### Abstract

**Aims:** Social media use is widespread in teens. But, few studies have developed recommendations on how social media can be used to promote teen health. The Philadelphia Ujima™ Coalition funded by the Office on Women’s Health conducted a needs assessment to explore social media as a health communication tool. This study aimed to identify (1) social media utilization practices, (2) strategies to effectively engage teens on social media, and (3) recommendations for teen health promotion on social media.

**Methods:** A cross-sectional mixed methods study design was used, in which a survey was administered to 152 youth (ages: 13–18 years). In addition, four focus groups were conducted with 26 teens to elaborate on the quantitative findings. **Results:** We found that while 94.6% of teens use social media, only 3.5% reported using it to seek health-related information. However, when asked about specific topics (i.e., fitness, sexual health, nutrition), 66.7% to 91.7% reported health information seeking. Although, many teens were not able to identify reliable sources of information. Teens felt health messages should be attractive and tailored.

**Conclusion:** Social media holds promise as an effective health communication tool; however, information must be reliable and composed of attractive messages tailored to meet teens’ diverse needs. The findings from this study are indicative of the critical need to further explore how social media platforms enhance usage in health promotion.

### Keywords

qualitative research, social media, social networking sites, teens, youth health promotion

Introduction

Participative Internet use, which most individuals recognize as “social media,” has revolutionized and transformed pat- terns of communication, especially in teens (Chou, Hunt, Beckjord, Moser, & Hesse, 2009). Particularly among young adolescents, social media use has dramatically risen, with research suggesting a 1000% increase in use from 2005 to 2013, and more recent estimates report use in 74% of high school students (Duggan, Ellison, Lampe, Lenhart, & Madden, 2015). Over 93% of American teenagers (ages: 12–17 years) are now connected to the Internet, more than any other age group, with an estimated 73% belonging to at least one social network site (SNS) (Lenhart, Purcell, Smith, & Zickuhr, 2010; Nesi & Prinstein, 2015). This study explores teens’ perspectives on the role of social media as a health communication tool.

Social media facilitates the creative display of information, while simultaneously influencing, motivating, and engaging individuals on important health issues (Maher et al., 2014). Research has shown that motivations for teen social media use are diverse. A study by the Pew Research Center in 2009 found that 73% of teens use social media platforms to receive news on current events, 31% to gather information on health, and 17% search for health topics, such as sexual health or drug use, that are difficult to discuss with others (Chou et al., 2009; Lenhart et al., 2010). Teen use of SNSs has continued to increase; more recent studies have found that approxi- mately 87% of teens use social media to access health infor- mation, particularly content related to stress, depression,

fitness, and anxiety (Rideout, Fox, & Well Being Trust, 2018). Research also suggests that teens use social media for health-related information related to dieting, fitness, and body image (Carrotte, Vella, & Lim, 2015). Accordingly, SNSs have great potential for health promotion since teens are likely to engage in risky behaviors such as substance use and unprotected sex (Hightow-Weidman, Muessig, Bauermeister, Zhang, & LeGrand, 2015). Due to their remarkable efficiency in disseminating information to large groups, SNSs have the potential to be a powerful tool for public health practitioners; they provide a space for both education and virtual dialogue.

However, gaps remain in our understanding of social media as a health communication tool for teens (Keller, Labrique, Jain, Pekosz, & Levine, 2014). While social media sites have become popular platforms for social inter- actions and can be considered a novel setting for health pro- motion, it remains unclear how social media can be used to promote teen health (Loss, Lindacher, & Curbach, 2014). While the number of publications exploring the use of social networking sites in public health promotion steadily increases, many researchers have advocated for additional studies to explore the utility and effectiveness of various social media platforms in addressing health gaps (Capurro et al., 2014). Thus, supplementary studies surveying social media use in teen health promotion are necessary to provide optimal guidance to health practitioners seeking to use SNS to address health gaps.

On a global scale, social media offers opportunities for individuals to connect and share information. In the United Kingdom (UK), scholars are exploring how social media serves as a valuable tool for suicide prevention. In 2017, the Suicide by Children and Young People report found that in 26% of deaths in persons under the age of 20 years, the vic- tims had used the Internet to search and post suicide-related content (Rodway et al., 2017). Researchers such as Sonia Livingstone at the London School of Economics and Political Science have examined the relationship between risk and adolescent health and its influence on social media use. In her work, Dr Livingstone highlights how people from differ- ent countries and cultural backgrounds have unique percep- tions and conventions regarding social media use. Her work can be used to make potential interventions more effective by allowing researchers to better adapt their tactics to spe- cific populations. In addition, while it is beyond the scope of this study, evidence suggests that culture contributes to social media preference, influencing risky behaviors. For example, children from high socioeconomic groups are more likely to meet individuals they originally connected with online, in person (Livingstone, Mascheroni, Dreier, Chaudron, & Lagae, 2015). Current literature also demonstrates that social media can be instrumental in sexual health promotion. In Australia, young people prefer to access health information through social media, given the assumed anonymity and pri- vacy. Researchers are currently exploring the strengths and

challenges of using social media to discuss bullying, stigma, privacy, and sexual health (Evers, Albury, Byron, & Crawford, 2013; Shaw, Mitchell, Welch, & Williamson, 2015). Considering the domestic and global increase of social media use by teens, it is important to explore how SNSs can be effective tools for promotion of health educa- tion and for public health interventions.

Social media provides new opportunities for public health practitioners and other health advocates to engage, promote, and advocate for health issues such as mental health and sub- stance use (Roman, 2014). For example, the Centers for Disease Control and Prevention (CDC) continues to inte- grate social media networking into their programming efforts, to promote health and wellness (CDC, 2012). Social media has also successfully been used to influence teen behaviors related to nutrition, physical health, HIV/AIDS, and reproductive health (Evans, Santoro, Murphy, & Schoenman, 2009). Effective social media campaigns can potentially engage teens to spread health promotion mes- sages in a way that influences health knowledge, awareness, and attitudes. It is important to note that there are challenges concerning teens, health, and social media. In general, indi- viduals favor the anonymous nature of social media to share sensitive information freely; however, social networking platforms, such as Facebook, do not guarantee anonymity (Naslund, Aschbrenner, Marsch, & Bartels, 2016). In addi- tion, information shared by peers on SNSs is not always rigorous, scientific, or peer-reviewed. Consequently, it is dif- ficult for teens to be sure of the validity of information found on SNSs. Sites like Facebook and Instagram may also have conflicts of interest because they generate their income from advertising revenue; incorrect or misleading information can be promoted by companies paying social networking sites to advertise posts. Therefore, given the complexity of health promotion and communication, it is important for this study to explore the advantages and challenges of using SNSs to engage teens and young adults.

## Gender Neutrality

Various disciplines, ranging from psychology, sociology, marketing, and health communications, have examined the use of social media in health promotion. However, the role of gender remains a domain to be further explored. Social media use is not sex/gender neutral (Barker, 2009); evidence suggests that the topics that teens explore are sometimes influenced by societal gender norms. Therefore, underscor- ing the importance of using a gender lens is essential to explore potential differences in how social media may influ- ence health knowledge, awareness, and attitudes in teen boys and girls (Núñez et al., 2015). Both adolescent girls and boys have unique perspectives and experiences, which must be taken into consideration for effective health promotion initiatives (Núñez, Robertson-James, Reels, Weingartner, & Bungy, 2012). Moreover, gender norms, roles, stereotypes, and expectations influence adolescent health risks, beliefs, and behaviors. Thus, a gender lens is useful as we consider effective strategies for teen social media health promotion efforts.

The Philadelphia Ujima™ Coalition for a healthier com- munity, funded by the Office on Women’s Health and com- prising over 20 faith-based, education, social service, and health and wellness organizations, integrates gender and health to promote sustained health behavior change (Núñez et al., 2015; Núñez et al., 2012). The Philadelphia Ujima program uses social media to reinforce health messages among teens. These efforts use social media strategically to promote teen health, increase knowledge and awareness, and address disparities.

Various social media modalities provide diverse con- straints for health communication and information sharing (Kite, Foley, Grunseit, & Freeman, 2016). This study aimed to identify (1) social media utilization practices of teens, (2) strategies to engage teens on social media, particularly around health messaging, and (3) recommendations for teen health promotion using social media. Secondarily, we also explored sex/gender differences in social media practices and their implications for health promotion.

# Methods

We employed a mixed methods approach in two phases to assess teen social media utilization practices and to iden- tify the most effective strategies to engage teens on social media. In Phase I, the Social Media Usability Survey was developed using evaluation research for the Philadelphia Ujima social media initiative. One of the program’s goals is to use social media to encourage integrated gender health education and interventions. The survey consisted of 21 closed-ended questions that addressed the following areas: (1) demographics (race/ethnicity, sex, age, zip code),

(2) utilization (type of social media use, average number of times social media is accessed on a daily basis), (3) fre- quency (number of friends and followers, relationship groupings, i.e., family members, friends, work colleagues), mode of device used (phone, computer, tablet), (4) infor- mation-seeking behaviors, (5) interests and activities (types of participation on social media sites), (6) explora- tion of health information, and (7) identification of reliable sources for health information.

The survey was self-administered in the spring of 2013 to a convenience sample of 152 teens. Students were enrolled in health education courses and signed consent to participate in the study. Specific classes were chosen by school admin- istrators for participation in the survey, ages 13–18 years, in two Ujima partner schools (one catholic and one charter school) in Philadelphia, Pennsylvania. The charter school (grades 7–12) serves predominantly underserved African American students from Philadelphia. The catholic school includes a culturally diverse group of students from over 40 zip codes in Philadelphia. The data were entered and ana- lyzed using SPSS 20, statistical software.

To identify and understand the role of social media in teen health promotion, thus in Phase II, we also conducted four sex-specific teen focus groups (two girls, two boys). This approach is consistent with research advocating for the integration of teen’s voices in social media research (Subrahmanyam & Greenfield, 2008). Participants were recruited from the Ujima Social Media Summer Internship program and one Ujima partner school (Catholic school described above). The focus groups were conducted at Drexel University College of Medicine as well as the catho- lic school between July 2013 and February 2014. They were facilitated by project staff with expertise in facilitating focus groups and a trained master’s level public health student.

An interview guide, created by project staff and informed by the literature and findings obtained from the quantitative study, was used with each focus group. Participants were asked to provide feedback regarding the following domains:

1. social media–related benefits and challenges, (2) use and purpose, (3) modalities, (4) health information seek- ing, and (5) how health can be promoted on social media. The sessions were audio recorded and transcribed verbatim by project staff.

The transcribed texts of each group served as the basis for the qualitative analysis. A content analysis was con- ducted to identify common themes. The question domains were used as a priori codes. Additional codes were added as relevant as part of the analysis process if the data revealed information that did not fit appropriately in the other codes. Three raters reviewed the transcripts. Each rater first read the transcripts several times to gain a sense of the data. The text was coded, and categories were devel- oped. The raters interpreted the meaning of the codes col- lectively and formulated into categories and themes. Each rater reviewed and coded the transcripts independently and then discussed the codes collectively. Each code was defined and linked with example quotations and statements from the transcripts. Disagreements were resolved by the second investigator, and consensus was reached for both the codes and themes. The overall intercoder reliability for this study was 94.44%. The protocol was approved by the University Institutional Review Board.