Falls prevention for the aged living at home – an occupational therapist’s perspective

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# Life Expectancy for Countries, 2014

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Life expectancy (yrs.)</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Monaco</td>
<td>89.57</td>
</tr>
<tr>
<td>2</td>
<td>Macau</td>
<td>84.48</td>
</tr>
<tr>
<td>3</td>
<td>Japan</td>
<td>84.46</td>
</tr>
<tr>
<td>4</td>
<td>Singapore</td>
<td>84.38</td>
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<tr>
<td>5</td>
<td>San Marino</td>
<td>83.18</td>
</tr>
<tr>
<td>6</td>
<td>Hong Kong</td>
<td>82.78</td>
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<tr>
<td>7</td>
<td>Andorra</td>
<td>82.65</td>
</tr>
<tr>
<td>8</td>
<td>Switzerland</td>
<td>82.39</td>
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<td>9</td>
<td>Guernsey</td>
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<td>10</td>
<td>Australia</td>
<td>82.07</td>
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</table>
Prevalence of falls in the elderly

• Approximately 28-35% of people aged of 65 and over fall each year. (WHO, 2007)

• Prevalence of community elderly falls in Hong Kong was 19% and the mean number of falls per faller was 1.4. (Chu et al, 2007)

• 9.9% of falls resulted in bone fractures and 31.3% resulted in soft tissue injuries. (Chu et al, 1999)
Risk Factor Model for Falls in Older Age

- Behavioural risk factors
- Biological risk factors
- Environmental risk factors
- Socioeconomic risk factors

Falls and fall-related injuries

WHO Global report on falls prevention in older age, 2007
Occupational Therapy Model of Practice
Person Environment Occupation Occupation (PEO) Model
Law et al, 1996
Home Visit by an Occupational Therapist (OT)

1. Assessment of the person’s functional abilities
2. Daily Life Routine
3. Home Safety Assessment
4. Occupational Performance
5. Fall risk behaviour identification

OT Intervention

- Environmental Modification
- Skills Training
- Behavioural Change

Better fit
Elderly Fall

Source: Findings from a recent RCT study on using OT home visit to reduce falls in community elderly in Hong Kong.
Location of Fall

- Indoor: 52%
- Outdoor: 48%
Top Five Environmental Fall Risks at home

1. Inadequate lightning
2. Obstacles in the passage way
3. Loose carpets or rugs
4. Slippery floor
5. Bathroom hazards

Source: Findings from a recent RCT study on using OT home visit to reduce falls in community elderly in Hong Kong.
Home Environmental Challenges for the Aged

- Lighting
- Obstacles in the passageway
- Loose rugs/cloth/electric cord
- Difference in floor level
- Threshold (height and width)
- Inadequate Colour Contrast
- Toilet Door
- Layout – difficult to access
Home Environmental Challenges for the Aged

• Lighting

No lighting inside toilet
Home Environmental Challenges for the Aged

• Difference in floor level:

Inside threshold height difference = 0.9 cm

Outside threshold height difference = 5.8 cm.
Home Environmental Challenges for the Aged

• Threshold (height and width)
Home Environmental Challenges for the Aged

- Inadequate Colour Contrast

  Improve Colour contrast
Home Environmental Challenges for the Aged

• Layout – difficult to access
Risky behaviour
Population by Age Group

- Age 0 to 14
- Age 15 to 64
- Age 65 and above

<table>
<thead>
<tr>
<th>Year</th>
<th>Age 0 to 14</th>
<th>Age 15 to 64</th>
<th>Age 65 and above</th>
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<tbody>
<tr>
<td>2012</td>
<td>74.90%</td>
<td>13.70%</td>
<td>11.40%</td>
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<td>2022</td>
<td>68.80%</td>
<td>19.70%</td>
<td>11.50%</td>
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<td>2032</td>
<td>63%</td>
<td>26.90%</td>
<td>10.10%</td>
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<td>2041</td>
<td>60.80%</td>
<td>30.20%</td>
<td>9%</td>
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Source: 2013-14 Budget Speech
Risk Factor Model for Falls in Older Age

WHO Global report on falls prevention in older age, 2007
Reducing Environmental risk factors

• Housing design - Flexible to accommodate changing care needs
Accommodation and Prevention

Universal Design

A CHECKLIST FOR PREVENTING FALLS IN YOUR HOME

Stairways
- Make sure all handrails are not broken and are securely fastened.
- Both sides of the steps should have handrails.

Floors and rugs
- Make sure all floorboards are even and rugs, including area rugs, are secured to the floor with tacks, non-slip pads or double-sided tape.
- Use non-slip floor wax.

Bathroom
- Be sure that you can move safely in bathroom area, and in and out of the tub or shower.
- Remove soap build up in tub or shower on a regular basis.
- Place non-slip strips in bath/showers.
- Install adjustable height shower heads.
- Mount grab bars at the toilet, bath and shower on walls with secure reinforcements, to prevent the bars from coming loose.
- Secure bath mats with non-slip, double-sided rug tape.

Kitchen
- Items that you use frequently, such as dishes and food items, should be easy to reach.
- If you have to use a step stool, make sure that it has a bar at the top to hold on to.

Lighting
- Place nightlights in hallways, bedrooms, bathrooms and stairways.
- Install light switches at the top and bottom of stairs.
- Place a lamp (and telephone) near your bed.
- Keep lighting uniform in each room and add lighting to dark spaces.

http://www.elderage.gov/
Thank You