

Commentary

# Improving school physical education to increase physical activity and promote healthy growth of Chinese school-aged children—Time for action

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Throughout its more than 5000-year history, China has a long tradition of encouraging active engagement in physical and sport activities.<sup>1,2</sup> This enduring tradition, however, has been facing some major headwinds as China continues to experience demographic and environmental changes related to aging, urbanization, and lifestyle shifts.<sup>3–5</sup> Mounting evidence indicates increasing levels of sedentary behaviors, insufficient levels of physical activity (PA), escalating levels of overweight and obesity, and decreasing levels of physical fitness in the Chinese population.<sup>6,7</sup> The continued trend in these behavioral tendencies have led to public health concerns that are especially significant both in size and magnitude in populations of school-aged children.<sup>8–10</sup>

As part of the China's national surveillance efforts, a team of researchers at the Shanghai University of Sport has provided the most recent updates by using data generated from the 2016 Physical Activity and Fitness in China—The Youth Study (PAFCTYS). As shown in several of the cross-sectional studies appearing in this special issue of the *Journal of Sport and Health Science*, there are alarming statistics on the diminishing prevalence of PA; high prevalence of sedentary behaviors and unhealthy weight; and low levels of physical fitness among school-aged children. Among the key findings are reports showing that fewer than 30% of school-aged children met the recommendation of 60 min of daily moderate-to-vigorous physical activity (MVPA).<sup>11</sup> Fewer than 5% reached the marker of the “excellent” category in physical fitness,<sup>12</sup> and about 37% showed non-adherence to the daily screen-time viewing recommendations.<sup>13</sup>

While these data contribute to our understanding of the behavioral health problems existing among Chinese school-aged children, they also highlight some of the most urgent public health challenges and reform needs facing China's physical education (PE) system in its schools. Since the start of economic reforms in the early 1980s, there has been a heavy

emphasis in China on academic achievement and excellence,<sup>14</sup> which has not only increased the academic burden (i.e., high examination pressure) on students<sup>15,16</sup> but has also greatly marginalized the importance of promoting PE and improving physical and mental health among Chinese school children. Likewise, the development of and advances in modern technologies (e.g., the Internet, smart phones, video games) have also reduced the time school children spend engaging in PA on playgrounds and in community gyms. Finally, limited access to school and community PA resources, especially in rural areas, may have further reduced children's opportunities to engage in PA and participate in other contemporary and traditional sports-related activities.

In an effort to address these issues, the Ministry of Education of the People's Republic of China hosted, in September 2017, a national school education conference in Hangzhou, China, during which a series of discussions was held among school educators, administrators, and policy-makers on the importance and ramifications of the PAFCTYS findings. Following these discussions, the Ministry of Education issued a nationwide call for reforms in the Chinese PE system to address challenges related to physical inactivity in schools. These include (1) reducing the academic burden students feel and increasing their PE time; (2) reforming the current PE curriculum, with an emphasis on increasing MVPA time during school; (3) creating within-school opportunities for students to participate in PA; and (4) integrating PE as part of the overall evaluation of the quality of schools in China.

The importance of implementing improved school PE programs to promote the healthy growth and well-being of Chinese school-aged children has long been recognized.<sup>17</sup> By law, the current Chinese education system requires that school children in primary grades participate in at least 4 weekly PE classes, lasting 35–45 min each, and that middle school children participate in PE classes 3 times weekly, with each lasting 40–45 min.<sup>18</sup> However, implementation of these requirements has been slow. These school PE policies, however, are important as the nation works toward meeting the goals of *Healthy China 2030*, a national plan<sup>19</sup> developed by the Chinese government to

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promote and improve population health in China. The plan specifically emphasizes the need to provide school children with 60 min of in-school PA daily and sets a goal of having at least 25% of all school children meet the “excellent” level of China’s physical fitness standards.

In sum, the studies reported in this special issue of *Journal of Sport and Health Science* corroborate other published studies on PA and deliver an important public health message to school educators, parents, policy-makers, and others: PA levels among Chinese school-aged children do not meet the recommended levels,<sup>20</sup> which could lead to various adverse health problems, including cardiovascular disease.<sup>21</sup> While these data suggest that we have a long way to go toward improving the levels of physical inactivity among Chinese children and youth, they nevertheless provide both a scientific premise and an impetus for policy changes that will reform the PE system and curriculum among Chinese schools. These reforms will help China develop and evaluate school-based strategies and interventions that address the urgent need for effective PE policies and practices based on the best evidence available, thus improving school PA, maximizing school PA time, and promoting healthy growth among Chinese children.

Physical inactivity is known to pose a significant threat in the development of non-communicable diseases,<sup>22</sup> which results in a burden on the Chinese public health and healthcare systems.<sup>23,24</sup> Therefore, the stakes of inaction are far too high when it comes to protecting the physical and mental health and wellness of Chinese school children. Just as a school class starts at the chime of a school bell, the time to take action that promotes the well-being of our children is now.

### Competing interests

The author declares that he has no competing interests.

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