Acknowledgements

- We would like to thank:
  - Lee Honors College
  - Mary Ann Stark, Ph.D, RNC
  - Debra Lindstrom, Ph.D
  - Kelly Broadd, BSN, RN
  - All of those who participated in our study

Background

- WHO\(^1\) recommends 150 minutes of moderately intense physical activity per week
- Physical activity may reduce:
  - the risk of Type II diabetes
  - cardiovascular disease
  - some cancers

\(^1\) Physical activity, (2012)

Background cont.

- Racette, Deusinger, Strube, Highstein and Deusinger (2005) conducted a two-year study of college students and found considerable weight gain in the first two years of college
- Weight gain caused by:
  - Physical inactivity
  - Not consuming enough fruits and vegetables
  - Over consumption of fast and fried foods

Background for Health Profession Students

- Risk for physical inactivity due to\(^2\):
  - Academic time constraints
  - Lack of sleep
  - Social pressures
  - Unhealthy college lifestyle\(^3\):
    - Lack of regular exercise
    - Alcohol and tobacco use
    - Poor eating patterns

\(^2\) Comer et al (2002)
\(^3\) paper (2012)

Review of the Literature

- Link between depression and physical inactivity\(^4\)
- Use of pedometers\(^5\)
- Use of cell phones for increasing physical activity\(^6\):
  - Availability
  - Text messages to improve physical activity

\(^4\) Most et al (2012)
\(^5\) Most et al (2008)
\(^6\) Most et al (2012)
Pender's Health Promotion Model

Research Question

- Is there a difference between those who received (intervention group) and those who did not receive (control group) affective messages in the number of daily steps?

Study Design

- Quasi experimental
- Intervention group
- Control group
- Convenience sample

Procedure

- HSIRB approval
- Students recruited via email and booth in the CHHS atrium
- Completed demographics questionnaire
- Both groups received a text message at 9pm daily
- Intervention group received a text at 4pm daily
- "Increasing your number of steps can make you feel more energized!"

Sample

- 134 students from the College of Health and Human Services (CHHS)
- Inclusion Criteria:
  - Enrolled in at least one course in CHHS
  - Able to read, write, understand English
  - Have a cell phone with texting capability
- Exclusion Criteria:
  - Known physical disability that limits mobility
  - Faculty or staff status at CHHS

Sample Demographics

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Males 26.1</th>
<th>Females 38.9</th>
<th>Undergrad 77</th>
<th>Nursing 74</th>
<th>MA 22.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>(SD = 9.2)</td>
<td>(SD = 2.1)</td>
<td>(SD = 68.9)</td>
<td>(SD = 66.1)</td>
<td>(SD = 4.9)</td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergrad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Major</th>
<th>Gender</th>
<th>Grade</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Male</td>
<td>55</td>
<td>Caucasian</td>
</tr>
<tr>
<td>30</td>
<td>Female</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Female</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>
Results

- Treatment and control groups were similar when the study started (Time 1).
- N=112
- Paired t tests compared Time 1 steps with all other days. There were no statistical differences in either group.

Results (continued)

- Most of the sample thought they did not get enough exercise (n=69, 61.2%)

More than 10,000 Steps/ Day

<table>
<thead>
<tr>
<th>Day</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>29</td>
</tr>
<tr>
<td>Two</td>
<td>29</td>
</tr>
<tr>
<td>Three</td>
<td>17</td>
</tr>
<tr>
<td>Four</td>
<td>10</td>
</tr>
<tr>
<td>Five</td>
<td>16</td>
</tr>
<tr>
<td>Six</td>
<td>19</td>
</tr>
<tr>
<td>Seven</td>
<td>13</td>
</tr>
<tr>
<td>Eight</td>
<td>19</td>
</tr>
<tr>
<td>Nine</td>
<td>17</td>
</tr>
<tr>
<td>Ten</td>
<td>23</td>
</tr>
<tr>
<td>Eleven</td>
<td>8</td>
</tr>
<tr>
<td>Twelve</td>
<td>14</td>
</tr>
<tr>
<td>Thirteen</td>
<td>12</td>
</tr>
<tr>
<td>Fourteen</td>
<td>10</td>
</tr>
</tbody>
</table>

Discussion

- Results did not support those of Sirrieh, Lawton, and Ward (2010)
- Although we used the same time frame and similar affective text messages, their results were not replicated.

Discussion

- Limitations:
  - Low-quality pedometers
  - Winter season
  - Length of study was not long enough
  - Little pretest data
Conclusion

- Use of mobile devices for reporting data may be useful for simple data, such as reporting of daily steps.
- Pedometers should be carefully tested in order to ensure precision and accuracy.
- Although our findings did not show statistical significance, further research should be done.
- We saw enthusiasm and positive attitudes.

References


Questions??

- Does anyone have any questions?