Why We Should Care about Older Adults Susceptibility to Phishing

Daniela Oliveira
Population Distribution by Age
1950

http://www.calculatedriskblog.com/

Census Bureau
actual through 2010; projections through 2050
Cognitive change across adulthood

Agarwal et al., 2009; Samanez-Larkin & Knutson, 2015
Authority
Scarcity
Commitment/Consistency
Liking
Reciprocation
Social Proof
## Participants - 158

<table>
<thead>
<tr>
<th></th>
<th>Young Participants</th>
<th>Older Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td>99</td>
<td>59</td>
</tr>
<tr>
<td><strong>% female</strong></td>
<td>55.6</td>
<td>44.1</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>21.57 (3.80)</td>
<td>70.98 (8.30)</td>
</tr>
<tr>
<td><strong>Years of Education</strong></td>
<td>14.24 (3.57)</td>
<td>16.30 (2.79)</td>
</tr>
<tr>
<td><strong>Hrs of Exercise per week</strong></td>
<td>5.40 (3.43)</td>
<td>8.84 (10.50)</td>
</tr>
<tr>
<td><strong>Physical Health</strong></td>
<td>7.72 (1.54)</td>
<td>7.53 (1.97)</td>
</tr>
<tr>
<td><strong>Mental Health</strong></td>
<td>8.00 (1.52)</td>
<td>8.57 (1.50)</td>
</tr>
<tr>
<td><strong>Hrs on Internet per week</strong></td>
<td>7.35 (2.90)</td>
<td>7.09 (2.98)</td>
</tr>
</tbody>
</table>

Note. **Bold** indicates significant age differences at $p < .05$. 
Day 1
- Home
- Lab server continuously

Day 2
- Tracking extension

Day 21

Log manager

Phishing manager

Logs

DB

(1) (2) (3)
Dear Daniela,

Our resources have indicated that you have a parking violation from 12/17/2015 at SW 89th Avenue, in Gainesville FL at 3:34pm. Please go to our website to obtain more information about the violation and to pay your fine or refute your ticket: <link omitted>

Sincerely,

Susan Smith
Alachua County Traffic Correspondence
2345 Main Street
Gainesville, FL
352 344 5656

Authority + Legal
Older adults more susceptible than younger adults into falling for a phishing email

Huge effect for older women: the most susceptible group

\( p < 0.001 \)
Age x Gender Effect

Note. Age x sex: $B = 1.10$, $z = 2.30$, $p = .02$
Note. Age x sex: $B = 1.10$, $z = 2.30$, $p = .02$
Weapon of Influence x Susceptibility

Click on Email Link (Predicted Probability)

- Scarcity
- Authority
- Perceptual Contrast
- Reciprocation
- Liking
- Commitment
- Social Proof

- Young Participants
- Older Participants
Life Domains x Susceptibility

Click on Email Link (Predicted Probability)

- Legal
- Ideological
- Health
- Social
- Security
- Financial

- Young Participants
- Older Participants
Low Susceptibility Awareness, Particularly Among Older Users and Those with Lower Cognitive Status

How likely would you click on the link in this email?

Note. Age main effect: $p = .08$

Note. Delayed Memory Recall: $B = .163$, $R^2 = .317$, $p = .002$

Oliveira, Ebner, et al., 2017, CHI
ONE SIZE DOES NOT FIT ALL
Deception
Thank you!

daniela@ece.ufl.edu