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A Pilot Study Examining Risk Behavior in Facebook Posts for Maltreated versus Comparison Youth using Content Analysis

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Abstract

Background: Social Media use is highly prevalent among contemporary adolescents yet, no studies have examined the similarity in risk content (e.g., substance use, sexual behaviors) between the online posts of maltreated youth and their friends.

Objective: The current study examined the risk content of Facebook posts among a sample maltreated and comparison youth and compared the rates of risk content produced by the participants versus their Facebook friends.

Participants and Setting: Data were from a sample of maltreated ($n=56$) and comparison ($n=62$) youth. At the time of data collection participants were in young adulthood ($M=21.78$ years; $SD=1.45$), but the timeframe of their Facebook profiles captured mid adolescence to young adulthood.

Methods: Data were downloaded from the Facebook profiles of all participants and the posts and comments were coded for references to alcohol, marijuana, hard drugs, partying, and sexual content.

Results: The results showed that maltreated and comparison youth were similar in the amount of risky content they posted on Facebook as well as in the amount posted by their Facebook friends. Correlations between participant's and friends' posts showed stronger associations for posts about alcohol use for the maltreated group but stronger associations in the comparison group for posts about marijuana, hard drug, and sexual references. Gender differences were also examined, with males producing more online risky content than females.

Conclusions: Next steps should incorporate a more nuanced analysis to determine which online friends are the sources of risky content.

Keywords

Facebook; content analysis; risk behavior; maltreatment

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The integration of social media and social network sites (SNSs) into the lives of today's youth is unprecedented. According to recent data from the Pew Research Center, 95% of teens in the United States aged 13–17 have access to a smartphone, 72% use Instagram, and 45% report being online “almost constantly” (Pew Research Center, May 2018). The high frequency of use has given rise to concerns regarding the potential negative effects. In particular, the potential exposure to online content glamorizing substance use or risky sexual behavior has been a focus for parents and researchers alike. While a number of studies have examined the prevalence of risky content and links with offline behavior, most used self-reports of exposure to such content (Huang et al., 2014; Pegg, O'Donnell, Lala, & Barber, 2018; Stoddard, Bauermeister, Gordon-Messer, Johns, & Zimmerman, 2012; Westgate, Neighbors, Heppner, John, & Lindgren, 2014), or coded risk behaviors such as sexual references or alcohol use into dichotomous categories (i.e. ‘displayers vs. nondisplayers’) (Moreno, Brockman, Rogers, & Christakis, 2010; Moreno, Brockman, Wasserhit, & Christakis, 2012; Moreno, Christakis, Egan, Brockman, & Becker, 2012). These approaches have clear limitations regarding the ability to describe the actual prevalence of this type of content both from the individual and their online friends. Another important avenue that has not been investigated is potential subgroups of youth, such as those with maltreatment experiences, who may be at higher risk for producing and being exposed to risky online content.

Childhood Maltreatment and Online Risky Content

Evidence indicates that youth who have experienced maltreatment (i.e., physical abuse, sexual abuse, emotional abuse or neglect) are a particularly vulnerable group for exposure to online risky content. For example, childhood maltreatment has been found to predict solicited and unsolicited online sexual advances (Noll, Shenk, Barnes, & Haralson, 2013; Wells & Mitchell, 2008). Maltreated youth also seek sexual content online at higher rates than nonmaltreated youth and are at higher risk for online sexual victimization (Wells & Mitchell, 2008). Evidence indicates that maltreated youth have more offline friends who engage in delinquency or substance use than nonmaltreated youth (Negriff, 2018) and are more likely to become enmeshed in deviant peer groups (Fergusson & Horwood, 1999). In this way, maltreated youth may create an online network that is more likely to post about risky behavior. Through both unsolicited posts as well as the creation of homophilous online networks (i.e., similarity on particular attributes or behaviors), maltreated youth may post and be more likely to be exposed to risky online content. However, no studies have examined the prevalence of posts by maltreated youth continuing risky online content and similarity to the content produced by their online friends.

Risk Behavior in Online Posts

Although SNSs in their current form are over a decade old, studies examining the content of online posts have been infrequent. One of the first studies to examine risk content was on the platform MySpace (Moreno et al., 2010). Selecting 10 “displayers” of sexual references and 10 “nondisplayers”, researchers coded the profiles of the “Top 8” friends. They found that participants who displayed sexual references were not more likely to have friends who also posted sexual references. The exception was for explicit sexual references, where the

participant's and friends' sexual content was more similar. Other studies have examined links between participants' posts about alcohol and offline drinking behavior (Moreno, Christakis, et al., 2012; Ridout, Campbell, & Ellis, 2012) or sexual references and intention to become sexually active (Moreno, Brockman, et al., 2012), but few have examined correlations between participants and friends' posts to determine the degree of similarity between the individual and members of their online social network.

The Current Study

Most studies that have examined risky content of posts on SNSs used self-reports of content, very few have coded the posts from both the individual and their friends, and none have coded information from the entirety of the Facebook timeline as was done in the current study. While Facebook has become less relevant for teen and young adults, at the time of data collection it was still the most prevalent SNS (Pew Research Center, April 2015). In addition, online posts are not a feature unique to Facebook and what is observed on this particular platform likely generalizes to other SNSs that have the same purpose. The important contribution of the present study lies in the quantification of risk content posted on a particular SNS. Importantly, exposure to risky online content has been shown to alter attitudes and perceptions about acceptability of such behavior (Beullens & Vandebosch, 2016; Beverley Branley & Covey, 2017). However, no studies have described the potential differences in risky content posted by youth with maltreatment experiences compared with nonmaltreated youth. Youth with maltreatment histories are especially vulnerable to developing risk behaviors (Afifi, Henriksen, Asmundson, & Sareen, 2012; Negriff, Schneiderman, & Trickett, 2015) and understanding their production of and exposure to online risky content is important for clarifying mechanisms leading to higher levels of substance use and sexual risk behavior found in these youths.

Research Design and Methods

Participants

Data for the current study came from Time 5 of an ongoing longitudinal study examining the effects of maltreatment on adolescent development. The Parent study enrolled 454 adolescents aged 9–13 years at baseline (2002–2005; $n=303$ maltreated, $n=151$ comparison; 241 males and 213 females). Baseline (Time 1) took place between 2002 and 2005, followed by three additional assessments. Time 2 (2003–2006), Time 3 (2005–2008) and Time 4 (2009–2012) occurred approximately 1 year, 1.5 years and 4.4 years following each prior assessment. Time 5 (2013–2015) was conceptualized as pilot study on social networks using a subsample of enrolled participants ($n=152$; $M_{\text{age}}=21.84$; $SD=1.46$) and took place approximately 11 years after baseline. For Time 5, participants enrolled in the larger study were contacted and asked to participate in a study of online social networks, with attention placed on maintaining equal numbers for the maltreated and comparison groups (a deviation from the design of the parent study). There were 152 participants who completed some portion of the study assessment; the sample size for the online survey was $n=133$ and for those with complete Facebook and survey data was $n=118$. The ethnic/racial composition of

the final pilot sample was Black (39%), Latino (37%), White (11%), and Biracial (13%), which was similar to the distribution at baseline for the full sample.

Recruitment (Parent Study).—The maltreatment group was recruited from active cases in the Children and Family Services (CFS) of a large west coast city. The inclusion criteria were: (1) a new referral to CFS in the preceding month for any type of maltreatment; (2) child age of 9–12 years; (3) child identified as Latino, African-American, or Caucasian (non-Latino) (4) child residing in one of 10 zip codes in a designated county at the time of referral to CFS. With the approval of CFS and the Institutional Review Board of the affiliated university, potential participants were contacted and asked their willingness to participate. Based on information abstracted from all available case records for each participant, 70% of the maltreated group experienced neglect, almost 57% experienced emotional abuse, more than 50% experienced physical abuse, and almost 20% experienced sexual abuse.

The comparison group was recruited using names from school lists of children aged 9–12 years residing in the same 10 zip codes as the maltreated sample. Comparison caregivers were contacted the same way as the maltreated group. Comparison families indicated they had no previous or ongoing involvement with child welfare agencies.

Recruitment (Time 5).—For Time 5, contact was attempted for all enrolled participants (N=433; 21 requested to be dropped from the study at a previous wave) for a one-year period while maintaining the planned design of equal numbers in the maltreated and comparison groups. Of those contacted, 26 declined to participate, 3 were deceased, 5 were in the military and unable to have contact, 4 were incarcerated, one was likely in Mexico with no contact, and one was in a treatment facility. There were 18 participants who were consented and given the study instructions but did not start the Facebook app. There were 76 participants who did not complete the previous timepoint (Time 4) and due to lack of current contact information none were able to be reached. Of the remaining 300, 152 participants completed one or more parts of the study assessment (Facebook application and/or survey), while the remaining 148 could not be reached (either because no contact information could be located or the participant would not return our messages). Because we could not determine if our messages were not returned due to lack of interest or an incorrect number the actual participation rate is difficult to estimate.

Procedures

All data collection took place online. After verbal consent was obtained from the participant over the phone, the research staff emailed the participant the URL for the Facebook application (developed for the current study) to access from their personal computer on their own schedule. The Facebook application was created using the API provided by Facebook, this seamlessly integrated the application into the Facebook platform and only allowed download of information allowable by Facebook. Upon accessing the URL, the participant clicked the button “Login with Facebook” and a window appeared to enter their Facebook login and informed them of the permissions and data accessed by the application. The Facebook application downloaded the list of Facebook friends, the list of mutual friends

(i.e., whom on the friend list were friends with each other), and the participants' Timeline data (included posts, comments, likes, etc.). Photos, videos and private messages were not accessed. All Facebook data was downloaded between 2013 and 2015 and contained information from 2007–2015.

Following the completion of the Facebook application, each participant was sent a link to an online survey. Participants were compensated for their participation by check or gift card. All procedures were approved by the Institutional Review Board of the affiliated university.

Facebook Coding.—After participants completed the Facebook application, research staff downloaded the 'Timeline' file from the server. The Timeline file contained all the posts (e.g., status updates, comments) that appeared on the participant's Timeline, including all posts and comments from the participant's friends. Five coders were trained by the first author (S.N.) to evaluate the posts and comments for risky content (specified in the codebook section). All coders were trained on the same Timeline file until they achieved acceptable agreement. Discordant coding was discussed until agreement was reached. Coders then independently coded individual files assigned to them, with 20% of the files randomly assigned to be double-coded to test inter-rater reliability. Halfway through, agreement was checked again by having all coders work on the same file and discrepancies were discussed until agreement was reached. The independently double-coded Timeline files were used to compute Cohen's κ and determine the extent of overall agreement for the presence or absence of each risk behavior code. The inter-rater reliability ranged from .54 to .89 indicating moderate to excellent agreement (Viera & Garrett, 2005).

Risk Behavior Codes.—A codebook was developed for the current study based on a priori topic areas of interest (i.e., substance use and sexual content). Codes were developed to capture references to alcohol use, excessive alcohol use, marijuana, hard drugs, and sexual content. Other studies have used similar strategies to define risk behavior codes (Moreno et al., 2010; Moreno, Christakis, et al., 2012; Moreno, Parks, & Zimmerman, 2009). The code was only marked as present if the post endorsed or supported the target risk behavior. Posts that contained references to alcohol but were anti-substance use (e.g., "please don't get wasted") were not coded as present for that content. Substance use codes were not mutually exclusive (except general and excessive alcohol use), for example if a post contained reference to drinking beer AND smoking marijuana then both general alcohol use and marijuana use were coded. If the post only contained a reference to drinking beer, then only general alcohol use was coded. On the other hand, sexual content codes were mutually exclusive and coded hierarchically. First the coder determined if the post contained reference to sexual intercourse, if not, they determined if it contain reference to soft sexual content, if not then it was coded as sexualized content as detailed in Table 1. The general codes and distinctions between codes were developed from reading Timeline posts from a study of college undergraduates (independent from the current study). Based on those data we developed the codes shown in Table 1 and added clarifications or additional terminology at the initial and halfway reliability checks.

Measures

Online Activity Questionnaire – Revised (OAQ-R).—The OAQ-R is a 51-item revision of the Online Activity Questionnaire (Subrahmanyam, Reich, Waechter, & Espinoza, 2008) adapted to assess the extent and quality of participants' use of electronic communication (see Table 3). Items from the Internet and Media Consumption Inventory (Noll et al., 2013) were also incorporated into the questionnaire. Items assessed the types of social network sites being used and the reason(s) and the frequency of usage.

Number of Facebook Friends.—The friend list was downloaded from Facebook and used to calculate the number of Facebook friends.

Data Analyses

Group differences in the Facebook content variables between a) maltreated and comparison youth and b) males and females were examined using MANCOVA, controlling for T5 age, sex or maltreatment status, and race/ethnicity (minority vs White). To examine associations between the amount of risk content posted by participants and their friends, correlations between posts of each category were computed. Fisher's *r*-to-*z* transformation was used to determine significant differences in the size of the correlations between participant and friends' posts for a) maltreated versus comparison youth and b) males versus females.

Results

Missing data.

Of the 152 participants enrolled in the Time 5 study, 133 completed the online survey and, of those, 118 (48% maltreated; 57% female) completed the Facebook application and had available data to code their Facebook content.

Demographics and descriptives for social media use.

Of the 133 participants who completed the survey, the mean age was 21.78 ($SD=1.45$). Table 2 shows the information for Facebook usage for the total sample. Participants joined Facebook between August 2007 and December 2014. All were active on Facebook at the time their data were downloaded (between 2012 and 2015). On average, participants were active on Facebook for 3.87 years ($SD=1.37$) at the time their data were downloaded; this ranged from 1 to 80 months (.08 to 6.67 years). The number of posts ranged from 7 to 30,403 with an average of 6,320.25 posts ($SD=6,156.92$). The number of participants with no posts from friends containing risky content was quite low, ranging from 3.3% for sexual content to 15.6% for hard drug use. Only five participants had no risky content posted from their friends for any of the coded categories. Means, standard deviations and ranges of all the risk behavior content codes can be found in Table 2.

As shown in Table 3, 91% of the sample used Facebook, with Instagram being the next most popular SNS at 82%. Similarly, Facebook was the profile updated most often (42.1%) followed by Instagram (39.8%). The most frequently endorsed reasons for using SNSs was "to stay in touch with friends I don't see often" (72.2%) and "to make plans with friends I see often" (66.9%) (note that multiple reasons could be selected). Over half of the

participants also said that they use SNSs because “all my friends have accounts” (55.6%) and “to stay in touch with relatives/family” (55.6%).

Maltreated versus Comparison.

The results from the MANCOVA showed there were no mean differences in the Facebook content codes for maltreated versus comparison groups (Table 4). In general, sexual content was the most frequent risk behavior code for both participants and friends.

Overall, the correlations (Table 5) were higher between participants’ and friends’ posts for alcohol use references in the maltreated group, but higher for posts about marijuana hard drugs, partying, and sexual content in the comparison group. Fisher’s *r*-to-*z* transformation was used to compare the correlation coefficients between groups. All correlations were significantly different (at $p < .01$), except excessive alcohol references. In the maltreated group, the correlations ranged from .91 ($p < .01$) for general alcohol references to .08 (*ns*) for soft sexual references. In the comparison group the correlations ranged from .94 ($p < .01$) for marijuana use to .73 ($p < .01$) for sexual intercourse references. Overall there was high concordance between the number of risky posts that participants made and the number that their friends made.

Males versus Females.

Mean differences were examined between males and females for all of the Facebook posts (Table 6). Overall, the results from the MANCOVA showed that males had more posts that contained risk content than did females. However, in terms of friends’ posts, there were no differences for male versus female participants.

Correlations were computed between Facebook posts for the participant and friends (see Table 7). Fisher’s *r*-to-*z* transformation was used to compare the correlation coefficients between groups. Males had stronger associations between their risky posts and their friends’ risky posts, except for marijuana use. For males, correlations ranged from .93 ($p < .01$) (marijuana references) to .68 ($p < .01$) (soft sexual references). On the other hand, for females, correlations ranged from .92 ($p < .01$) for marijuana references to .14 (*ns*) for soft sexual references.

Discussion

The current study provides a descriptive analysis of the amount of risky content posted on Facebook among a sample of maltreated and nonmaltreated youth. Of particular importance is the finding that maltreated youth do not differ from comparison youth on either the amount of risky content they post, nor the amount posted by their friends. This conflicts with findings from studies showing that maltreated youth report higher exposure to online sexual content (both intentional and unintentional) (Noll et al., 2013; Wells & Mitchell, 2008), a difference that may be due to self-report versus observational assessment of online risk content. This may also be due to a cohort effect, as prior studies were not specifically focused on social networking sites but internet use in general.

Research on offline peer interactions has noted how adolescents tend to form friendships with peers who share similarities with them (McPherson, Smith-Lovin, & Cook, 2001). Few studies have focused on whether this also occurs in the online environment (Mazur & Richards, 2011; Thelwall, 2009). The results of the current study show that there are high correlations between the amount of risky content posted by the participant and that posted by the Facebook friends. Of particular concern is that adolescents may become online friends with someone who promotes substance use or risky sexual behavior. Evidence indicates that adolescents interpret posts about alcohol use as indicative of actual offline use, thus creating more accepting attitudes towards use (Moreno, Briner, Williams, Walker, & Christakis, 2009). In addition, higher levels of self-reported exposure to alcohol content posted by online friends was associated with more use, particularly for those with higher online social identity (Pegg et al., 2018). Unfortunately in the current study we could not determine whether the participant or the friends were the catalyst for the risky content, this is an important avenue for future research.

The strength of the associations between participants' and friends' risky posts differed for the maltreated versus comparison groups. For both groups, there were high correlations between the number of posts containing substance use references for participants' and friends', however this was not the case for sexual references. Specifically, for two of the three sexual codes the correlation was not significant for the maltreated group but it was for the comparison group. This indicates that the comparison group was more similar to their Facebook friends in the number of posts about sexual behavior than the maltreated group (except for sexual intercourse references). No studies have examined the similarity in content for maltreated youth and their online friends, but other research shows that this group tends to seek out sexual content more so than nonmaltreated youth (Wells & Mitchell, 2008) and receive solicited and unsolicited online sexual advances. It is unclear from the current data whether maltreated youth or their friends are instigating the posts about sexual content, a time-series analyses of the posts would help illuminate the source. It is also possible that only a small proportion of the maltreated youths' friends are producing the majority of sexual content. Data indicate that having a more Facebook friends who are isolates (not connected to the others in their network) is associated with offline high-risk sexual behavior (Negriff & Valente, 2018), implicating a small set of online friends as a source of risk.

Differences between males and females in our sample were also examined. Overall our male participants produced a higher number of posts containing risk content than did our female participants, whereas the Facebook friends of male participants only posted marginally more substance use posts than female's friends. This may be due to the gender composition of the Facebook network, unfortunately this is only conjecture as we were unable to obtain data regarding the gender of the Facebook friends. Generally, males engage in higher rates of substance use (Chen & Jacobson, 2012) and sexual behavior (Blayney, Lewis, Kaysen, & Read, 2018), so it is likely that this transfers to the online environment. Correlations between participant's and friends' posts were higher for males than females, supporting the supposition that males' online social networks are more homophilous.

There are some clear limitations of this study that should be noted. Foremost, only the content of posts was coded, no photos or videos were included in the study. While photos are an obvious source of exposure to risk behavior, comments on photos were coded allowing some information about the photos to be captured. Second, this study was a subsample of the full parent study. However, those not recruited were more likely to be male and maltreated, both characteristics that would have increased the possible prevalence of risk content. It should also be noted that the content coded based on Facebook posts may not generalize to other platforms such as Instagram or twitter. Lastly, these associations are likely specific to the cultural context of U.S. teens, and although social media use is widespread and peer influence effects have generally been found in other cultures, the production of online risky content may vary widely based on the availability and type of online platforms used.

Although not generalizable to other populations of maltreated youth, this study provides the first descriptive data on the prevalence of risky content in the Facebook networks of maltreated youth. The results enhance our understanding of the production of and exposure to risky content in online posts, a predictor of offline risk behavior (Beverley Branley & Covey, 2017). Future research should examine the actual offline behavior of maltreated youth to determine the specific effects that online risk content may have on offline behavior. In addition, asking participants how they choose their online friends would add to our understanding of the development of online friendships. Lastly, it may be important to compare posts for youth with different types of maltreatment experiences, as sexual abuse has been linked to more provocative online presence (Noll et al., 2013; Noll, Shenk, Barnes, & Putnam, 2009), perhaps other types of maltreatment have a common pattern. Although Facebook is over a decade old, research on the content of online interactions is still emerging, particularly for vulnerable groups such as maltreated youth. Identifying risks in the online environment will be essential for effective intervention for these youth.

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Table 1.

Risk behavior codes and examples

Code	Definition	Example	Inter-rater reliability
General alcohol use	Any reference to alcohol including purchasing, consuming, seeing, desiring.	“scotch n gin :D” “We invented booze to relax us in this world.”	$\kappa=.72$
Excessive alcohol use	Any reference to a) feeling the effects of alcohol or binge drink (e.g., being drunk, drinking to get drunk, playing drinking games etc.); b) direct indications that alcohol use is interfering with poster’s life, that alcohol has negatively impacted school, job performance or relationships, caused physical sickness or withdrawal problems—feeling “hung over”, vomiting—, legal problems, physical fights, or made a situation unsafe or dangerous-drunk driving; or c) references to alcohol tolerance and/or addiction.	a) “Your [sic] drink. Lol” b) “Been at work for an hour now. And, I might still be drunk.” c) “i can’t stop drinking, i can’t stop smoking, i can’t stop writing, i should be the ‘i can’t stop spokesman’	$\kappa=.73$
Marijuana use	Any reference to marijuana including consuming, seeing, desiring, being under the influence, purchasing, or selling.	“420 wake n bake!!” “i want to blaze!!!!”	$\kappa=.78$
Hard drug use	Any reference to substance use other than alcohol and marijuana including depressants stimulants, narcotics, and hallucinogens and references may be broad.	“popping pills”	$\kappa=.89$
Partying	Any references to partying (e.g., getting ill, turnt, etc.) or establishments where a person is likely to come into contact with drugs and/or alcohol (e.g., clubs, bars, music festivals, etc.). No direct mention of drug/alcohol use.	“Bored as hell and I wanna get ill...”	$\kappa=.54$
Sexual content	General references to sexual promiscuity, derogatory references toward women or men, name-calling that includes sexual terms, references to being sexually attracted to someone, or references to person or person’s behaviors that are sexual (e.g., stripper, pornstar, virgin).	“sexy ladies”	$\kappa=.57$
Soft sexual references	References to sexual anatomy (excluding name-calling), sexual touching, oral sex, but no direct mention of sexual intercourse.	examples are graphic	$\kappa=.68$
Sexual intercourse references	Any reference to sexual intercourse (thinking about, desiring, engaging in, observing).	examples are graphic	$\kappa=.71$

Table 2.

Descriptives for Facebook content (N=118)

	Mean	SD	Min	Max
Number of years on Facebook	3.87	1.37	0.08	6.67
Number of posts	6320.25	6156.92	7	30403
Number of friends	539.29	463.98	5	3059
Date first joined FB	2010	n/a	2007	2014
Date of last post	2014	n/a	2012	2015
Participant posts				
General alcohol use	8.92	19.488	0	118
Excessive alcohol use	4.60	11.321	0	69
Marijuana use	11.76	50.991	0	521
Hard drug use	1.55	3.239	0	24
Partying	9.54	17.907	0	105
Sexual content	27.01	62.908	0	467
Soft sexual references	7.24	15.720	0	96
Sexual intercourse references	5.19	14.536	0	105
FB friend posts				
General alcohol use	7.99	16.542	0	121
Excessive alcohol use	3.79	7.342	0	43
Marijuana use	5.24	15.116	0	146
Hard drug use	1.26	2.613	0	14
Partying	14.44	27.189	0	198
Sexual content	23.25	50.484	0	400
Soft sexual references	9.75	37.683	0	394
Sexual intercourse references	2.83	7.822	0	70

Table 3.

Descriptives for social media usage (N=133)

	Percent	
Profile on any social networking site (SNS)	98.5	
Which SNSs do you use?		
Facebook	91.0	
MySpace	28.6	
Twitter	40.6	
Instagram	82.0	
YouTube	62.4	
Google+	38.3	
LinkedIn	19.5	
What profile do you use/update most often		
Facebook	42.1	
MySpace	0.0	
Twitter	6.8	
Instagram	39.8	
YouTube	8.3	
Google+	0.0	
LinkedIn	0.8	
Why do you use SNSs (not mutually exclusive)		
Because all my friends have accounts	55.6	
To make plans with friends I see often	66.9	
To stay in touch with friends I don't see often	72.2	
To stay in touch with relatives/family	55.6	
To meet new people/make new friends	32.2	
To find new romantic/sexual partners	9.0	
To flirt	12.0	
To voice my opinions on various topics	22.6	
To fill up free time	51.9	
To explore interests	42.1	
To post pictures and/or videos	51.9	
How much time do you spend using SNS	weekday	weekend
less than 1 hour	29.4	22.6
1 –3 hours	37.6	45.9
4–6 hours	19.5	16.5
7–9 hours	3.8	5.3
10 or more hours	8.3	8.3

Note: SNS=social network sites

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Table 4.

Descriptives for Facebook content for maltreated versus comparison groups

	Maltreated	Comparison	<i>p</i>
N	56	62	
Number of years on Facebook	3.63 (1.36)	4.08 (1.35)	0.08
Number of posts	6199.31 (6093.62)	6431.12 (6263.69)	ns
Number of FB friends	595.63 (528.38)	485.44 (389.13)	ns
Participant posts			
General alcohol use	8.80 (19.65)	9.03 (19.49)	ns
Excessive alcohol use	4.93 (12.49)	4.31 (10.27)	ns
Marijuana use	8.68 (16.01)	14.55 (68.84)	ns
Hard drug use	1.63 (2.54)	1.48 (3.77)	ns
Partying	8.09 (12.17)	10.85 (21.85)	ns
Sexual content	26.26 (36.40)	27.26 (79.96)	ns
Soft sexual references	6.93 (11.95)	7.52 (18.57)	ns
Sexual intercourse references	5.54 (14.54)	4.89 (14.64)	ns
FB friend posts			
General alcohol use	8.18 (19.44)	7.82 (13.56)	ns
Excessive alcohol use	4.02 (7.87)	3.58 (6.88)	ns
Marijuana use	4.52 (8.13)	5.89 (19.43)	ns
Hard drug use	1.11 (2.59)	1.40 (2.64)	ns
Partying	14.70 (29.42)	14.21 (25.23)	ns
Sexual content	26.70 (56.71)	20.13 (44.35)	ns
Soft sexual references	13.88 (53.37)	6.03 (11.87)	ns
Sexual intercourse references	3.80 (10.48)	1.95 (4.07)	ns

Note: Mean differences tested using MANCOVA controlling for T5 age, gender, and race/ethnicity (minority vs White)

Table 5.

Correlations between participant and friend posts for Facebook content by maltreated versus comparison groups

	Maltreated	Comparison	<i>p</i>
N	56	62	
Participant and Friend Correlation			
General alcohol use	0.91**	0.83**	0.04
Excessive alcohol use	0.91**	0.85**	ns
Marijuana use	0.82**	0.94**	0.001
Hard drug use	0.52**	0.79**	0.004
Partying	0.43**	0.87**	0.001
Sexual content	0.22	0.78**	0.0001
Soft sexual references	0.08	0.83**	0.0001
Sexual intercourse references	0.29*	0.73**	0.0004

* $p < .01$, ** $p < .05$

Table 6.

Mean differences in Facebook content for males versus females

	Males	Females	<i>p</i>
N	49	66	
Number of years on Facebook	3.95 (1.33)	3.81 (1.40)	ns
Number of posts	7093.43 (8059.01)	5746.23 (4211.62)	ns
Number of FB friends	575.02 (608.06)	512.50 (318.01)	ns
Participant posts			
General alcohol use	13.96 (26.70)	5.08 (9.92)	0.01
Excessive alcohol use	7.68 (16.26)	2.25 (3.72)	0.03
Marijuana use	23.68 (75.63)	2.68 (9.03)	0.04
Hard drug use	2.49 (4.35)	0.83 (1.74)	0.01
Partying	12.78 (24.15)	7.07 (10.58)	0.09
Sexual content	38.13 (87.21)	18.53 (32.92)	0.09
Soft sexual references	11.52 (21.45)	3.970 (8.01)	0.01
Sexual intercourse references	9.09 (21.05)	2.22 (4.23)	0.01
FB friend posts			
General alcohol use	11.19 (22.07)	5.55 (10.10)	ns
Excessive alcohol use	5.19 (9.93)	2.71 (4.25)	ns
Marijuana use	9.05 (21.22)	2.32 (6.62)	ns
Hard drug use	1.78 (3.34)	0.865 (1.80)	ns
Partying	16.43 (28.11)	12.92 (26.57)	ns
Sexual content	22.1548.74)	24.07 (52.11)	ns
Soft sexual references	8.03 (14.22)	11.05 (48.58)	ns
Sexual intercourse references	3.00 (5.52)	2.70 (9.23)	ns

Note: Mean differences tested using MANCOVA controlling for T5 age, maltreatment status, and race/ethnicity (minority vs White)

Table 7.

Correlations between participant and friend posts for Facebook content by males versus females

	Males	Females	<i>p</i>
N	49	66	
Participant and Friend Correlation			
General alcohol use	0.88**	0.75**	0.02
Excessive alcohol use	0.92**	0.72**	0.0002
Marijuana use	0.93**	0.92**	ns
Hard drug use	0.67**	0.66**	0.004
Partying	0.86**	0.43**	0.0001
Sexual content	0.75**	0.31**	0.0004
Soft sexual references	0.68**	0.14	0.0002
Sexual intercourse references	0.75**	0.27*	0.0002

*
 $p < .01$, * $p < .05$