Promote physical activity and reduce ageism across generations: effects of an intergenerational program

Alexandre Mouton, Corentin Heldenbergh, Allison Flamion, Stéphane Adam & Marc Cloes

June 9, 2016
Being active...a forgotten need

A major decline in physical activity across generations...

Morris (2013)
Designedtomove.org
...that leads to a dangerous intergenerational cycle

Morris (2013)
Designedtomove.org
Small effort, great gains

65-year-old man:
- Chance of dying that year is **2.4%**
- 150 minutes of exercise a week reduces risk to **2.1%**
- 300 minutes of exercise a week reduces risk to **1.8%**

65-year-old woman:
- Chance of dying that year is **1.5%**
- 150 minutes of exercise a week reduces risk to **1.3%**
- 300 minutes of exercise a week reduces risk to **1.1%**

*Harvard Medical School (2014)*
Small effort, great gains

Kahn (2012)
Recommendations for older adults

Recommendations for kids

Innovative interventions are required to help older adults increase and maintain healthy levels of PA (Flora & Faulkner, 2007)

Emerging approaches targeting specific intergenerational dyads, such as grandparent-grandchild pairs, are recommended (Marcus et al., 2006)

First results of family-based interventions to increase PA are promising (Brown et al., 2016)
Intergenerational interactions could also combat aging stereotypes across generations (Ory et al., 2003)

To date, research in the field is weak (Mouton, Henrioulle & Cloes, 2014)

Ageism = stereotyping and discriminating individuals or groups on the basis of their age

Examine the effects of an intergenerational PA program on PA behaviours and aging stereotypes of grandparent-grandchild pairs
Methods
Recruitment

✓ Intergenerational grandparent-grandchild pairs were recruited in two Belgian municipalities

No significant differences between groups before the intervention

Combined groups for the results

✓ Grandparents should be autonomous and older than 50
✓ Grandchild should be in primary (elementary) school (5-12)
2 Program development

✓ Adapted from a previous intervention (Mouton, Renier & Cloes, 2015)

✓ One weekly session of PA (1h) right after school during 12 weeks
### 3. Assessment tools

#### Before (T0) & after (T1) intervention

<table>
<thead>
<tr>
<th>Assessment tools</th>
<th>T0</th>
<th>T1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociodemographics</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Representations about old/young people (5 words each)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Network of Relations Inventory – NRI (21 likert scale items)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Grandchild-granparent relationship quality (37 diverse items)</td>
<td>X</td>
<td>X</td>
</tr>
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<td>Fraboni ageism scale (23 likert scale items)</td>
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</tr>
<tr>
<td>UCLA Loneliness scale (17 likert scale items)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Senior Fitness Test (7 physical tests for balance, strength, flexibility and endurance)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Child well-being (7 likert scale items with smiley icons)</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

*After each session: satisfaction questionnaire (10 likert scale items with smiley icons)*

*References for the tests are mentioned in the bibliography*
Assessment tools

*References for the tests are mentioned in the bibliography*
Results
1. Grandparent-Grandchild Relations

✓ Direct relation or phone call on a regular basis
Grandparent-Grandchild Relations

- Mostly play or take a walk when they meet, but rarely play sport
1. Grandparent-Grandchild Relations

- Used to eat and speak together regularly, but also watching TV

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Each time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take a meal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speak together</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching TV</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Speak about childhood:
- Never: 20%
- Sometimes: 50%
- Often: 20%
- Each time: 10%

Cinema:
- Never: 30%
- Sometimes: 40%
- Often: 20%
- Each time: 10%

Crafts (DIY):
- Never: 10%
- Sometimes: 40%
- Often: 50%
- Each time: 10%

Read stories:
- Never: 15%
- Sometimes: 45%
- Often: 30%
- Each time: 10%

Listening to music:
- Never: 10%
- Sometimes: 40%
- Often: 45%
- Each time: 5%
Grandparent-Grandchild Relations

- High levels of feelings, closeness and satisfaction with the relation

![Graph showing feelings about GP/GC, relation satisfaction, perceived closeness, and dialogue satisfaction with percentages for each category.]

- Very high
- Rather high
- Moderately
- Rather low
- Very low
2

Pre-Post intervention analysis

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</tr>
</tbody>
</table>

No significant differences!
Pre-Post intervention analysis

Ageism*

Perceived by Pre-Post intervention analysis

-0.41 ± 1.77

0.49 ± 1.74

2.02 ± 1.44

2.25 ± 0.59

* -5 to +5 scale
Satisfaction with the intervention

✓ High levels of satisfaction, low perceived difficulty level

Most-liked session (n°9, 4.78/5): Music, expression, dance and sing

Least-liked session (n°5; 4.32/5): Mime Game – Painter and Sculptor

Karageorghis & Priest, 2012
Conclusions
- Quality of the Grandparent-Grandchild relationship was already high at baseline
  - The intervention supported those good relations, but didn’t improve it significantly
- Senior physical activity level high at baseline (mean = 2812 MET-min/semaine)
  - Volunteer bias: people already concerned about PA
- Participants were highly satisfied about the intervention, but perceived difficulty level was low
  - Increase difficulty level in order to observe significant physical improvements
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References


Diplôme du senior actif

Décerné avec succès à Gerhard Mentmal

Félicitations pour les progrès réalisés!

Les entraîneurs vous remercient pour votre implication et espèrent que vous continuerez à être actif!

Bonne continuation!

Fait à Tilff, le 17/12/2015
M. Cloes

<table>
<thead>
<tr>
<th>Tests</th>
<th>Pré Bouger +</th>
<th>Post Bouger +</th>
<th>Gain de vie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force des jambes</td>
<td>14 Répétitions</td>
<td>14 Répétitions</td>
<td></td>
</tr>
<tr>
<td>Force des bras</td>
<td>17 Répétitions</td>
<td>20 Répétitions</td>
<td>2 ans</td>
</tr>
<tr>
<td>Souplesse des jambes</td>
<td>+16 Cm</td>
<td>-4 Cm</td>
<td>5 ans</td>
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<tr>
<td>Souplesse des bras</td>
<td>-2 Cm</td>
<td>-3 Cm</td>
<td>2 ans</td>
</tr>
<tr>
<td>Agilité</td>
<td>6”00</td>
<td>5”26</td>
<td>2 ans</td>
</tr>
<tr>
<td>Equilibre</td>
<td>5-15 secondes</td>
<td>&gt;15 secondes</td>
<td>2 ans</td>
</tr>
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