



Global Public Health Emphasis Is Imperative to Improve Quality of Life and Reduce Morbidity for the Geriatric Population in Low- And Middle-Income Countries

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Dear Editor-in-Chief

Aging is a multifactorial process which involves a complex grouping of genetic, lifestyle, social, and environmental factors that combine to impact health beliefs and health behavior (1). Thus, geriatric populations display a spectrum of cognitive and motor abilities that range from normal or mild age-related impairment, to obvious inactivity and cognitive decline. Mounting evidence describes the growing global prevalence of cognitive decline – an estimated 132 million people will be living with dementia by the year 2050 (2). Physical disability also represents a challenge in achieving health success for the geriatric population. Morbidity and mortality surrounding falls, cardiovascular disease, and difficulty with activities of daily living leading to sarcopenia and malnutrition represent global public health crises and can cause significant difficulty not only on the elderly, but also on the families that must provide care at the expense of additional income (3). Several countries (Japan, Italy and Germany particularly) have an increasingly higher percentage of the population in geriatric age groups. Other countries lack the economic reserve to appropriately address the geriatric population, and other demographics may take precedence with regards

to the allotment of public funding of health initiatives (4,5).

Thus, the aim of this commentary was to bring awareness to the growing geriatric public health crisis in low- and middle-income countries (LMICs), and to describe in brief some low-cost measures, which can be taken to slow cognitive decline and increase the physical health of the aging population. Herein, we emphasized three components of focus for the geriatric population: physical, cognitive, and mental health.

Physical health

We recommended exercise focusing on strength and endurance to increase cardiovascular function and retain muscular tone. Exercise quantity recommendations are 150 min/week of moderate intensity exercise or 75 min/week of high intensity exercise. Swimming, biking, and other forms of closed-chain exercise can be effective forms of movement which minimize joint and muscle pain, and can be undertaken at very low cost. Furthermore, activities such as walking with a friend or performing resistance exercises represent dual task exercises that can improve cognitive and motor abilities simultaneously. Other benefits of an exercise protocol include the



avoidance or mitigation of hypertension, cardiovascular disease, and diabetes, all large causes of morbidity in the geriatric population (6,7).

Cognitive health

Mounting evidence suggests that cognitive-based exercises can play a role in mitigating the effects of dementia. Computerized cognitive training (CCT) is a form of electronic-based therapy which can be initially introduced to a participant by a layperson, and can ultimately be used by a professional interventionalist to identify, track, and monitor strategies to utilize this technology most effectively. As technology becomes more readily available in LMICs, CCT may become a viable form of therapy in these countries. Additionally, cognitive exercise may play an important adjunctive and synergistic role with traditional pharmacologic management at different disease stages (8,9). Therefore, active cognitive life style and appropriate pharmacologic intervention is recognized as a protective factor for the onset of age-related cognitive decline.

Mental Health

Participating in activities such as yoga, pilates, and tai chi or meditating with the use of calming music or guided meditation are low-cost ways to potentially bolster the mental health of the geriatric population. Cognitive exercises can improve thinking, memory, reasoning, and processing skills, which can help to improve mental health as well (10). Maintaining active social engagement may represent one of the most important factors for mental health in the geriatric population, and social engagement has been found to impact physical health.

Geriatric care represents an oft-overlooked aspect of global public health. Taken together, we hope these suggestions will serve to strengthen the public health measures in LMICs and call attention to this mounting crisis.

Conflict of interest

The authors declare that there is no conflict of interest.

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