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Texercise Effectiveness: Impacts on Physical Functioning and Quality of Life

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This study examines the effectiveness of Texercise Select, a 12-week lifestyle program to improve physical functioning (as measured by **gait** speed) and quality of life. Baseline and 12-week follow-up assessments were collected from 220 enrollees who were older (mean = 75 years), predominantly female (85%). White (82%), and experiencing multiple comorbidities (mean = 2.4). Linear mixed-models were fitted for continuous outcome variables and GEE models with logit link function for binary outcome variables. At baseline, over 52% of participants had Timed Up-and-Go (TUG) test times of 12 s or more, which indicate below-normal performance. On average, participant showed significant reductions in TUG test scores at the postintervention (11% reduction, $p <$ .001). Participants also showed significant improvement in general health status ($p =$ .002), unhealthy physical days ($p =$ .032), combined unhealthy physical and mental days ($p =$ .006), and days limited from usual activity ($p =$ .045). Findings suggest that performance indicators can be objectively collected and integrated into evaluation designs of community-based, activity-rich lifestyle programs.

The value of physical activity throughout the life course is well-known in terms of general wellness and chronic disease prevention (U.S. Department of Health and Human Services, 2008**).** Older adults with mobility problems are at higher risk for various adverse health outcomes, including loss of independence, institutionalization, and premature mortality (Cesari et al., 2005). As such, multicomponent programs that include behavioral change and risk management strategies are especially recommended for this aging population (Cress et al., 2005). With a greater national emphasis on self-management for chronic conditions (Ory et al., 2013a. 2013b), community-based physical activity programs for seniors are proliferating. Additionally, with growing diversity among the aging population in terms of sociodemographic, comorbidity, and physical functioning, it is increasingly important to match older adults with activity programs appropriate for their abilities and preferences (Resnick el al., 2008).

While physical activity programs vary in format and structure and target different populations and settings (National Council on Aging, 2014), there is growing evidence about the effectiveness of physical activity programs on a wide range of self- reported health status, health beliefs, and behavioral and cost

outcomes (Exercise is Medicine, 2008; Ory, Smith, & Resnick, 2012). Studies have also documented the ability of physical activity programs to improve mobility indicators, especially gait speed, which is seen as a particularly pragmatic measure for assessing mobility disorders (Shumway-Cook, Brauer, & Woollacott, 2000; Steffen, Hacker, & Mollinger, 2002).

Evaluation efforts are often limited for community-based physical activity programs serving older adult populations and delivered in "real-world" settings (Glasgow & Riley, 2013; Ory & Smith, 2012). When evaluations are performed in this setting, they often focus on assessing participant reach, delivery site adoption, and self-reported health indicators, beliefs, and behaviors. While measuring these aspects is informative, there is often a lack of objectively assessed physical functional performance among naturally occurring community-based physical activity program (U.S. Department of Health and Human Service, 2008). Given the known associations between physical functioning, mobility, and quality of life (de Vries et al., 2012: Fuco et al., 2012: Wood et al., 2005), addressing and evaluating these interrelated outcome in physical activity program has great potential to improve health and wellness among older adult participants.

This pragmatic research study was conducted 10 assess the impact of Texercise *Select*, an adaptation of a long-standing physical activity program delivered widely throughout Texas (Texas Department of Aging and Disability Services, 2013). Texercise *Select* was designed to incorporate best practice in exercise programming for older adults as well as provide motivation for engaging in recommended physical activity behavior (Cress et al., 2005). In recent studies, it has shown to positively impact self-reported physical activity and nutrition behaviors (Smith, Ory, Jiang. et al., 2015). However, it had not been formally evaluate d in term of impact on physical functioning and quality y of life outcomes. The purposes of this article were to: (1) describe the characteristics of participants who enrolled in Texercise *Select;* (2) compare participant characteristic by entry-level performance on Timed Up-and-Go (TUG) test score, one indicator of physical functioning; and (3) examine the effective ness of Texercise *Select* to imp rove physical functioning and quality of life indicators among participants from baseline to postintervention.

Methods

Program Description and Procedures

Texercise *Classic* is a health promotion and wellness program designed for middle-aged and older adults. The program pulls from foundational concepts in evidence-based health and wellness programs and utilizes a volunteer lay leader model (National Council on Aging, 2014). An adaptation, Texercise *Select*, is a structured version facilitated by trained facilitators who have undergone six hours of intense, uniform training (Texas Department of Aging and Disability Services, 2013). During the program, facilitators use an official program manual and other

complementary materials that identify standardized processes and procedures associated with program activities, timing, and evaluation.

Texercise is a structured behaviorally based lifestyle program supported by a detailed training and program manual for facilitator *and* participants (Ory et al., 2015; Texas A&M Health Science Center School of Public Health, 2013). As indicated in Table 1, which overviews the weekly Texercise topic, and physical activity objectives, the program is implemented over a 12-week period that includes two weeks for participant recruitment and 10 weeks of activity sessions. Activity sessions are held twice a week, and each session is 1.5 hr in duration. A total of 20 activity sessions are delivered.

Texercise *Select* provides a supervised environment to practice endurance, strength, balance, and stretching exercises safely and correctly. Each week consists of educational information, interactive discussions, and an opportunity to practice exercises safely and correctly. The class facilitator can chose from an inventory of recommended multicomponent exercises designed to improve endurance, strength, balance, and flexibility within the 30-45 min reserved for guided exercise. As indicated in the training protocols, the in-class exercise component was 30 min at the beginning of the program and increased to 45 min as the program progressed to session 6. Although the specific exercises for strength, balance, and flexibility might vary, the 45-min exercise sessions were designed to include 15 min each of endurance and strength exercises, 10 min of balance exercises, and 5 min of flexibility exercises. The exercises were adapted to ensure safety (e.g., sitting or holding onto a chair).

An underlying goal of Texercise *Select* is to increase participants' self-efficacy, which will enable them to continue engaging in learned healthy aging activities long after the program has concluded. More specifically. Texercise *Select* elements are designed to: (1) improve participants' knowledge about the value of physical activity and nutrition: (2) increase participants' confidence in their ability to make healthier choices related to physical activity, healthy eating, and other healthy behaviors for future years; (3) improve participants' mobility and increase the case in which they can sit, stand, and walk; and (4) provide participants' with effective strategies to prevent falling.

Setting and Participants

As part of program delivery, data were collected from 220 participants, enrolled in Texercise *Select* from delivery sites in eight Texas counties between September 1, 2012 and August 31, 2013. Participant were defined as those with baseline data who attended either the first or the second session (e.g., those who joined the sessions after the second week were not included in the analyses). Recruited though a variety of communication channels, participants received the program in various settings such as senior centers *(11* = 7), multipurpose community facilities *(11* = 5) , faith-based organizations (11 = 2) , and senior housing *(11* = I). While the minimum age to receive Texercise incentives is 45, in our recruitment materials, the program was marketed to adults aged 55 and older, with no maximum age cut-off.

Our recruitment approach was to cast a broad net and attract the type of

participants typically served by the aging services sector. Based on our prior work with the EASY tool (www.easyforyou.info), we emphasized safety versus exclusion based on health status. No medical consent was required and no medical conditions arbitrarily excluded. The program was designed for anyone, with or without assistive devices. All were encouraged to work at their own pace and could do the exercises standing or sitting with adaptations. The warm-up begins in a chair and participants are invited to stand if they wish. A safety tip sheet was distributed at the beginning of the program, along with information on the EASY tool. The program evaluators obtained institutional review board approval at Texas A&M University to assess de identified secondary data on program participants and outcomes.

Instrument

Program facilitators surveyed participants at each delivery site using identical instruments at baseline and postintervention (i.e., upon completion of the 20-session intervention). The self-report questionnaire was six pages, paper-based, and consisted of approximately 50 standardized items which had been used in previous state or national evaluations of evidence-based programs for seniors (Ory et al., 20I 0; Ory et al. , 20 I 3a, 20 13b). Survey instrument it ems included Likert-type scales, yes/no, closed-response, and open-ended formats. All measures included in the instrument were selected by public health and aging experts who developed evaluation materials based on program objectives and activities intended to change participant beliefs, perceptions, and behavior. Baseline and postintervention instruments took participants approximately 30-45 min to complete each, and assistance was provided for those needing help filling out the forms.

Measures

This study included two types of variables: personal characteristics (sociodemographics and health indicator s) of the participants measured at baseline to describe the sample; and variables hypothesized to be influenced by the 12-week intervention (i.e., measured at baseline and postintervention, then compared to assess change).

Sociodemographics. Personal characteristics included in this study were age (i.e., treated as a continuous variable based on the participant's birth date), sex (i.e., female, male), whether the participant was Hispanic (i.e., no, yes), race (i.e., White, Bla ck or African American, America n Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, other/multiple races), and highest level of educational attainment (i.e., less than high school, some high

school, high school graduate or equivalent, some college or vocational school, college graduate or higher). Participants were also asked to report the number of people who live in their household, including themselves (i.e., treated as a continuous variable).

Table 1 Texercise Select Physical Activity Topics and Objectives•

Week	Physical Activity Sesisons & Topics	Physical Activity Objectives
1 & 2	None: Participant recruitment	
3	*Ready. Set, Get Active: launching an Active Lifestyle*	• Describe the 11 principles of physical activity success
		• Identify their personal exercise levels
		• Understand the impo rtance of a warm-up & cool-down
		• Set realistic goals related to physical activity
4	*Ready, Set, Get Moving! Getting & Staying Physically Active*	• Recognize the essential components of being and staying physically active
		• Practice endurance, strength, balance, and stretching exercises safely and correctly
		• Create an action plan
5	*Ready, Set, Hydrate! Hydration for Health*	• Explain the basis and requirements of proper hydration
		• Practice previous exercises safely and correctly
		• Identify barriers and apply problem-solving skills when action planning
		• Practice new exercises safely and correctly
6	*Ready, Set, Go Endurance! A Focus on Endurance*	• Identify ways to safely increase endurance
		• Practice exercises safely and correctly
		• Evaluate previo us action plan and apply strategies to overcome challenges with personal action plans
7	*Ready, Set, Prevent Injury! Injury Prevention for Beuer Health & Safety*	• Identi fy and apply injury prevention methods before, during, and after phys ical activity
		• Practice safe and correct exercises
		• Evaluate previous action plans and apply strategies to overcome challenges
8	*Ready, Set, Get Strength Training*	• Understand and apply the fundamenta ls of strength training introduced in class
		• Practice exercises safely and correctly
		• Evaluate previous action plans and challenges
		• Identi fy and apply strategies to overcome challenges with personal action plans
9	*Ready, Set, Don't Stress! Stress Management & Mental Hea lth*	• Recognize and discuss healthy behaviors, especially those that reduce stress
	Ready, Set, Precent Chronic Illness! Healthy Preventive Behaviors	• Practice exercises safely and correctly
		• Evaluate previous actions plans
		• Identify and select strategies to overcome challenges with action plans/goals
		• Identify ways to prevent and belier manage chronic illnesses
10	*Ready, Set, Keep Fitness Fun! Keeping Fitness Fun*	• Practice exercises safely and correctly
		• Identify ways to make long-term fitness enjoyable
		• Identify and select strategies to overcome challenges with action plans/goals
11	*Ready, Set, Stay Committed! Staying Committed to Fitness & Review*	• Practice exercises sa fely and effectively
		• Apply the two-step approach to creating an actio n plan
		• Ide ntify and apply strategies to overcome challe nges
		• Iden ti fy and apply safe ways to stay physically active (review)
12	*Ready, Set, GO! Moving Forward Successfully*	• Ide ntify and apply ways to stay physically active
	Ready, Set, CELEBRATE!	• Practice exercises safe ly and correctly
		• Identify and apply strategies to overcome barriers of physical activity
		• Ide ntify and apply ways to stay committed to physical activity goals and celebrate a healthier you

• Adapted from Texercise *Select* Implementation Manual. Note that the exercise training builds over time: There is a recommended 30-min exercise period per session until sessio n 6, then facilitators are e nco uraged to increase time to 45 min, with 15 min each for strengt h and endurance, 10 min for balance, and 5 min for flexibility exercises.

Timed Up-and-Go Test. Introduced in 1991 (Bohannon, 2006), the TUG test has been widely used to examine functional mobility and predict fall risk among older adults (Hutton et al., 2009; Shumway-Cook et al., 2000). It assesses the time in seconds required for participants to "rise from a standard arm chair. Walk at your typical or normal pace to a line on the floor 3 meters away, turn, return, and sit down again" (Podsiadlo & Richardson, 1991, p. 64). This test has been validated among community-dwelling older adults (Shumway-Cook et al., 2000). Recommended practical benchmarks designate that TUG test times of 12 or more seconds are indicative of below normal performance (Bischoff et al., 2003). In this study, TUG test scores were examined as continuous scores measured in seconds.

We used the protocol used by the Centers for Disease Control and Prevention (CDC) in their injury prevention and initiatives (CDC, 2013), which specifies assessment for a 3-m/10-foot version of the test. The assessors went through detailed training, which involved watching a brief video demonstrating TUG assessment that was taped by a geriatrician with falls prevention expertise, a well as receiving detailed written protocols. Given the multiple test locations, there was not a standard stopwatch mandated. Most used their cellphone stopwatch functions. The lack of a standardized timing tool will be noted as a possible limitation. Given that this was a community-based program, we typically only had one trial. Participants were invited to do a practice trial if they wanted. However, no one chose to do a test run.

Healthy Days Measure. The CDC Healthy Day measure (CDC, 2011) has been used extensively in health research and is considered by the Centers for Medicare and Medicaid Services as an acceptable health outcome for its state innovation waiver programs Texas Health and Human Services Commission, 2011). Participants were asked to report their general health status. Response choices included "excellent," "very good," "good," and "fair or poor." Participants were asked to report the number of days in the past 30 days their physical health (i.e., including physical illness and injury) was not good. Potential responses ranged from 0 days to 30 days. Similarly, participants were asked to report the number of days in the past 30 days their mental health (i.e., including stress, depression, and problems with emotions) was not good. Potential responses ranged from 0 days to 30 days. Physical and mental health days defined as not good were also summed to create a combined variable. Potential responses ranged from 0 days to 30 days for this summed variable. Finally, participants were asked 10 report the number of days in the previous 30 days that their poor physical or mental health kept them from doing their usual activities (i.e., including self-care, work, or recreation). Potential responses ranged from 0 day to 30 days.

Statistical Analysis

Baseline characteristics were compared by participants' TUG test scores at baseline using the recommended practical benchmarks of 12 s (i.e. ., TUG test times of 12 or more seconds suggest below normal performance) (Bischoff et a l., 2003), using x^2 tests for categorical variables and two sample *t* tests for continuous variables. Various analyses were performed to examine change from baseline to posttest assessment based on the outcome being examined. Linea r mixed-model (using SAS Proc GENMOD procedure) use all available data in model estimation and provide unbiased estimates of the intervention effects under the assumption of missing at random.

An effect size *(d* = [posttest mea n - pretest mean]/pretest stan-dard deviation) using estimates of changes from the mixed effect models and GEE models was computed for each outcome except the binary outcome variables. Effect sizes of *d* = 0.2 were considered small, *d* = 0.5 medium, and *d* = 0.8 large (Cohen, 1988).

Results

Sample Characteristics

In total, 220 participants were recruited and completed the base line assessment, of which 186 completed a baseline TUG test. As shown in Table 2, over 52 % of participants had TUG test times of 12 s or more at base line, which indicate s these individuals, were functioning below normal performance (Bischoff e t al., 2003). The average age of these participants was 74.9 (± 8.4) years with an average of 2.4 (± 1.6) chronic conditions. The majority of participant s were female (84.6%), no n-Hispanic (92.6%), and White (8 1.8 %).

Tab le 2 also compares participants ' TUG test scores at baseline using the recommended practical benchmarks of 12. On average, participants with TUG test times of 12 or more seconds were significantly older than those with faster TUG test times were (t = - 3.8 0, p < .00 1). A significantly larger proportion of participant s with lower education attainment had T UG test times of 12 or more seconds (X^2 = 12.0 3, p = .017).

The average number of sessions attended was 12 (± 6.4). An examination of the number of class sessions attended s how that approximately 1 5 % of the participants only attended one or two sessions. In further analyses (not shown), completion status (attending at least 14 sessions) was not related to any baseline par-ticipant sociodemographic (i.e., age, ex, race/ethnicity, education) or number of chronic conditions, which suggests no systematic attrition.

Changes in Outcome Measures

Table 3 shows changes in physical functioning and quality of life indicators from baseline to postintervention. As shown in Table 3, participants had significant reductions in TUG test scores at the postintervention. On average,

participants' mean TUG test score was reduced by 11% (MR = 0.89, $p < .001$) from baseline to postintervention, which represents an effect size of 0.27. Participants showed significant improvement in their general health status, with an effect size of 0.24. Significant improvements were also observed in participants' unhealthy physical days, combined unhealthy physical and mental days, as well as days limited from usual activity. The average number of unhealthy physical days among the participant decreased by 36% from baseline to postintervention (MR = 0.64, $p = .032$), the mean number of combined unhealthy physical and mental days was reduced by 32% (MR = were fitted for continuous outcome variables. General estimating 0.67, $p = .006$), and the average days limited from usual activity equation (GEE) models with Poisson link function (using SAS Proc GENMOD procedure) were used to assess changes in count and/or skewed outcome measures. All the regression models included participant-level random intercepts to account for the correlation among repeated measures from the same participant. Linear mixed-effects models are likelihood-based approaches that was reduced by 40% (MR = 0.60, $p = .045$). The average number of unhealthy mental days was also decreased by 29%, but the reduction was not statistically significant (MR = 0.70, $p = .074$). None of the sociodemographic variables was significantly associated with changes in the outcome measure, and hence were not included in the final regression models.

Table 2 Participant Characteristics by Baseline Timed Up-and-Go Test Score

	Total (n = 186)	Under 12 s (n = 89)	12 s (n = 97)	$7.^2$ or t	p
Age	74.85 (± 8.40)	72.62 (± 7.56)	77.14 (± 8.48)	-3.80	**< .001**
Sex				2.41	.121
Female	84.6%	**88.5%**	80.2%		
Male	15.4%	11.5%	19.8%		
Hispanic				0.01	.939
No	92.6%	92.7%	92.4%		
Yes	7.4%	7.3%	7.6%		
Race				2.28	**.809**
While	81.8%	82.1%	81.5%		
Black or African American	11.9%	11.6%	12.3%		
American Indian or Alaska Native	1.7%	2.1%	1.2%		
Asian	0.6%	1.1%	0.0%		
Native Hawaiian or Pacific Islander	0.6%	0.0%	1.2%		
Other/multiple races	3.4%	3.2%	3.7%		
Education				12.01	.017
Less than high school	5.0%	3.1%	7.1%		
Some high school	9.9%	4.2%	16.5%		
High school graduate or equivalent	28.2%	26.0%	30.6%		
Some college or vocational school	37.6%	43.8%	30.6%		
College graduate or higher	19.3%	22.9%	15.3%		
Number of individuals in household	1.74 (±0.97)	1.67 (± 0.79)	1.81 (± 1.18)	-0.97	.335
Body mass index (**BMI**)				0.42	.809
Normal	24.0%	**22.8%**	25.3%		
Overweight	38.0%	37.0%	39.2%		
Obese	38.0%	40.2%	35.4%		
umber of chronic conditions	2.37 (± 1.61)	2.36 (±1.49)	2.36 (±1.56)	1.05	.296
Number of sessions attended	12.16 (± 6.41)	12.71 (± 6.04)	12.63 (±6.10)	0.09	.927

Discussion

This study showed the potential reach of lifestyle programs for seniors recruited as part of community-based programs to promote physical activity. Similar to other evidence-based programs (Ory & Smit h, 2012; Ory et al., 2013b), such programs attracted a wide age range and persons with differing levels of physical function. As with other community programs targeted toward seniors, individuals of various races were underrepresented (Yancey, Ory & Davis. 2006), as were males (Smith,Ory, Ahn, et al., 2015), suggesting the need for more targeted recruitment efforts to reach out to previously underserved populations. However, as a low-cost but evidence-based program, Texercise *Select* has the potential to be widely adopted by program managers affiliated with aging services network.

This study also demonstrated the feasibility of collecting an objective physical performance measure in such community-based lifestyle programs. The TUG test can be viewed as a pragmatic, patient-centered measure (Glasgow & Riley, 20 13) that provides useful feedback for program facilitators as well as program participants. Further, the TUG test is an important performance measure because of the association of gait speed to a variety of adverse health events such as falls (Ekström, Dahlin-Ivanoff, & Elmståhl. 2011; Ostir, Kuo, Berges, Markides, & Ottenbacher. 2007; Shumway Cook et al., 2000; Studenski et al., 2011).

Study findings indicated that Texercise *Selec* has a significant impact on gait peed. In fact, the average TUG test time at baseline was below normal performance, but this score shifted to a normal performance at postintervention among this community-dwelling population (Bischoff et al., 2003). In addition, over two-thirds of participants showed improvement on this meas ure. Not surprisingly, those who were older entered the program with poorer physical functioning as identified by our TUG time benchmark (i.e. 12 or more seconds).

In addition to prior positive impacts on lifestyle behavior (Smith, Ory, Jiang, et al., 2015). Texercise *Select* also had significant impacts on most of the health-related quality of life measures, confirming previous research about the importance of physical activity programs for promoting improvements in general health status as well the more specific reports of "unhealthy days" for seniors (National Council on Aging , 20 14 ; Smith, Ahn. et al., 2010: Smith. Ory, & Larsen, 2010). In future studies, it would be instructive to examine the associations between walking speed and these quality of life measures. When examining study findings across differently quality of life domains, it is interesting to observe no significant

Table 3 Outcome Changes From Baseline to Postintervention

	Baseline Mean (± SD)	Postintervention Mean (± SD)	Percent Change in Pre–Post Surveys	Change from Linear Mixed Models	Mean Ratio from Poisson Model	*P*-values	Effect Size	Proportion of Participants Who Improved
Timed Up-and-Go	12.9 (± 5.1)	11.7 (± 4.8)	–10.8%	–	0.89	< .0001	0.27	68.6%
General health status	2.9 (± 0.9)	2.8 (± 0.9)	–7.2%	–0.21	–	.002	0.24	28.0%
Unhealthy physical days	4.8 (± 8.2)	3.0 (± 7.1)	–35.7%	–	0.64	.032	0.21	37.4%
Unhealthy mental days	3.6 (± 7.0)	2.4 (± 5.3)	–28.6%	–	0.70	.074	0.15	24.8%
Combined unhealthy physical and mental days	7.7 (± 10.4)	4.9 (± 8.3)	–31.6%	–	0.67	.006	0.24	36.9%
Days limited from usual activity	2.2 (± 5.2)	1.4 (± 3.4)	–39.6%	–	0.60	.045	0.17	20.4%

impact on unhealthy mental days, although the scores for this variable reduced from baseline to postintervention. This finding is unexpected given the strong evidence identifying the impact of physical activity on mental health status (Morgan & Goldston, 1987).

Several limitations ca n be noted. First, given the parameters of this project, it was not feasible to conduct a randomized control trial or even a wait-list control. Therefore, threats to internal validity were not eliminated in our study des ign. However, this translational research effort was a pragmatic examination of physical performance and health-related quality of life indicators across diverse populations and settings (Glasgow & Riley, 20 13), with a goal of exploring whether a community- focused intervention can have the same positive outcomes despite being less regulated as traditional randomized controlled studies.

Second, our study is further potentially limited by the measurement battery used in this pragmatic study. With respect to the TUG (although we employed a standardized assessment protocol endorsed by the CDC) in our field application, we were not ab le to standardize the timing instrument (i.e., specific stopwatch devices), which may have introduced some unknown biases. Other than the T UG, our measures were se lf-reported and subject to bias. However, as a subjective phenomenon, perceived quality of life is hard to assess objectively. To counter potential bias, we employed standardized measures (e.g., CDC Healthy Days) previously used in state and national health evaluation studies.

Third, as in many co mm unity studies, there were limited resources to track all participant s, and about 30% of participants were lost at 12-week follow-up. Similarly, only 60% of the participants attended 70% or more of the classes. This suggests a need to better understand why this attrition occurred. Anecdotally, we believe that some participants were treating the sessions as "drop in" exercise classes rather than a comprehensive lifestyle program with a 12-week commitment. Since approximately 15 % of enrollees attended only one or two sessions, we recognized the need for better communication with both community providers and participants of the intended program design, and strategies to help those who may have logistical challenges reduce any attendance barriers. Sensitivity analyses comparing those who completed 70 % or more classes and those who did not showed similar estimated changes in the outcome measures, indicating potential robustness of our results.

Fourth, treatment fidelity is a concern in the rollout of any community health promotion program. To address this concern, a standardized manual and training session was developed for program facilitators. Evaluation program staff also conducted midcourse fidelity checks to help identify areas of concern and needs for corrective action.

Finally, Texercise *Select* only examined short-term impacts.

Thus, fun her studies call for a longer follow- up period to determine whether gains ca n be sustained. These findings can then be com- pared with

outcome sustainability in other studies of evidence-based programs (Shumway-Cook et al., 2007).

Conclusion

This study marks the first impact assessment of Texercise *Select* on physical functional performance and health-related quality of life. This study demonstrates that middle-aged and older adults can be recruited into community-based physical activity programs and a performance indicator can be collected and integrated into the evaluation designs. It is notable that Texercise *Select* had a significant impact on walking speed, an objectively measured indicator associated with loss of independence, institutionalization, and premature mortality. Moreover, Texercise *Select* had a similarly beneficial impact on self-reported general health status and most measures of health-related quality of life, including days of limited activity. These positive results further reinforce the value of community-driven lifestyle programs, such as Texercise *Select*, for modifying critical domains of life that enable older adults to live more healthily and independently in the community.

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