Note: All Training and assessment were done using modified IMLF and IM training sessions. Clients elected to remain in a chair facing the IM activities were all Upper Extremity based. Initially clients were given the option of standing or sitting; all of them moved to a sitting position and therefore all interventions were done in this manner. Repetitions began at 120 per activity and lasted 30 min moving to 45 min for each training session. The maximum number of repetitions was 275 without changing activities.

N=9, Ages 60 – 80

Training:
1. Pre-Assessment- 12 sessions over 2 months
   Re-Assessment
2. Break for 6 Weeks
   Re-Assessment
3. 6 sessions over 1 month
   Re-Assessment
4. Overall Post Assessment

Assessments
- IM Long Form Assessment
- IM Short Form Assessment
- D2 Test of Attention
- Woodcock Johnson
  - Decision Speed
  - Visual Matching
  - Math Fluency
  - Reading Fluency

*All notable changes are given the assumption that all participants were in fact healthy normal aging adults and yet they made changes.

Modified IM Long Form Assessment*
- After 1st first round of 12 sessions on IM: 78% improvement
- Overall gains after a total of 18 sessions: 77% improvement

IM Short Form Assessment
- After the first round of 12 sessions on IM: 28% improvement
- Overall gains after a total of 18 sessions: 31%

D2 Test of Attention
- After the first round of 12 sessions on IM: 15% improvement
- Overall gains after a total of 18 sessions: 16% improvement
  - Implications improved ability to stay focused and attend to more difficult tasks and task over time
Woodcock Johnson

- Math Fluency
  - After the first round of 12 sessions: 17% improvement
  - Overall gains after a total of 18 sessions: 23% improvement

- Reading Fluency
  - After the first round of 12 sessions: 11% improvement
  - Overall gains after a total of 18 sessions: 12% improvement

- Decision Speed
  - After the first round of 12 sessions: 2% improvement
  - Overall gains after a total of 18 sessions: 5% improvement

- Visual Matching
  - After the first round of 12 sessions: 1% improvement
  - Overall gains after a total of 18 sessions: 4% improvement

4 Step Square test of Balance

- After the first round of 12 sessions: 67% improvement
- Overall gains after a total of 18 sessions: 88% improvement
  - Implications improved speed and balance, improved sense of balance and confidence in independent walking and other daily tasks
  - This includes ability to dress and bath with confidence

Nine Hole Peg Test - Manual dexterity changes

- After the first round of 12 sessions: 2% improvement
- Overall gains after a total of 18 sessions: 3% improvement
  - Implications improved fine motor and dexterity improved sense of accuracy and confidence in independence in other daily tasks
  - This includes ability to dress, eat and perform fine motor tasks with confidence
Methods

The first wave of the Silver Tsunami has arrived with over 78 million baby boomers 65 and over [2], many seeking new and innovative health care. Local, state, and federal agencies are anticipating an exponential need for services for older adults who have balance and cognitive processing concerns. [3,4] The Interactive Metronome may be one source of ongoing maintenance and restorative care [1].

INTRODUCTION

The first wave of the Silver Tsunami has arrived with over 78 million baby boomers 65 and over [2], many seeking new and innovative health care. Local, state, and federal agencies are anticipating an exponential need for services for older adults who have balance and cognitive processing concerns. [3,4] The Interactive Metronome may be one source of ongoing maintenance and restorative care [1]. The first wave of the Silver Tsunami has arrived with over 78 million baby boomers 65 and over [2], many seeking new and innovative health care. Local, state, and federal agencies are anticipating an exponential need for services for older adults who have balance and cognitive processing concerns. [3,4] The Interactive Metronome may be one source of ongoing maintenance and restorative care [1].

RESULTS

Each of the standardized tests were administered for a series of repeated measures grouped into July, Sept, Nov, Dec times frames. The average loss of sustained skill was 5.4%, when combined as outcomes. With the final total average gain of 29.33% on the sum of changes.

CONCLUSIONS

The outcomes demonstrated a 88% percent in overall gains for the participants; with an average of 14% loss of skill levels on the IM during the interim time between the first series of IM protocols and implementation the second run of the abbreviated protocols. Upon completion of the second series there was a return to the previous gain with an average of a 8% gain over the initial gains using the IM. Which is positive in regards to adult learning and retentions [5]. The range of percentage of change with the seven standardized tests given was 31% - 5.56% with the average falling at 16.07%. Clients gave anecdotal descriptions of small, but noticeable changes in daily life tasks.

Anecdotal Incidents

Individuals completing the full series of IM protocols provide anecdotal incidents of things that have improved in their daily life. Such incidents as: Enjoying riding the Segway with more zip and confidence; remembering appointments that had not been written down on the calendar; grocery shopping; being able to do price comparisons between items. Feeling they could select from the whole restaurant menu, because they could remember the different items presented.

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References


