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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 patterns 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 approximately 87% of teens use social media to access health information, particularly content related to stress, depression,

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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 interactions and can be considered a novel setting for health promotion, 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 victims 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 different countries and cultural backgrounds have unique perceptions 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 specific 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 privacy. 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 education 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 substance use (Roman, 2014). For example, the Centers for Disease Control and Prevention (CDC) continues to integrate 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 messages 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, individuals 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 addition, information shared by peers on SNSs is not always rigorous, scientific, or peer-reviewed. Consequently, it is difficult 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, underscoring the importance of using a gender lens is essential to explore potential differences in how social media may influence 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 community, funded by the Office on Women's Health and comprising 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 constraints 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 identify 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) frequency (number of friends and followers, relationship groupings, i.e., family members, friends, work colleagues), mode of device used (phone, computer, tablet), (4) information-seeking behaviors, (5) interests and activities (types of participation on social media sites), (6) exploration 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 administrators 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 analyzed 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 catholic 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 seeking, 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 conducted 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 developed. The raters interpreted the meaning of the codes collectively 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.

Results

Phase I

In total, 152 youth (ages: 13–18 years) completed the survey. Our response rate was 98.67%. Participants self-identified as girls (46%) and boys (46%)—7.2% not reported. As depicted in Table 1, the racial/ethnic characteristics of participants were 32% Caucasian, 36% African American, 17% Latino, 1% Asian, 7% biracial, and 2% individuals identified as “other.”

Table 1. Characteristics of Survey Participants.

Race/ethnicity	Male, N (%)	Female, N (%)
Caucasian	32 (46.37)	14 (20.89)
African American/Black	22 (31.88)	31 (46.26)
Latino	9 (13.04)	13 (19.40)
Asian	2 (2.89)	0 (0)
Biracial	3 (4.34)	8 (1.19)
Other	1 (1.45)	1 (1.49)

Frequency Use. Our study found that 94.6% of teens utilize social media: Facebook (27.4%), Twitter (32.0%), and Instagram (53.8%). A third of participants (33.6%) reported using social media for connecting with family, and 61.6% reported they used social media to post pictures of friends and family. Comparatively, only a small percentage (3.5%) reported using social media to seek information on health from the list of reasons they use social media.

We assessed the frequency of social media utilization at the completion of the survey by distinguishing between high- and low-frequency users. We provided a Likert-type scale question, asking: “How often do you use social media?” and provided the following choices: *daily, few times per week, once per week, monthly, rarely, and never*. As Table 2 shows, participants were labeled as high-frequency users if they used social media a few times per week or more or low-frequency users if they used social media once per week or less. Our data (see Table 3) indicated a statistically significant sex difference between frequency of use for Facebook, Twitter, and Instagram ($FbOften = p < .0001$, $TwittOften = p < .0001$, $InstaOften = p < .0001$).

Despite the relatively small number of students who said they turn to social media for health information (3.5%), when asked about specific health topics, students did report social media use. In fact, both high- and low-frequency users were likely to report using social media for health-related information. For example, 91.7% of high-frequency Facebook users reported researching health topics concerning fitness and sexual health on social media and 66.7% of high-frequency Twitter users reported utilizing social media to research health topics concerning sexual health. Moreover, 80.7% of low-frequency Facebook users reported viewing sites on health topics concerning fitness and nutrition indicating that both high- and low-frequency users turn to social media for health-related information.

Reliable Information. Participants were asked to identify reliable health information sources from a list provided. The list contained both reliable (CDC, WHO [World Health Organization], etc.) and unreliable (blogs, Facebook pages, magazines articles, etc.—not affiliated with reputable health-related organizations) sources. Reliable sites were defined as trustworthy sites advocated and endorsed by health professional

Table 2. High-Frequency Social Media Users by Sex.

High-frequency use (%)		
Social media platform	Boys	Girls
Facebook	57.97	44.7
Twitter	41.42	48.48
Instagram	66.67	70.77

other public health organizations (Morahan-Martin, 2004). In our sample, 81.4% were unable to identify two reliable sources to obtain health information from the list provided. There were no observed differences between boys and girls.

Phase II

We conducted focus groups with 14 girls and 12 boys to examine and contextualize how teens use social media for health promotion. Adolescent focus groups are effective in the elicitation of information on social media; they also help increase comfort and facilitate discussion (Burnette, Kwitowski, & Mazzeo, 2017; Hughes & DuMont, 1993). The racial and ethnic distribution of the groups is described in Table 4. The mean age of girls was 15.78 years (range: 14–17) compared to 16.16 years for the boys (range: 14–18). Table 5 demonstrates several pertinent themes emerged from the groups, including perceived benefits, challenges, and uses of social media as well as strategies and recommendations for teen health promotion on social media that included use of humor, attractive images, and advocacy messages. The results presented below primarily highlight perceived benefits and the role of social media in teen health promotion.

Perceived Benefits. Both boys and girls acknowledged the primary benefit of social media use as a tool to connect with friends and family. Girls discussed social media as an advantageous way to learn about school events and connect with others. They discussed how social media facilitates communication with others who are not in a close peer network. In comparison, boys were more likely to use social media for information seeking. For example, one participant described how social media often broadcasts information or news early “before it is in other sources.” Male participants also discussed how social media expands one’s ability to communicate: “you can talk with someone you wouldn’t otherwise talk with on a regular basis.” Health information seeking was not mentioned specifically as a benefit in any of the groups during this discussion.

Health Promotion and Social Media. Although they may not have initially recognized it, teens did turn to the Internet and social media for health information and shared opinions about ways social media could be better used to promote health. Most teens did not comment on the reliability of the

Table 3. Social Media Frequency Use.

Social Media Frequency Use	t	df	Significance (two tailed)	Mean difference	95% confidence interval of the difference
					[Lower, upper]
How often check Facebook	12.368	145	.000	1.918	[1.61, 2.22]
How often check Twitter	7.578	146	.000	1.381	[1.02, 1.74]
How often check Instagram	12.629	144	.000	2.303	[1.94, 2.66]

df: degrees of freedom.

Table 4. Racial/Ethnic Characteristics of Group Participants.

Race/ethnicity	Girls (%)	Boys (%)
African American	57	33
Caucasian	7	33
Hispanic	7	17
Asian	7	0
Biracial	14	0
Other	7	17

information directly but commented on various aspects of reliability in their discussions. One group of female participants stated that they trusted information based on whether it seems true or logical and if it can be found on multiple sites: “if it makes sense and [it] all adds up; I believe it’s true.” “If you see similar information on different sites like a website and then on Facebook and then hear it from someone, it’s most likely true.”

Both boys and girls discussed several methods that could be used to promote health on social media (i.e. Facebook, Twitter, Instagram YouTube, etc.). These included “posting pictures,” “facts,” “outcomes you can see,” “establishing forums for anonymous communication,” “sharing stories and resources” and “info graphics.” One female participant stated, “Sharing posts of others can be motivating to encourage your own behavior change, for example in fitness.” The teens also discussed social media as a great vehicle for, “increasing awareness,” “getting the word out,” “promoting advocacy,” “rallying people together for a cause” and “it also connects people around issues and makes people want to do something and rally together, like go to marches and stuff.” They also discussed the potential to disseminate health related information to their networks: “social media, it’s a community that can spread information.” Several boys shared how social media could potentially change norms and help teens deal with cycles of peer pressure. As one male participant stated, “a lot of teens don’t do drugs, alcohol, smoke or have sex because they want to do it, most of the time or sometimes, but I believe it’s because of peer

pressure... it’s a whole cycle that keeps going.” The teens discussed social media’s potential to influence this cycle through building “comradery” and allowing teens to unite to advocate for something positive. They addressed social media’s potential to appeal to ‘social justice issues.’

Participants provided examples such as Treyvon Martin and the Boston Marathon. One female described, “it’s a fast vehicle to spread information and awareness like with Treyvon Martin, like everyone heard of it and the details, that’s how I find the news . . . it also connects people around issues and makes people want to do something and rally together, like go to marches and stuff.”

While teens agree that social media could be a valuable tool for health promotion, they acknowledged several barriers that may minimize its effectiveness in disseminating health information and influencing teen attitudes, beliefs, and behaviors. For instance, the boys discussed that health educators should “watch the wording of messages (e.g. length, complexity) to make sure it is not worded like spam” as they would discount it as “unreliable.” One boy suggested they should “share stories and resources, motivating and encouraging others so you know it’s trustworthy.” Another commented, “More directed efforts at teens are needed, I feel like teens feel forgotten, I control my own body.” Other boys commented that better advertisements and messages targeted to urban environments are needed and recommended using infographics and visually appealing messages.

The girls also discussed what they do not like about many current teen health sites. One girl stated, “they’re not showing anything to me, like they tell you what you should do, don’t just put go eat healthy, give me something.” Others stated, “put stuff that we can relate to” and “be specific - I tried this and this is what happened.” The girls recommended using humor (“funny pictures, videos, etc.”) or fun facts and providing opportunities for teens to learn from their peers. They agreed that teens would not read a lot of health information, so the messages need to be visually appealing (recommended using pictures and videos) and engage teens to actively share. They also felt that teens needed to be an active part of the process of sharing messages. As one girl stated,

Table 5. Themes Described by Participants.

Theme	Summary	Boys example	Girls example
Perceived benefits	Both boys and girls acknowledged the benefits of social media use and discussed connections with friends and family as a primary benefit	“social media is effective in spreading awareness because it’s a community that can spread information” “[it’s successful] because you can encourage each other.”	“Keep up with what’s going on in school and friends.” “Most teens use social media to keep up with their friends, it’s just a habit, [because] the purpose of it is to connect with friends”
Perceived challenges	Boys and girls described several challenges such as cyberbullying	“It promotes insecurity, lower self-esteem . . . like a girl posts a picture on Instagram.. And a bunch of guys leave negative comments.”	“[Cyberbullying] occurs more on social media these days, [more] than it occurs in person. There are [like] new bullies. [Fights] start on social media — [someone writes something] on Instagram or whatever, and then it’s a problem in the [whole] school because of what [one] person wrote.”
Perceived use	Boys and girls use social media for connecting with friends, self-expression, comedy, and laughter	“Social media is a part of your life. You can go on twitter and talk to people. Social media is something that you think you have to do.” “We [use social media] because we can see stuff that people are sharing and you can talk and see people. You can see the changes that happened throughout the year.” “Some people use as comedy but for other, [it’s] like [a] business. But for me, I just use it for like work purposes and mainly to just stay connected [with people] that I can’t connect with over the phone”	“It’s definitely a really fast vehicle to spread [the] word. Like the Trayvon Martin case, like you knew everything [because] it basically spread around the world. Like everyone heard of it knew most of the details or at least some details and wanted to do something about it. So I think that it’s definitely a really good module for spreading awareness and you know, getting the word out.” “Some of the times they use it just for fun— or like promotional, or maybe if they don’t know some type of information, they [use] social media to read.”
Health promotion and social media	Boys and girls use social media for health information and discussed several ways social media could be better used to promote health.	“you can use social media [to improve health] if you give people something to follow, [and] show motivation” “The best way to promote [health is to] give people places to go to get help . . . like say you really [need to] talk to someone about alcohol [but] people don’t really know where to get help.. I don’t want to talk to my parents about this” “Almost every organization has a twitter page now . . . they put like fast [information] Or like, they got the commercials about drunk drivers . . . I think if they do that with other issues too, then people will [listen].”	“[I don’t think current social media sites are helpful] I know for me, I’m trying to eat healthy and obesity is a big topic now. We talk about it a lot, [but] it’s also a mental thing; your surroundings, your stress level. Someone can’t just [lose it], it’s not just weight, it could be a medical problem. [And] I feel like there’s not much being done about it. I think that there should be more places for kids to use” “If they really wanna put the websites, put stuff that we can relate to. Not just “if you do this, [then you’ll be] more like this.” [We] need, “I tried this, and this is what happened,” be specific and maybe we would understand more. I think girls wouldn’t be so insecure.” “When you see someone on Instagram [and] you know they look good because of how they [look] and how they exercise. [you see] the way they carry themselves and the way they eat and—that’s a motivation to change health too so that people can think better of you.”

“They will read, and share information forwarded from their friends and networks.”

Discussion

The goal of this study was to assess teen social media utilization practices and explore the role of social media as a health promotion tool. Utilizing a gender-focused approach, we

also identified potential sex/gender differences in social media utilization practices of teens, strategies to effectively engage teens on social media, and recommendations for teen health promotion on social media. As social media use increases, it continues to provide valuable potential and promise to better promote health in teens. However, there are important challenges that must be considered and appropriately addressed to maximize its utility as a health promotion

tool. Almost 95% of our sample reported using social media, although seeking health information was cited by only 3.5% of teens. One important challenge will be addressing perceptions of social media as solely a communication tool for family and friends. Whether they recognize it or not, however, teens do turn to social media for health information. Our study found that while not a core function, both high- and low-frequency users turn to social media for specific health-related information, most often nutrition, fitness, and sexual health. This underscores the potential for social media as a health promotion tool for teens at least in these areas. Our findings are consistent with Lenhart et al. (2010), which reported an estimated 30% of teens use social media to learn about health topics such as dieting, nutrition, and fitness. Research also demonstrates that 68.4% of teens use social media for sexual education (González-Ortega, Vicario-Molina, Martínez, & Orgaz, 2015).

The potential for social media use as a health communication tool was implied as teens discussed their communication with others beyond their traditional social networks, opportunities for self-expression, and general information seeking behaviors. The students in our study shared their perspectives of social media as a tool for connection. Although this was most often with friends, there was also discussion of connecting to and mobilizing around issues and causes through social media efforts. This suggests that health messages targeting teens may need to directly highlight how they connect to broader teen or social justice issues to better engage them. Thus, messages that connect health issues with the related social determinants of health and health-related inequalities may appeal more to certain groups of teens. For example, from a public health perspective, sexual risk and obesity can be framed as social justice issues (Mañano & Aimé, 2017; Puhl & Heuer, 2010). Further research is needed to determine how best to frame various health topics in the context of social justice issues that will be attractive to teens as well as to understand the types of social justice issues that are more likely to mobilize and engage diverse groups of teens.

Even though information seeking was not high on the list of reasons teens go to social media, both boys and girls stated they were likely to turn to social media for information on nutrition, fitness, and health issues that are “harder to discuss” like sexual health. Also supporting our findings, previous researchers have found that social media networks can serve as a plausible source for health promotion concerning sexual health and information-seeking practices (Byron, Albury, & Evers, 2013; Lim, Vella, Sacks-Davis, & Hellard, 2014). Topics that are drug or sex related appear to be popular on social media platforms; teens express increased comfort when discussing these issues online, in comparison to non-virtual (in person) communication (Lenhart et al., 2010). Other research has similarly found teens to be more receptive to online platforms for sexual health information (Hightow-Weidman, Muessig, Pike, et al., 2015). Further research

should explore specific messaging for these topics that can not only enhance the utility of content posted on social media but also serve as a gateway for introduction of other important health topics.

Our findings also suggest the need for health messages to be attractive to teen audiences to capture their attention. Posts with too much information were ignored and noted as “spam.” The teens appreciated personal stories that were “motivational” and messages that were not specifically directive (“don’t just tell me to eat healthy”). They appreciated the use of teen-targeted, visually appealing, humorous, and entertaining health messages, stories, and images they felt they could relate to. Thus, recognizing that teens are not a homogeneous group, tailoring messages to specific teen groups may be more effective than generic teen-focused health messaging. Moreover, teens have the potential to share health information throughout their peer networks (Gray, Klein, Noyce, Sesselberg, & Cantrill, 2005; O’Keeffe & Clarke-Pearson, 2011). But, they must be actively engaged in creating and spreading messages. “Social networking patterns” are closely correlated to “peer-to-peer” contact, illustrating that teens are more receptive to receiving information (resources) from a member of their “social circle” rather than acquaintances or someone “outside” of that circle (Van Cleemput, 2010). This can strategically be used to engage and disseminate health messages to diverse groups of teens with shared values and experiences.

Our findings demonstrate a need to identify opportunities to teach about reliable sources of information and health advocacy on social media. It is important to ensure that health-related information shared on social media modalities is accurate because research has shown that approximately 90% of teens report trusting medical information from social media outlets (Price Water House Coopers, 2015). Most participants could not identify two reliable sources of health information from the list provided. Moreover, qualitatively students used metrics to determine reliability that are not necessarily good predictors of reliability such as hearing information from multiple sources or if it is linked to a personal story. While, there is a lot of valid information disseminated through social media, there is also a wealth of medically and scientifically inaccurate information available as well (Syed-Abdul et al., 2013). These indicators of “reliability” are potentially concerning as there are many health-related myths that could be reinforced through multiple sources (social media sites, radio personality, friend), and there are many personal stories disseminated through social media that are either inaccurate or medically irrelevant (Fernández-Luque & Bau, 2015). Previous research suggests further investigating teens’ competencies in deciphering the validity of health research (Jones & Biddlecom, 2011). Participants in the study appeared to relate more to stories, explaining why social media platforms are more likely to use engaging stories. They did not appear to be as interested in the research and statistics from other perceived reliable sites. Further

investigation on this can bridge the gap to ensure the validity of the information disseminated, while engaging teens through stories that capture their attention. Teenage perception of health-related content is correlated with online environments (Fergie, Hunt, & Hilton, 2013). Consequently, exposure to health information through online platforms may inform beliefs, attitudes, and knowledge related to various health issues. In addition, as teens are most likely to turn to social media for hard-to-discuss topics, misinformation can prove detrimental to their ability to make healthy informed decisions in their best interest.

While there were many similarities between the girls and boys, differences emerged in the surveys and group discussions. For instance, boys and girls reported different rates of use for the various social media modalities. Boys' information seeking on social media was much broader compared to girls. This suggests there may be differences in the strategies used to engage teen boys and girls on social media (Spencer, Rehman, & Kirk, 2015). For example, messages or platforms for girls that provide opportunities for self-expression and sharing in a safe space may be particularly effective for them. Boys discussed how teens feel pressured to engage in specific risk behaviors and how social media has the potential to create new social norms that promote positive messages and health behaviors. Effective messages for boys may capitalize on this positive peer pressure norm setting. Other research has highlighted differences in boys' and girls' motivation for health practices and behaviors as well as their receptivity to prevention messages (Núñez et al., 2015). Thus, it is important to consider gender norms, roles, and expectations in crafting effective health messages for teens.

It is imperative that health promotion practitioners adapt to the changing landscape of social media and new media cultures (Mowlabocus, Harbottle, Tooke, Haslop, & Dasgupta, 2015). Social media can be used to disseminate public health information to teens, more quickly and directly than at any time in history (Ralph, Berglas, Schwartz, & Brindis, 2011). It provides health educators with unique opportunities to bridge the communication gap between teens and health professionals and practitioners. Due to the flexibility and versatility of social media, health practitioners and researchers alike can tailor messages to meet the diverse needs of teenagers within their communities. However, effective teen health promotion initiatives using social media must utilize diverse communication strategies that integrate best practices for expanding reach and fostering engagement (Thackeray, Neiger, Smith, & Van Wagenen, 2012). Important skills, such as identifying reliable information, need to be included in promotion efforts, and messages need to be tailored and visually attractive. Continued efforts to identify the utilization practices and perceptions of teen social media users may better integrate this information into more meaningful teen health promotion efforts (Atkinson, Saperstein, & Pleis, 2009).

Limitations

A convenience sample was used for this study, and results may be vulnerable to selection bias. As such, study findings may not be representative of the perspectives and experiences of all teens. Social media use and perspectives are dynamic and may vary geographically. This may also limit the generalizability of results. However, the participant demographics are discussed, and the results are consistent with other reported literature. This study provides important feedback from teens to be considered in teen-focused social media-based health promotion efforts. While the quantitative assessment only included a gender (male/female) delineation, teens in the qualitative assessment were able to discuss their perspectives on the gendering of health messages for social media without constraints. Additional research is needed to further delineate the concepts and findings discussed herein as well as any ethical concerns that may arise (Clar et al., 2014).

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. As our study has shown, social media provides a new dimension health care and proposes additional evaluation to better assess the extent to which social media can be used to improve health communication (Moorhead et al., 2013). Social media's dynamic ability to engage and maintain large audiences helps create an incredible potential to increase knowledge and awareness and promote health behavior change related to fitness and physical activity in teens (Vandelanotte et al., 2014). However, studies evaluating the impact of health programs including social media-based programs on teen knowledge, attitudes, and behaviors are lacking (Guse et al., 2012). Therefore, given the lack of information, the findings from this study are indicative of the critical need to further explore how social media platforms can be used to promote health.

Authors Note

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References

- Atkinson, N., Saperstein, S., & Pleis, J. (2009). Using the Internet for health-related activities: Findings from a national probability sample. *Journal of Medical Internet Research*, *11*(1), e5.
- Barker, V. (2009). Older adolescents' motivations for social network site use: The influence of gender, group identity, and collective self-esteem. *Cyber Psychology & Behavior*, *12*, 209-213.
- Burnette, C. B., Kwitowski, M. A., & Mazzeo, S. E. (2017). "I don't need people to tell me I'm pretty on social media": A qualitative study of social media and body image in early adolescent girls. *Body Image*, *23*, 114-125.
- Byron, P., Albury, K., & Evers, C. (2013). "It would be weird to have that on Facebook": Young people's use of social media and the risk of sharing sexual health information. *Reproductive Health Matters*, *21*(41), 35-44.
- Capurro, D., Cole, K., Echavarría, M. I., Joe, J., Neogi, T., & Turner, A. M. (2014). The use of social networking sites for public health practice and research: A systematic review. *Journal of Medical Internet Research*, *16*(3), e79.
- Carrotte, E. R., Vella, A. M., & Lim, M. S. (2015). Predictors of "liking" three types of health and fitness-related content on social media: A cross-sectional study. *Journal of Medical Internet Research*, *17*(8), e205. doi:10.2196/jmir.4803
- Centers for Disease Control and Prevention. (2012, February). *CDC eHealth metrics dashboard*. Author. Retrieved from <http://www.cdc.gov/metrics/socialmedia/index.html>
- Chou, W. S., Hunt, Y. M., Beckjord, E. B., Moser, R. P., & Hesse, B. W. (2009). Social media use in the United States: Implications for health communication. *Journal of Medical Internet Research*, *11*(4), e48. doi:10.2196/jmir.1249
- Clar, C., Dyakova, M., Curtis, K., Dawson, C., Donnelly, P., Knifton, L., & Clarke, A. (2014). Just telling and selling: Current limitations in the use of digital media in public health. *Public Health*, *128*, 1066-1075.
- Duggan, M., Ellison, N. B., Lampe, C., Lenhart, A., & Madden, M. (2015, January). *Social media update 2014*. Pew Research Center. Retrieved from <http://www.pewinternet.org/2015/01/09/social-media-update-2014/>
- Evans, W., Santoro, K., Murphy, B., & Schoenman, J. (2009, March). *Recommended adolescent health care utilization: How social marketing can help* (NIHCM foundation issue brief). Retrieved from <https://www.nihcm.org/pdf/NIHCM-SocialMarketing-FINAL.pdf>
- Evers, C. W., Albury, K., Byron, P., & Crawford, K. (2013). Young people, social media, social network sites and sexual health communication in Australia: "This is funny, you should watch it". *International Journal of Communication*, *7*, 1-18.
- Fergie, G., Hunt, K., & Hilton, S. (2013). What young people want from health-related online resources: A focus group study. *Journal of Youth Studies*, *16*, 579-596.
- Fernández-Luque, L., & Bau, T. (2015). Health and social media: Perfect storm of information. *Healthcare Informatics Research*, *21*(2), 67-73.
- González-Ortega, E., Vicario-Molina, I., Martínez, J. L., & Orgaz, B. (2015). The Internet as a source of sexual information in a sample of Spanish adolescents: Associations with sexual behavior. *Sexuality Research and Social Policy*, *12*, 290-300.
- Gray, N. J., Klein, J. D., Noyce, P. R., Sesselberg, T. S., & Cantrill, J. A. (2005). Health information-seeking behaviour in adolescence: The place of the Internet. *Social Science & Medicine*, *60*, 1467-1478. doi:10.1016/j.socscimed.2004.08.010
- Guse, K., Levine, D., Martins, S., Lira, A., Gaarde, J., Westmorland, W., & Gilliam, M. (2012). Interventions using new digital media to improve adolescent sexual health: A systematic review. *Journal of Adolescent Health*, *51*, 535-543. doi:10.1016/j.jadohealth.2012.03.014
- Hightow-Weidman, L. B., Muessig, K. E., Bauermeister, J., Zhang, C., & LeGrand, S. (2015). Youth, technology, and HIV: Recent advances and future directions. *Current HIV/AIDS Reports*, *12*, 500-515.
- Hightow-Weidman, L. B., Muessig, K. E., Pike, E. C., LeGrand, S., Baltierra, N., Rucker, A. J., & Wilson, P. (2015). HealthMpowerment.org building community through a mobile optimized, online health promotion intervention. *Health Education & Behavior*, *42*, 493-499.
- Hughes, D., & DuMont, K. (1993). Using focus groups to facilitate culturally anchored research. *American Journal of Community Psychology*, *21*, 775-806. doi:10.1007/BF00942247
- Jones, R. K., & Biddlecom, A. E. (2011). Is the Internet filling the sexual health information gap for teens? An exploratory study. *Journal of Health Communication*, *16*, 112-123.
- Keller, B., Labrique, A., Jain, K. M., Pekosz, A., & Levine, O. (2014). Mind the gap: Social media engagement by public health researchers. *Journal of Medical Internet Research*, *16*(1), e8.
- Kite, J., Foley, B. C., Grunseit, A. C., & Freeman, B. (2016). Please like me: Facebook and public health communication. *PLoS ONE*, *11*(9), e0162765.
- Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). *Social media & mobile Internet use among teens and young adults* (Millennials). Washington, DC: Pew Internet & American Life Project.
- Lim, M., Vella, A., Sacks-Davis, R., & Hellard, M. (2014). Young people's comfort receiving sexual health information via social media and other sources. *International Journal of STD & AIDS*, *25*, 1003-1008.
- Livingstone, S., Mascheroni, G., Dreier, M., Chaudron, S., & Lagae, K. (2015). *How parents of young children manage digital devices at home: The role of income, education and parental style*. London, England: EU Kids Online, LSE.
- Loss, J., Lindacher, V., & Curbach, J. (2014). Online social networking sites—A novel setting for health promotion? *Health & Place*, *26*, 161-170.
- Maher, C. A., Lewis, L. K., Ferrar, K., Marshall, S., De Bourdeaudhuij, I., & Vandelandotte, C. (2014). Are health behavior change interventions that use online social networks

- effective? A systematic review. *Journal of Medical Internet Research*, 16(2), e40.
- Maïano, C., & Aimé, A. (2017). Weight-based stigmatization: A special issue on determinants, mediating mechanisms, and intervention programs. *Revue Européenne de Psychologie Appliquée/European Review of Applied Psychology*, 67, 113-170 doi:10.1016/j.erap.2017.03.001.
- Moorhead, S. A., Hazlett, D. E., Harrison, L., Carroll, J. K., Irwin, A., & Hoving, C. (2013). A new dimension of health care: Systematic review of the uses, benefits, and limitations of social media for health communication. *Journal of Medical Internet Research*, 15, e85.
- Morahan-Martin, J. M. (2004). How Internet users find, evaluate, and use online health information: A cross-cultural review. *Cyberpsychology & Behavior*, 7, 497-510.
- Mowlabocus, S., Harbottle, J., Tooke, B., Haslop, C., & Dasgupta, R. K. (2015). 'Because even the placement of a comma might be important': Expertise, filtered embodiment and social capital in online sexual health promotion. *Convergence: The International Journal of Research into New Media Technologies*, 21, 375-387.
- Naslund, J. A., Aschbrenner, K. A., Marsch, L. A., & Bartels, S. J. (2016). The future of mental health care: Peer-to-peer support and social media. *Epidemiology and Psychiatric Sciences*, 25, 113-122.
- Nesi, J., & Prinstein, M. J. (2015). Using social media for social comparison and feedback-seeking: Gender and popularity moderate associations with depressive symptoms. *Journal of Abnormal Child Psychology*, 43, 1427-1438.
- Núñez, A. E., Robertson-James, C., Reels, S., Jeter, J., Rivera, H., & Yusuf, Z. (2015). Exploring the role of gender norms in nutrition and sexual health promotion in a piloted school-based intervention: The Philadelphia Ujima™ experience. *Evaluation and Program Planning*, 51, 70-77.
- Núñez, A. E., Robertson-James, C., Reels, S., Weingartner, R. M., & Bungy, B. L. (2012). Conducting a needs assessment for women and girls using a gender analysis framework: The Philadelphia Ujima coalition for a healthier community experience. *Women's Health Issues*, 22, e527-e534.
- O'Keeffe, G. S., & Clarke-Pearson, K. (2011). The impact of social media on children, adolescents, and families. *Pediatrics*, 127, 800-804. doi:10.1542/peds.2011-0054
- Price Water House Coopers (PwC). (2015). *Social media "likes" healthcare: From marketing to social business*. Retrieved from www.pwc.com/us/en/industries/health-industries/library/health-care-social-media.html
- Puhl, R. M., & Heuer, C. A. (2010). Obesity stigma: Important considerations for public health. *American Journal of Public Health*, 100, 1019-1028.
- Ralph, L. J., Berglas, N. F., Schwartz, S. L., & Brindis, C. D. (2011). Finding teens in their space: Using social networking sites to connect youth to sexual health services. *Sexuality Research and Social Policy*, 8(1), 38-49. doi:10.1007/s13178-011-0043-4
- Rideout, V., Fox, S., & Well Being Trust. (2018). Digital health practices, social media use, and mental well-being among teens and young adults in the U.S. *Articles, Abstracts, and Reports*, 1093. Retrieved from <https://digitalcommons.psjhealth.org/publications/1093>
- Rodway, C., Appleby, L., Kapur, N., Shaw, J., Turnbull, P., Ibrahim, S., . . . Raphael, J. (2017). *Suicide By Children and Young People*. University of Manchester.
- Roman, L. A. (2014). Using social media to enhance career development opportunities for health promotion professionals. *Health Promotion Practice*, 15, 471-475.
- Shaw, J. M., Mitchell, C. A., Welch, A. J., & Williamson, M. J. (2015). Social media used as a health intervention in adolescent health: A systematic review of the literature. *Digital Health*. Advance online publication. doi:10.1177/2055207615588395
- Spencer, R. A., Rehman, L., & Kirk, S. F. (2015). Understanding gender norms, nutrition, and physical activity in adolescent girls: A scoping review. *International Journal of Behavioral Nutrition and Physical Activity*, 12(1), Article 6.
- Subrahmanyam, K., & Greenfield, P. (2008). Online communication and adolescent relationships. *The Future of Children*, 18, 119-146.
- Syed-Abdul, S., Fernandez-Luque, L., Jian, W. S., Li, Y. C., Crain, S., Hsu, M. H., . . . Liou, D. M. (2013). Misleading health-related information promoted through video-based social media: Anorexia on YouTube. *Journal of Medical Internet Research*, 15(2), e30.
- Thackeray, R., Neiger, B. L., Smith, A. K., & Van Wagenen, S. B. (2012). Adoption and use of social media among public health departments. *BMC Public Health*, 12(1), Article 242. doi:10.1186/1471-2458-12-242
- Van Cleemput, K. (2010). "I'll see you on IM, text, or call you": A social network approach of adolescents' use of communication media. *Bulletin of Science, Technology & Society*, 30(2), 75-85.
- Vandelanotte, C., Kirwan, M., Rebar, A., Alley, S., Short, C., Fallon, L., . . . Duncan, M. J. (2014). Examining the use of evidence-based and social media supported tools in freely accessible physical activity intervention websites. *International Journal of Behavioral Nutrition and Physical Activity*, 11(1), Article 105.

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