



2011 - 2013

A Matter of Balance

PROGRAM EVALUATION REPORT



Introduction

Falls are the leading cause of injury-related deaths, hospitalizations, and emergency department visits among Rhode Islanders 65+.¹ Negative outcomes associated with falls include hip fractures, traumatic brain injury, loss of mobility, and depression.² Preventing older adult falls and keeping this population healthy and independent for as long as possible is a priority for the Violence & Injury Prevention Program (VIPP) of the Rhode Island Department of Health.

A Matter of Balance is an evidence-based program proven to reduce fear of falling and increase exercise levels in older adults. The *A Matter of Balance* program consists of eight, two-hour sessions for a small group led by a trained facilitator.

In October of 2011, the VIPP supported pairs of health professionals from seven community-based agencies to become trained as ‘Master Trainers’ in the *A Matter of Balance* falls management program.

This report includes evaluation results from *A Matter of Balance* sessions held October 1, 2011 through December 31, 2013. The VIPP surveyed class participants pre-program, post-program, and three months after the program to evaluate the program’s impact on self-efficacy, physical activity levels, and frequency of falls.

Program Demographics

The average age of participants was 78 years old. Most of the program participants were white females: 87 percent were female and 92 percent were white.

Age group	Number	Percent
45-64 years	16	5%
65-74 years	74	22%
75+ years	242	73%
Sex	Number	Percent
Male	43	13%
Female	296	87%
Race/Ethnicity	Number	Percent
Hispanic	15	5%
Non-Hispanic white	308	92%
Non-Hispanic other races	11	3%

*Data include 342 participants who completed the pretest survey.

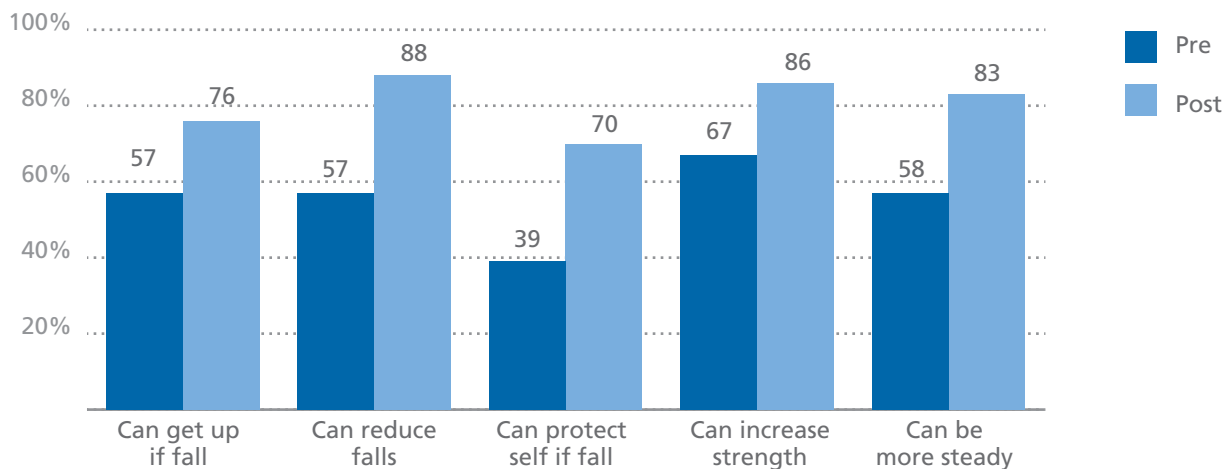
~Age is unknown for 10 participants, sex is unknown for 3 participants, and race/ethnicity is unknown for 8 participants.

Self-efficacy

Many older adults experience a fear of falling. People who develop this fear often limit their activities, which can result in physical weakness, making their risk of falling even greater.² The *A Matter of Balance* program uses a variety of activities to address physical, social, and cognitive factors affecting fear of falling. Participants learn to view falls and fear of falling as controllable, set realistic goals to increase their activity level, and change their environment to reduce fall risk factors.

Figure 1 demonstrates that self-efficacy levels significantly improved for program participants immediately after completing the *A Matter of Balance* program compared to before the program began. Of those participants that reported a low self-efficacy in the pretest, 26 to 35 percent answered “very sure” or “sure” on the posttest when asked: can you get up if you fall? Can you reduce your falls? Can you protect yourself if you fall? Can you increase your strength? And can you be more active?

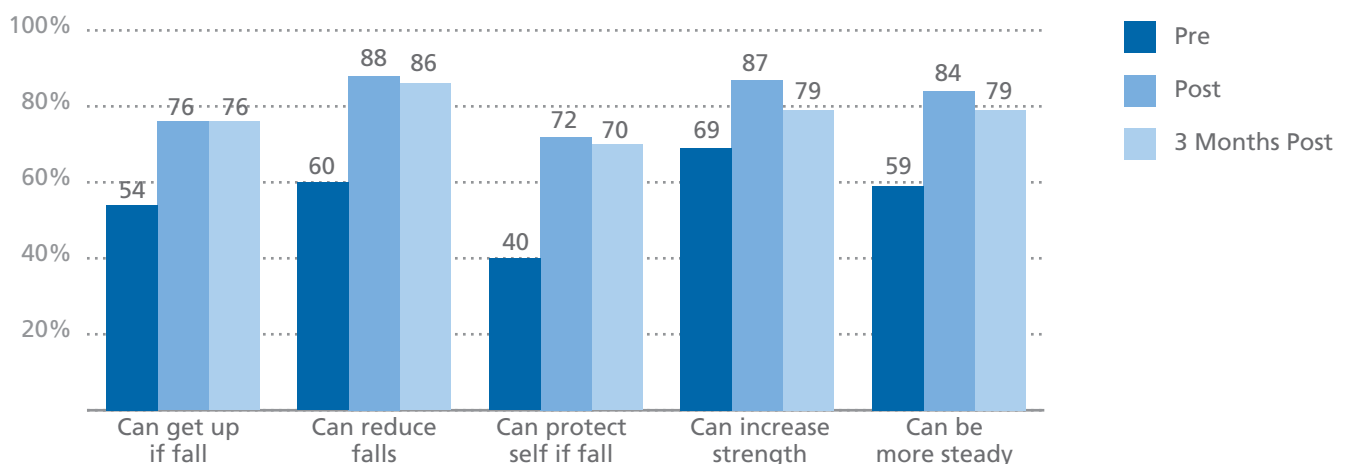
FIGURE 1: PERCENT OF PARTICIPANTS WHO ANSWERED “VERY SURE” OR “SURE” TO SELF-EFFICACY MEASURES



* Data include the 317 participants who completed the pre- and posttest surveys.

The findings in Figure 2 demonstrate that self-efficacy levels stayed the same or slightly decreased for participants three months after completing the program. These evaluation results suggest that the positive impact the program has on self-efficacy is sustainable for at least three months after program completion.

FIGURE 2: PERCENT OF PARTICIPANTS WHO ANSWERED “VERY SURE” OR “SURE” TO SELF-EFFICACY MEASURES



* Data include the 156 participants who answered all three surveys.

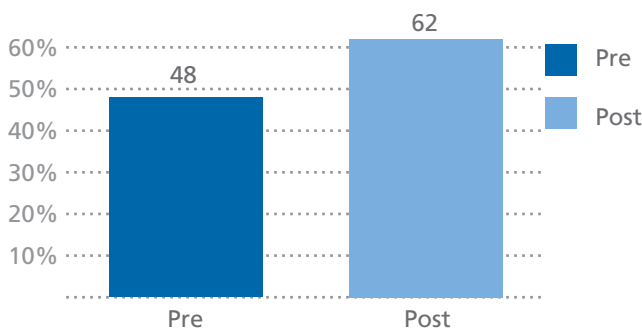


Physical Activity Levels

As people age, poor balance and flexibility contribute to falls and broken bones. Increasing physical activity, especially through strengthening exercises, improves a person’s flexibility and balance, which decrease the likelihood and severity of falls.³ The National Institute on Aging encourages all adults aged 50 and older to achieve at least 30 minutes of moderate-intensity endurance activity on most or all days of the week.⁴ The *A Matter of Balance* program promotes regular exercise to increase strength and balance. Each program session includes a 30-minute, group-exercise component, and participants are encouraged to engage in daily exercise on their own.

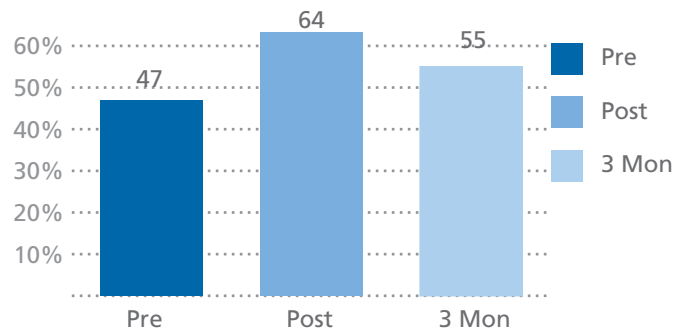
Figure 3 shows that the percent of participants who reported doing moderate exercise three or more times per week increased immediately after completing the *A Matter of Balance* program. Of those participants who reported not exercising regularly in the pretest, 22 percent then reported that they were exercising three or more times per week after the program. This demonstrates that program participation significantly increased physical activity levels in some participants.

FIGURE 3: PERCENT OF PARTICIPANTS EXERCISING THREE OR MORE TIMES PER WEEK



* Data include the 317 participants who completed the pre- and posttest surveys.

FIGURE 4: PERCENT OF PARTICIPANTS EXERCISING THREE OR MORE TIMES PER WEEK



* Data include the 156 participants who answered all three surveys.

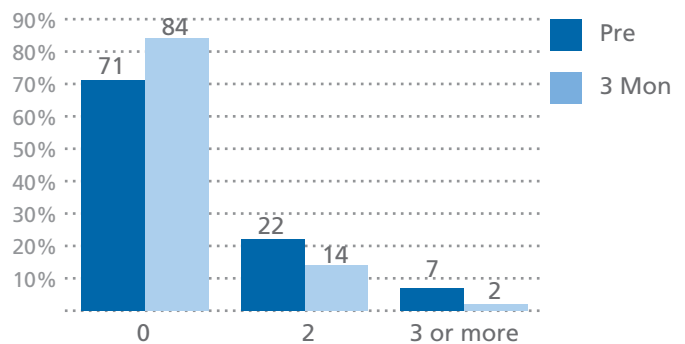
The impact on exercise levels three months after completing the program was not as conclusive. As shown in Figure 4, exercise levels increased immediately after completion of the *A Matter of Balance* program. A slight decrease in exercise levels, however, appears to occur three months after program completion. This shows that the effects on exercise level are only sustainable in some participants three months after the program.

Frequency of Falls:

The *A Matter of Balance* program emphasizes practical strategies to reduce fear of falling and increase exercise levels. Both program components should lead to a decrease in falls rates. Before the program and three months after the program, participants were asked to report the number of falls they had experienced in the past three months to determine if program participation could be linked to a reduction in the rate of falls.

Figure 5 compares participants' recent falls histories before they began the program and three months after program completion. The percent of participants who reported zero falls in the past three months increased after program participation, while the percent with two falls and three or more falls decreased. These findings suggest that program participation positively impacted the frequency of falls for some participants. Of the participants who reported a recent fall at the time of the pretest survey, 23% reported fewer or zero falls three months after program completion. This is promising; however, results should be interpreted with caution as percentages are based on small numbers and the sample size is not large enough to demonstrate statistical significance.

FIGURE 5: NUMBER OF FALLS IN THE PAST THREE MONTHS



* Data include the 170 participants who completed a pretest and 3-month follow-up survey.

Conclusion:

Initial data are promising and indicate that the *A Matter of Balance* program increases self-efficacy and physical activity levels in older adults and may reduce the frequency of falls. Although the preliminary data are encouraging, further replication and evaluation of the program is warranted. It is also important to note that the program does not collect information on other factors known to contribute to risk of falling in older adults (e.g. chronic health conditions, vision impairment, the mixing of medications, and an unsafe home environment). Several agencies that serve the older adult population in Rhode Island regularly offer the *A Matter of Balance* program, and evaluation materials continue to be collected.

¹Rhode Island Vital Record Death Data, Rhode Island Hospital Discharge Data, Rhode Island Emergency Department Data, 2009-2011.

²Centers for Disease Prevention and Control, Falls Among Older Adults: An Overview.

Available at: <http://www.cdc.gov/homeandrecreationalafety/falls/adultfalls.html>

³Centers for Disease Prevention and Control, Physical Activity: Why Grow Stronger.

Available at: <http://www.cdc.gov/physicalactivity/growingstronger/why/>

⁴National Institute on Aging. Healthy Aging. Exercise & Physical Activity: Your Everyday Guide from the National Institute on Aging.

Available at: <http://www.nia.nih.gov/health/publication/exercise-physical-activity>

