



Published in final edited form as:

AIDS Educ Prev. 2016 October ; 28(5): 393–404. doi:10.1521/aeap.2016.28.5.393.

The Uses of Text Messaging in Sexual Relationships Scale: Associations with risky sexual behavior among at-risk African American emerging adults

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Abstract

Qualitative and quantitative research was used to create the Uses of Texting in Sexual Relationships scale. At-risk, predominantly African American emerging adults participated in qualitative interviews (N = 20) and quantitative surveys (N = 110) about their uses of text messaging within romantic and sexual relationships. Exploratory factor analysis of items generated from interviews resulted in four subscales: Sexting, Relationship Maintenance, Relationship Development, and Texting for Sexual Safety. Exploratory analyses indicated associations of Sexting with more instances of condomless sex, and Texting for Sexual Safety with fewer instances of condomless sex, which was moderated by relationship power. Further research on the connections between text messaging in relationships and sexual behavior among high-risk and minority young adults is warranted, and intervention efforts to decrease sexual risks need to incorporate these avenues of sexual communication.

Keywords

African-Americans; young adults; text messaging; risky sexual behavior

New communication technologies, in particular text-messaging, have significantly altered how people communicate with romantic and sexual partners. Research has shown that some teens and young adults use text-messaging to send sexually suggestive messages and photographs (i.e., “sexting”), with 44% of 18–24 year olds reporting receiving sexts and 15% reporting sending them (Pew Research Center, 2014). This behavior is not limited to single people, as individuals in relationships are just as likely to receive sexts as those who are not. Yet there is scant and contradictory research regarding the potential link between this activity and actual sexual risk. In one study, college students who reporting having sexted (44%) also reported engaged in more condomless sex and having multiple partners, controlling for demographic factors and substance use (Benotsch, Snipes, Martin, & Bull, 2013). Among adolescents in Texas, sexting was associated with having initiated sexual intercourse, and for girls, multiple partners (Temple et al., 2012). In a probability sample of

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adolescents in Los Angeles, sexting was also associated with initiation of sexual intercourse (Rice et al., 2012). However, in another survey of mostly Hispanic female college students there was an overall “sexting” incidence of 20.5%, but no links between sexting and number of sex partners, condomless sex, or history of sexually transmitted infection (STI) (Ferguson, 2011). Finally, in a large web-based survey of young adults, sexting was not associated with number of sexual partners or condomless sex partners (Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2013).

It is necessary to distinguish sexting from other uses of text messaging within sexual relationships. Our previous research has demonstrated that young African American men and women also use text messages to negotiate condom use and safer sex (Author, 2013), which may decrease sexual risk behaviors. Using text messages may help individuals avoid difficulties associated with condom negotiation due to sexual arousal (Ariely & Loewenstein, 2006), and the possibility of intimate partner violence in response to condom requests (El-Bassel, Gilbert, Rajah, Foleno, & Frye, 2000; Wingood & DiClemente, 1997). Wingood and DiClemente’s application of the Theory of Gender and Power (TGP) to women’s experiences with HIV risks (Wingood & DiClemente, 2000) also suggests that gender and power may be important moderators of the effectiveness of text messaging for sexual safety. Women are often primarily responsible for condom negotiation (Carter, McNair, Corbin, & Williams, 1999; Pulerwitz & Dworkin, 2006), yet they may not have the power or authority to make important decisions in the relationship, therefore be less effective in ensuring their condom wishes. Text messaging is also used within relationships to increase intimacy, with 41% of 18–29 year olds reporting feeling closer to partners because of communicating either online or through text message conversations (Pew Research Center, 2014). This behavior may also be contributing to higher sexual risks.

However, currently no scales exist that capture multiple uses of text messaging behavior within sexual and romantic relationships. Therefore, our aims were: 1) to describe the initial development of a multidimensional scale of the Uses of Text Messaging in Relationships in two stages of exploration of qualitative themes, and quantitative exploratory factor analysis, and 2) to explore relationships of these subscales with sexual risk behavior. We examined these aims within a population of young African American adults due to their risks for STIs and high use of text messaging. African Americans are between 6 (for women) and 8 (for men) times more likely to contract chlamydia, 12 times more likely to contract gonorrhea, and five times more likely to contract syphilis than Whites (Centers for Disease Control and Prevention, 2013). HIV incidence for African Americans is eight times that of Whites (Centers for Disease Control and Prevention, 2015). Additionally, African Americans who text send an average of 70 texts per day (Median = 20) compared to Whites who send an average of 31 texts (Median = 10) (Pew Research Center, 2011).

Method

Scale Development

Participants and procedures—To address the first aim of our investigation, we first conducted qualitative interviews with 20 young African American adults. Participants were recruited from a health department clinic offering STI testing, treatment, and prevention

services, located within the inner city. Potential participants were approached while waiting to receive services by research staff and asked if they would be interested in participating in an interview survey regarding sexual relationships and text messaging. If interested, participants were screened for eligibility. Eligibility criteria were being between the ages of 18 and 24 and having a clinic appointment that day. Although identification as Black or African American was not included in eligibility criteria, the clinic primarily served this population, and research associates focused recruitment efforts on Black and African American individuals. Eligible participants provided informed consent and completed the interview in a private room. Interviews were audio recorded and transcribed. Interviews asked about how participants used text messaging in their romantic and sexual relationships. All procedures were approved by [Institution]’s Institutional Review Board. Participants were provided with \$20 compensation for their time.

Data Analysis—The analysis procedure used to create the coding scheme is described in a previous publication (Author, 2013). The resulting coding scheme included several codes that emerged to describe participants’ reasons or motivations for texting. From these results, we generated a pool of 55 items corresponding to these codes and themes (see Table 1), which were assessed in a quantitative data collection phase described below.

Initial Scale Validation and Exploration

Participants and Procedures—Participants were recruited using the same methods as described above for the qualitative interviews using the same eligibility criteria, except that potential participants were asked to take a survey rather than participate in an interview. Surveys were completed on laptops using Audio Computer Assisted Self-Interviewing (ACASI) software and took on average 45–60 minutes. Participants were provided with \$20 compensation for their time. We recruited 110 total participants, of which 51% identified as male. All but 5 participants identified as Black or African American. One participant identified as Hispanic, one as Hispanic and mixed race. One participant identified as Jamaican, one participant identified as American Indian/Alaska Native, and one participant did not indicate any race or ethnicity. Seven participants reported more than one race (including Black or African American). The mean age was 20.7 years, range 18–24.

Measures—The following measures were collected.

Uses of texting in sexual relationships: All 55 generated items were included in the survey. Response options ranged from “Never” (1) to “All the Time” (7). After exploratory factor analysis, the resulting subscales were averaged to assess uses of text messaging.

Relationship status: This was assessed by asking if participants were currently in a relationship and how they described the relationship: Boyfriend/Girlfriend, Seriously dating, Casually dating, Casual sex, Hanging out. These variables were recoded such that participants were considered to be in a serious relationship if they answered both that they were in a relationship and that they considered it to be either a boyfriend/girlfriend, or seriously dating (n = 60). All others were categorized as not in a serious relationship.

Safer sex intentions: Intentions was assessed with a scale (4 items, $\alpha = .83$) drawn from previous research (Bryan, Rocheleau, Robbins, & Hutchinson, 2005) to assess intentions to obtain and use condoms in the future (example item: “How likely is it that you will use a condom every time you have sexual intercourse in the next month?”). Response options included “Will definitely NOT happen” (1) to “Will definitely happen” (7).

Relationship power: Power was measured with two subscales drawn from the modified Sexual Relationship Power Scale (Pulerwitz, Gortmaker, & DeJong, 2000). Questions were asked of the participant’s current or most recent partner with response options “Strongly Disagree” (1) to “Strongly Agree” (7). Relationship Control ($\alpha = .88$) consisted of the average of 13 items assessing the extent to which the individual perceives to be in control of the relationship (example item: “My partner does what he/she wants even if I do not want him/her to”). Decision Making Dominance ($\alpha = .77$) consisted of the average of 6 items assessing perceptions of who is the dominant decision-maker in the relationship (example item: “Who usually has more say about when to see each other?”). Answers were reverse coded such that higher scores indicated more relationship power.

Outcome measures: We assessed instances of condomless sex with the question, “In the last month, how many TIMES have you had unprotected sex (vaginal or anal intercourse in which a condom was NOT used)?” 103 participants provided answers to how many times they had had condomless sex in the previous month and were included in analyses using that variable. Of those participants, 20% indicated no instances of condomless sex in the previous month, median number of times was 2, range 0–50. We also asked number of lifetime sexual partners. 90 participants provided answers to how many lifetime sexual partners they had had and were included in analyses using that variable. Of those participants median number of partners was 10, range 1–90.

Data analysis—We conducted an EFA in order to clarify appropriate subscales for use in the current and future research, using Maximum Likelihood Factoring. We hypothesized that factors would be correlated, with some people engaging in more texting overall than others, therefore we used an oblique promax rotation. Examinations of factor loadings were used to define factors and create subscales. These subscales were then used to examine gender differences, differences by relationship status, correlations with safer sex intentions, relationships with condomless sexual behavior and sexual partners, and potential moderations of effects by gender, relationship status, and relationship power. We used generalized linear models predicting instances of condomless vaginal and anal intercourse in the previous month by each of the Uses of Texting subscales, controlling for gender and relationship status. Goodness of Fit indices indicated that a negative binomial distribution was more appropriate than a Poisson distribution for the outcome of condomless intercourse occasions. Number of lifetime partners was also non-normal, but did not follow a Poisson or negative binomial distribution. Log-transformation resulted in a normal distribution, therefore we used a linear model. Our participant sample included 7 women who indicated that they only had sexual attraction towards women. Considering the lower level of risks for STIs and HIV for women who only have sex with women, we conducted these analyses both including and excluding these participants. The pattern of results did not change, therefore

results without these participants are shown. For significant associations, we then examined potential moderation by gender, relationship status, and relationship power. Interaction analyses were conducted using mean deviated variables, and simple effects of significant interactions were explored by examining effects at the level of the mean of the moderator variable, and one standard deviation above and below the mean.

Results

Scale Development

Qualitative analysis—Interviewees indicated several motivations or reasons for using text messages to communicate with partners. These included: finding out about partner’s day, scheduling times to see one another, getting to know the person, expressing emotions (e.g., love, affection), talking about problems, arguing, breaking up, because texting is free or cheaper than talking on the phone, flirting, foreplay, to make partner horny, sending pictures, asking for pictures, talking about condoms/safer sex, talking about previous sexual partners, talking about if they or their partner had an STI, and asking about getting tested for STIs.

Participants discussed using text messages to keep in contact with partners day-to-day in order to keep in touch, check in with each other, and discuss problems they may be having.

“Well he is my only sexual partner so [we] don’t really like text message like sexually or nothing like that. We just really—just if we are apart, away from each other and I need to tell him something and then I just send it in a text or I will call him (bless his heart). But if I’m in church or something and I’m bored I’ll text him. Or if I’m in school like because I’m in college and I’m in class and I’m bored, I’ll text him. Or if he is at work and I’m bored I’ll text him.”

“Oh well when we first started dating he would text me like, ‘do you want to go out to the movies or like out to eat and stuff.’ And he would text me like, every now and again he would text me ‘how am I doing’ and stuff like ‘how was my day today at work and stuff.’ And—or because I was still in high school back then so he would text me like, ‘how was school,’ you know stuff like that. And I have a bad attitude so he would be texting me like just like having a conversation with me to calm me down and stuff and make me feel better when I get angry in school.”

One participant also described how general messages could then turn into discussions about sex:

“Basically it will be starting out asking questions with what they are doing tonight if they are free. And then it would turn into what we actually be doing tonight and basically be freaky conversations, kinky conversations things like that.... I say if you are coming out tonight what are we going to do? He will probably text back and say, ‘what do you want to do?’ So I will text back and say, ‘have sex’ or something like that. He’ll agree and then probably go from freaky to what we are going to do how are we going to do it and things like that. Basically it’s—they get him horny enough to come over.”

Participants described using text messages to get to know potential partners, or further develop existing partnerships, often ending in sexual discussions.

“If [you] do want to take it to another level then obviously you’re going to get to asking more questions about each other and then when you—when they start texting you, you can pretty much be familiar with who’s texting you sometimes just by what they’re saying. When they’re first texting you, you would know who it was. So basically I say you just have to get to know each other and that’s how we progress from when you first start talking to getting to that relationship.”

“You can get to know your partner a little bit easier and better. Something they might not want to tell you was bothering you or what you didn’t do right.”

“Text message to get to know them basically, ask them questions on where he work, or do you have any kids, do you have a girlfriend, things like that... What are their hobbies, what do they like to do for fun, do you like to go to the movies? Like bowling? Basically to get to know the person first, ask them questions about themselves. Or you get—I’d say if I feel like that person is sending me a text message that he wants to have sex with me or if he wants to get to that point and then I will go to, ‘ok have you been to the doctor? When was your last sex partner? When was the last time you had sex? How many girls have you had sex with?’ Things like that.”

Participants described using text messages to talk about sex in a broad way, that including not only sending pictures, but also discussions about sex.

“You can send pictures texting of yourself, pictures like no naked pictures but you know lingerie, stuff like that.”

“Yeah ‘cause when she text she tell me she horny or when I text her I tell her I’m horny and then we just talk about it... Like she’ll text like, ‘baby I’m horny.’ And I’ll be like, ‘for real?’ And she like, ‘yeah, what you gonna do about it?’ And I’ll start texting her nasty stuff... like what I am gonna do to her like first I’m gonna kiss your lips, and kiss your nips and kiss your body and rub your back and just lay you down. We gonna take off our clothes, hop in the shower and straight to the room.”

Finally, many participants indicated that they would use text messages to discuss sexual safety, sometimes in the context of a larger sexual discussion.

“Do you still have that protection? Do you have the music on? Candles?”

“I might text them, might ask them if they—they could be late, I could call them or I’ll just text them ‘can she bring a condom?’ Or she might text me and ask me, ‘do I already have one?’ I say ‘yeah.’ I might not and if I don’t have one, I’ll ask her if she could bring one on the way or I’ll get one when she come here. And I do ask them questions about how many sex partners they had.”

“Like females will be like ‘I hope you good. I hope you got some rubbers ‘cause I ain’t trying to burn. I ain’t trying to get burnt,’ something like that. I think they

trying to be funny so cause how she said I don't know. Like little slang words, she said burnt.”

Using a bottom-up approach, we generated a list of 55 potential items to capture the diverse ways interviewees indicated that they used text messages in their partnerships.

Quantitative analysis—In the first step of EFA we used non-rotated Maximum Likelihood Factoring to explore number of factors with eigenvalues greater than 1. Examination of the scree plot revealed 4 or 5 likely factors. We then conducted Maximum Likelihood Factoring with an oblique promax rotation to account for likely correlation among the factors and constrained the solution to 4 factors. Each of these factors contributed 30.27%, 7.52%, 5.14%, and 3.15% to variance explained. Correlations among the four factors ranged from .20 to .57, indicating the appropriateness of an oblique rotation. Repeating this analysis constraining the solution to 5 factors revealed that no items loaded more than .40 on factor 5, therefore we chose the 4-factor solution. Due to the length of the full scale, we conservatively restricted factor loadings to .50 for inclusion in subscales. Twenty-three questions did not load greater than .50 on any of the four factors and were dropped from the scale. Table 1 provides factor loadings for the four-factor solution. Examination of items loading on the four factors indicate that factor one included items that could be considered various forms of sexting, including talking about what they want or like to do during sex, and sending pictures of body parts. Factor two included items that indicated relationship comfort, including talking about problems and making plans. Factor three included items that indicated getting to know one another, including asking questions and giving compliments. Finally, factor four included items regarding safer sex, including requesting condoms, and getting tested for STIs. We therefore named the factors: Sexting, Relationship Maintenance, Relationship Development, and Texting for Sexual Safety. Cronbach's alphas were high: .93, .89, .79, and .84, respectively.

Initial Scale Exploration

Men ($M = 3.19$, $SD = 1.19$) reported more Sexting than women ($M = 2.72$, $SD = 1.15$; $t(108) = 2.11$, $p < .05$), there were no other significant gender differences. Those in serious relationships ($M = 2.71$, $SD = 1.09$) reported less Sexting than those not in serious relationships ($M = 3.26$, $SD = 1.25$; $t(108) = 2.46$, $p < .05$), there were no other significant relationship differences. All of the subscales correlated with each other, but only Texting for Sexual Safety significantly correlated with Safer Sex Intentions (See Table 2). Controlling for gender and relationship status, we found no significant effects of any of the subscales on lifetime number of sex partners (log-transformed) (Sexting: $B = .06$, Wald $\chi^2(1, 80) = 1.86$, ns ; Relationship Maintenance: $B = -.03$, Wald $\chi^2(1, 80) = .27$, ns ; Relationship Development: Sexting: $B = .02$, Wald $\chi^2(1, 80) = .15$, ns ; Texting for Sexual Safety: $B = -.02$, Wald $\chi^2(1, 80) = .33$, ns).

Table 2 provides effect sizes and significance tests of the main effects of the four Uses of Texting subscales on instances of condomless vaginal sex within the previous month, controlling for gender and relationship status. Results indicated a positive effect of Sexting on condomless sex, such that participants who engaged in more Sexting also engaged in more condomless sex. Also, results indicated that participants who engaged in more Texting

for Sexual Safety engaged in fewer instances of condomless sex. In analysis including both Sexting and Texting for Sexual Safety as predictors and controlling for gender and relationship status, both main effects remained significant (Sexting: $B = .40$, Wald $\chi^2(1, 87) = 12.46$, $p < .001$; Texting for Sexual Safety: $B = -.29$, Wald $\chi^2(1, 87) = 6.72$, $p < .05$), but there was no significant interaction ($B = -.03$, Wald $\chi^2(1, 87) = .13$, *ns*).

Moderation analyses revealed no significant interaction between Sexting and gender controlling for relationship status ($B = -.03$, Wald $\chi^2(1, 88) = .02$, *ns*), or by relationship status controlling for gender ($B = -.32$, Wald $\chi^2(1, 88) = 1.91$, *ns*). There was no significant moderation of the effect of Texting for Sexual Safety by gender controlling for relationship status ($B = .28$, Wald $\chi^2(1, 88) = 1.56$, *ns*), or by relationship status controlling for gender ($B = .22$, Wald $\chi^2(1, 88) = 1.06$, *ns*). Controlling for gender and relationship status, we also explored possible interactions of Sexting and Texting for Sexual Safety by relationship power. Sexting was also not moderated by Relationship Control ($B = -.14$, Wald $\chi^2(1, 84) = 2.53$, *ns*) or Decision-Making Dominance ($B = .04$, Wald $\chi^2(1, 84) = .16$, *ns*). The effect of Texting for Sexual Safety was not moderated by Relationship Control, ($B = .14$, Wald $\chi^2(1, 84) = 3.19$, *ns*). There was a significant interaction with Decision-Making Dominance ($B = .29$, Wald $\chi^2(1, 83) = 6.05$, $p < .05$). Table 3 shows the simple effects of Texting for Sexual Safety on condomless sex, controlling for gender and relationship status. Examining the parameters shows that the negative effect was significant only when participants were high in Decision-Making Dominance.

Discussion

Using qualitative interviews and exploratory factor analysis, we developed the Uses of Texting in Sexual Relationships scale, which will allow researchers to examine associations of different uses of texting within sexual and romantic relationships among emerging adults. While our results indicate that Sexting is potentially implicated in sexual risk behaviors, it is important to note that young people are also taking advantage of texting to negotiate condoms and safer sex. The subscales' high degree of intercorrelations indicate that individuals who text for one reason may also be likely to text for other reasons. Still, low mean values of the Texting for Sexual Safety subscale indicate room for improvement and potential intervention targets. Given the effect on condomless sex, increasing the use of text messages to negotiate condom use and discuss STI testing is a potentially fruitful area for future interventions.

However, these results also show that efforts to increase the use of text messages for sexual safety need to take into account the larger context of text messaging within relationships. Although results are mixed, much previous research and our results indicate that sexting is a potential risk factor for risky sexual behavior. Further research should explore the mechanisms of this association. Personality factors such as sensation seeking or impulsive decision making could contribute to both sexting and condomless sex (Hoyle, Fejfar, & Miller, 2000). The effect of Sexting on condomless sex, and the fact that Texting for Sexual Safety did not mitigate that effect, highlights the importance of teaching skills for navigation of electronic communication within sexual relationships in general. These skills may include maintenance of privacy, or resistance to pressures to sext. Additionally, although our

participants were all 18 years of age or older, adolescents may be particularly vulnerable to additional legal risks, as some states consider sexting to constitute dissemination of child pornography. Incorporating the influence of electronic media of communication into comprehensive sexual education is therefore necessary.

Some qualitative research has suggested that pressure from male partners may contribute to the prevalence of “sexting” (Lenhart, 2010). These partners may also be applying pressure to engage in condomless sex. Our results provide evidence that such power imbalances in relationships may be important to consider within the larger context of text messaging within relationships. In particular, individuals who express desires to engage in safer sex through text messaging may only have those desires met if they have sufficient decision-making power within that relationship. Power to make decisions seems to have more impact than overall relationship control, although our low power to detect moderating effects suggests that further research may be warranted.

Some limitations of this work should be noted. Our sample size was small, with a participant-to-item ration of 2:1. Sample size suggestions for exploratory factor analysis are mixed, however, one recommendation calls for a 5:1 participant-to-item ratio (Stevens, 1996). Therefore, further research is needed for a full psychometric analysis, including confirmatory factor analysis with a new sample, and examination of convergent and discriminant validity. However, the subscales are highly reliable, correspond with qualitative themes, and the Texting for Sexual Safety subscale’s significant association with safer sex intentions suggests some construct validity. Also, our exploration of the scale used a cross-sectional survey study, therefore no causal inferences can be drawn. Longitudinal research would more persuasively argue for effects of sexting and texting for sexual safety on subsequent sexual behaviors. Finally, recruitment from an STI clinic allowed us to access a population that may be at risk, but unfortunately we did not record refusal rates. Therefore, generalizability of the findings is limited, and may not extend to those who are engaging in risky sexual behaviors but do not get tested for STIs, or would refuse to participate in a study on texting in sexual relationships. Additionally, a participant who has condomless sex with a stable partner of known negative HIV status may not be at much risk, therefore our main outcome variable of instances of condomless intercourse occasions would more precisely capture level of risk if we also knew how many partners these occasions were with. However, all participants presumably perceived themselves at some risk due to their presence at the STI clinic. Finally, the timeframe for our outcome variable did not match that of the Texting Uses scale, which asked about general texting behavior, and our assessment of relationship power referred specifically to participants’ current or most recent partner. It is probable that levels of both relationship power and texting behavior may vary partner-to-partner. In future research, we would suggest tailoring the stem of the Texting Uses scale to correspond with other variables of interest, for example to the current or most recent partner.

Conclusions

Despite these limitations, our results suggest that examination of the effects of text messaging deserve further research in at-risk African American populations, especially given the focus on college students in previous research. Black or African American men

who have sex with men (MSM) particularly warrant further investigation, as they are at particularly high risk for HIV transmission and they may also use text messages in different ways than heterosexuals. The landscape of romantic and sexual relationships has undeniably been altered by the rapid emergence and uptake of electronic communication, and understanding how this communication operates to positively and negatively affect sexual behavior among vulnerable populations is vital.

Acknowledgments

Sources of support: NRSA postdoctoral training grant T32-MH19985 from the National Institute of Mental Health, center grant P30-MH52776 from the National Institute of Mental Health

This study was supported by NRSA postdoctoral training grant T32-MH19985 from the National Institute of Mental Health. Preparation of the manuscript was supported by center grant P30-MH52776 from the National Institute of Mental Health. The study sponsor had no involvement in study design, the collection, analysis, and interpretation of data, the writing of the report, or the decision to submit the manuscript for publication. We'd like to thank the Keenan Health Center and our participants, without whom this research would not have been possible.

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Table 1

Uses of Texting in Sexual Relationships Scale.

	Factor			
	1	2	3	4
The next questions ask about how you use text messages with partners. The word “partner” can mean anything from a casual sex partner, to a boyfriend/girlfriend, or just someone you’re interested in sexually or romantically. How often have you used text messaging with partners...				
Sexting				
To talk about what you want to do with them when you have sex?	.92			
To ask for a picture of their body parts?	.85			
To plan how to get together to have sex?	.77			
To ask when you can get together to have sex?	.77			
To send a picture of your body parts?	.75			
To ask questions about what they like to do during sex?	.72			
To tell them you’re horny?	.72			
To talk about sex you’ve had with them recently?	.71			
To talk about what you want to do before having sex with them (foreplay)?	.70			
To have phone sex?	.65			
To turn them on?	.63			
Relationship Maintenance				
To tell them you miss them?		.89		
To talk to them about your problems?		.88		
To make plans about what you want to do together for fun?		.81		
To ask where they are at the time?		.71		
To listen and help them with their problems?		.60		
To talk about things you have done together in the past?		.59		
Just for something to do?		.55		
Because it’s easier to text than talk on the phone?		.53		
To see what their reaction will be when you text them?		.52		
To send jokes or funny pictures?		.51		
Relationship Development				
To ask questions about their life?			.72	
To see if they like you?			.62	
To express your feelings?			.62	
To compliment them?			.59	
To ask what they’ve been doing that day?			.58	
Texting for Sexual Safety				
To ask them if they want to use a condom when you have sex?				.76
To tell them you want to use a condom if you have sex?				.70
To ask questions about whether or not they’ve had an STD test?				.68
To ask about going to an STD clinic together?				.66
To ask them if they have condoms before you have sex?				.62
To ask them to remember to bring condoms with them before you have sex?				.55
Questions without loadings above .50:				
To tell them about your previous sex partners?				

	Factor			
	1	2	3	4
The next questions ask about how you use text messages with partners. The word “partner” can mean anything from a casual sex partner, to a boyfriend/girlfriend, or just someone you’re interested in sexually or romantically. How often have you used text messaging with partners...				
To send them a picture of you (your face)?				
To tell them you’ve noticed them and like them?				
To ask for a picture of them (their face)?				
To set a romantic scene?				
To argue about things?				
To ask questions about what they are doing at the time?				
To get to know them?				
Because you’re too busy to talk to them on the phone?				
To ask questions about what they like to do for fun?				
To ask questions about their family?				
To provide support?				
To check up on who they’re with or talking to?				
To make them feel good?				
To develop a connection with them?				
To flirt with them?				
To ask if they have a girlfriend/boyfriend?				
To talk to them without other people knowing it, in secret?				
To tell them you love them?				
To ask questions about their previous sex partners?				
To ask about about their relationship with their girlfriend/boyfriend?				
To break up with them?				
Because it’s cheaper than talking on the phone?				

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Table 2

Correlations among Uses of Texting and Safer Sex Intentions.

	1	2	3	4	5
1. Sexting	-				
2. Relationship Maintenance	.43***	-			
3. Relationship Development	.46***	.53***	-		
4. Texting for Sexual Safety	.32**	.32**	.24*	-	
5. Safer Sex Intentions	<i>ns</i>	<i>ns</i>	<i>ns</i>	.22*	-
Mean (SD) ^a	2.96 (1.19)	3.94 (.88)	4.03 (.90)	2.42 (1.11)	

df = 108-109

* p < .05,

** p < .01,

*** p < .001

^aUsing a 7-point scale.

Table 3

Main effects of the associations between Uses of Texting and condomless vaginal intercourse in the previous month, controlling for gender and relationship status.

Texting Usage Subscale	B (95% Wald CI)	IRR ^a (95% Wald CI)	Wald χ^2
Sexting	.35 (.14, .57)	1.43 (1.15, 1.76)	10.80***
Relationship Maintenance	.07 (-.24, .37)	1.07 (.79, 1.45)	.18
Relationship Development	.09 (-.20, .39)	1.10 (.82, 1.47)	.38
Texting for Sexual Safety	-.23 (-.45, -.01)	.79 (.64, .99)	4.35*

df = 85 – 91

^aIncident Rate Ratio

* $p < .05$,

** $p < .01$,

*** $p < .001$

Note: Women participants who indicated only being sexually attracted to women not included

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Table 4

Simple effects of the associations between Texting for Sexual Safety and condomless vaginal intercourse in the previous month at different levels of Decision Making Power, controlling for gender and relationship status.

Texting for Sexual Safety at:	B (95% Wald CI)	IRR ^a (95% Wald CI)	Wald χ^2
-1 SD Decision Making Dominance	.14 (-.21, .49)	1.15 (.81, 1.64)	.64
Mean Decision Making Dominance	-.18 (-.43, .08)	.84 (.65, 1.08)	2.33
+1 SD Decision Making Dominance	-.48 (-.79, -.17)	.62 (.45, .84)	9.23 **

df = 83

^aIncident Rate Ratio

**
 $p < .01$

Note: Women participants who indicated only being sexually attracted to women not included

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