Social Media for Health: Utilizing Instagram to Improve Eating Habits of Overweight and Obese Adolescents

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BACKGROUND

Adolescent Health & Diet
- Health behaviors developed during adolescence often persist into adulthood (AAP, 2003; Badawy & Kuhns, 2016; De Winters et al., 2011)
- 63% consume sugar sweetened beverages (SSB) daily (Centers for Disease Control and Prevention [CDC], 2017)
- Only 0.9% meet dietary recommendations for fruit & vegetable (FV) consumption (Kimmons et al., 2009; Vereeneken et al., 2015)
- Obesity results from poor dietary behaviors → increased healthcare costs (American Academy of Pediatrics [AAP], 2003; Kinge & Morris, 2017; Waters et al., 2011; WHO, 2017)

Social Media Benefits
- Average social media viewing among adolescents - 71 min/day (Clark, Raphael, & McGuire, 2018)
- Means to promote healthy eating by exploring recipes, food pictures, and cooking videos (Holmberg, Berg, Dahlygen, Lissner, & Chaplin, 2018; Nour, Rouf, & Alman-Fannelli, 2017)
- Effective for communicating & eliciting behavior change - Preventive counseling (Yonker et al., 2015)
- Decreasing risky behaviors (Yonker et al., 2015)
- Increased FV consumption in young adults (Coccia, Fernandes, & Altiti, 2018; Helm & Jones, 2016)

METHODS

Recruitment: Adolescent Health & Endocrine Clinic, Children’s Hospital of Pittsburgh of UPMC, PITT+Me research website
- Sample: Adolescents (n=30)
  - Eligibility: 14-18 years of age; BMI ≥85th percentile
  - Exclusion: enrollment in weight loss program; eating disorders
  - Study Design: Descriptive, mixed method

Measures
- Part 1: Focus Survey
  - Part 2: BEVQ-15; 2-item SERVINGS FVS
- Fruit & Vegetable Inventory form

PURPOSE

- Determine adolescents’ preferences for a social media intervention and delivery of content related to healthy eating.
- Implement a tailored Instagram-based social media intervention followed by evaluation of FV and SSB intake and motivation to engage in healthy dietary behaviors in adolescents.

HEALTH BELIEF MODEL (HBM)

Increased Knowledge:
- MyPlate resources (2012)
  - Meal budget
  - Recipes
  - Health benefits
  - FV consumption

Cue to Action:
- Social Media Platform Intervention: Instagram

Perceived Benefits:
- Immediate health benefits (Yonker, Badawy, & Allman-Farinelli, 2017)
- Decreased SSB intake

Perceived Barriers:
- Time & effort to prepare vegetables
- Unpleasant taste

INSTAGRAM PROGRAM: foods4your_health

- Phase 1: Program Development Qualtrics Survey (n=5)
  - 9 multiple choice; 1 free response question
- Survey results/preferences identified:
  - Timing: Postings twice weekly prior to school
  - Design: Image/Picture with text
  - Content: Easy & cheap recipes, FV vitamins & nutrients, & making FV appealing

- Phase 2: 4-week Instagram Program (n=19)
  - Content themes:
    - Week 1: FV basics & health benefits
    - Week 2: Purchasing & integrating FV in meals
    - Week 3: Adding FV & decreasing SSB intake
    - Week 4: Healthy Snacking & Recipes

RESULTS

- Instagram followers: n=27
  - study n=17; non-study n=12; unfollowed n=2
- Engagement: 37 total posts
  - 112 total likes; 3.02 likes/post
  - 0 shares; 0 comments

DISCUSSION

- Most adolescents reported a lower intake of F/V & ½ reported increased SSB consumption on post examination
- Were teens overestimating baseline consumption?
- Did the knowledge gained result in more accurate reporting on post survey?
- Despite low intake, most adolescents are “trying” to eat more F/V

Limits:
- Short duration
- Small sample
- Instagram program – followers may not view all posts
- Twice weekly posting

The authors have no conflicts of interest.

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W-16: Social Media for Health: Utilizing Instagram to Improve Eating Habits of Overweight and Obese Adolescents

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Background: Few adolescents (0.9%) consume the recommended amounts of fruits and vegetables (FV) and many children (63%) consume sugar-sweetened beverages (SSB) daily, with the highest intake reported in adolescents. Such behaviors increase adolescents’ risk for obesity and related comorbidities. Social media provides an effective means to support healthy behavior change by providing health information. Yet, few studies evaluate the effects of social media on adolescent health behaviors such as healthy eating related to FV and SSB. Guided by the Health Belief Model, the overall purpose of this 2-phase pilot project is to increase FV and decrease SSB consumption for overweight and obese adolescents (14-18-years-old) via the following aims: 1) determine preference for social media format and delivery of content, and 2) implement a tailored social media intervention followed by evaluation of FV and SSB intake and motivation to engage in healthy dietary practices.

Methods: This 2-phase pilot pre- and post- social media intervention enrolled adolescents, 14-18-years-old, with a BMI ≥85th percentile through two urban pediatric clinics and a research website. Phase 1 informed the social media intervention through a web-based qualitative survey. Phase 2, the social media intervention, included posting MyPlate content to the social media account, Instagram, over a 4-week timeframe. Pre- and post-intervention Qualtrics surveys were used to gather data on FV and SSB intake, and motivation to engage in healthy eating behaviors. Data collection measures included: 2 item SERVING tool (r=.70), BEVQ-15 tool (α=.994), and Fruit and Vegetable Inventory tool (r=.74).

Results: Phase 1 adolescents (N=5) preferred twice weekly media postings before school using both a text and picture format. The resulting Instagram account currently has 27 followers with 17 being study participants. Instagram posts (n=37) generated 112 likes, with an average of 3.02 likes per post. Adolescents did not share or comment on posts. Despite engagement only 7 of the 19 enrolled adolescents completed post-surveys. These adolescents reported decreased (n=3) or unchanged (n=2) F/V consumption. Half of the adolescents reported increased intake of SSBs. Assessment of motivation pre-intervention revealed a majority of adolescents were “trying” to eat more fruits (42%) and vegetables (37%) with post intervention revealing an increase in “trying” to eat more fruits (57%) and vegetables (43%). Pre-intervention one quarter of the adolescents were “not thinking” about eating fruits (n=2; 11%) and vegetables (n=3; 16%); post-intervention all were thinking about eating fruits and vegetables.

Discussion/Conclusion: Implementing social media interventions have been effective in promoting behavior change and improving health for young adults and adolescents. Yet, preliminary findings from this study demonstrated that adolescents consumed less F/V and more SSB post-intervention, Explanations include: 1) baseline self-report measures may have been overestimations; and 2) raised awareness of dietary habits or knowledge gained from postings may have resulted in more accurate post-intervention consumption levels. Despite the lower reported F/V intake, the majority of adolescents were trying to consume more F/V. Our mixed results highlight the need to continue exploring social media or other means to effectively communicate with adolescents to promote healthy dietary practices, leading to future health and wellbeing.

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