Introduction: High intake of sugar sweetened beverages and low intake of fresh fruits and vegetables is a persistent problem contributing to overweight and obesity in adolescents. Communicating the importance of obtaining and maintaining healthy habits with adolescents remains a challenge in healthcare. Social media may be the answer to enhance communication with this population as it is not only popular, but it has been found to be effective in changing health behaviors in young adults and adolescents. The purpose of this project is to 1) explore adolescent preferences regarding delivery of content on a social media platform and 2) tailor and implement a social media intervention using Instagram to help increase healthy dietary behaviors in adolescents.

Background: Poor dietary practices hold negative implications for health, contributing to obesity and the secondary development of many chronic conditions including cardiovascular risk, diabetes, musculoskeletal problems, and some cancers (American Academy of Pediatrics [AAP], 2003; Kinge & Morris, 2017). Frequent sugar sweetened beverage (SSB) and low fruit and vegetable (FV) consumption have been identified as contributing factors to the dramatically increasing rates of obesity observed worldwide (Centers for Disease Control and Prevention [CDC], 2017; Kimmons, Gillespie, Symour, Serdure, & Blanck, 2009; Waters et al., 2011; World Health Organization [WHO], 2017). The Centers for Disease Control and Prevention (CDC, 2017) reports that approximately 63% of youth consume sugar sweetened beverages (SSB) daily, with the highest intake reported in adolescents. In addition, the majority of adolescents fail to consume FV in the amounts recommended by established dietary guidelines (Vereeken et al., 2015), with one study reporting only 0.9% of adolescents meeting recommendations (Kimmons et al., 2009). Therefore, adolescence is a critical period for education and interventions aimed at addressing health behavior (AAP, 2003; Badawy & Kuhns, 2016; De Winter et al., 2016).

Social media has been identified as a means to support behavior change and its use has increased dramatically among adolescents in the United States (Clark, Raphael, & McGuire, 2018; Coccia, Fernandez, & Altiti, 2018; Helm & Jones, 2016). Social media is an effective method of communication with adolescents and may facilitate delivery of health information such as dietary practice materials (Yonker et al., 2015). Preventative counseling messages through social media has resulted in behavioral changes as evidenced by adolescents displaying less risky behaviors (Yonker et al., 2015). Increased nutritional knowledge and FV consumption in young adult’s post implementation of a six-week social media based intervention further support this mechanism for healthy behavior change (Coccia et al., 2018; Helm & Jones, 2016). Moreover, the effects of social media to induce behavior change resulted in a significant increase of FV intake by one cup in young adults compared to control (p<0.001) (Nour, Yeung, Prtridge, & Allman-Farinelli, 2017). Consequently, social media could become a successful method for health providers to connect with adolescents in communicating important health messages.

Theoretical Model: Principles from the health belief model (HBM) are foundational in guiding the development of a social media intervention to promote healthy dietary behaviors in adolescents and include motivating factors, perceived barriers, and cues to action. Motivating factors such as the adolescent’s knowledge, perception of susceptibility to adverse consequences, perceived benefits and attention to perceived barriers can lead to healthier dietary choices. Perception is a critical component of the HBM as accurate perceptions of weight have been demonstrated to increase engagement in positive health behaviors (Cai et al., 2017). Cues to action, can include a variety of factors such as: life events, people, media campaigns, or illness in a personal acquaintance. Given the extent that adolescents utilize
social media for communication and exploring information related to healthy eating habits, provider utilization of a social media intervention to communicate information pertaining to diet is a possible means to cue action with adolescents (Holmberg, Berg, Dahlgren, Lissner, & Chaplin, 2018; Singh, Wilkinson, & Braganza, 2014).

Methods: A social media intervention is being developed utilizing Instagram as a means of communication to capture the attention of adolescents and meet their learning needs. Over an 8-week period, overweight and obese adolescents aged 14- to 18-years-old from a primary care adolescent clinic will see posts from the primary investigator to the social media account, Instagram, in a format and frequency based on the feedback of data obtained from focused qualitative surveys. Content utilized to develop the Instagram post will be obtained from MyPlate, developed by the United States Department of Agriculture (USDA), and provides a myriad of reputable resources for families to foster healthier eating styles. In addition, a large portion of this content is pre-designed for utilization on a social media platform (USDA, 2017). Content found on the site contains tools targeted at addressing perceived barriers and benefits to healthy dietary practices such as FV consumption in youth, thus fulfilling principles of the HBM and aims of this project. The number of likes, shares, and comments will be tracked. The proposed outcomes of the study are to 1) increase FV consumption as evidenced by increasing 1 serving from baseline to follow up as measured by the 2 item SERVING tool (r=.70) (Yaroch et al., 2012); 2) decreased consumption of SSB as evidenced by decreasing intake by 1 cup as measured by the BEVQ-15 tool (α=.994) (Hedrick et al., 2012); 3) Increase adolescent motivation and readiness to engage in healthy eating habits as measured by improved self-reported perceived benefits and readiness to eat FV on the Fruit and Vegetable Inventory tool (r=.74) (Townsend & Kraiser, 2005). Data collection for the proposed project will begin once IRB approval is confirmed.

Implications: Implementing a social media intervention limiting SSB and increasing FV consumption may assist adolescents in maintaining a healthy weight and lowering risk for chronic disease by addressing this important issue through a comfortable venue (CDC, 2017; Kimmons et al., 2009). Using social media to address healthy behaviors in adolescents is proposed to set them up for continued healthy choices into their adult years. This social media intervention will provide health care providers with a well-received mechanism to guide adolescents toward healthier diet choices, potentially leading to future health and wellbeing.

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

Keywords:
Adolescents, Dietary Practices and Social Media

References:


Abstract Summary:
Social media is an effective tool to promote healthy patient behaviors. The purpose of this project is to 1) explore adolescent preferences regarding delivery of content on a social media platform and 2) tailor and implement a social media intervention using Instagram to help increase healthy dietary behaviors in adolescents.

Content Outline:

- Intro/Purpose
- Background
  - Diet and Adolescent Health: Fruit/Vegetable and Sugar Sweetened Beverage Intake
  - Technology and Health Behaviors: Social Media as a Means to Improve Health
- Theoretical Framework: Health Belief Model for Dietary Behavior Change
  - Perceived Barriers
  - Motivating Factors
  - Cue to Action
- Methods: Proposed DNP Project
  - Aims
  - Methods
  - Outcomes
  - Evaluation
- Implications for Practice

First Primary Presenting Author

Primary Presenting Author

Abbey J. Horner, BSN
University of Pittsburgh
School of Nursing
Student
PITTSBURGH PA
USA
Professional Experience: 2016-current: Registered Nurse, 9B Oncology/Bone Marrow Transplant, Children’s Hospital of Pittsburgh UPMC, Pittsburgh, PA Primary author of article related to dental caries in the childhood cancer survivor

Author Summary: Abbey Horner is a doctor of nursing practice student in the School of Nursing at the University of Pittsburgh specializing in primary care pediatrics. She is currently employed as a registered nurse and provides care for pediatric oncology, hematology, and bone marrow transplant patients. She is committed to promoting the health of children and adolescents.

Second Author

Cynthia A. Danford, PhD, CRNP, PPCNP-BC, CPNP-PC
University of Pittsburgh
School of Nursing
Assistant Professor
School of Nursing
PITTSBURGH PA
USA

Professional Experience: 2012-present -- Assistant Professor, University of Pittsburgh, School of Nursing, Pittsburgh, PA 2017-present – Pediatric Nurse Practitioner, Hug Me Tight Childlife Center, Inc., Pittsburgh, PA 2011-2012-- Lecturer, University of Michigan, School of Nursing, Ann Arbor, MI 2003-2010 – Assistant Professor, Wayne State University, School of Nursing, Detroit, MI Teaches at PhD, DNP, MSN, and BSN levels. Co-chair of International Family Nursing Association (INA) International Research Subcommittee. Past President of Association of Faculties of Pediatric Nurse Practitioners (AFPNP). Presently funded through NIH for research exploring self-regulation of lifestyle behaviors to decrease obesity risk with parent-preschool child dyads using event history calendars.

Author Summary: Cynthia Danford is an assistant professor in the School of Nursing at University of Pittsburgh, where she teaches in the DNP, PhD, and undergraduate programs. She is a primary care pediatric nurse practitioner who works in a community setting. As a nurse scientist she is committed to promoting child health and decreasing risk for obesity and cardiovascular problems by fostering healthy lifestyle behaviors in families with young children.