

Opinion

BRICS nations and the opportunities for community physical activity interventions

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Decreases in physical activity (PA) in the populations of developing countries have occurred alongside the rapidly changing urban form, greater availability of automobiles, pollution, shifts in the nature of work, and other factors.^{1,2} PA behavior varies among the countries of Brazil, Russia, India, China, and, more recently, South Africa (grouped together under the acronym BRICS), and this becomes more apparent when comparisons are made across age and sex. Nonetheless, these 5 countries share some common characteristics related to PA: insufficient PA is prevalent, PA decreases with age, women are less active than men, people living in rural areas are more active than urban dwellers, and higher incomes are associated with higher levels of PA.³ Furthermore, a global PA report card shows similarly depressing figures for children residing in these countries.⁴

The BRICS nations are a focus of the global public health community because more than 40% of the world's population resides in these countries and they encompass more than one-quarter of the world's landmass.⁵ Although the BRICS countries were thought to be similar economically and were poised to emerge as dominant economies at one time (and hence grouped together economically), the current reality is that the economies are more divergent than had been expected. For example, 2 of the countries, China and India, have been growing at a rapid pace, while growth in Brazil and Russia have slowed because these 2 countries have experienced economic downturns. Furthermore, while sometimes viewed similarly from an economic perspective, these countries are different politically and socioculturally. Consequently, it is inappropriate to consider them as a block where a singular approach to address public health issues, such as PA, might be adopted. The disparate realities of these countries present different challenges to the people and the communities in which they live; therefore, different strategies for engaging these communities in promoting PA will be required.

In regard to PA, policies promoting economic growth in the BRICS countries have been accompanied by rapid urbanization—particularly in China, Southeast Asia, and Africa—hurtling them toward rapid population shifts at unprecedented levels.⁶ China has experienced the greatest shifts in urbanization, with one-half of its population now residing in urban areas, compared with 10%–20% in 1980.⁶ The prevailing wisdom that urbanization uniformly promotes economic growth and prosperity has been challenged.⁶ Although government officials and policy makers have generally accepted that more urbanization is a positive development, scholars suggest that this is not necessarily the case because the impact of urbanization is complex.⁶ From a public health perspective, rapid urbanization often results in damaging consequences to the environment, including increased pollution and carbon emissions, poor water quality and availability, and effects on human food sources and biodiversity.^{6–9} Urbanization is associated with many harmful effects on health (i.e., communicable and noncommunicable diseases) and is associated with increased health risks, many of which result from stress, environmental hazards, poor sanitation, inadequate housing and overcrowding, income inequality, food insecurity, inadequate safety regulations, and poor health behaviors.^{6,9–11}

The BRICS nations also have high rates of obesity. According to the Study on Global Ageing and Adult Health Survey of people over the age of 50 years, South Africa and Russia have the highest prevalence of obesity. For example, 45.2% of adults over age 50 in South Africa are obese and 36% of older adults in Russia are classified as such.³ More concerning is the high prevalence of central adiposity, with rates among older men and women in the BRICS countries ranging from a low of 41.4% among Chinese men ages 50–59 years to a high of 86.7% among Indian women 60–69 years of age; in each BRICS country, more women than men have central obesity across all age groups.³ The high rates of obesity parallel a high prevalence of comorbid diseases, such as coronary heart disease, diabetes mellitus, and cancer.^{12–14} Chronic disease risk factors also are common (although the prevalence varies across countries) and include insufficient PA (e.g., a high of 59.6% among older adults in South Africa), inadequate fruit and vegetable intake

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(e.g., a high of 87.9% among older adults in India), tobacco abuse (e.g., a high of 46.7% among older adults in India), hypertension (e.g., a high of 78% among older adults in South Africa), and heavy drinking (e.g., a high of 6.2% among older adults in China). People with multiple risk factors for chronic diseases are common in China, Russia, and South Africa, with a high of 15.3% among older adults in China.³

One thing is clear: it is important to develop infrastructures and institutions for urbanization and economic growth that simultaneously have positive effects on the health and well-being of a country's residents. This suggests that considering and planning for the potential positive and negative effects of urbanization and economic growth is crucial. Developing transitional strategies and capacities in infrastructures that will support public health, public services, job training, and other factors will make it more likely that positive economic growth will occur with urbanization, while attenuating the adverse effects on the population and environment.⁶ Urbanization presents many opportunities for planning that can enhance environmental and sociocultural supports for PA, but the challenge is to balance competing economic demands that may seem to be expeditious in the short term but that are not necessarily so in the long term.

Communities can be an effective level at which to adopt and implement policies and interventions to promote PA. The communities with which individuals identify can include governmental, religious, and sociocultural communities. Social cohesion refers to how people work together to address an opportunity or a crisis, and it is a fundamental ingredient for successful implementation of community-level policies and interventions that promote PA. To engage communities, it is necessary that people have trust in relevant agencies or organizations, that they believe that the long-term benefits of programs will outweigh any short-term difficulties or losses, and that residents identify with leaders and believe that those leaders understand the community.^{15,16} Inclusiveness of all individuals seems to be vital to success, while exclusion based on class, racial, or other differences can inhibit success.¹⁵

Identifying with a social group can influence individual PA and is a key factor to consider when intervening at the community level. Identifying social groups and working with them as partners in community participation and engagement is a central element of successful community interventions.¹⁶ However, rapid urbanization can present a challenge to social cohesiveness and social identity because people may undergo disruptive moves from their original communities (e.g., moving from a rural to an urban environment), resulting in social isolation caused by separation from family or religious and sociocultural groups to which they formerly belonged. Social identity is integrated into an individual's sense of self, which is a powerful correlate of PA behavior.¹⁶ Thus, the challenge in the rapidly changing BRICS countries is to reach out to people in ways in which they can identify and to use methods that will help to foster social identity. Stevens and colleagues¹⁷ provide a helpful review of applying social identity and self-categorization theories to PA interventions, and they make the point that fostering social identities as part of interventions may be an effective, although not well-tested, strategy.

The BRICS nations have many challenges, but they also have some exciting opportunities to proactively implement policies and infrastructures that can promote PA within their communities. These efforts can help to reverse the poorer health of residents in these countries and must go well beyond simply increasing health care expenditures. Additionally, they need to work to improve health behaviors, such as PA levels.^{9,18} Most of the BRICS countries have adopted goals consistent with the World Health Organization Global Action Plan for the Prevention of Non-communicable Diseases or have developed consensus guidelines.^{19–22} Although much of the published scientific work has focused on epidemiology of the populations and the development of valid and culturally relevant measurement tools, there are several examples of effective community approaches designed to improve PA in these countries, with more initiatives in progress (e.g., Matsudo,²³ Baker et al.,²⁴ and Andrade et al.²⁵).

The collaborative efforts initiated with the advent the BRICS Council of Exercise and Sport Science will provide further opportunities to share expertise and learn from other collaborators (including the global PA and public health communities) to identify successful community-based models that might be implemented in BRICS communities and across the globe.⁵ The BRICS countries provide exciting opportunities to apply scientific knowledge proactively to develop effective models of community PA promotion. This will require collaborations across the global community without preconceived notions about the “best” approaches, since each country and community is different, and of necessity will need tailored approaches and broad expertise.

Competing interest

The author declares that she has no competing interests.

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