

Reviewer #1 Comments

Overall Comment: This project addresses a gap in translational research to promote overall health span in rapidly expanding, diverse older populations. The project objectives and proposed methodologies are sound, feasible, and are to be achievable by the multistate interdisciplinary team with over a decade of successful collaboration and institutional resources. The resulting data and outcomes have the potential to inform future research, program, and policy decisions aimed at improving the overall well-being of older adults.

Response: Thank you very much for your insightful review and comments.

Comment 1.1. Considering Policy, Systems, and Environmental (PSE) intervention strategies, complementing the proposed direct intervention (Objective 3) would strengthen the project and reflect the identified needs for community environmental support in promoting health span from the perspectives of older adults (Objective 2).

Response 1.1. Good point. We added statement in Objective 3 to address this comment.

“The proposed renewal project will also begin to consider clustered important factors linked to evidence-based intervention sustainability including local policy, health care systems and environments, and examine strategies that could better address those factors in an effort to enhance the identified needs from Objective 2.”

Comment 1.2: The expansion of the StrengthenHer program (Objective 3) to men and across different race-ethnic groups ages 40-75 years may be needed to meet the overall project goal.

Response 1.2. Thank you. Although we agree with reviewer that such program is important for both men and women, we do have sound rational why our focuses is on women for example Women are less physically active than men (Stahl & Albert, 2015), the number of women turning age 65+ years grows rapidly (Administration for Community Living, 2020), longer life expectancy and associated health care costs (Ginter, Simok, 2013, Alemayehu & Warner, 2004), the average per person sarcopenia associated cost for women is higher than men (Janssen et al, 2004). Also, compared to men, older women are also more likely to be classified as living in a state of poverty in almost all racial/ethnic groups (Harris, et al., 2013).

- Stahl ST, Albert SM. Gender differences in physical activity patterns among older adults who fall. *Prev Med.* 2015 Feb;71:94-100. doi: 10.1016/j.ypmed.2014.12.016.
- Administration for Community Living. *2020 Profile of Older Americans.*
- Ginter E, Simko V. Women live longer than men. *Bratisl Lek Listy.* 2013;114(2):45-49. doi:10.4149/BLL_2013_011
- Alemayehu B, Warner KE. The lifetime distribution of health care costs. *Health Serv Res.* 2004;39(3):627-642. doi:10.1111/J.1475-6773.2004.00248.X
- Papadopoulou SK. Sarcopenia: A Contemporary Health Problem among Older Adult Populations. *Nutrients.* 2020;12(5). doi:10.3390/NU12051293
- Janssen I, Shepard DS, Katzmarzyk PT, Roubenoff R. The Healthcare Costs of Sarcopenia in the United States. *J Am Geriatr Soc.* 2004;52(1):80-85. doi:10.1111/j.1532-5415.2004.52014.x
- Harris WS, Pottala JV, Varvel SA, Borowski JJ, Ward JN, McConnell Prostaglandins. *Leukot Essent Fatty Acids.* 2013 Apr;88(4):257-63.

Reviewer #2 Comments

Overall Comment: The team has a clear record of success and is comprised of a multidisciplinary team that spans foundational science to human intervention. Strong needs related to the health and well-being of older adults are identified. The opportunities for growth highlighted in the proposal will enhance both a critical body of knowledge and necessary community-based interventions related to sarcopenia and overall health span. The objectives present concise, concrete, and attainable next steps.

Response: Thank you very much for your insightful review and comments.

Comment 2.1. Further developing then translating the social determinants of health research (objective 2) would be useful (expanding beyond the direct-education proposed in objective 3).

Response 2.1. Good point, we revised our objective 3 to address this comment. That is, translation research in practice, especially during the implementation stage. Statements added are

“which can be translated and adopted at the community level to better help aging population improve their overall health and prolong independence”

“All of those approaches are attempted to examine and disseminate effective strategies results from varied interventions into practice at varied community settings.”

Reviewer #3 Comments

Overall comment: This project has many exciting implications for the development and implementation of effective interventions to prevent and reduce sarcopenia among older adults, improve physical function, and improve overall quality of life (and health span). I appreciate the inclusion of adults in their 40's, as previous research shows that interventions need to start earlier in life. I look forward to following what this group finds in their interdisciplinary, collaborative research!

Response: Thank you very much for your insightful review and comments. We are glad that you recognize what we also believe are the strengths of our project.