

Smart Television and Exercise Promotion for Independent Living Facilities (STEP4Life)  
Protocol  
NCT03001778  
7/8/2014

Smart Television and Exercise Promotion for Independent Living Facilities (*STEP for LIFE*)

Procedures for the Prototype Usability Testing

20140708

## Grant Information

Prototype usability testing is part of Specific Aim #5, which is to **conduct focus groups and usability testing of the web-based prototype with independent living facility (ILF) residents and administrators, and non-ILF older adults to evaluate the user interface, ease of use, exercise preferences, and how to further understand and optimize the organizational and environmental culture for implementation.** The revised prototype will be shown in group and individual settings.

All usability testing sessions will be conducted at Springwood Retirement Campus, Harvard Square Retirement Community, and Jewish Family Service Colorado Senior Connection (JFS-CSC)/ Edgewater Community Center. The program will be tested in individual (n=30; 10 per facility) and group (n=30; 10 per facility) formats at each of these facilities. Groups (two per setting) will include five older adults per group.

All exercise will be supervised, and established safety procedures will be followed. The ILF residents, ILF administrators, and non-ILF older adults will provide feedback on program use. Participants will be compensated \$50 for their time.

A total of 60 older adults (20 per facility) will be recruited and randomly selected to participate. Potential participants will be screened and those meeting eligibility criteria will be entered into a pool. The ILF activity director will assist with recruiting ILF residents. Non-ILF residents will be recruited through JFS-CSC with the assistance of the Center's activity coordinator.

Usability testing will be recorded, transcribed, coded, and analyzed with constant comparative and phenomenological approaches, using Atlas.ti™.

## Eligibility Criteria

ILF resident eligibility criteria are: current ILF resident, age 55+, exercising  $\geq 60$  min a week based on attendance at weekly ILF scheduled PA programs, able to read and speak English, and consent to participate. Non-ILF resident eligibility criteria are: age 55+, exercising  $\geq 60$  min a week based on self-report, able to read and speak English, and consent to participate.

## Participant Confidentiality

Although identifiers such as name, email address and phone number may be used for the collection of the data, all identifiers will be stored in secure files and behind computer firewalls and results will be shared in combined form only. Also, disclosure of participants' responses cannot reasonably be expected to place the subjects at risk of criminal or civil liability, or be damaging to their financial standing, employability, or reputation.

## Recruitment

Participants will be recruited through facility administrators and contacted by study staff to be screened and enrolled.

Smart Television and Exercise Promotion for Independent Living Facilities (*STEP for LIFE*)

Procedures for the Prototype Usability Testing

20140708

# Usability Testing Procedures

## Individual Format

Following informed consent procedures, usability testers will begin by watching the STEP for LIFE program tutorial. This tutorial explains how to install the technology required to use the STEP for LIFE program, and how to login and actually use the program from a resident perspective.

ILF residents (n=20, 10 per ILF) and non-ILF OAs (n=10) will use the prototype to complete the 3 chair-based videos. KB staff will observe participants using the program and actually performing the exercises, noting areas of ease and difficulty for usability participants.

## Usability Instructions

KB staff will begin the usability session by reciting the following script:

*Now that you have watched the tutorial, I want you to create a workout. After you create this workout, you will complete the workout while we watch. Remember, we are not watching to judge how well you exercise. We just want to make sure that the exercises in this program are doable. After you complete the exercises, we will ask you some follow-up questions on what you think about the program.*

*For your workout, I want you to customize a workout that contains three different videos. I want you to include the three different types of chair-based videos in your workout. You can name the workout whatever you want. You can also choose whether or not you would like to perform the warm-up and cool-down exercises.*

Participant observations will be made based on the following considerations. These observations will be recorded by KB staff. KB staff will debrief after usability testing is complete at each facility, and notes will be compared and compiled.

- Could the participant log in?
- Did the participant find Create a Workout?
- Could the participant actually build their workout?
- Did the participant find the chair-based videos?
- Did the participant find all three types of exercises?
- Did the participant know when they had 30 minutes of exercise added to their workout?
- Could the participant use the tablet to name their workout?
- Could the participant cast the video to the television?
- How well did the participant complete the Balance & Flexibility exercises?
- How well did the participant complete the Strength & Toning exercises?
- How well did the participant complete the Cardio exercises?
- Did the participant have any trouble hearing/seeing/following exercise instructions?
- Are 10-minute exercise segments viable for this population?
- Is a 30-minute workout limit appropriate for this population?

Smart Television and Exercise Promotion for Independent Living Facilities (*STEP for LIFE*)

Procedures for the Prototype Usability Testing

20140708

After the workout has been completed, usability participants will be asked the following follow-up questions:

1. What are your general impressions of the STEP for LIFE program?
2. What did you find easy to do? What was difficult?
3. What elements did you find to be engaging? What did you find to be a barrier in using the program?

Finally, usability participants will complete a System Usability Scale (SUS, **Appendix A**) to measure program usability

## Group Format

Following informed consent procedures, usability testers will begin by watching the STEP for LIFE program tutorial. This tutorial explains how to install the technology required to use the STEP for LIFE program, and how to login and actually use the program from an administrator perspective.

**Note: A roster of the usability participants will be preloaded for the administrators.**

The ILF and non-ILF activity directors will select all three the prototype's standing workouts and conduct a group exercise session. Half of the group will perform the standing exercises, and half will perform the modified, chair-based exercises in the video. The ILF residents and administrators, and non-ILF OAs and Activity Directors will provide feedback on program use. KB staff will observe administrators using the program and participants performing the exercises, noting areas of ease and difficulty for these groups.

## Usability Instructions

KB staff will begin the usability session by reciting the following script:

*Now that you have watched the tutorial, I want ADMINISTRATOR to add everyone here to a group. After the group has been created, ADMINISTRATOR will select a moderate intensity exercise for the group to do. You may perform either the regular or the modified version that is shown in the video.*

*Remember, we are not watching to judge how well you exercise. We just want to make sure that the exercises in this program are doable. After you complete the exercises, we will ask you some follow-up questions on what you think about the program.*

Administrator and resident observations will be made based on the following considerations. These observations will be recorded by KB staff. KB staff will debrief after usability testing is complete at each facility, and notes will be compared and compiled.

- Could the administrator log in?
- Could the administrator Create a Group?

Smart Television and Exercise Promotion for Independent Living Facilities (*STEP for LIFE*)

Procedures for the Prototype Usability Testing

20140708

- Did the administrator find Premade Workouts?
- Could the administrator cast the video to the television?
- How well did the residents complete the selected exercises?
- Did the administrator offer any coaching to residents while they were performing the exercises?
- Did the residents have any trouble hearing/seeing/following exercise instructions?
- Did the residents seem confused by having two different versions of exercises on the screen?
- Are 10-minute exercise segments viable for this population?
- Generally, did the program seem to work well in a group format?

After the workout has been completed, usability participants and facility administrators will be asked the following follow-up questions:

1. What are your general impressions of the STEP for LIFE program?
2. What did you find easy to do? What was difficult?
3. What elements did you find to be engaging? What did you find to be a barrier in using the program?
4. *(Administrator only)* What are your general thoughts on implementing a program like this at your community?

Finally, usability participants will complete a System Usability Scale (SUS, Appendix A) to measure program usability