Systematic review of digital interventions for improving the diet and physical activity behaviours of adolescents

Taylor Rose
Lifecourse Epidemiology Unit
1 December 2016
Rationale

Adolescents

- Poor diets
- Not enough physical activity
- Key developmental stage
- Pre-conception population

Digital interventions

- Inexpensive and wide-reaching
- Numerous and constantly evolving
- Limited consensus about effectiveness
Methods

How can digital interventions be used to improve quality of diet and increase physical activity in adolescents, and which intervention features are associated with effectiveness?

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Participants aged 10-19</td>
<td>• Observational studies</td>
</tr>
<tr>
<td>• Studies with and without a control group</td>
<td>• Papers published in a language other than English</td>
</tr>
<tr>
<td>• Digital interventions including smartphone applications, websites, text messaging, social media, email and PDA use</td>
<td></td>
</tr>
<tr>
<td>• Studies that measure a diet or PA outcome at two or more time points</td>
<td></td>
</tr>
</tbody>
</table>
Results

Digital platforms
- Websites (n=15)
- Text messages (n=4)
- Games (n=3)
- Multi-component school-based (n=3)
- Email (n=1)
- Social media (n=1)

Overall effectiveness
- Diet:
  - 3 improvement
  - 5 inconclusive
  - 3 no change
- Physical activity:
  - 5 improvement
  - 6 inconclusive
  - 3 no change

Features of effective interventions
- Diet or physical activity education
- Goal-setting
- Self-monitoring
- Parental involvement
Conclusions

- Digital interventions can improve diet and physical activity in adolescents
- Interventions should include health education, goal-setting, self monitoring and parental involvement
- Most evidence relates to websites
- More studies of apps and other forms of digital intervention are needed
Acknowledgements

Janis Baird
Mary Barker
Chandni Jacob
Leanne Morrison
Tom Baranowski
Wendy Lawrence

Sofia Strömmer
Christina Vogel
Kathryn Woods-Townsend
Hazel Inskip
Cyrus Cooper

Funding: Danone Nutricia
Early Life Nutrition
Included studies (1)


Included studies (2)


