FIT HARRT Plus: A Study of Participant Informed Text Messages to Promote Physical Activity in Adolescent and Young Adult African American Women

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Purpose: Due to the high incidence of obesity among young African American (AA) adolescent and young adult women, innovative approaches to promote physical activity (PA) are needed. The purpose of this study was to develop, refine, and pilot a participant informed culturally relevant technology-based PA promotion tool for adolescent and young adult AA women.

Methods: A mixed method approach combining nominal group technique (NGT) and traditional focus group techniques was employed to elicit participant generated culturally relevant text messages to promote physical activity in overweight and obese adolescent and young adult African American (AA) women. In phase I, NGT was used to generate text messages in response to three scenarios representing barriers to physical activity including lack of social support, lack of motivation, body image and hair maintenance. After a 3 week pilot during which participants received text messages 1-2 times per day, focus group sessions were conducted to refine text messages for content, clarity, and acceptability. Participants also completed a satisfaction and acceptability survey.

Results: Fourteen overweight/obese AA females with a mean BMI of 35.9 and a mean age of 19.79 participated in focus group assessments. Analysis of focus group data identified several themes including message length, tone, and time of day. In general participants preferred text messages that were brief, were sent during mid-morning/early afternoon hours, included PA or dietary health tips and “challenges”, included the study signature at the end of messages, and judicious use of humor in message content.

According to post-satisfaction survey results 100% of participants (n=14) owned smart phones and 11 participants had unlimited service plans. Approximately 57% felt that creating motivational text messages as a group was helpful and 92% endorsed motivation to become more physically active. 42% reported wanting to continue to receive motivational text messages to keep them motivated. Overall, survey results demonstrated that messages were well accepted with 53% reporting being somewhat satisfied, 15% very satisfied, and 30% not very satisfied. 46% were somewhat satisfied with timing of messages, 38% were very satisfied, and only 15% were not very satisfied.

Conclusions: The iterative, mixed methods approach used to develop and test the PA promotion website facilitated direct incorporation of participant preferences into the motivational text messages created. Our sample of adolescent and young adult African American women reported favorably for the use of text messages to promote PA. Future studies should further explore the development and application of culturally relevant text message interventions as a strategy to promote PA. Designing
culturally adapted technology-based programs to promote PA and proper dietary habits among AA adolescent women may increase feasibility and success of such programs.

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**Music to My Ears: Connections Between Club Drugs and Electronica Viewed Through Facebook**
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**Purpose:** With the surge of club drug use in recent years, it is necessary to identify the demographic of young adults that are more prone to club drug use for more effective preventive strategies. Although it is known that college students frequently display alcohol references on Facebook, it remains unclear whether club drug references or behaviors associated with club drug use are present on Facebook. Club drug use often takes place at musical events featuring electronic music, suggesting a strong social context for this drug use. Previous studies have found there to be a relationship between club drug use and electronic music. Therefore, the purpose of this case-control study was to examine how club drug users display content related to club

**Methods:** This study drew participants from within a larger longitudinal study of college students from two universities. In the parent study, participants completed yearly phone interviews from before college through the second year of college. Interview data included assessment of lifetime substance use across several substances, including club drugs. For this study, we used a case-control design. All club drug users were considered cases and were matched 2:1 to non-club drug users as controls. After identifying eligible participants, their Facebook profiles were evaluated by a trained researcher for the presence of electronic music likes, electronic music events and number of friends over a 3-year time period. Analysis included descriptive statistics and x.

**Results:** From the large sample of 338, 17 participants reported lifetime club drug use. Of these 17 cases, 70% were male, 76% were Caucasian, and 53% were from University A. These 17 cases were matched 2:1 to 34 controls who had no reported club drug experience and same demographics. Of the club drug users, 24.5% of their total music likes were electronic. Of the non-club drug users, 2.91% of their music likes were electronic, p=0.004. Of the club drug users, 70% had attended electronic events on Facebook compared to 5.88% of the non club drug users, p=0.000. Lastly, club drug users averaged a friend count of 920.5, while non club drug users averaged a friend count of 548.525, p=0.00. Club drug users liked an average of 15.8 artists on Facebook, and non-club drug users liked an average of 24 artists on Facebook.
Conclusions: Club drug users provide several indications of club drug use on Facebook profiles. Findings suggest club drug users display more references to electronic music, indicate attendance at electronic music events more frequently, and have more Facebook friends compared to non-club drug users. Thus, one could potentially predict someone’s club drug use based on the content of his or her Facebook profile. Future intervention efforts could examine targeting club drug education ads toward individuals who display this genre of music or electronic events.

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Characteristics of Young Adolescents Accessing Pornography Online
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Purpose: To define the characteristics of young adolescents reporting having visited pornographic websites in the previous 30 days.

Methods: Survey among 3067 8th graders in Switzerland (mean age 14 years, 50.3% females). We asked participants to report whether they had visited pornographic websites in the previous month and we divided them according to their answers into 3 groups: never (G1; N=2096), rarely (G2; N=529) and often/very often (G3; N=442). Groups were compared regarding age, gender, family structure, emotional wellbeing, main purpose of Internet use, problematic Internet use, having a personal (not shared) computer, having a parental filter and reporting current smoking, alcohol misuse (drunkenness), cannabis use and use of other illegal drugs. All variables significant at the bivariate level were included in a multinomial logistic regression using G1 as the reference category. Results are given as Relative Risk Ratios (RRR) with 95% confidence interval.

Results: Compared to G1, G2 were more likely to be males (RRR: 16.3 [12.4/21.5]), problematic Internet users (RRR: 1.94 [1.32/2.87]), living in a non-intact family (RRR: 1.28 [1.01/1.63]) and using both tobacco (RRR: 1.59 [1.08/2.32]) and cannabis (RRR: 2.20 [1.37/3.53]). As for G3, they were more likely to be males (RRR: 87.7 [51.1/150.6]), problematic Internet users (RRR: 3.25 [2.14/4.95]), using it mainly for leisure (RRR: 1.90 [1.42/2.53]), having a personal computer (RRR: 1.51 [1.17/1.96]), and also using both tobacco (RRR: 1.83 [1.19/2.81]) and cannabis (RRR: 2.86 [1.73/4.74]). G3 also showed a clear trend of being less likely to have a parental filter (RRR: 0.69 [0.48/1.00]; p=.053).

Conclusions: Online pornography viewing is an activity almost exclusively reported by male adolescents and is associated with a certain risk-taking profile including being a problematic internet user and using tobacco and cannabis more frequently. Moreover, the frequency of visiting pornographic websites increases in parallel to the risk-taking profile. Additionally, having a personal computer is a risk factor for
frequent online pornography viewing. Parental guidance regarding Internet use could be key not only to decrease online pornography viewing but also other risk behaviors.

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Social Media Use and Adolescent Risk Taking Behavior
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Purpose: Social media has become an important medium for adolescents to learn about and receive health information. However, it is unclear if all adolescents use various social media equally, and in turn, if they would be equally affected by health interventions using different outlets. The objective of this study is to determine social media use among adolescents by their risk-taking behavior.

Methods: Data were obtained from adolescents at a Pediatrics Clinic in the South. Demographics, insurance and vaccination history were gathered through electronic medical record abstraction. The Guidelines for Adolescent Prevention Services survey was used to collect data on health, risk and protective behaviors. Social media data were collected via a survey adapted from The Pew Research Center. Univariate analysis with Stata 12.0 was used to evaluate sample characteristics. Bivariate chi-square analysis assessed association between social media use and risk taking behavior.

Results: 314 adolescents participated, ages 11-21 (48% male, 52% female, 21% white; 45% black, 27% Hispanic, 8% other, average age 14.35 years, median 14.5 years). 87% of teens had access to the internet, 72% had a cell phone and 68% were able to send and receive text messages, while only 11% had previously received health information through social media. Teens who reported currently dating or being in a relationship (25%) were more likely to have a cell phone (82%), send and/or receive text messages (83%), have received health information through social media (17%), spend over two hours a day on the computer or cell phone (75%), use Facebook (82%) and use Twitter (45%) compared to teens who were not dating (x2<0.05). Teens who reported sexual intercourse (20%) were more likely to have a cell phone (87%), send/receive text messages (82%), have received health information through social media (28%) and to spend over two hours a day on the computer or cell phone (68%); however they were less likely to have access to the internet (78%) or to use online games/apps (31%) than sexually naïve teens (x2<0.05). Teens who were thinking of having sex soon (17%) were more likely to have a cell phone (86%), send/receive texts (86%), have received health information through social media (42%), spend over two hours a day on the computer or cell phone (65%) and use Facebook (86%) compared to those who were not (x2<0.05). No other measured risk behaviors: eating/weight/body, schools, weapons/violence/safety, tobacco, substance use, emotions or special circumstances were associated with social media use.
Conclusions: Dating and sexual behaviors may be associated with social media use more than other risk-taking behaviors. Preventive sexual health information through social media may be an effective strategy to reach dating, sexually-active adolescents and those thinking about sex, as these adolescents are frequently engaging in social media and cellular settings. Further research is needed to determine what preventive sexual health information via social media and texting would be effective.

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Relationship of Media Location to Adolescent Health-risk Behaviors: Gender Differences
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Purpose: The aim was to explore relationships among the risk factor of peer influence, the protective resource of parental monitoring, location of media use, and the outcomes of health-risk behaviors (smoking cigarettes, smoking marijuana, drinking alcohol, age at first coitus, number of sex partners, contraceptive use, and use of alcohol or drugs with sex), and to further explore differences between females and males.

Methods: This analysis is one component of a longitudinal study of health-risk behaviors in high school-aged adolescents. Following IRB approval and written informed consent of the participants, data were collected either by computer or by mailed paper surveys from 912 adolescents (42.9% males, 47.4% Hispanic/Latino). Peer influence was measured by a 15-item Likert scale with a Cronbach’s alpha = 0.90. Parental monitoring was measured using an 8-item Likert scale with a Cronbach’s alpha = 0.82. Media use scales were created for this study and summed participants’ use (not at all, < 3 hours/day, 3-5 hours/day, > 5 hours/day) of various media (TV with or without cable, fashion or teen magazines, video games, computer with or without Internet, CD, VCR, or DVD player) by location (out-of-home; in-home, but not in room; in-room). Health-risk behaviors were measured using single items from the Youth Risk Behavior Surveillance Survey.

Results: Media use outside the home was statistically significantly related, inversely, to parental monitoring, and positively to drinking alcohol (p = .05), and number of sexual partners for females (p = .01); media use outside the home was also statistically significantly related to peer influence (p = .01); and marijuana use (p = .05) among females and males. Media use inside the home (but not in one’s room) was significantly related to number of sex partners for females only (p = .05), but none of the other variables were significantly related for either females or males. Media use in one’s room was significantly related to peer influence, smoking marijuana, drinking alcohol, and number of sex partners for females; it was also significantly related to contraceptive use for both females and males (p = .05). Among males, in-room media use was significantly inversely related to parental monitoring (r = -.12, p = .05).
Conclusions: To our knowledge, this is the first study to explore the location of media use among adolescents and it suggests avenues for intervention that may be gender-specific. It also supports previous studies that indicate peer influence as a risk factor and parental monitoring as a protective resource for adolescents’ health-risk behaviors. This approach to studying media, by location rather than technology, could be a model for future longitudinal studies where the evolution of media provides substantial measurement challenges.

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Email Isn’t Just for Old People: How Medical Providers Can Communicate with Youth Today
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Purpose: Understanding how adolescent and young adult patients utilize communication technology has the potential to improve contact between patients and medical providers. This study describes the technology use habits and willingness to use technology with medical providers among a diverse youth population.

Methods: A convenience sample of youth patients, ages 15-25, completed a technology use survey in the waiting room of an Adolescent/Young Adult Practice between October 2012 and April 2013. Seventy-seven percent (108/140) of surveys were completed. We used chi-square to determine whether technology use or willingness to complete online questions between medical visits differed by sex and race.

Results: Demographics reflected the clinic population: mean age 19.9 years (SD 3.1 years), 68% female, 29% white, 32% black, 27% Latino and 12% other. With respect to technology use patterns, 62% of patients reported using email daily, 17% several times a week, 12% at least once a week and 5% less than once a week. 58% used online banking. Older participants (those 19-25 years of age) were more likely than young participants (those 15-18 years of age) to email every day (75.4% vs. 47.1%, $\chi^2=9.9$, p-value=0.04). Older participants were also more likely to use online banking at least once a week than younger participants (59.2% vs. 12%, $\chi^2=20.76$, p-value=0.0004).

With respect to use of technology for medical purposes, 60% of patients reported willingness to answer questions online about their health in between doctor’s visits, 22% were neutral, and 14% were unwilling. Among the unwilling group, half were worried about privacy and security of answering questions online. To answer online questions, 41% preferred using a web-based internet browser, 24% preferred using a mobile application, 25% preferred to answer questions on paper and 10% did not respond. The best ways for the clinic to contact participants with online questionnaires were voice
mail/phone call (53%), home email (49%), and text message (36%). Within the past year, 24% of participants had changed their mobile phone number and 12% had changed their home email address. We found no statistical differences by sex or race.

**Conclusions:** Our data indicate that adolescents and young adults are open to online communication with their medical providers. Contrary to the popular belief that texting is the only way to reach teens and young adults, we found that email as a modality for communication has high acceptability, with lower rates of change than mobile phone numbers, thus highlighting the value of email outreach to this population.

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