

Mapping the Gaps: A Geographical Analysis of Evidence-Based Community Exercise Programs for Older Adults in the Boston Area

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Key words: Community-Based Exercise Programs, Older Adults, Fall Prevention, Boston, GIS, Tai Chi, Matter of Balance

Introduction/ Background

Falls are a leading cause of death related to injury among people 65 or older¹. Many adults in this age group fear falling, fall related injuries and know someone who has fallen. People become less confident as they age due to sensory changes, decreased muscle strength, bone density and reflexes¹. An initial fall is the highest predictor of a person's risk for a subsequent fall. As the American patient population ages falls and fall related injury prevention are essential to lowering healthcare costs, maintaining patient independence, and decreasing hospitalizations². There are many evidence-based falls prevention exercise programs that successfully reduce falls in older adults but are difficult to locate and therefore not routinely used in practice. According to Burtman, Aeronautical Reconnaissance Coverage Geographic Information Systems (GIS) mapping technology allows for institutions to identify where program/resource gaps exist in underserved communities giving insight into where improvements could be made^{3,4}. This study aims to use GIS software to map the evidence-based exercise programs to the accessibility of the exercise intervention within the Boston area. The project specifically focuses on Tai Chi: Moving for Better Balance and Matter of Balance community-based exercise programs.

Methods

GIS is software that uses spatial analysis and census level data to examine location, attributes and relationships of geographical features within a specific area⁴. Researchers at Brigham and Women's Hospital used GIS to determine patterns of access for evidence-based community exercise programs, specifically Tai Chi: Moving for Better Balance and Matter of Balance throughout the Boston Area. These findings are depicted through maps that highlight areas where there are gaps and barriers in accessibility to community-based exercise programs.

Results

Results are in production and will be available by the conference date.

Discussion/ Conclusion

Identifying geographical locations of these programs and where there are gaps may help to increase community-based exercise program accessibility. In addition, it will allow for institutions to further understand community needs as an effort to keep older adults active and independent.

References

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