Designing a diabetes mobile application with social network support

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«diabetes» OR «glucose»

- Spring 2009: 60
- Spring 2011: 260
- Autumn 2011: 338
- Summer 2013: 650
Alerts/reminders
PHR/portals
Education
Social Media
Blood Pressure
Physical Activity
Weight Mgmt.
Diet Mgmt.
Insulin/meds
Communication
Introduction

3 Fat Chicks on a Diet Weight Loss Community Statistics

Threads: 223,550, Posts: 3,911,059, Members: 140,693
Welcome to our newest member, mommy5
FewTouch Design

Overview

- Self-monitoring
- Simplicity
- Convenience
- Attractiveness
- Tailoring
- Social facilitation
- Social comparison
- Normative influence
- Competition
- Cooperation
FewTouch Design

Core Features + Social Features
Pilot Testing Endpoints

Inclusion: Type 2 Diabetes, Aged 46 - 70

Usability
Health
Self-efficacy
# Pilot Testing Results

<table>
<thead>
<tr>
<th></th>
<th>HbA$_1^c$</th>
<th>SUS</th>
<th>HeiQ</th>
<th>DES-SF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baseline</strong></td>
<td>6.97</td>
<td>-</td>
<td>2.96</td>
<td>4.14</td>
</tr>
<tr>
<td></td>
<td>$\sigma = 0.69$</td>
<td></td>
<td>$\sigma = 0.27$</td>
<td>$\sigma = 0.62$</td>
</tr>
<tr>
<td><strong>Follow-up</strong></td>
<td>6.79</td>
<td>84.6</td>
<td>3.10</td>
<td>4.57</td>
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<tr>
<td></td>
<td>$\sigma = 0.68$</td>
<td>$\sigma = 13.2$</td>
<td>$\sigma = 0.23$</td>
<td>$\sigma = 0.21$</td>
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</table>
Pilot Testing Results

<table>
<thead>
<tr>
<th>Gender</th>
<th>Tau (2-sided p)</th>
<th>Baseline to follow up HbA₁c change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Female</td>
<td>−0.156 (0.000)</td>
<td></td>
</tr>
<tr>
<td>2 Female</td>
<td>−0.058 (0.357)</td>
<td></td>
</tr>
<tr>
<td>3 Female</td>
<td>−0.031 (0.676)</td>
<td></td>
</tr>
<tr>
<td>4 Male</td>
<td>−0.077 (0.030)</td>
<td></td>
</tr>
<tr>
<td>5 Female</td>
<td>−0.027 (0.572)</td>
<td></td>
</tr>
<tr>
<td>6 Male</td>
<td>−0.037 (0.342)</td>
<td></td>
</tr>
<tr>
<td>7 Male</td>
<td>−0.146 (0.001)</td>
<td></td>
</tr>
</tbody>
</table>
Conclusion

Self-monitoring & Convenience
- And other persuasion techniques are essential

Social Media
- Backed by physical meetings were meaningful bonds are established

Limitations
- Study is not powered
- IT interventions are complex
Thank You!

okay, marlon...
...this Twitter thing has gone far enough.

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