Commentary

Can an evidence-based fall prevention program be translated for use in culturally diverse communities?

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Older adult falls are a significant public health problem, but one that is amenable to preventive interventions.1-3 Despite the progress made in identifying risk factors, developing efficacious health-related interventions, and promoting evidence-based programs in the community, much work remains before these strategies are broadly available and effectively used to reduce fall-related injuries.3 As Newton and Scott-Findlay4 have pointed out, the translation of basic scientific knowledge into clinical studies, and the transformation of clinical studies into improvements in health services and public health practices, remain major obstacles to widespread adoption.

Donaldson and Finch5 have shown the feasibility of applying implementation science to sports injury prevention, and Li et al.6,7 demonstrated how an exercise and balance program (Tai Ji Quan) can successfully be translated into a community program and implemented in either community or clinical settings. Equally important was the fact that Li and his colleagues showed that program fidelity and adherence to their intervention was maintained, at least over the short term, to prevent older adult falls. Manson et al.5 showed positive results in taking a Tai Ji Quan program to low-income older adults, concluding that “non-(Tai Ji Quan) culturally related ethnic groups did not experience a barrier to participation in an older low-socioeconomic population sample”. However, the sample consisted of only 56 participants who were recruited into a 16-week program, and no attempt was made to translate the findings to the wider multi-ethnic community through the use of existing stakeholders.

The article Implementing an evidence-based Tai Ji Quan program in a multicultural setting: A pilot dissemination project9 by Fink and Houston in this special issue of Journal of Sport and Health Science extends these findings and takes the next step. Specifically, the authors demonstrate that it is possible to scale up an effective health-related fall prevention program in a community of older adults with differing cultural backgrounds, provided that the intervention meets three criteria:

1. Native language: The intervention must be translated and delivered to participants in their native language. It is also important for program leaders to be bilingual.
2. Community organization engagement: The intervention must be implemented by a broadly imbedded community organization such as an Area Agency on Aging.
3. Program fidelity: The intervention must be delivered with fidelity to specified research-tested protocols.

The work by Fink and Houston9 shows that interventions proven effective using randomized control trials require additional adaptation and translation for use outside the research setting, but by adhering to these three elements a community-based organization can successfully implement a Tai Ji Quan program even in a multicultural setting.

Another important component of this program was the use of community-level infrastructures and delivery systems. In the study, the Minnesota Area Agency on Aging served in a coordinating role to help community-level organizations such as the Lao Advancement Organization of America and the Korean Service Center implement the program. Other community groups with wide reach, such as public health departments, community-based health associations, faith-based organizations, and aging services providers or senior centers, were also instrumental in achieving participation and community uptake. This “system integration” is essential for widespread adoption and sustainability.

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The Minnesota program also demonstrated the importance of “knowledge brokers” to bridge the gap between knowledge generated from research and applications of knowledge to community programs involving older adults from different cultural backgrounds and languages. Local community organizations served as knowledge brokers to:

- provide resources such as technical assistance, training, incentives, and peer support;
- link program developers with bilingual program leaders;
- translate program materials into relevant native languages of participants.

Sleet et al.10 have highlighted the importance of following the rigorous public health model in older adult fall prevention programs, in which a lynchpin to successfully reducing older adult falls is the utilization of RCT-tested interventions in program delivery. The Tai Ji Quan program used by Fink and Houston9 meets these criteria, and its multi-ethnic applicability makes it especially appealing.

It is equally important for rigorous falls screening to occur within healthcare provider settings to triage and refer older adults to an appropriate community-based program like Tai Ji Quan. The Centers for Disease Control and Prevention developed the Stopping Elderly Accidents, Deaths, and Injuries toolkit to foster this screening, treatment, and referral.11

Among the many benefits of this approach is that it can help integrate clinical medicine and public health and assure improved patient outcomes. It can also provide substantial cost savings to society.

In evaluating the impact of efforts to translate, disseminate, and implement evidence-based fall prevention programs, more attention to research models such as RE-AIM12,13 might be considered. RE-AIM can help measure a program’s reach in the target population, efficacy and effectiveness of the implementation/dissemination strategies, extent of the adoption by the target audience, consistency and fidelity of intervention delivery, and elements necessary for maintenance. Glasgow and colleagues14 have already demonstrated that RE-AIM can be used successfully in a low-income community for weight loss and hypertension self-management.

Translation research like this can also help identify characteristics of the implementation process that are critical to assure uptake, adoption, and maintenance of fall prevention behaviors embedded in programs such as Tai Ji Quan. This is an encouraging step forward.

Disclaimer

The findings and conclusions in this report are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

References