

Guest editorial

## Improving BRICS's public health and wellness through physical activity

In 2009, Professor Steven Blair predicted that physical inactivity would be the greatest public health issue of the 21st century.<sup>1</sup> A public health problem is one that affects the health, function, and well-being of a large number of people. This problem will get worse, spread, and affect populations' health if it is not addressed as a collective community responsibility. Blair noted that physical inactivity and the associated adverse health outcomes of low cardiorespiratory fitness carried a high risk for all-cause and cardiovascular mortality, and if all persons were to get 30 min of walking at least 5 days of the week, preventable death and disability could be avoided.

Due to the high prevalence and negative impact on an array of health outcomes, physical inactivity is viewed as a global public health problem.<sup>2,3</sup> A multinational population study of 1.9 million people surveyed from 168 countries shows global (age-standardized) prevalence of insufficient physical activity (PA) of 27.5% in 2016, a consistent value since 2001.<sup>3</sup> Clearly, physical inactivity is a global problem and is a behavior that is difficult to change in people less inclined to exercise on their own. These trends also suggest the need for prompt, organized, and coordinated multidisciplinary efforts on a community-wide basis to get people moving as part of healthful lifestyle behaviors.

In this specially themed issue of the *Journal of Sport and Health Science*, we present the opinions of and perspectives on PA from researchers and practitioners regarding the importance of PA on the public's health and wellness in Brazil, Russia, India, China, and South Africa (the BRICS nations of national emerging economies). The BRICS nations include nearly 40% of the world's population, and with an increasing prevalence of noncommunicable diseases (NCDs),<sup>4</sup> the importance of PA on health promotion and disease prevention is paramount in reducing population levels of NCDs, disabilities, and premature death. The BRICS nations are similar in their rapid economic development but differ considerably in their prevalence of NCDs and related health and disease risk factors, including levels of health-enhancing PA in children, youth, and adults.

In her commentary, [Barbara Ainsworth](#) provides an overview of the formation and purpose of the BRICS Council on Exercise and Sport Science (BRICSCESS).<sup>5</sup> She highlights the burden of NCDs and their risk factors in the BRICS nations as a motivator for the development of BRICSCESS while emphasizing the potential impact of BRICSCESS by engaging volunteers and young scholars in community PA promotion.

[Mielke and Brown](#) remind us that a hallmark of any public health problem is that the problem affects specific high-risk populations disproportionately when compared to the rest of society. In their opinion, Mielke and Brown note an important public health issue related to PA inequality across sex and accentuate the adverse impact of economic and technologic changes in the BRICS nations on PA, especially in women. From the perspective of public health, their opinion speaks to the importance of recognizing gender disparities in PA and the need for empowering and creating opportunities for women to be physically active.

[Carol Ewing-Garber](#) shares her perspective concerning the importance of advocating coordinated multidisciplinary team approaches to adequately address the multiple dimensions of high levels of physical inactivity in BRICS nations. Dr. Ewing-Garber highlights the significance of considering age when studying PA, sharing data about PA disparities among persons 50 years of age and older. She also discusses the challenges of engaging PA in urban environments undergoing rapid urbanization and emphasizes opportunities for the promotion of social interaction and community engagement through PA. Dr. Ewing-Garber concludes her article with the need for great collaboration among members of BRICS countries to identify and develop country-specific approaches to promote and improve health behaviors such as PA.

[Li et al.](#) provide an overview of the PA status in Chinese youth. Given the low proportion of school-aged children and adolescents engaging in recommended levels of PA and decades of PA participation decline, Li et al. offer their perspective on reversing the current status and unhealthy trends. Specifically, by adopting a public health approach, the authors propose a social-ecologic framework to understand factors that contribute to physical inactivity and to develop and implement evidence-based interventions aimed at increasing PA and sports activities to meet the goals of Healthy China 2030.

From a perspective of the BRICS nations as emerging economies with substantial growth in the past 30 years, [Jakovljevic et al.](#) provide a discussion of the progress and challenges to health care funding and public health in the BRICS nations. They highlight the Russian Federation's economic investment in improving the health care infrastructure and programs to expand access to health care, increase fertility rates, improve longevity, and reduce mortality in urban and rural section of the country.

In their perspective on the BRICSCESS organization, Chin et al. describe the formation of a professional organization, the BRICSCESS. BRICSCESS aims to facilitate communication among future leaders and senior scientists in BRICS countries to find ways of promoting PA, exercise, sport, and proper diet with the overall goal of enhancing health and quality of life through healthful lifestyles. Members of BRICSCESS include educators, sports science professionals, community leaders, business leaders, and interested others.

With increasingly rapid economic and social development and population growth in BRICS nations, we hope the outcomes of these scholarly opinion and perspective articles will provide insights into developing public health, promoting PA, and preventing NCDs in the diverse populations living in these countries. In looking to the future, we realize that a wide array of significant research needs and public health issues must be addressed in order to better understand multiple levels of influence on decreasing PA and preventing NCDs. From this perspective, we invite scholars, practitioners, and policymakers from international academic research and public health communities to join forces in the fight against physical inactivity and promoting and improving BRICS's public health and wellness through PA.

### Competing interests

The authors declare that they have no competing interests.

### References

1. Blair SN. Physical inactivity: the biggest public health problem of the 21st century. *Br J Sports Med* 2009;43:1–2.
2. World Health Organization. *Physical inactivity: a global public health problem*. Available at: [https://www.who.int/dietphysicalactivity/factsheet\\_inactivity/en/](https://www.who.int/dietphysicalactivity/factsheet_inactivity/en/). [accessed 17.07.2019].
3. Guthold R, Stevens GA, Riley LM, Bull FC. Worldwide trends in insufficient physical activity from 2011 to 2016: a pooled analysis of 358 population-based surveys with 1.9 million participants. *Lancet Global Health* 2018;6:1077–86.
4. Jakovljevic MB, Milovanovic O. Growing burden of non-communicable diseases in the emerging health markets: the case of BRICS. *Front Public Health* 2015;3:65. doi:10.3389/fpubh.2015.00065.
5. Uvinha RR, de Oliveria NRC, de Ridder JH, Chin MK, Durstine JL. The BRICS Council for Exercise and Sport Science (BRICSCESS): a new era has dawned. *J Sport Health Sci* 2018;7:425–8.

Barbara E. Ainsworth, Guest Editor

*School of Kinesiology, Shanghai University of Sport,  
Shanghai 200438, China  
College of Health Solutions, Arizona State University,  
Phoenix, AZ 85004, USA  
E-mail address: [barbara.ainsworth@asu.edu](mailto:barbara.ainsworth@asu.edu)*

Fuzhong Li, Guest Editor

*Oregon Research Institute, Eugene, OR 97403, USA  
E-mail address: [fuzhongli@ori.org](mailto:fuzhongli@ori.org)*

J. Larry Durstine, Guest Editor

*Department of Exercise Science, The University of South  
Carolina, Columbia, SC 29208, USA  
E-mail address: [LDURSTIN@mailbox.sc.edu](mailto:LDURSTIN@mailbox.sc.edu)*

Accepted 5 September 2019

Available online 13 September 2019