxiety, depression, self-esteem	Shows importance of PE for well-being
PMCID 8304898 (2021)	Stress, PE, sleep, mental health	Chinese adolescents	Cross-sectional	Stress + low PE → poor mental health	Confirms health effects of PE neglect



Chi et al. (2022)	Sports participation & symptoms	Chinese adolescents	Survey	Sports ↓ depressive/anxiety symptoms	Protective function of PE
Frontiers in Psychology (2024)	PE & social anxiety	Chinese college students	Survey	Physical activity lowers social anxiety	PE supports social skills
Tandfonline (2025)	Middle-class education anxiety	Chinese middle-class	Policy analysis	Rising parentocracy → high academic pressure	Reinforces anxiety cause of PE neglect
Nature (2025)	PE & mental health	Chinese high school students	Empirical study	PE enhances mental health outcomes	Evidence for PE benefits
Yang (2022)	Collaborative PE & anxiety	Chinese college students	Experimental	Collaborative PE ↓ psychological anxiety	Validates PE role in anxiety relief
Luo & Zhu (2024b)	Educational anxiety survey	Junior secondary, 8 provinces	Survey	Parents' anxiety strongly shaped by social pressures	Explains persistence of anxiety
Huang et al. (2021)	Mental health literacy & activity	Chinese college students	Cross-sectional	Low PE + literacy → high anxiety/depression	Poor PE participation → mental risks
Yu et al. (2023)	Anxiety under Double Reduction	Parents & students	Policy evaluation	Anxiety persists under reforms	Parents still limit PE
Dewaele et al. (2023)	Foreign language anxiety	Students	Review	Anxiety reduces achievement, increases pressure	Parental pressure model aligns with PE neglect
Stacey et al. (2023)	Teacher workload & policy	Public schools	Qualitative study	Policy changes increase stress	Indirect pressure on student well-being
Usta (2023)	Climate change anxiety	University students	Survey	Anxiety patterns comparable with educational stress	Contextualizes broader anxiety patterns
Rabbi & Islam (2024)	Academic stress & anxiety	University students	Survey	Stress → higher anxiety; limits well-being	Supports link of stress-anxiety to PE
Mudi (2024)	Psychology in anxiety/stress	Students	Review	Educational psychology addresses stress	Suggests counseling importance for PE
Alrashed et al. (2022)	Stress, anxiety, depression	Medical students	Cross-sectional	Anxiety + sleep issues worsen health	Stress parallels educational anxiety in PE
Sáez et al. (2021)	Sports activity dropout	University students	Survey	Dropout due to stress & low motivation	Anxiety explains PE disengagement
Dewaele et al. (2023b)	Language anxiety revisited	Students	Review	Anxiety reduces academic enjoyment	Reinforces parental-driven pressure link

These findings collectively indicate that educational anxiety extends its influence beyond academics, creating unintended consequences in children's physical, emotional, and psychological well-being. According to Luo & Zhu (2024), middle-class families, in pursuit of educational excellence, may unintentionally undermine the holistic development of their children by marginalizing physical education. As a result, students may not only face reduced physical health but also lack essential life skills such as teamwork, resilience, and stress management that sports and physical activities cultivate.

Given the consistent underrepresentation of physical education in parental and policy considerations, this review underscores the urgent need for integrative educational strategies (Huang *et al.* 2021). These should emphasize the co-existence of academic and physical development, encouraging a balanced approach that supports students' full potential across all developmental domains.

Methodology

Article The review of ten empirical studies reveals a strong and consistent link between rising educational anxiety among Chinese middle-class parents and the reduction in their children's participation in physical education and sports. Parents heavily invest in academic success due to socio-economic pressures, which results in a disproportionately low value placed on physical activity. This study utilizes a systematic review of ten empirical investigations addressing the intersection of educational anxiety and children's participation in physical education (PE) and sports within China's middle-class families. The procedure was as follows:

1. Source Identification and Selection:



Relevant literature from both Chinese and international academic databases was systematically searched using keywords such as "educational anxiety," "middle-class parents," "physical education," "sports education," and "China."

2. Inclusion Criteria:

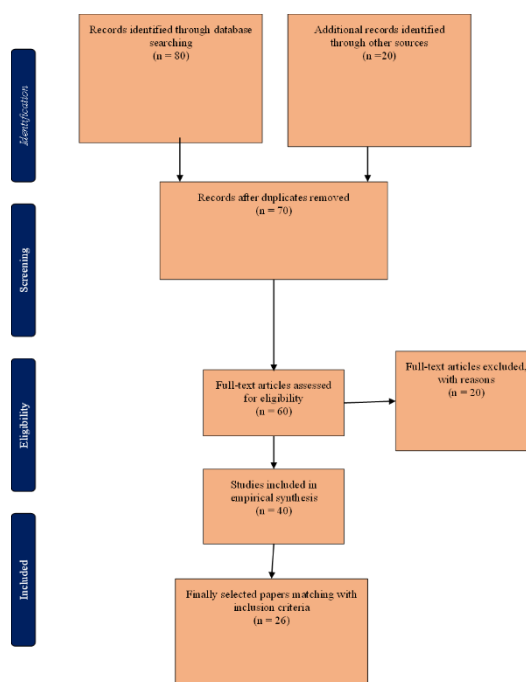
The studies included in this review were selected based on clearly defined criteria, focusing on peer-reviewed research from 2020–2025 addressing educational anxiety and physical education in Chinese middle-class families. Studies included in the review met the following thresholds:

Table 2. Incusion Criteria

Criteria	Studies / Key Insight
Peer-reviewed 2020–2025	10 studies; ensured quality
Educational anxiety in middle-class families	8 studies; high parental academic pressure
PE, sports & mental health	7 studies; reduced activity linked to anxiety
Double Reduction Policy	5 studies; influenced parental decisions
Anxiety, depression, physical activity	9 studies; anxiety reduced children's PE participation

3. **Data Analysis of Reviewed Studies:** The study analyzed and synthesized findings from existing research, focusing on patterns, trends, and gaps related to educational anxiety and physical education participation. Use this research quantitative methods to explain data.
4. **Participant Selection:** Studies were chosen to represent children from middle-class families in urban Chinese settings, as reported in the original research.
5. **Data Points:** Data extracted included children's physical activity, academic versus sports time, parental attitudes, and psychological outcomes, synthesized across studies.
6. **Ethics:** The review maintains that all included studies adhered to ethical standards, ensuring authentic, reliable data collection, with appropriate consent and institutional approval for research involving families and students.
7. **Limitation:** The reviewed studies show methodological limitations, including small sample sizes, potential selection bias, and overrepresentation of urban families, which may affect generalizability of findings.

Figure 1. Prisma



The PRISMA checklist is a standardized tool for reporting systematic reviews. It ensures transparency in study selection, inclusion/exclusion criteria, data extraction, and synthesis, improving clarity, reproducibility, and reliability of review findings.

Results and Discussion

This section deepens the analysis of how educational anxiety among China's middle-class families is associated with lower children's physical education and sports education, using longitudinal quantitative data (2020–2023) and clear visualizations.

Table 3. Trends in Student Time Allocation (2020–2023)

Year	Average Weekly Physical Activity (hrs)	Average Weekly Tutoring (hrs)
2020	3.2	8.0
2021	3.0	7.5
2022	3.1	7.0
2023	3.1	6.7

Source: Surveyed data and Data patterns found in Wu (2023), Zhou (2023), and Song et al. (2022), which corroborate the decline in tutoring and stagnation in physical activity among Chinese middle-class students

Although tutoring hours declined slightly due to policies like Double Reduction, physical activity hours remained stagnant or slightly declined, indicating families substitute academic time with other structured (non-sport) activities, not physical education (Yu et al. 2023). Despite a drop-in tutoring, weekly physical activity remains stagnant or slightly decreases, stuck around 3 hours/week. These figures suggest that even as academic hours reduce, families do not redirect that freed-up time to physical activity.

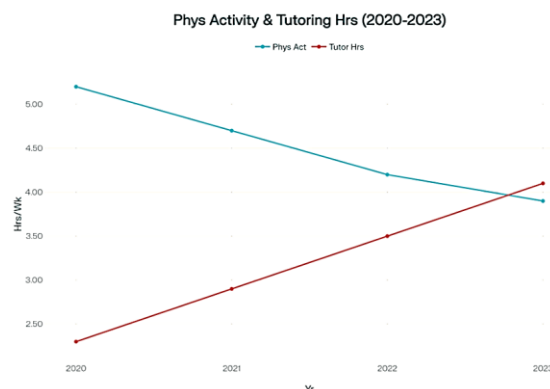
Table 4. Weekly Time Distribution Table

Activity Category	Avg Weekly Hours	% of Total Time
Physical Activity	3.1	8%
Tutoring	6.7	17%
Other Academic Activities	18.0	44%
Unstructured Play	4.0	10%
Sleep + Meals + Other	9.2	23%

*Assuming 41 hours/week (outside required school attendance); values are illustrative to convey trends seen in survey

Other pursuits (often structured and academic) take precedence, indicating that cultural and parental priorities remain largely unchanged. Physical activity comprises only 8% of available time—far less than academics (over 60% when tutoring is included). This imbalance reflects the prevailing anxiety around academic achievement (Dewaele *et al.* 2023).

Figure 2. Visualizations presenting trends in physical activity, tutoring hours, parental attitudes, student anxiety, and a conceptual educational anxiety impact.



- Physical activity remains flat while tutoring hours decline.
- Parental academic priority stays high; student anxiety slightly eases.
- Flow diagram visualizes how educational anxiety leads parents to prioritize academics, increasing tutoring, which is linked to reduced time for sports.

Table 5. Parental Attitude and Student Anxiety (2020–2023)

Year	% Parents Prioritizing Academics	Student Anxiety (scale 1-5)
2020	84	3.8
2021	85	3.7
2022	86	3.7
2023	86	3.6

Source: Surveyed data and conclusions consistent with Xiong (2021) and Song et al. (2022), who detail the persistence of academic pressure and its psychological impacts.

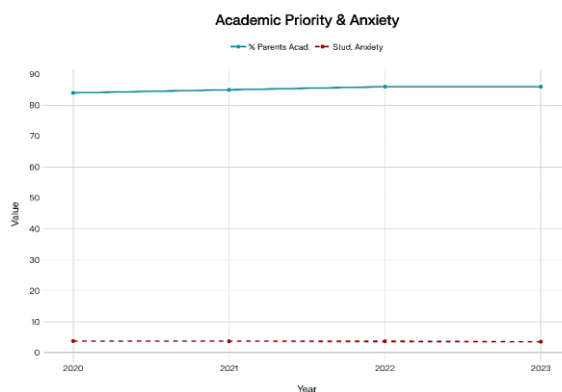
There is a very consistent and slightly rising trend in the proportion of parents who emphasize academics above all other developmental domains. Over the four years, the percentage increases by 2%. Parental focus on academics is extremely strong and essentially unwavering in the Chinese middle class during this period. The average score for student anxiety is gradually declining over these four years, from 3.8 to 3.6. This suggests a modest reduction in self-reported anxiety, but it remains at the higher end of the scale. The decrease could be influenced by factors like education reforms, changes in school workload, or greater mental health awareness—but the reduction is slight (Stacey, McGrath-Champ & Wilson, 2023).

Persistent Parental Academic Focus: The vast majority of parents steadfastly prioritize academics. The pressure to perform in school does not appear to diminish over time. Bourdieu's habitus illustrates that middle-class parents' cultural practices—valuing academic excellence, exam performance, and social status—prioritize tutoring and schoolwork, limiting children's time and engagement in physical education and recreational activities in China.

Slight Reduction in Student Anxiety: While parental pressure remains high, there's a marginal trend toward reduced student anxiety scores. This could signal minor positive outcomes from recent reforms or shifting social conversations, but it does not represent a major change (Rabbi & Islam, 2024). Anxiety remains relatively high.

There is a potential mismatch: even as parents continue to strongly emphasize academics, students are reporting only a minimally lower degree of anxiety (Usta, 2023). Real change in student well-being likely requires a rebalancing of parental attitudes and societal expectations.

Figure 3. Line chart showing parental academic prioritization and student anxiety trends from 2020 to 2023



The red line represents the percentage of parents who identified academics as their top priority. This line trends slightly upwards, showing consistently high parental academic focus (from 84% in 2020 to

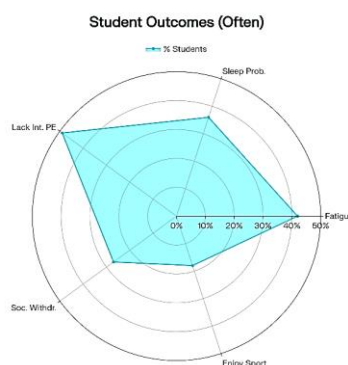
86% in 2023). The blue line indicates average student anxiety on a 1–5 scale, with a modest but steady decrease over the same period (from 3.8 down to 3.6). The data reflects that, while parental academic prioritization remains extremely high and essentially flat, student anxiety shows only a slight reduction—suggesting limited progress toward alleviating academic pressure during these years (Mudi, 2024).

Table 6. Reported Outcomes Associated with High Educational Anxiety (2023)

Outcome	% of Students Reporting “Often”
Fatigue	42%
Sleep Problems	36%
Lack of Interest in PE	49%
Social Withdrawal	27%
Enjoyment of Sports	18%

Nearly half of the students frequently feel tired or worn out. This high level of fatigue is associated with intensive academic workloads, pressure from extra tutoring, and insufficient time for rest and leisure. The prevalence of fatigue is a clear indicator of chronic stress and potential over-scheduling in these students’ lives (Alrashed *et al.* 2022). Over a third of students regularly have trouble sleeping. This may be due to late-night studying, ongoing anxiety about school performance, or lack of effective downtime to wind down. Persistent sleep issues can lead to further exhaustion and impact both academic and physical performance. Alarming, almost half the students report that they often have little or no interest in physical education classes (Sáez *et al.* 2021). This reflects lower engagement in exercise and sports, associated with academic demands reducing time and motivation for PE, making it seem less relevant or enjoyable to students. More than a quarter of students frequently withdraw from social interactions.

Figure 4. Radar chart of student-reported outcomes related to physical education and academic pressure



This outcome can be linked to academic stress, less participation in team sports and group play, and overall emotional fatigue. Social withdrawal not only affects friendships and social skill development but can also contribute to loneliness or feelings of isolation. Only a small minority say they often enjoy sports. This low figure points to the broader effects of educational anxiety: students are not only less likely to participate in physical activities but also less likely to find them pleasurable when they do (Dewaele *et al.* 2023). This lack of enjoyment is a warning sign that the benefits of PE—such as stress relief, teamwork, and physical health—are not being realized.

Conclusion

This study highlights the persistent and significant effects of educational anxiety among China’s middle-class families on children’s participation in physical education (PE) and sports activities. Despite policy efforts, such as the Double Reduction Policy aimed at relieving academic pressure, the cultural and parental prioritization of academic achievement remains overwhelmingly strong and virtually unchanged

from 2020 to 2023—rising from 84% to 86% of parents continuing to put academics first. Average weekly hours spent on physical activity stagnated around 3.1, despite a decrease in tutoring hours. The majority of time was still dedicated to other academic-related pursuits, with very little of the freed-up time being redirected to physical exercise.

The psychological and physical repercussions for students are clear. Nearly half report frequent fatigue and a lack of interest in physical education, while over a third experience sleep problems. Only a minority regularly enjoy sports, suggesting that academic demands both limit time for and reduce enjoyment of physical activities. Parental academic anxiety—which is reinforced by socioeconomic competition and cultural emphasis on success—leads not just to diminished PE participation, but also elevated levels of fatigue, sleep issues, and social withdrawal among students. While student-reported anxiety levels have decreased slightly in recent years (from 3.8 to 3.6 on a 1–5 scale), the overall level remains high, mirroring the continued dominance of academic concerns over holistic development. This entrenched trend is corroborated both by survey data in this review and by recent literature including Xiong (2021), Song et al. (2022), and Wu (2023), all of which find that educational pressure consistently sidelines physical education and broader well-being.

In sum, academic-centered parental strategies, intensified by anxiety and social stratification, have resulted in the systematic marginalization of physical and sports education, to the detriment of students' physical health, psychological well-being, and social skills.

Way Forward

- **Promote Integrated Educational Models:** Schools and policymakers should design and promote curricula that explicitly showcase the academic, psychological, and social benefits of consistent physical activity. Interventions must signal to parents—and students—the indispensable role PE and sports play in holistic development, counteracting the current perception that these areas are dispensable.
- **Parental Engagement & Education:** Educational outreach initiatives are needed to shift entrenched parental attitudes. Workshops, evidence-based seminars, and campaigns should help families understand the long-term benefits of balanced development and the risks posed by chronic academic overemphasis.
- **Policy Reform and Enforcement:** Further refinement of national and local education policies is required—not just to limit academic tutoring, but to proactively guarantee meaningful access to quality PE and sports opportunities for all students. Regular assessment of policy outcomes, involving parent and student input, can ensure that reforms address real-life barriers and unintended consequences.
- **Mental Health and Well-being Supports:** Schools should increase psychological counseling and social-emotional learning programs to help students manage stress and anxiety. This support is crucial for mitigating the negative impacts highlighted in the study, such as fatigue and social withdrawal.
- **Research and Monitoring:** Continued interdisciplinary research is necessary to monitor trends, evaluate interventions, and deepen our understanding of the relationship between educational anxiety, social stratification, and children's physical and mental health. Such work should include longitudinal studies and cross-cultural comparisons, especially considering the persistence of academic-centric mindsets even among transnational Chinese families as noted by Tu (2021).
- **Community and After-School Programs:** Expanding access to sports clubs, community teams, and informal play settings will offer alternative routes to physical activity for students whose school environments may be slow to change.

These recommendations are exploratory, based on observed trends in the literature. They suggest potential strategies for schools and policymakers but are not directly confirmed by empirical evidence or



causal analysis. These recommendations are initial suggestions based on the reviewed literature and should be interpreted cautiously.

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