

Effects of Tai Chi Practice on Attention, Flexibility, and Anxiety in Children

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Article Info	Abstract
Article type: Research Article Article history: Received 07 March 2026 Received in revised form 09 May 2026 Accepted 27 May 2026 Available online 29 June 2026 Keywords: Tai Chi, Child, Attention, Flexibility, Anxiety.	Introduction: Mind-body practices such as Tai Chi may enhance cognitive, physical, and emotional outcomes in children. However, research examining their simultaneous effects on attention, flexibility, and anxiety in school-aged children is limited. Objective: To investigate the effects of a 12-week Tai Chi intervention on attention, flexibility, and anxiety in children aged 8–12 years. Method: Sixty children (32 boys, 28 girls; mean age 10.0 ± 1.2 years) were assigned by class to a Tai Chi group ($n=30$) or a control group ($n=30$) engaging in standard physical activity. The Tai Chi group participated in two 45-minute sessions per week for 12 weeks, focusing on sequential movements, balance, and mindful attention. Attention was assessed using the Conners' Continuous Performance Test (CPT), flexibility using the sit-and-reach test, and anxiety using the Spence Children's Anxiety Scale (SCAS). Data were analyzed using ANCOVA controlling for baseline scores, age, and sex; effect sizes were reported (partial η^2). Results: In the post-intervention, the Tai Chi group demonstrated significant improvements compared to controls: attention ($F=48.5$, $p<0.001$, partial $\eta^2=0.46$), flexibility ($F=39.2$, $p<0.001$, partial $\eta^2=0.40$), and anxiety ($F=35.8$, $p<0.001$, partial $\eta^2=0.38$). Conclusions: Twelve weeks of Tai Chi practice significantly enhances attention, flexibility, and reduces anxiety in school-aged children. These findings support Tai Chi as a holistic, developmentally appropriate intervention that can promote cognitive, physical, and emotional well-being in youth. Cite this Article: Shahedi, V. (2026). Effects of Tai Chi Practice on Attention, Flexibility, and Anxiety in Children. <i>Physical Activity in Children</i>, 3(1), 1-8. https://doi.org/10.22034/pach.2026.577353.1085

1. Introduction

Childhood is a critical period for the development of cognitive, physical, and emotional skills, which collectively shape overall health and well-being (1). Among these domains, attention, flexibility, and anxiety regulation are particularly important for children's academic performance, motor development, and psychological resilience (2). Attention underlies learning and problem-solving abilities (3), flexibility supports physical competence and injury prevention (4), and anxiety management is essential for emotional health and social functioning (5). Promoting interventions that simultaneously target these domains can have profound short- and long-term benefits, making them a priority for both educators and health professionals.

Importantly, these three developmental domains are closely interconnected rather than independent outcomes. Research suggests that difficulties in attention are often associated with increased emotional distress and anxiety, which may interfere with academic performance and daily functioning (3,5). Likewise, elevated anxiety can impair attentional control by diverting cognitive resources toward worry and stress-related thoughts. Physical functioning may

also be linked to psychological and cognitive outcomes, as participation in movement-based activities that enhance flexibility and body awareness has been associated with improved self-regulation, emotional well-being, and cognitive performance (4,5). Consequently, interventions capable of simultaneously improving attention, flexibility, and anxiety may generate broader developmental benefits than those targeting a single domain.

Tai Chi, an ancient Chinese mind-body practice, combines slow, deliberate movements with controlled breathing and focused attention (6). Originally developed for adult health, Tai Chi has gained attention in pediatric populations due to its low-impact nature, adaptability, and potential cognitive and emotional benefits. The practice involves sequences of coordinated movements requiring balance, coordination, and body awareness, as well as mental engagement and mindfulness (7,8). For children, these aspects may translate into enhanced motor skills, improved attention regulation, and reduced anxiety, making Tai Chi a promising intervention for school and community settings (9).

The growing interest in Tai Chi for children is particularly relevant in contemporary society, where



many children experience increasing academic demands, reduced opportunities for physical activity, greater screen exposure, and elevated levels of psychological stress. These factors have raised concerns regarding children's cognitive functioning, physical fitness, and emotional well-being. Therefore, identifying safe, accessible, and developmentally appropriate interventions that simultaneously support cognitive, physical, and emotional health has become an important public health and educational priority.

The benefits of Tai Chi in adults and older populations have been well-documented. Studies report improvements in cognitive performance, balance, flexibility, and stress reduction, attributed to the integration of physical, cognitive, and emotional components of the practice (10,11). However, research in children remains limited. Preliminary studies suggest that Tai Chi can enhance executive function, attentional control, and mood, while improving physical attributes such as postural stability and flexibility (12,13). Yet, systematic investigations on the simultaneous effects of Tai Chi on attention, flexibility, and anxiety in school-aged children are scarce.

From a theoretical perspective, Tai Chi aligns with several developmental and cognitive frameworks. Attention regulation can be interpreted through executive function theory, which emphasizes the role of goal-directed behavior, working memory, and inhibitory control. The focused, sequential movements of Tai Chi require sustained attention and cognitive control, potentially strengthening these executive processes in children (14). Motor development theories, including dynamic systems and ecological perspectives, suggest that deliberate movement practice in variable contexts enhances motor coordination, flexibility, and postural control (15). Tai Chi's flowing sequences provide variable yet structured movement challenges, supporting the development of flexible and adaptive motor patterns (16).

In addition, embodied cognition theory provides further support for examining the effects of Tai Chi on children's development. This perspective proposes that cognitive processes are closely linked to bodily movement and sensory experiences. Because Tai Chi integrates attentional focus with coordinated physical movement, improvements in physical functioning may contribute to cognitive benefits, while enhanced cognitive control may facilitate more efficient movement performance. This theoretical perspective provides a scientific rationale for investigating attention and flexibility within the same intervention framework.

Tai Chi also addresses emotional well-being through principles aligned with mindfulness and stress regulation frameworks (17). The practice emphasizes slow, rhythmic movements paired with deep, controlled breathing, which may activate parasympathetic nervous system pathways, reducing physiological markers of stress and anxiety (7). For children, who often face academic pressures, social challenges, and emotional regulation demands, Tai Chi may offer an accessible tool for anxiety reduction and emotional self-regulation (18). Additionally, Tai Chi sessions often incorporate group practice, promoting social connectedness, which may further enhance emotional resilience (19).

From a theoretical perspective, mindfulness-based models suggest that sustained attention to present-moment experiences reduces cognitive rumination and emotional reactivity, both of which contribute to anxiety. Consequently, improvements in attentional control achieved through Tai Chi practice may indirectly support reductions in anxiety. This potential relationship further supports the importance of examining attention and anxiety together within a unified conceptual framework.

Empirical evidence supports the potential benefits of Tai Chi for cognitive and emotional outcomes (20-22). In this regard, research has shown improvements in sustained attention and working memory following Tai Chi interventions, suggesting that the combination of physical movement and focused attention enhances neural pathways supporting executive functions (10,23). Flexibility improvements have been observed through increased joint range of motion and postural control, aligning with findings in adult populations (24). Regarding emotional outcomes, studies indicate reductions in self-reported anxiety, stress, and emotional reactivity, highlighting Tai Chi's potential as a holistic mind-body intervention (25).

Collectively, these findings suggest that Tai Chi may influence cognitive, physical, and emotional development through interconnected mechanisms involving attentional regulation, motor control, physiological relaxation, and self-regulation processes. However, despite growing evidence supporting individual outcomes, scientific understanding of the combined effects of Tai Chi on attention, flexibility, and anxiety remains limited.

Despite these promising findings, gaps remain. Many existing studies have small sample sizes, short intervention durations, or focus on single outcomes, limiting generalizability and understanding of cumulative effects. Few studies have examined multiple domains such as cognitive, physical, and emotional simultaneously, leaving unanswered questions about the integrative benefits of Tai Chi for children. Moreover, variations in teaching methods, session frequency, and measurement tools complicate cross-study comparisons. Systematic research is needed to clarify how structured Tai Chi practice influences attention, flexibility, and anxiety in school-aged children and to determine practical implications for school and community programs.

Therefore, what is currently known is that Tai Chi may improve attention, flexibility, and emotional well-being when these outcomes are studied separately. What remains unclear is whether a structured Tai Chi program can simultaneously influence these interconnected domains within the same population of children and whether such benefits can be achieved through a practical school- or community-based intervention. This represents an important gap in the literature because child development occurs through interactions among cognitive, physical, and emotional systems rather than within isolated domains.

The present study was therefore conducted to address this gap and provide evidence regarding the multidimensional developmental effects of Tai Chi in children. This research is necessary because educators, clinicians, and policymakers increasingly require evidence-based interventions that can simultaneously

support cognitive performance, physical health, and emotional well-being. By examining attention, flexibility, and anxiety together, the study seeks to provide a more comprehensive understanding of Tai Chi as a holistic developmental intervention during childhood.

The present study aims to address these gaps by investigating the effects of a 12-week Tai Chi intervention on attention, flexibility, and anxiety in children aged 8–12 years. It was hypothesized that children participating in regular Tai Chi sessions will demonstrate significant improvements in attentional performance, increased physical flexibility, and reduced anxiety compared to a control group engaged in standard physical activity. By integrating cognitive, physical, and emotional measures, this study contributes to a holistic understanding of Tai Chi's developmental benefits in childhood, providing evidence-based guidance for educators, clinicians, and policymakers seeking to promote healthy physical and mental development.

2. Methods

2.1. Study Design

This study employed a quasi-experimental, pre-post intervention design to investigate the effects of Tai Chi on attention, flexibility, and anxiety in children. Participants were assigned to either a Tai Chi intervention group or a control group engaging in standard physical activity. Assessments were conducted before (baseline) and after (post-intervention) the 12-week program.

2.2. Participants

A total of 60 children aged 8–12 years were recruited from local primary schools to participate in the study. Sample size was determined a priori using G*Power 3.1, assuming a medium effect size ($f = 0.25$), alpha level of 0.05, and power of 0.80 for analysis of covariance (ANCOVA) with two groups and two measurement points, which indicated a minimum of 54 participants were required. Inclusion criteria required participants to be within the specified age range, able to engage in light to moderate physical activity, and to have provided parental consent and child assent. Children were excluded if they had neuromuscular, orthopedic, or neurological conditions affecting movement, were currently participating in structured mind-body interventions (e.g., yoga or martial arts), or had chronic medical conditions limiting exercise. Participants were assigned by class to either the Tai Chi group ($n = 30$) or the control group ($n = 30$), with groups matched for age, sex, and baseline cognitive and physical measures.

2.3. Intervention: Tai Chi Practice

The intervention consisted of 12 weeks of Tai Chi practice, with two 45-minute sessions per week. Sessions were conducted by certified instructors and incorporated the following components:

1. **Warm-up (5 minutes):** Joint mobilization, dynamic stretching, and breathing exercises.
2. **Tai Chi practice (35 minutes):** Sequential movements from simplified Tai Chi forms suitable for children, emphasizing:
 - Slow, coordinated movements requiring balance, postural control, and motor precision
 - Focused attention on movement execution, mind-body awareness, and breathing
 - Gradual progression of complexity across sessions, including longer sequences and mild cognitive challenges

3. **Cool-down (5 minutes):** Gentle stretching and reflection on movements to consolidate attention and relaxation.

The control group engaged in standard physical activity sessions (e.g., running games, calisthenics) matched for duration and frequency but without structured mindfulness or Tai Chi movements.

2.4. Measurements

2.4.1. Attention

Attention was assessed using the Conners' Continuous Performance Test (CPT), a validated computerized measure designed to evaluate children's attentional functioning (26). The test provides indices of sustained attention, response inhibition, and reaction time, with higher scores reflecting better overall attentional performance.

2.4.2. Flexibility

Flexibility was measured using the sit-and-reach test, which assesses hamstring and lower back flexibility. Participants performed three trials, and the highest score (cm) was recorded.

2.4.3. Anxiety

Anxiety levels were assessed using the Spence Children's Anxiety Scale (SCAS), a self-report questionnaire suitable for children aged 8–12 years. Higher scores indicate greater anxiety (27).

2.5. Procedure

All participants first completed baseline assessments of attention, flexibility, and anxiety prior to the start of the intervention. The Tai Chi group then participated in structured Tai Chi sessions, while the control group engaged in standard physical activities, both conducted twice weekly for 12 weeks, with attendance and engagement carefully monitored. Upon completion of the intervention, all outcome measures were repeated within one week, and assessors were blinded to group assignment to minimize potential bias.

2.6. Statistical Analysis

Data were analyzed using SPSS Version 28. Descriptive statistics (mean $\pm$ SD) were calculated to summarize demographic characteristics and baseline outcomes, and independent-samples t-tests were used to assess baseline equivalence between groups. Paired-samples t-tests evaluated within-group pre-post changes, while ANCOVA compared post-intervention outcomes between groups, controlling for baseline scores, age, and sex. Effect sizes were reported as Cohen's d for t-tests and partial η^2 for ANCOVA, and statistical significance was set at $p < 0.05$.

3. Results

3.1. Participant Demographics

A total of 60 children participated in the study (30 in the Tai Chi group and 30 in the control group). The

mean age was 10.0 ± 1.2 years, with 32 boys (53.3%) and 28 girls (46.7%). Baseline characteristics, including age, sex distribution, attention, flexibility, and anxiety scores, were similar between groups, indicating successful matching prior to the intervention (Table 1).

Table 1. Baseline Participant Characteristics.

Variable	Tai Chi (n = 30)	Control (n = 30)	p
Age (years), Mean $\pm$ SD	10.1 $\pm$ 1.1	9.9 $\pm$ 1.3	0.52
Boys, n (%)	16 (53.3)	16 (53.3)	1.00
Attention (CPT Score), Mean $\pm$ SD	85.3 $\pm$ 8.7	84.7 $\pm$ 9.0	0.78
Flexibility (cm), Mean $\pm$ SD	24.5 $\pm$ 4.1	25.0 $\pm$ 3.9	0.63
Anxiety (SCAS Score), Mean $\pm$ SD	28.2 $\pm$ 6.3	27.8 $\pm$ 6.0	0.75

3.2. Descriptive Statistics: Pre- and Post-Intervention Outcomes

Table 2 summarizes pre- and post-intervention outcomes. Children in the Tai Chi group showed

marked improvements in attention and flexibility, along with reduced anxiety, whereas the control group showed minimal changes.

Table 2. Pre- and Post-Intervention Outcomes.

Outcome	Tai Chi-Pre	Tai Chi-Post	Control-Pre	Control-Post
Attention (CPT)	85.3 $\pm$ 8.7	94.8 $\pm$ 7.9	84.7 $\pm$ 9.0	85.5 $\pm$ 8.8
Flexibility (cm)	24.5 $\pm$ 4.1	28.9 $\pm$ 3.7	25.0 $\pm$ 3.9	25.5 $\pm$ 4.0
Anxiety (SCAS)	28.2 $\pm$ 6.3	23.1 $\pm$ 5.8	27.8 $\pm$ 6.0	27.2 $\pm$ 5.9

3.3. Pre-Intervention Equivalence

Independent-samples t-tests confirmed no significant baseline differences between groups for attention ($t(58) = 0.28$, $p = 0.78$), flexibility ($t(58) = -0.48$, $p = 0.63$), or anxiety ($t(58) = 0.32$, $p = 0.75$).

3.4. Effects of Tai Chi

Paired-samples t-tests revealed that children in the Tai Chi group demonstrated significant improvements across all outcomes. Attention increased from 85.3 ± 8.7 to 94.8 ± 7.9 ($t(29) = -8.1$, $p < 0.001$, Cohen's $d = 1.48$), whereas the control group showed minimal change ($84.7 \rightarrow 85.5$; $p = 0.41$). Flexibility, measured by the sit-and-reach test, improved significantly in the Tai Chi group ($24.5 \pm 4.1 \rightarrow 28.9 \pm 3.7$ cm; $t(29) = -7.3$, $p < 0.001$, Cohen's $d = 1.33$), while the control group exhibited only a small, non-significant increase ($25.0 \rightarrow 25.5$ cm; $p = 0.28$). Finally, anxiety decreased significantly in the Tai Chi group, with SCAS scores dropping from 28.2 ± 6.3 to 23.1 ± 5.8 ($t(29) = 6.9$, $p < 0.001$, Cohen's $d = 1.26$), whereas the control group showed no meaningful change ($27.8 \rightarrow 27.2$; $p = 0.30$). These results indicate that 12 weeks of Tai Chi practice substantially improved cognitive, physical, and emotional outcomes compared to standard physical activity.

3.5. Between-Group Comparisons

ANCOVA, controlling for baseline scores, age, and sex, revealed significant post-intervention differences between the Tai Chi and control groups across all outcomes (Table 3). Children in the Tai Chi group demonstrated substantially higher attention scores compared to controls (adjusted means: 94.8 ± 8.0 vs. 85.5 ± 8.7 ; $F = 48.5$, $p < 0.001$, partial $\eta^2 = 0.46$), indicating a large effect of Tai Chi on sustained attention and response control. Similarly, flexibility was significantly greater in the Tai Chi group (28.9 ± 3.8 cm vs. 25.5 ± 4.0 cm; $F = 39.2$, $p < 0.001$, partial $\eta^2 = 0.40$), reflecting improvements in joint mobility and postural control. Additionally, anxiety levels were significantly lower in children practicing Tai Chi compared to controls (23.1 ± 5.8 vs. 27.2 ± 5.9 ; $F = 35.8$, $p < 0.001$, partial $\eta^2 = 0.38$), demonstrating that the intervention effectively reduced emotional distress. The partial η^2 values indicate large effect sizes for all outcomes, highlighting that Tai Chi had a meaningful and robust impact on cognitive, physical, and emotional functioning, independent of baseline performance, age, or sex.

Table 3. Post-Intervention ANCOVA Results.

Outcome	F	p	Partial η^2	Adjusted Group Means $\pm$ SD
Attention (CPT)	48.5	<0.001	0.46	Tai Chi: 94.8 ± 8.0 Control: 85.5 ± 8.7
Flexibility (cm)	39.2	<0.001	0.40	Tai Chi: 28.9 ± 3.8 Control: 25.5 ± 4.0
Anxiety (SCAS)	35.8	<0.001	0.38	Tai Chi: 23.1 ± 5.8 Control: 27.2 ± 5.9

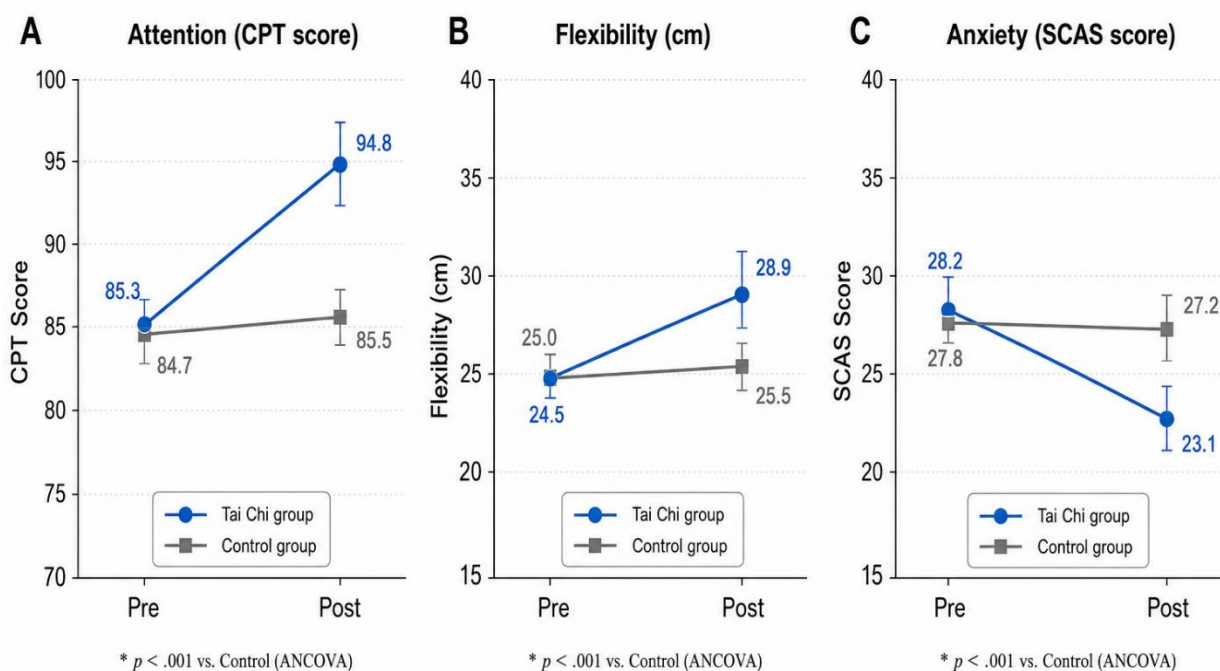


Figure 1. Effects of the 12-Week Tai Chi Intervention on Attention, Flexibility, and Anxiety. Panel A shows pre- and post-intervention attention scores (CPT), Panel B shows flexibility (sit-and-reach), and Panel C shows anxiety (SCAS) for the Tai Chi and Control groups.

4. Discussion

This research examined the impact of a 12-week Tai Chi program on attention, flexibility, and anxiety levels in children aged 8 to 12 years. The findings revealed that participants who engaged in Tai Chi experienced significant enhancements in attentional capabilities and flexibility, alongside a decrease in anxiety, when compared to a control group involved in conventional physical activities. These results imply that Tai Chi serves as a comprehensive intervention that can effectively improve cognitive, physical, and emotional well-being in school-aged children. Beyond confirming the effectiveness of Tai Chi, the present findings contribute to growing evidence that mind-body interventions may simultaneously influence multiple developmental systems rather than producing isolated cognitive, physical, or emotional benefits. This multidimensional pattern is particularly important during childhood, when developmental domains interact closely and influence one another over time.

The primary finding of the study was a significant enhancement in attention among participants in the Tai Chi group. Following the intervention, there was a significant increase in CPT scores, indicating improved sustained attention and response control. This outcome is consistent with earlier research that highlights the positive effects of mind-body interventions on executive function and attentional control in children (28,29). The practice of Tai Chi, which involves concentrated attention, memorization of sequences, and mental oversight of movements, likely fortifies the neural pathways associated with executive function (10). Theoretically, this improvement can be understood through executive function theory and cognitive control frameworks, which propose that structured, goal-oriented activities enhance working memory, inhibition, and sustained attention (14). The slow, intentional movements of Tai

Chi, coupled with mindfulness, promote ongoing cognitive engagement, thereby enhancing attentional regulation (20). Additionally, self-regulation theory supports the notion that practices fostering awareness and controlled actions can significantly improve children's capacity to manage their attentional resources (30).

While previous studies have reported improvements in executive functioning following mind-body interventions (7,8), the present findings suggest that Tai Chi may be particularly beneficial because it combines physical movement with sustained cognitive engagement. Unlike conventional exercise programs that primarily target physical fitness, Tai Chi continuously requires children to monitor posture, movement sequences, breathing patterns, and attentional focus simultaneously. In the authors' view, this integration of cognitive and physical demands may explain why meaningful improvements in attentional performance were observed. These findings support the growing argument that movement-based cognitive training may represent an effective strategy for enhancing children's attentional capacities within educational and community settings.

The second significant finding revealed that participants in the Tai Chi group exhibited significant improvements in flexibility, as evidenced by enhanced sit-and-reach scores. This aligns with previous studies indicating that Tai Chi positively affects joint range of motion, postural stability, and muscle elasticity in both children and adults (31,32). Theoretical insights can be derived from motor development and dynamic systems theories, which suggest that engaging in varied movement patterns within a structured environment fosters better coordination, adaptability, and flexibility (15). The practice of Tai Chi involves children executing slow and precise movements

through various postures, thereby challenging their muscles and joints across multiple planes (12,20). Additionally, the incorporation of controlled breathing and heightened postural awareness may alleviate muscular tension, further enhancing flexibility outcomes (31).

The flexibility gains observed in the present study may have broader implications than improvements in physical performance alone. Increased flexibility is often associated with enhanced movement efficiency, improved postural control, and reduced injury risk during physical activity. From the authors' perspective, the structured yet gentle nature of Tai Chi may be especially suitable for children because it allows flexibility to develop progressively without exposing participants to excessive physical strain. This characteristic may make Tai Chi an attractive alternative for children who are less inclined to participate in competitive sports or vigorous exercise programs.

The third important finding revealed a decrease in anxiety levels among children who practiced Tai Chi. This observation is consistent with previous research suggesting that Tai Chi and similar mind-body techniques can diminish physiological arousal and enhance emotional regulation in both children and adolescents (22,33). From the perspective of mindfulness and stress management, Tai Chi facilitates relaxation through its slow, rhythmic movements combined with focused attention and controlled breathing, which activate the parasympathetic nervous system and mitigate stress responses (16). Additionally, self-determination theory may help elucidate these findings, as the practice encourages autonomy, competence, and a sense of belonging within a supportive group, thereby enhancing emotional well-being (34). By improving body awareness and offering structured, attainable challenges, Tai Chi may equip children with effective coping strategies, ultimately leading to reduced anxiety in their everyday lives.

The reduction in anxiety is particularly noteworthy given increasing concerns regarding children's mental health in contemporary educational and social environments. The findings suggest that Tai Chi may serve not only as a physical activity but also as a practical emotional self-regulation tool. In the authors' opinion, the anxiety reductions observed in this study likely resulted from the combined influence of physiological relaxation, enhanced attentional control, and increased self-confidence derived from mastering new movement skills. This interpretation reinforces the view that emotional well-being is shaped by interactions among cognitive, physical, and social processes rather than by psychological factors alone.

The findings collectively indicate that Tai Chi provides a range of benefits for children, enhancing cognitive abilities, physical flexibility, and emotional regulation simultaneously. This comprehensive effect can be analyzed through developmental, motor learning, and mind-body integration theories, highlighting the connection between cognitive engagement, physical activity, and emotional control. Engaging in structured and mindful practice challenges both the body and mind, fostering synergistic effects that contribute to healthy development during childhood.

An important contribution of the present study is the demonstration that attention, flexibility, and anxiety may respond concurrently to a single intervention. Previous research has often examined these outcomes independently, whereas the current findings support a more holistic perspective of child development. The authors propose that improvements in attentional regulation may have contributed to reductions in anxiety, while enhanced physical competence and flexibility may have increased children's confidence and willingness to engage in activities. Although these relationships were not directly tested, they offer a plausible explanation for the broad pattern of improvements observed and warrant further investigation in future research.

When interpreted alongside existing evidence, the present findings strengthen support for incorporating Tai Chi into school-based and community-based health promotion programs. Its low cost, minimal equipment requirements, adaptability, and safety profile make it particularly suitable for large-scale implementation. Moreover, Tai Chi may provide benefits for children with diverse physical abilities and fitness levels, increasing its potential applicability across different educational and community settings.

Several important limitations should be acknowledged. Firstly, the quasi-experimental design restricts the ability to draw causal conclusions, as participants were grouped by class rather than being randomly assigned. Secondly, the relatively small sample size of 60 participants may hinder the generalizability of the findings. Additionally, the 12-week duration of the intervention raises questions about the long-term retention of cognitive, physical, and emotional benefits. Furthermore, the reliance on self-reported measures of anxiety introduces the possibility of reporting bias. Future research should aim for larger, randomized samples, extended intervention periods, and the inclusion of objective physiological stress measures, along with follow-up assessments to determine the sustainability of the observed benefits. Future investigations should also explore potential mediating mechanisms, including mindfulness, self-regulation, and self-efficacy, to better understand how Tai Chi influences cognitive, physical, and emotional outcomes in children. Despite these limitations, the study offers compelling evidence that Tai Chi serves as an effective and accessible method for enhancing attention, flexibility, and emotional well-being in children. Consequently, schools, sports programs, and community organizations might consider integrating brief, structured Tai Chi sessions into their physical education or after-school activities, given its low cost, minimal risk, and adaptability to various fitness levels, making it a valuable resource for comprehensive child development.

4.1. Conclusion

This study demonstrated that a 12-week Tai Chi program produced significant improvements in attention and flexibility while reducing anxiety among children aged 8–12 years. These findings support the growing body of evidence indicating that Tai Chi is a multidimensional intervention capable of simultaneously promoting cognitive, physical, and emotional development.

Authors' Contribution: The author was responsible for the overall research process, including study conception, methodological planning, intervention delivery, data collection, statistical analysis, interpretation of the results, and manuscript preparation.

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Ethical Considerations: Ethical approval for the study was granted by the relevant institutional ethics committee (Ethics Code: IR.IAU.PIAU.REC.1403.010). The research procedures were conducted in accordance with the ethical principles set forth in the Declaration of Helsinki, with appropriate safeguards in place to protect the participants' rights, confidentiality, safety, dignity, and well-being. Written informed consent was secured from the parents or legal guardians of all participating children before enrollment. The children received age-appropriate explanations of the study, and their willingness to participate was respected throughout the research.

Data Availability: The data supporting the findings of this study can be obtained from the corresponding author upon reasonable request.

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