

VISIONS/Services for the Blind and Visually Impaired
Final Report
The Fan Fox & Leslie R. Samuels Foundation

VISIONS/Services for the Blind and Visually Impaired is delighted to provide this Final Report to The Fan Fox & Leslie R. Samuels Foundation for the Evidence-based Exercise Program entitled "Adapting SAIL for a Visually Impaired Senior Population," that was offered during the past year at the VISIONS Center on Aging at Selis Manor. We are pleased to report that the program has exceeded expectations.

“Stay Active and Independent for Life” (SAIL), the SAIL Program, is a fitness class designed specifically for older adults, and provides educational materials and self-assessments. Evidence-based exercise programs (EBP) use tested models and interventions to address chronic health issues of older adults. The programs have been certified by the U.S. Administration on Aging, and were demonstrated to be effective in helping seniors adopt health-conscious behaviors.

There were no specific accommodations for older adults who are blind. As a result, to implement and employ this exercise program for blind seniors, modifications were necessary to meet their specific needs. The program includes aerobics, balance activities, strengthening and stretching exercises that can be done seated or standing, as well as educational components. Participants are also encouraged to perform these exercises at home.

In our proposal, the SAIL program was to be conducted twice a week for a 12-week period, followed by a break to survey participants, analyze results of the program and adjust and prepare for the next SAIL program offering. We projected that 25 seniors would enroll and at least 15 would complete the SAIL program each time it is offered. We are proud to report that participation is 18% higher than forecasted.

The first SAIL cohort began in November, 2015 and concluded in February, 2016. 24 participants enrolled, while 17 completed the program.

The second session was held between May and July 2016. In the second round, a total of 35 seniors enrolled, and 22 completed the program. The combined sessions enrolled 59 participants, of which 39 completed the programs.

As a result of the popularity of the SAIL program, a third session is now underway that will conclude in October, but this session is outside the scope of the funded project.

Three exercises were adapted for use by seniors who are blind under the SAIL Program. At the beginning of each exercise, baselines were established for each of the participants.

1. **8 Foot Up and Go:** Participants are scored on the time it takes to walk 8 feet and back. This is a test that can measure mobility and risk of falling.

First Session: The average time it took participants to complete the baseline test was 9 seconds. The range was from 6 seconds to 29 seconds. 13 of the participants were not in their normative ranges and only 5 were within normative range. After 12 weeks, 11 participants were within normative range and 6 not in range. The average time of completion was now 7 seconds.

Second Session: The average time it took participants to complete the baseline test was 7 seconds. The range was from 5 seconds to 12 seconds. 10 of the participants were not in their normative ranges, 7 fell within normative range and 2 overachieved. After 4 weeks, only 7 people fell outside of normative range and 8 people met the goal for their normative range. The results demonstrate improvement in mobility, which is very important for seniors, especially those with limited or no vision.

In both sessions, there were significant improvements in mobility function and great improvements for participants who were below normal limits at the start of the exercise.

First Session	Base Line	After 12 Weeks	Improvement
Average Time	9	7	✓
Range of Time	6 -29	5-18	✓
Number of People Not in Normative Range	13	6	✓
Number of People in Normative Range	5	11	✓
Number of People Over Achieved Range	0	0	

Second Session	Base Line	After 12 Weeks	Improvement
Average Time	7	6	✓
Range of Time	5-12	5-9	✓
Number of People Not in Normative Range	10	7	✓
Number of People in Normative Range	7	8	✓
Number of People Over Achieved Range	2	0	

2. **Biceps Curl:** The test is scored on the number of times the participant is able to lift and lower the weight in 30 seconds. This test assesses arm strength which is helpful in balance reactions and can prevent trips from becoming falls.

In Session 1, the average number of biceps curls for the baseline was 16. The number of curls ranged from 10-21. Five participants were not within normative range, two over-achieved the range and nine were within range. After 12 weeks, the average number of biceps curls increased to 19. The range increased from 14-32 curls. And 10 people overachieved in their age range which is a definite success.

In the next session, the average number of biceps curls for the baseline was 18. The number of curls ranged from 5-27. Two participants were not within normative range, eight over achieved the range and eight were within range. By the end of the class, the lowest number of curls was 10 and the highest was now 30. 10 participants over achieved the range, three were within normative ranges and only one was under the normative limits which is a huge improvement in arm muscle strength and mass.

First Session	Base Line	After 12 Weeks	Improvement
Average Number of Curls	16	20	✓
Range of Curls	10-21	14-32	✓
Number of People Not in Normative Range	5	0	✓
Number of People in Normative Range	9	7	✓
Number of People Over Achieved Range	2	10	✓

Second Session	Base Line	After 12 Weeks	Improvement
Average Number of Curls	18	22	✓
Range of Curls	5-27	10-30	✓
Number of People Not in Normative Range	2	1	✓
Number of People in Normative Range	8	3	✓
Number of People Over Achieved Range	8	10	✓

3. **Chair Stand:** Participants are scored on the number of times he/she is able to stand up in 30 seconds. This tests leg strength which is critical for balance, mobility and independence.

In the first session, the average number of chair stands was 11 for the baseline. The number ranged from 0 to 15. 11 were not in the normative range and six were in normative range. After 12 weeks, the average number of stands increased to 13 and the range of stands increased to 7-26 stands. Six participants were not in normative range, six were in range and six over achieved the range. This improvement shows that participants are gaining leg strength.

For the second session, the average number of chair stands was 14 for the baseline. The number ranged from 8-30. Seven were not in the normative range, four were in normative range and seven overachieved on their baseline test. After four weeks, the average number of increased to 15 and the range of stands remained about the same. Four participants were not in normative range, five were in range and five over achieved the range. This test is a challenge for participants with physical issues related to arthritis, knee injuries, balance, etc. However, the improvement shows that participants are gaining leg strength, which helps maintain balance and reduce falls.

First Session	Base Line	After 4 Weeks	Improvement
Average Number of Chair Stands	11	13	✓
Range of Stands	0-15	7-26	✓
Number of People Not in Normative Range	11	5	✓
Number of People in Normative Range	6	6	same
Number of People Over Achieved Range	0	6	✓

Second Session	Base Line	After 12 Weeks	Improvement
Average Number of Chair Stands	14	15	✓
Range of Stands	8-30	8-27	
Number of People Not in Normative Range	7	4	✓
Number of People in Normative Range	4	5	✓
Number of People Over Achieved Range	7	5	

The SAIL program has been highly successful. Attendance has been consistent, with an average of 17 people each day for the first session, and 21 people for the second. Word of mouth around the senior center helped increase participation in the second session. They are excited about the fit tests to see how much they've improved. Based on the fit tests, the participants have shown great improvements in physical function through aerobics, scripted balance/cool down, strength training and stretching which will help reduce the risk of falls.

Adaptations have been made to accommodate seniors who are blind and visually impaired without having to change any of the curricula. The instructor provides verbal instructions to ensure the participants are performing the exercises properly, and actively walks around the groups to provide tactile cueing.

Another example of an adaption that the program has made is the "8 foot Up and Go" test. The test requires the participant to walk towards a cone and back. Our clients are unable to see the cone, so we designed the test where the clients can walk independently around an 8 foot table.

The participants are already talking about signing up for the next SAIL class. A third set of exercises is now underway, and will be completed in the fall.

The certified instructor for the SAIL Program was Shannon Stanczak. Her observations conclude that the SAIL class has been a great accomplishment. The students enjoy the diversity of the classes and the workouts. Many of the participants have spoken about having more energy, more stamina and some have even talked about weight loss. As a personal trainer, it's always great when people tell you that they feel more conditioned and toned in their muscles. They have adapted to this way of life and they inspire each other.

An additional impact of this program is the absolute joy that the seniors have expressed during the exercises, and seniors keep coming back for more. It has also encouraged them to participate in other exercise programs offered at the senior center.

One participant stated: "It's been very, very, VERY helpful! Let me tell you! When I first started, I was moaning and groaning because of the arthritis in my feet and toes. Now, I feel great. The more I move, the better I feel. I'm sleeping better at night and my blood pressure is lower too!"

Another said: "SAIL strengthened me as far as my core. I am able to get up and down out of my chair better. Also, it made me aware of my mobility every day and how I step. I gained more balance and was able to navigate the streets better and avoid falls."

Other comments included: “My sciatica pain improved a lot.”

“...it built up my stamina and gave me balance...”

“I feel better physically, I walk more and I’m more active. “

The SAIL Program is one of five distinct evidence-based exercise programs that have been incorporated into the Health Promotion Services provided by the VISIONS. SAIL and the other EBP programs are now a staple in the services available to blind seniors to help improve their quality of life and increase their independence throughout their older years.

The total budget for the SAIL program was \$80,000. The Samuels Foundation provided \$40,000 with VISIONS matching those funds. During the year, some modest modifications have been made to the line items in the budget. There was no need for translation of materials from English to Spanish or for printing. Equipment purchases were increased.

All other personnel and other expenses were at budgeted levels. A financial accounting of the funding is attached.

The SAIL program was supervised by VISIONS Director of Occupational Therapy and Medical Coordinator Tressa (Teddy) Kern, OTR. She was assisted by Travis Joseph, OTA, who helped monitor the conditions of the participants. The Fitness Instructor and Certified SAIL instructor was Shannon Stanczak who conducted both SAIL sessions. Chief Program Officer Ruben Coellar supervises all programs at VISIONS at Selis Manor, including the senior center. Elizabeth Lee, (LMSW) Senior Director of Caregiver and Senior Services monitored the program. Carrie Lewy (MS Gerontology) is the director of the VISIONS Center on Aging.

VISIONS is grateful to The Fan Fox & Leslie R. Samuels Foundation for its support of the SAIL Program and the VISIONS Center on Aging. The NYC Department for the Aging now mandates that the innovative senior centers offer these evidence-based programs, but has not provided any additional funding to cover costs, particularly relating to adapting the programs for seniors who are blind. VISIONS would welcome additional funding to facilitate new exercise sessions next year.