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Fall Risk Assessment of Older Adults with Dementia Attending Goodwill Easter Seals Adult Day Services Programs

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BACKGROUND AND PURPOSE

- Dementia is a neurocognitive disorder involving significantly impaired cognitive function. Alzheimer’s is the most common type of dementia.
- In 2015, estimated 5.3 million Americans with Alzheimer.
- In 2010, 31.7% of people 65 or older reported a fall with injury in the past year. These rates are even higher with dementia.
- Medical Cost of falls in 2013: $34 billion.

Purpose: To test different measures affecting fall risk (lower body strength, walking speed, balance) in order to better understand the possible needs of this population to develop targeted interventions.

METHODS

- Consent obtained
- History of past falls obtained from Goodwill/Easter Seals coordinators
- Measurements taken for Montreal Cognitive Assessment (MoCA), Timed Up and Go, 4 meter Walk test, Sit to Stand, and Grip Strength

RESULTS

Table 1: Comparison of Participants Physical Functioning Scores with Aged Matched Normative Values

<table>
<thead>
<tr>
<th></th>
<th>Avg. Participants Scores</th>
<th>Age Matched Normative Values</th>
<th>Decreased Mobility/Function Cut Offs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gait Speed (m/s)</td>
<td>0.78</td>
<td>1.25</td>
<td>&lt; 0.8</td>
</tr>
<tr>
<td>Timed Up and Go (s)</td>
<td>15.67</td>
<td>9</td>
<td>&gt; 13.5</td>
</tr>
<tr>
<td>30 s Sit to Stand (repetitions)</td>
<td>8.13</td>
<td>Males: 12-17, Females: 10-15</td>
<td>&lt; 10-12</td>
</tr>
<tr>
<td>Male Grip Strength (kg)</td>
<td>29</td>
<td>42.4</td>
<td>&lt; 37</td>
</tr>
<tr>
<td>Female Grip Strength (kg)</td>
<td>16.3</td>
<td>23.7</td>
<td>&lt; 21</td>
</tr>
</tbody>
</table>

Montreal Cognitive Assessment (30 pts):
- Participants Score = 16 (Range: 0-29)
- Average Score for individuals without dementia = 27.4
- Score of < 18 is cut-off between mild cognitive impairment and Alzheimer’s Disease.

Gait Speed- 6th Vital Sign
- Speed >1.0 m/s - better survival rate in community dwelling older adults
- < 0.8 m/s – associated with limited capacity for community ambulation
- < 0.4 m/s – identifies those with an inability to meet basic ADLs

CONCLUSION

- Average MoCA scores were consistent with Alzheimer’s Disease
- Gait Speed, Timed Up and Go, Sit to Stands and Grip Strength were all lower than the normative values and indicative of an increased risk for falls and further loss of mobility.
- Individuals participating in Goodwill Easter Seals Adult Day Services would benefit from evidence based exercise programs of sufficient intensity and progression.
- Simple strengthening program of large anti-gravity muscle groups likely to have greatest chance for benefit.