Engagement in digital health interventions for prevention

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Behavior change challenges

- When effective, most communication/marketing interventions have small effects (Snyder et al, 2013)
  - But if we reach scale, large population effects
- Implementation failures are a common cause of ineffectiveness (Hornik, 2002)
- Low dosage is another (Jacobsohn & Hornik, 2008)
- Complexity, high level of required effort, inadequate connection with participants leads to low engagement
- Increasing engagement for easy and rewarding participation can increase program effects (Evans, 2016)
Engagement

- Connectivity between program and participant
- To maximize engagement, need multiple points of contact between program and participant
- Build interest, realism, and identification
- Increase brand equity (positive associations with program attributes and identity)
- Engagement is key to behavior change interventions, often neglected in fields like public health
Commercial digital engagement
Adelante Digital

- **Adelante program** (NIMHD grant 1P20MD006898-01)
- Community-based program to prevent and control substance use, violence, sexual risk behaviors
- **Adelante** employed branding to build program identity
- Branding offers an approach to address multiple behaviors through a lifestyle focus
- **Purpose:** Create a brand to reduce Latino youth co-occurring substance use, HIV/STI, and violence risks
Adelante brand: Turning the Corner
Innovative engagement: branding, social media, communications
• Adelante branding

• Promote Positive Youth Development (PYD)

• Engaging digital prevention messages

• Social media advocacy

• Victor & Erika Webnovela
Themes:

1) Adelante is...
2) Live Your Dream
3) Adelante is about Choices
4) Be Part of Something Bigger

Victor & Erika disseminated via Youtube channel

https://www.youtube.com/user/ADELANTELP
### Social Media Coding Scheme

- **Phase 1**, student interns reviewed all FB posts
- **Phase 2**, investigators did detailed content analysis

<table>
<thead>
<tr>
<th>Phase 1</th>
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<tbody>
<tr>
<td><strong>Content</strong></td>
<td>Text only, photo, video, link to external content</td>
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<tr>
<td><strong>Language</strong></td>
<td>English, Spanish, bilingual</td>
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<tr>
<td><strong>Post Tone</strong></td>
<td>Positive, negative, neutral</td>
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<tr>
<td><strong>Purpose of Post</strong></td>
<td>Sharing program activity, health promotion, contest, campaign messaging, etc.</td>
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<tr>
<td><strong>Campaign Theme</strong></td>
<td>Adelante is, Choices, Live your dream, Be part of something bigger, no theme</td>
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<thead>
<tr>
<th>Phase 2</th>
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<tr>
<td><strong>Health Topic</strong></td>
<td>Sexual health; Violence; Substance Use; Mental health</td>
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<tr>
<td><strong>PYD Construct</strong></td>
<td>Confidence; Contribution (attitudes/action); Competence (athletics, civic action, school, family, multicultural efficacy); Connection (romantic partner, community, social/cultural, school, friends/peers, family)</td>
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<tr>
<td><strong>People Portrayed</strong></td>
<td>Individuals/groups; Gender (male, female, mixed male/female); Adults/youth</td>
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<tr>
<td><strong>Communication Strategy</strong></td>
<td>Use of statistics; testimonial; News/documentary format; Use of humor</td>
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Adelante digital media outcomes

- To what extent is engagement associated with outcomes?
- Engagement:
  - 247,212 reached by all posts
  - 44,488 total engagement (like, click, share, comment)
- Post Engagement Rate: Divide Post Engagement value by total reach per post – Measure of population effect
- ANOVA: Post engagement rate associated with multiple program outcomes, including PYDs:
  - Competence (positive sense of self) \((F 1.486, p < .001)\)
  - Contribution (to community) \((F 1.553, p < .001)\)
Thank you!

- Digital tools engage youth and are a promising substance use prevention strategy
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