

太极拳干预注意缺陷多动障碍儿童的应用进展及发展趋势

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摘要: **目的:** 注意缺陷多动障碍 (Attention-Deficit/Hyperactivity Disorder, 简称 ADHD) 是儿童期最常见的精神发育障碍, 除了与年龄不相符的注意力不集中、多动和冲动等核心症状以外, 还常合并认知功能损害和动作发育落后, 给患儿的学业、生活和社会适应带来诸多困难。药物是目前 ADHD 的主要治疗方法, 但存在部分患儿药物治疗不敏感、药物副作用以及每天服药难以坚持的问题, 故迫切需要寻找有效、易行的非药物替代治疗方法。太极拳是中国传统文化的瑰宝, 以传统文化中的儒教、道教中的哲学为核心思想, 是一种集内外兼修、养生保健、强身健体、积极对抗为一体的中国传统拳术。由于太极拳囊括了身体平衡、姿势协调、呼吸调整、意念练习等内容, 因此将力量、耐力、柔韧以及感觉与神经肌肉协调的锻炼与认知训练有机地结合, 已有研究显示, 太极拳不仅能够提高锻炼者的身体素质、健康水平, 还能有效增强身体意识、改善注意和记忆能力。鉴于太极拳对个体身心发展的促进作用, 目前国外已有研究者将太极拳应用于 ADHD 儿童的干预治疗中, 并发现其可能给 ADHD 儿童带来积极的影响, 但国内鲜有相关研究报道。为了促进国内临床、教育和体育领域专业工作者重视民族传统体育在儿童精神卫生领域的应用, 也为开展相关基础和应用研究提供借鉴, 本文通过查阅国内外相关文献, 对太极拳在 ADHD 儿童中的应用进展加以综述, 并提出未来研究的发展趋势。**方法:** 选取中国知网、PubMed、web of science, 以“太极拳”、“太极”、“Tai Chi”、“运动干预”、“ADHD”及注意缺陷多动障碍为主题词, 检索的时间范围为建库以来至 2021 年 7 月。在中国知网检索到 2 篇文献, PubMed 数据库检索到 9 篇文献, web of science 数据库检索到文献 14 篇, 剔除重复文献和与研究主题无关文献, 最终纳入 6 篇文献。**结果:** 1、太极拳干预 ADHD 儿童的效果研究显示, 习练太极拳时, ADHD 儿童通过身体的运动实现注意力转换, 对身体和呼吸进行有意识地控制, 从而对注意功能产生积极影响, 并使 ADHD 儿童的核心症状改善; 此外, 在练习过程中, 还通过锻炼时对肌肉紧张—放松的控制, 调控呼吸, 使副交感神经的兴奋性增强, 达到放松机体、缓解焦虑、减少情绪的波动; 太极拳训练还可显著提升儿童的感觉统合功能, 尤其表现为改善前庭和本体感觉信息处理能力; 2、太极拳干预 ADHD

儿童的干预方案梳理显示，太极拳练习内容涉及基础动作学习（步法、手法）、24式太极拳、杨氏太极拳等；仅有1项研究太极拳练习时间为5周，其余研究的运动干预周期均在8周以上，最长达16周；干预频率方面，仅一项研究采用每周2次的方案，其他研究种运动频率均为每周3次；时间设置方面各项研究均达到30分钟以上，长则60分钟。3、太极拳干预ADHD儿童的可行性分析可见，太极拳干预ADHD儿童具有可行性，一方面太极拳的动作技能特征和动作控制的神经机制既有助于提升ADHD儿童的动作控制能力，又有利于改善患儿的注意力和执行功能；另一方面，太极拳有深厚的文化内涵和群众基础，习练对环境和场地要求少，网络上的学习资源丰富，可以个人或集体练习，因此，采用太极拳进行运动干预既有理论依据又具备现实条件。4、未来研究方向：主要包括（1）干预方案标准化制定；（2）太极拳干预ADHD儿童的量效研究；（3）干预效果的生态化评价体系；（4）根据ADHD儿童身心发育特点，对传统太极拳进行相应创编，提高运动的趣味性和儿童参与运动的依从性。**结论：**太极拳可改善ADHD儿童的核心症状、行为情绪、感觉统合能力等，运用太极拳干预ADHD患者具有较好的可行性，未来有望将太极拳作为ADHD儿童的替代疗法，独立或辅助药物治疗。限于已有研究数量较少，被试样本量较小、研究范式不统一，尚未建立标准化的太极拳干预方案，不利于研究结果比较，也限制了太极拳干预ADHD的广泛应用。未来研究应着力开展太极拳干预的标准化方案制定、运动量效关系、生态化评价体系建构的研究，以深化太极拳对ADHD患者影响的研究，推动太极拳在ADHD患者非药物治疗中的应用。

关键词： 太极拳；注意缺陷多动障碍；儿童；运动干预

Application and development trend of Tai Chi chuan in children with attention deficit hyperactivity disorder

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Abstract: Objective: Attention Deficit/Hyperactivity Disorder (ADHD) is the most common mental development Disorder in childhood. In addition to the core symptoms of age-inappropriate Attention Deficit, Hyperactivity and impulsivity, it is often combined with cognitive impairment and motor development lag. It brings many difficulties to children's study, life and social adaptation. Drugs are the main treatment method for ADHD at present, but some children are not sensitive to drug treatment, drug side effects and difficult to adhere to daily medication. Therefore,

it is urgent to find effective and easy non-drug alternative treatment methods. Tai Chi chuan is the treasure of Chinese traditional culture, with Confucianism and Taoism as the core philosophy of traditional culture. It is a kind of Chinese traditional boxing that integrates internal and external training, health care, physical fitness and active confrontation. Because Tai Chi chuan covers the body balance, posture, coordination, breathing, idea and practice, etc, so the strength, endurance, flexibility, and feeling and neuromuscular coordination exercise combined with cognitive training organically, existing studies have shown that Tai Chi chuan can not only enhance the physical condition of exercisers and health level, but also can effectively improve the body consciousness, improve the attention and memory. In view of the promoting effect of Tai Chi chuan on individual physical and mental development, some foreign researchers have applied Tai Chi chuan in the intervention treatment of ADHD children, and found that it may bring positive effects to ADHD children, but there are few relevant research reports in China. In order to promote medical worker, education and sport professional workers attaches great importance to the national tradition sports application in the field of children's mental health, as well as to carry out the relevant references are provided for the basic and applied research, based on the review of related literature at home and abroad, the application of Tai Chi chuan in ADHD children's progress are reviewed, and put forward the development trend of future research. **Methods:** Cnki, PubMed and Web of Science were selected with "Tai Chi chuan", "exercise intervention", "ADHD" and ATTENTION deficit hyperactivity disorder as the topics. The retrieval time range was from the construction of the database to July 2021. Two literature were retrieved from CNKI. Nine literature were retrieved in PubMed database and fourteen literatures were retrieved in Web of Science database. Repetitive literature and literature irrelevant to the research topic were excluded and 6 literature were finally included. **Results:** 1. Research on the effect of Tai Chi chuan intervention on ADHD children shows that when practicing Tai Chi chuan, ADHD children realize the attention switch through physical movement, consciously control the body and breathing, so as to have a positive impact on the attention function and improve the core symptoms of ADHD children; In addition, in the process of practice, but also through the exercise of muscle tension-relaxation control, regulation of breathing, so that parasympathetic nerve excitability enhancement, to relax the body, relieve anxiety, reduce emotional fluctuations; Tai Chi chuan training can also significantly improve the sensory integration function of children, especially improving vestibular and proprioceptive sensory information processing ability. 2. The intervention scheme of Tai Chi chuan intervention for ADHD children showed that Tai Chi chuan training involved basic movement learning (footwork and manipulation), 24-style and Yang's Tai Chi chuan, etc. In only one study, the duration of Tai Chi chuan training was 5 weeks, and the exercise intervention cycle in the other studies was more than 8 weeks, the longest was 16 weeks. In terms of the frequency of intervention, only one study adopted the program of exercising twice a week, while the other studies all adopted the frequency of exercising three times a week. In terms of time setting, all the studies reached more than 30 minutes, and the longest was 60 minutes. 3. Feasibility analysis of

Tai Chi chuan intervention on ADHD children. It can be seen that Tai Chi chuan intervention on ADHD children is feasible. On the one hand, the characteristics of movement skills and the neural mechanism of movement control of Tai Chi chuan can not only improve the movement control ability of ADHD children, but also improve their attention and executive function. On the other hand, Tai Chi chuan has profound cultural connotation and mass basis, does not need much space, and abundant learning resources on the Internet, which can be practiced individually or collectively. Therefore, using Tai Chi chuan for exercise intervention has both theoretical basis and realistic conditions. 4. Future research directions: (1) Standardization of intervention programs; (2) Dose-effect study of Tai Chi chuan intervention on ADHD children; (3) Ecological evaluation system of intervention effect; (4) According to the physical and mental development characteristics of ADHD children, the traditional Tai Chi chuan is designed to improve the fun of sports and the compliance of children to participate in sports. **Conclusion:** Tai Chi chuan can improve ADHD with core symptoms, behavioral emotion and sensory integration ability of ADHD children, and it is feasible to use Tai Chi chuan to intervene in ADHD patients. In the future, Tai Chi chuan is expected to be used as an alternative therapy for ADHD children, independent or auxiliary drug therapy. Due to the limited number of existing studies, small sample size of subjects, inconsistent research paradigm, and no standardized Tai Chi chuan intervention program has been established, it is not conducive to the comparison of research results, and also restricts the wide application of Tai Chi chuan intervention on ADHD. Future studies should focus on the formulation of standardized Tai Chi chuan intervention schemes, the effect relationship between the amount of exercise and the ecological evaluation system, so as to deepen the research on the influence of Tai Chi on ADHD patients and promote the application of Tai Chi in non-drug treatment of ADHD patients.

Key words: TaiChi chuan, Attention deficit hyperactivity disorder, Children, Exercise intervention