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Internet Use, Social Networking, and Homeless Adolescents' HIV/AIDS Risk

Eric Rice, Ph.D.¹, William Monro, MSW¹, Anamika Barman Adhikari, MA, MSW¹, and Sean D. Young, Ph.D.²

⁽¹⁾University of Southern California

⁽²⁾University of California, Los Angeles

Abstract

Objective—To examine the association between sexual health and internet use, including social networking websites such as MySpace and Facebook, among a sample of homeless adolescents at high risk for contracting HIV/AIDS.

Methods—201 homeless adolescents were surveyed in 2009 about their internet use. Multivariate logistic regression models assessed how patterns of use were associated with engaging in exchange sex (sex for money, drugs, housing), recent HIV testing, and online partner-seeking behaviors.

Results—96.5% reported internet use. Most youth accessed the internet at public libraries or youth service agencies. Increased time online and recent engagement in exchange sex were both positively associated with online partner-seeking. Youth connected to family members online were less likely to practice exchange sex and more likely to report a recent HIV test. Youth connected to street-based peers online were more likely to practice exchange sex, while youth connected to home-based peers online were more likely to report a recent HIV test.

Conclusions—Although these data are preliminary, homeless youth need more access to the internet, as access facilitates connecting with family and home-based peers whose presence may reduce sexual risk-taking. Access, however, must be carefully monitored to prevent youth soliciting sex online.

As adolescent internet use has moved away from web surfing and anonymous chat rooms to social networking technologies (e.g. MySpace, Facebook, Twitter) (1–2), the implications for the impact of internet use on sexual health have also changed (2–4). Early worries about sexual predation and exposure to inappropriate sexual content online (5–7) have given way to worries about weakened parental influence and the growing influence of potentially risky peers (3–4). With notable exceptions, (6–7) few studies have looked into how internet use is associated with the sexual health of high risk adolescents.

The estimated 1.6 million runaway and homeless adolescents in the United States are at great risk for contracting HIV/AIDS (8), with prevalence rates reported as high as 11.5% (9). HIV/AIDS risk for homeless adolescents has been tied to the influence of sexual risk-

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All correspondence should be directed to: Eric Rice, Ph.D., at 1149 S. Hill St., Suite 360, Los Angeles, CA, 90015; or eric@usc.edu..

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taking homeless peers (10). Internet use, especially social networking technologies, may enable homeless adolescents to maintain their relationships to parents, family, home-based peers and other healthy influences which may counter some of the negative influences found among their homeless peers.

This study examines frequency of internet use, means of accessing the internet, and with whom homeless adolescents connect online. We assess how technology use is associated with engaging in exchange sex (sex for money, drugs, or other resources), recent HIV testing, and online partner-seeking behaviors.

Methods

Sample and Procedures

A non-probability sample of 201 adolescents was recruited June 2009 in Los Angeles, California at one drop-in agency serving homeless adolescents. Clients age 13 to 24 were eligible to participate. A consistent set of two research staff conducted all recruitment and assessment to prevent adolescents completing the survey multiple times. The survey was anonymous and youth were read a consent form which they did not sign. A waiver of parental consent was obtained for minors.

The survey was a computer administered self-interview, delivered at the agency, lasting 60 minutes. Participants received a \$20 gift card. Survey items and procedures were approved by university Institutional Review Board.

Measures and Analysis

All variables in Table 1 were based on self report. Exact wording for internet technology use variables are reported on Table 1. Three separate logistic regression models were fit and best fitting models are presented on Table 2. With the exception of demographic controls, non-significant variables were dropped from the final models. Outcomes were: lifetime online partner seeking (model 1), exchange sex in the previous 90 days (model 2), and HIV test in prior 6 months (model 3). Online networking variables used in the multivariate models were created by combining responses to both email and social networking websites.

Results

Table 1 displays descriptive statistics. Most adolescents (84%) used the internet once a week or more. The most popular access points for these adolescents were public places such as libraries and youth service agencies. Homeless adolescents used email or social networking sites to connect to family, home-based, street-based, and online peers. Approximately one quarter used the internet to find a sex partner.

Table 2 presents multivariate models. Adolescents engaging in exchange sex were approximately 18 times more likely to seek sex partners online. More time online, being male, and MSM were associated with an increase in the odds of online partner-seeking (model 1). Adolescents who used the internet to communicate with their street peers were nearly five times more likely to engage in exchange sex, while using the internet to communicate with family was associated with a 68% reduction in the odds of exchange sex (model 2). Using the internet to communicate with family or home-based peers was associated with an increase in odds of recent HIV testing (model 3). Outcomes for models 2 and 3 were positively associated with MSM and negatively associated with males.

Discussion

Homeless adolescents reported surprisingly high levels of internet use, accessed primarily through free, public locations. Moreover, homeless adolescents are using the internet and social networking sites to reach out to a broad set of social network ties, including street-based ties, but also family and home-based peers. We caution generalizing these results to all homeless youth, as these data were collected from a non-probability sample at one agency.

Sexual health behaviors of homeless adolescents were significantly associated with types of social relationships they were maintaining online. Those who used their internet time to maintain relationships with their street peers were more likely to be engaged in exchange sex. Adolescents who connected with home-based peers online were more likely to report recent HIV testing. Not all home-based peers are pro-social nor are all street-based peers risk-taking and these data do not specify peer's behaviors. In the aggregate, however, connections to home were associated with reductions in risk, while connections to street were associated with increased risk. For many homeless youth family relationships are abusive and not communicating may be healthy, but these data suggest that for youth who do maintain ties to family (presumably non-abusive), those connections are associated with healthier behaviors (reduced odds of exchange sex and increased odds HIV testing).

The most worrisome finding in these data was that homeless adolescents were using the internet to find sex partners. Moreover, the youth most likely to do so were the youth at highest risk for contracting HIV/AIDS. Adolescents who engaged in exchange sex were much more likely to be looking for partners online, suggesting these adolescents were soliciting sex online. Likewise, homeless MSM, who are at elevated HIV risk, were more likely to be seeking partners online. They, however, may be using the internet to avoid social stigma and rejection, as has been seen with housed young MSM (4). Male homeless youth, like normative adolescent males, are in some respects riskier and in some respects less risky than females (4).

Limitations to the study included self-reported technology use, cross sectional data, and a non-probability sampling strategy. Also, we do not differentiate between face-to-face and online networks and face-to-face interactions are possibly more strongly associated with risk.

While preliminary, these data suggest new and previously unobserved phenomena: (1) homeless adolescents used social networking technology to access a variety of home and street-based social network ties; (2) online ties were associated with sexual risk-taking behaviors. The needed next step is a longitudinal probability sample of homeless adolescents collecting detailed information on sex risk, technology use, and social network influences.

The current data, however, suggest an immediate direction for homeless youth programming. Agencies serving homeless youth should allow greater access to the internet because such access facilitates connecting with family and home-based peers who can help reduce sexual risk. Access, however, must be carefully monitored to prevent youth soliciting sex online.

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Table 1

Descriptive Statistics of Homeless Adolescents (n = 201) Los Angeles, CA 2009.

Sample Characteristics	n	%
Race		
African American	69	34.33
Latino	24	11.94
White	49	24.38
Asian American	5	2.49
Pacific Islander	1	0.5
Native American	4	1.99
Mixed Race	36	17.91
Other/N on-Identified	13	6.47
Gender		
Male	133	66.17
Female	62	30.85
Transgender	6	3.01
Sexual Orientation		
Gay/Lesbian	26	12.94
Bisexual	30	14.93
Heterosexual	137	68.16
Unsure	8	3.98
Men Who Have Sex With Men	29	14.43
Current Living Situation ^(a)		
Family home	14	7.14
Fosterfamily home	3	1.53
Relative's home	4	2.04
Friend's home	24	12.24
Family group home	3	1.53
Shelter	25	12.76
Hotel, motel	18	9.18
Own apartment	17	8.67
Street, squat, abandoned building	58	29.59
Transitional living program	22	11.22
Other	8	4.08
<hr/>		
	mean	std dev
Age	21.07	2.09
Years Homeless	3.81	3.88
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Technology Use	n	%
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How often do you use the internet?		
Never	7	3.50

Technology Use	n	%
Less than once a week	26	13.00
Once a week	16	8.00
A couple times a week	39	19.50
Almost every day	54	27.00
Every day but less than 1 hour	11	5.50
More than 1 hour a day	47	23.50
Where do you go to get online? ^(b)		
A youth service agency	63	31.34
At school	25	12.44
At work	11	5.47
At home, where you are staying	46	22.89
Internet cafe	45	22.39
Public library	100	49.75
Friend or associate's house/apartment	45	22.39
my cell phone	36	17.91
No where, I never get online	7	3.48
Who do you use your email to communicate with? ^(b)		
Parents (including fosterfamily or step family)	62	30.85
Brothers, sisters, cousins or other family members	73	36.32
Any family member (based on responses to items above)	93	46.27
Friends or associates you know from home (before you came to Hollywood)	90	44.78
Friends or associates you know from the streets of Hollywood	74	36.82
Friends or associates you met online	70	34.83
When you use social networking websites like MySpace or Facebook, who do you communicate with? ^(b)		
Parents (including fosterfamily or step family)	38	18.91
Brothers, sisters, cousins or other family members	85	42.29
Any family member (based on responses to items above)	96	47.76
Friends or associates you know from home (before you came to Hollywood)	120	59.70
Friends or associates you know from the streets of Hollywood	82	40.80
Friends or associates you met online	86	42.79
HIV/AIDS Risk Behaviors		
Online Partner Seeking (yes=1)	51	25.37
Lots of people have used the internet to find someone to have sex with.		
Have you ever used the internet to find someone to have sex with?		
Exchange Sex (yes=1)	18	8.96
In the last three months have you exchanged sex for money, drugs, a place to stay, food or meals, or anything else?		
Recent HIV Test (yes=1)	114	56.72
Have you been tested for HIV/AIDS in the past 6 months?		

^(a) All youth receiving services were literally homeless, were recently, or were at risk for literal homelessness.

^(b) Multiple responses allowed.

Table 2
Multivariate Logistic Regression of Sexual Risk and Online Communication of Homeless Adolescents (n=201), Los Angeles, CA, 2009.

	Model 1		Model 2		Model 3	
	O.R.	95% Conf Int	O.R.	95% Conf Int	O.R.	95% Conf Int
Age	0.94	(0.77, 1.16)	1.06	(0.80, 1.39)	1.03	(0.88, 1.21)
Male	3.58	(1.34, 9.54)*	0.28	(0.08, 0.94)*	0.47	(0.24, 0.94)*
White	2.17	(0.9, 5.26)	0.50	(0.12, 2.03)	2.11	(0.93, 4.8)
MSM	3.80	(1.46, 9.9)**	6.51	(1.74, 24.28)**	5.62	(1.9, 16.6)**
Time Homeless	1.01	(0.92, 1.12)	0.96	(0.82, 1.13)	1.00	(0.92, 1.09)
Unsheltered (a)	0.93	(0.38, 2.3)	1.25	(0.35, 4.42)	1.14	(0.53, 2.44)
Exchanged Sex	18.06	(4.89, 66.8)***				
Time Spent Online (b)	1.31	(1.04, 1.66)*				
Online Networking with:						
Street Peers			4.70	(1.36, 16.30)*		
Any Family			0.32	(0.10, 0.99)*	2.50	(1.32, 4.75)**
Home-Based Peers					2.02	(1.01, 4.02)*
-2 Log L	178.46		101.53		235.30	

* = p<.05
 ** = p<.01
 *** = p<.001

(a) = Dummy variable coded 1 for youth whose Current Living Situation = Street, squat, or abandoned building.

(b) = Continuous variable coded from responses to "How often do you use the internet?"