


“Everything feels risky now”: Perceived “risky” sexual behavior during COVID-19 pandemic

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Abstract

Social distancing through the COVID-19 pandemic has impacted sexuality and relationships, which may also change risk perceptions beyond traditional definitions (e.g. sexually transmitted infections). This study examines risk perceptions related to sexuality during the pandemic. We present qualitative analyses of a survey of adults in the United States ($N = 333$) to identify impacts of COVID-19 on individuals' risk perceptions. Risky sexual behavior definitions included: (1) COVID-19-related, (2) STI/pregnancy, (3) relationship-related, (4) physical boundaries, (5) drug or alcohol, and (6) multiple risks. Conventional public health messaging may need to incorporate changing risk definitions to address sexual health during the pandemic.

Keywords

coronavirus, COVID-19, pandemic, risky sexual behavior

Introduction

The Coronavirus (COVID-19) pandemic has led to societal changes in the United States, including recommendations and policies to limit social interactions outside of one's household (Centers for Disease Control and Prevention, 2020a). These changes have impacted romantic and sexual relationships, with decreases in reports of both solo and partnered behaviors (Lehmiller et al., 2020) and changes in dating such as virtual dating (Parker-Pope, 2020). However, people have increased their communication about sex (Abad-Santos, 2020). This may highlight an increased awareness of the risks presented by COVID-19 or the impact of stress.

Research traditionally defines “risky” sexual behavior as sexual encounters that increase the risk of unplanned pregnancies and contracting

sexually transmitted infections (STI) through any form of unprotected sex (e.g. lack of, incorrect or inconsistent use of condoms, and birth control) as well as casual sex with multiple partners (Fleming et al., 2019; Merrill and Liang, 2019). We use quotation marks with “risky” to acknowledge the subjective nature of sexual risk and to avoid contributing to the stigmatization of activities labeled as “risky.” When measuring “risky” sexual behavior, along with

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condom use and number of sexual partners in conjunction with condomless sex, researchers also factor in whether or not drugs and alcohol were used before or during recent sexual encounters (Merrill and Liang, 2019; Shneyderman and Schwartz, 2013). Previous research on infectious diseases with potential sexual transmission points to how individuals navigate risk. Regarding the Zika virus, an emerging infectious disease also transmitted through sex, individuals in at-risk states engaged in safer sexual behaviors (stayed sober during sex and abstained from sex) at higher rates than other states (Aiena et al., 2015). However, perceived risk may be broader than these physical sexual health implications. Definitions of “risky” sexual behavior do not account for how individuals may be perceiving other types of risks, such as emotional or social risk (e.g. embarrassment from sharing of nude or sexual photos)(Albury and Byron, 2016).

Given the nature of COVID-19 transmission, various states have published infographics to provide information regarding how to have safer sex (e.g. New York City Health, 2020; Oregon Health Authority, 2020). A common recommendation throughout these informational pamphlets includes masturbation as the safest option, while various public health organizations still encourage wearing masks during sexual intercourse, or consider positions where faces are aimed away from one another and consider the option of glory holes (i.e. physical barriers such as a wall with a hole between sex partners; Abad-Santos, 2020). Conventionally, the anonymity of glory holes was seen as “risky” (Holmes et al., 2010); this recommendation may represent a shift in societal perceptions of sexual risk. As the pandemic changes the nature of sexual interactions, public health campaigns, and interventionists must understand the rich and contextualized nature of “risky” sex perceptions. The goal of this qualitative study is to begin the exploration of perceptions of sexual risk, and shifts in those perceptions, related to the COVID-19 pandemic. A qualitative approach allows for the opportunity to discover higher-level relationships and themes

not yet well-understood, such as sex during the pandemic (Polit and Beck, 2010).

Methods

Participants

This study recruited participants through snowball recruitment, health-related listserv announcements, social media postings in health related groups in the United States, and specific population-related groups (to include underrepresented groups; e.g. Disability Rights New Mexico). Inclusion criteria for the electronic survey were current resident in the United States and over the age of 18. Participants were entered into a drawing for an e-gift card upon completion of the survey. Participants provided electronic consent. All procedures and protocols were approved by the authors’ institutional review board.

A total of 333 participants completed the online survey through Qualtrics, with 323 completing open-ended responses. The mean age of participants was 30.6 years (SD = 11.21; range 18–77). Most participants identified as women ($n=248$, 76.1%), with smaller proportions of men ($n=73$, 22.4%) and gender non-binary and agender individuals ($n=5$, 1.5%). Three-quarters of participants identified as White ($n=247$, 75.8%), with 6.4% ($n=21$) who identified as Black, 6.4% ($n=21$) as Hispanic/Latinx, 4.3% ($n=13$) as Asian, 1.2% ($n=4$) as American Indian, 0.3% ($n=1$) as Middle Eastern, 5.5% ($n=18$) as two or more identities, and 0.3% ($n=1$) did not specify. Most participants identified as heterosexual (70.9%; $n=231$), 3.7% ($n=12$) as gay, 1.8% ($n=6$) as lesbian, 12% ($n=39$) as bisexual, 0.3% ($n=1$) as pansexual, 2.5% ($n=8$) as queer, 0.9% ($n=3$) as asexual, 0.9% ($n=3$) as other, and 7.1% ($n=23$) as two or more identities. The highest proportion of participants were in a committed relationship with one person ($n=211$, 64.5%), while 20.2% ($n=66$) of participants were single or not dating, and 10.1% ($n=33$) of participants were dating.

Materials

The larger survey measured and explored perceptions of sexual risk during the COVID-19 pandemic. The survey was administered through Qualtrics, where the questions focused on perceived changes in sexuality and risk, body image, mental health, sexual behaviors, texting and sexting, as well as sexual self-efficacy. The current study focused specifically on participants' open-ended responses to questions about perceptions of risk and sex (e.g. "Thinking about your current circumstances, what would 'risky' sex be for you?"; "Have you had changes in 'risky' sex since the COVID-19 pandemic began?"; "How has your sexual being changed since the COVID-19 pandemic began?").

Procedure

This study used thematic coding to analyze responses, with common ideas grouped together to form themes (Thomas, 2006). Participant responses were each coded by two of three trained coders using Dedoose version 8.2.14, online software for analyzing qualitative data (Dedoose, 2021). Responses were preliminarily analyzed in order to create a codebook and then were augmented through an initial coding of 30 participants with axial coding to link common ideas. Coders confirmed reliability through the Dedoose "Test" function, with any codes less than 0.8 kappa discussed and refined.

Data sharing

All individual participant data collected in the electronic survey are available in a deidentified dataset. Additionally, the codebook and relevant excerpts are available. All documents are shared via FigShare.

Results

Responses were categorized into six themes which consisted of COVID-19 related risk, STI and pregnancy, partner-related boundaries, physical boundaries, drug and alcohol use, and

multiple sexual risks. Below we refer to example quotations in Table 1.

COVID-19 risk

Participants reported concerns about living with other vulnerable people and limiting their sexual behaviors. Sexual risk perceptions had shifted from traditional "risky" sexual behaviors, such as sex with little known partner, to viewing sex with anyone as risky

(1a,b). Other participants were navigating this risk through consideration of COVID symptoms (1c). Participants were concerned about having sex with a partner who had not socially distanced (1d), or who came home sick from work (1e). Due to COVID-19, some participants reported the responsibility of preventing transmission changed their sexual practices or comfort level (1f,g). Other participants described considering restricting or changing sexual and BDSM practices (i.e. bondage/discipline, domination/submission, sadomasochism; 1h). Alternatively, for those whose sexual practices changed in relation to open relations, their sexual risk perception narrowed (e.g. moving from polygamous relationships to monogamous; 1i).

STI and pregnancy risk

The most common response overall was unprotected sex or "sex without a condom." One participant nuanced this by saying "constant sex" (2a) which may point to multiple instances of sex without a condom. One participant specified that pregnancy would not be a risk if it was intended (2b). Others articulated protocols of their contraceptives as risky, like missing pills (2c). Contraceptive uncertainty was perceived as part of some risk, such as partners not withdrawing (2d,e). Participants described considering partners' sexual or "social" history in considering sexual risk (assumedly STI risk; 2f,g). There was a subtheme of overlapping STI and pregnancy risk with relationship boundaries, with either a partner or both partners (2h-j).

Table 1. Example quotations by theme with participant information (age, gender identity, sexual identity, relationship status, question prompt) including number of excerpts.

1. COVID risk (n = 124)	<p>Ia: “Usually, I could consider it risky to have unprotected sex with anyone I only recently met. Now I would feel risky having any sex with anyone new since they would be willing to risk transmitting coronavirus to me.” (30, Cisgender Woman, Bisexual and Queer, Asian, Single, Not dating, What is risky sex?)</p> <p>Ib: “Sex in general since I’m living at home and no one is 100% safe. It would be a risk to even want to meet up with someone.” (18, Cisgender Woman, Bisexual, White, Single, Not dating, What is risky sex?)</p> <p>Ic: “If I found a willing partner and neither of us had COVID symptoms, I would strongly consider seeing them on a regular basis.” (29, Cisgender Woman, Heterosexual, Hispanic, Latino, or Spanish, Other, How has your sexual being changed?)</p> <p>Id: “Sex with someone who hasn’t been social distancing.” (23, Cisgender Woman, Heterosexual, Black/African American, Dating casually, What is risky sex?)</p> <p>Ie: “Having sex with my partner if he comes home sick from work.” (23, Cisgender Woman, Bisexual, Hispanic, Latino, or Spanish, White, In a committed relationship with one person, What is risky sex?)</p> <p>If: “My sexual being has slowed down tremendously. It is mostly out of fear of getting the virus and passing on the virus to others. I feel like during a pandemic we all have a social responsibility to be as strategic as possible when it comes to lessening social interaction, which includes my sex life” (22, Cisgender Man, Gay, White, Single, Not dating, How has your sexual being changed?)</p> <p>Ig: “When at home, I’m constantly thinking about how to get the things we need without getting sick. On the rare times I leave, I’m watching my behavior and other people’s behavior. So vigilance plus the complete lack of any contact with anyone, it feels weird to have physical contact with my partner. Like it’s not allowed.” (30, Cisgender Woman, Bisexual, White, In a committed relationship with one person, How has your sexual being changed?)</p> <p>Ih: “Everything feels risky right now, not just sex. Even when social distancing, the asymptomatic nature of COVID-19 means being near anyone can be risky. Because I’m quarantining with a partner, I think risky would be engaging in BDSM or any other sexual practice that might result in an injury that could land one of us in the ER, or having sex or being in close contact with other people.” (44, Cisgender Woman, Heterosexual, Hispanic, Latino, or Spanish, In a committed relationship with one person, What is risky sex?)</p> <p>Ii: “My definition of risky has shrunk considerably, from poly/open (play parties n such) to straight up monogamy.” (37, Cisgender Man, Heterosexual, White, In a committed relationship with one person, How has your sexual risk behavior changed?)</p>
2. STI and/or pregnancy risk (n = 174)	<p>2a: “Constant sex without a condom.” (24, Cisgender Man, Heterosexual, White, In a committed relationship with one person, What is risky sex?)</p> <p>2b: “Unprotected sex without contraception, unless conception is intended.” (32, Cisgender Man, Heterosexual, White, In a committed relationship with one person, What is risky sex?).</p> <p>2c: “Having sex less than 7 days after missing a birth control pill or taking it late.” (22, Cisgender Woman, Bisexual, White, Dating casually, What is risky sex?).</p> <p>2d: “Having my partner finish in me. Even though I am on birth control, we don’t use condoms.” (26, Cisgender Woman, Heterosexual, White, In a committed relationship with one person, What is risky sex?)</p> <p>2e: “My partner doesn’t withdraw” (43, Cisgender Woman, Bisexual, White, In a committed relationship with one person, What is risky sex?)</p> <p>2f: “Sleeping with someone without protection, specifically someone who I don’t know their sexual history.” (22, Cisgender Woman, Bisexual, Pansexual, Queer; Black/African American, In a committed relationship with one person, What is risky sex?)</p>

(Continued)

Table 1. (Continued)

	<p>2g: "Unprotected vaginal sex with someone whose social behavior is unfamiliar to me." (21, Cisgender Woman, Heterosexual, White, Single, Not dating, What is risky sex?)</p> <p>2h: "Sex outside my marriage or sex while my partner was off birth control." (40, Cisgender Man, Heterosexual, White, In a committed relationship with one person, What is risky sex?)</p> <p>2i: "I am currently married he has had a vasectomy. Risky sex would be wanting to have someone else be involved in our sex life." (37, Cisgender Woman, Heterosexual, Asian and White, In a committed relationship with one person, What is risky sex?)</p> <p>2j: "Unprotected outside of primary relationship for either partner" (39, Cisgender Woman, Queer, Black/African American, In a committed relationship with one person, What is risky sex?)</p>
<p>3. Partner-related boundaries (n = 109)</p>	<p>3a: "Risky sex to me would be having sex in which I or my partner felt uncomfortable in any way. I have been tested for STDs since we have been dating for the past 2 years a few times and all come back negative and I have an IUD so I will most likely not become pregnant. We have a very healthy sex life and feel comfortable with each other." (21, Cisgender Woman, Heterosexual, White, In a committed relationship with one person, What is risky sex?)</p> <p>3b: "Risky sex would be sex without protection with multiple/different intimate partners that you do not have clear expectations and boundaries with." (30, Cisgender Woman, Bisexual, Pansexual, Queer, Asexual, White, In a committed relationship with one person, What is risky sex?)</p> <p>3c: "None. Married" (34, Cisgender Woman, Heterosexual, Black/African American, In a committed relationship with one person, What is risky sex?)</p> <p>3d: "Seeing other people while in a committed relationship would be risky for me." (35, Cisgender Woman, Bisexual, White, In a committed relationship with one person, What is risky sex?)</p> <p>3e: "Sex outside my marriage" (40, Cisgender Man, Heterosexual, White, In a committed relationship with one person, What is risky sex?)</p> <p>3f: "Pretty much any sex not with my current partner. We are in a committed, monogamous relationship. Sex outside of this would risk ruining the relationship." (27, Cisgender Woman, Heterosexual, White, In a committed relationship with one person, What is risky sex?)</p> <p>3g: "If my partner were to have sex with someone else during the lockdown." (36, Cisgender Woman, Heterosexual, White, Other, What is risky sex?)</p> <p>3h: "Sex with someone new" (50, Cisgender Man, Heterosexual, White, In a committed relationship with one person, What is risky sex?)</p> <p>3i: "Risky sex is having sex with someone that you haven't known before, are meeting for the first time and it's at their place or a random place." (21, Cisgender Woman, Heterosexual, White, In a committed relationship with one person, What is risky sex?)</p>
<p>4. Physical boundaries (n = 37)</p>	<p>4a: "Anal would be risky. I've been partnered for over 15 years and still don't have the guts to do it even though I've wanted to try. To me, that's risky. I think of all the complications that can arise from anal sex (and have several friends who have discussed their issues) and just keep holding off. Curiosity will get to me one day." (42, Cisgender Woman, Heterosexual, American Indian/Alaska Native, Black/African American, White; In a committed relationship with one person, What is risky sex?)</p> <p>4b: "Unprotected sex whether I knew the person or not. Oral sex if I don't know them and their history." (28, Cisgender Woman, Heterosexual, White, In a committed relationship with one person, What is risky sex?)</p>

(Continued)

Table 1. (Continued)

	4c: “Public” (19, Cisgender Woman, Heterosexual, Asian, Hispanic, Latino, or Spanish, White, Dating casually and In a committed relationship with one person, What is risky sex?)
	4d: “Having sex while all the neighbors upstairs are home and quiet.” (33, Cisgender Woman, Heterosexual, Black/African American, In a committed relationship with one person, What is risky sex?)
	4e: “I feel like I’ve become less sexual due to the stress of this time. Also, I’ve been around my family more which means less privacy.” (22, Cisgender Woman, Bisexual, White, Single, Not dating, How has your sexual being changed?)
	4f: “Our behavior has definitely changed because the kids are home. So we are more careful because we don’t want any unnecessary trauma. (Like 20 years from now they remember COVID 19 as the time they walked in on us.)” (42, Cisgender Woman, Heterosexual, American Indian/Alaska Native, Black/African American, White, In a committed relationship with one person, How has your sexual being changed?)
5. Drug or alcohol use (n = 18)	5a: “Incapacitated sex is the only thing that comes to mind - caused by excessive alcohol consumption” (27, Cisgender Woman, Heterosexual, White, In a committed relationship with one person, What is risky sex?)
	5b: “Sleeping with someone that you didn’t know if they had any hardcore drug problem, e.g., meth, heroine, etc.” (30, Cisgender Man, Heterosexual, White, In a committed relationship with one person, What is risky sex?)
	5c: “Sex when I’m on drugs.” (22, Cisgender Woman, Bisexual, White, Dating casually, What is risky sex?)
6. Multiple risks (n = 30)	6a: “Sex with someone who has been very sexually active with different partners in 2020 or who does not practice physical distancing. Sex with an IV or other drug user. Sex with someone I barely know. Sex without contraception, especially with someone fertile (my current partner is post-menopause).” (53, Cisgender Man, Heterosexual, Asian, Dating casually, What is risky sex?)
	6b: “If I hadn’t talked about STIs and recent tests and their other partners, and what type of barriers we would use, or if they had a known infection and we had sex anyways, or if either of us were intoxicated, or if it was someone I didn’t know very well and I wasn’t sure of their familiarity with consent culture.” (31, Cisgender Woman, Bisexual, Pansexual, Queer; White, In a committed relationship with more than one person, What is risky sex?)
	6c: “Multi-partner (risky to relationship); rope bondage or anal intercourse (“risky” physically)” (54, Cisgender Man, Heterosexual, White, In a committed relationship with one person, What is risky sex?)

Partner-related risk

A smaller number of participants articulated sexual risk in regards to communication. This was described in relation to feeling “uncomfortable in any way” (3a), which may extend beyond communication. It was also described in relation to establishing sexual expectations and boundaries (3b). Many participants who were married articulated having no sexual risk because of marriage (3c). Some acknowledged the possibility of sexual risk if they saw others or had sex with others outside of their current

partners (3d-f). A few participants specifically viewed sexual risk in relation to their partner engaging in behaviors, not themselves (3g). Additionally, some participants specifically highlighted that a new partner would be risky (3h). Part of this was also tied to place, such as having sex with someone new outside of the participant’s home (3i).

Physical boundaries risk

In considering bodily boundaries risk, some participants only responded with anal or oral

sex as risky (4a,b). Beyond STI risk, this may pertain also to risk of pain or emotional vulnerability. Physical space was a component of sexual risk for some participants, mainly pertaining to privacy. One participant clearly delineated any public sex as risky sex (4c). Others were concerned about neighbors (4d), or their family members as a result of COVID-19 social lockdown (4e,f).

Drug and alcohol use risk

Some participants viewed sexual risk in relationship to drugs or alcohol, such as incapacitation (5a). Others specifically thought about sexual risk related to substance use as pertaining to a partner (5b) or themselves (5c). Participants vocalizing this theme were 30 years of age and younger.

Multiple risks

A smaller number of participants responded with multiple types of sexual risks. These included a combination of COVID-19 related sexual risks, substance use, contraceptive sexual risk (6a), as well as concerns about STI risks, substance use, and consent (6b), and multiple partners and physical safety (e.g. tying up with ropes or anal intercourse; 6c).

Discussion

Overall, we found some individuals maintained conventional views of risk, including pregnancy and STI risks. Others, however, articulated concerns related to the boundaries of their relationship when asked about their “risky” sex perceptions. While still another theme primarily focused on sexual risk in relation to COVID-19, such as being with someone who did not practice social distancing or indeed, being with anyone at all. A last theme appears to be focused on multiple risks across categories.

We found that traditional definitions of “risky” sexual behavior have largely been adopted by participants in the current study. In many ways this can be viewed as a success for

public health campaigns focused on condom promotion. However, we also found that the COVID-19 pandemic has caused the perception of “risky” sexual behavior to expand and change. This may partly explain previous research findings of reductions in partnered behaviors during the pandemic (Lehmiller et al., 2020). However, we have yet to determine the durability of these changes. We find evidence that some individuals are using current information about COVID-19 transmission to include all sex as “risky.” Viewing all sex as “risky” is reminiscent of abstinence-only sex education programs, which are largely ineffective and unfeasible (Santelli et al., 2006). Finally, there were few examples in which individuals are assessing if potential sex partners are at risk for COVID-19 (i.e. those who are not social distancing). Decision-making related to sexuality may be affected by negotiation of changes in categories of risk. Research examining lived experiences of navigating partner risk in the COVID-19 pandemic may point to nuances in risk estimation.

With the absence of consistent and widespread messaging assisting individuals in navigating new perceptions and the realities of sexual risk around COVID-19, individuals may be uncertain of how to increase their safety. Previous sexual risk messaging promoted monogamy as a strategy to reduce STI transmission (Centers for Disease Control and Prevention, 2020b), long-term contraception (Kallner and Danielsson, 2016), and condoms (Montanaro et al., 2018) as ways to mitigate pregnancy and/or STI risk. This messaging has been successful; some individuals in our study described the only “risky” sex as having multiple partners or unprotected sex. However, traditional messaging around “risky” sex is not adequate in the era of COVID-19. Many participants described “risky” sex now as any sex with anyone or with someone working outside of the home (COVID-19 risk specifically) and poor communication with sexual partners. For instance, several participants were explicit in defining “risky” sex as *not* having conversations with sexual partners regarding STI testing

and/or social distancing practices. Our current sexual risk reduction messages do not address society's expanding definition of "risky" sex. Interventionists may need to assess and adapt discussions of safer sex to include assessments of COVID-19 risk behavior (e.g. not wearing masks) in order to reflect this reality.

Strengths and limitations

Data collection occurred during May and June 2020, which was still relatively early during the COVID-19 pandemic. Asking individuals in an open-ended question about sexual risk likely solicited more ranges in response than a checklist, as we may have captured more of their initial thoughts. Additionally, although we attempted to recruit from diverse and nationally representative social media group, our final convenience and demographically homogeneous sample may limit the generalizability of our findings. While the demographics of participants were not as diverse as anticipated (for both gender and race and ethnicity), this study did successfully capture a wide participant age range. Although beyond the scope of the current work, prior research suggests mixed impact of sociodemographic differences on perceptions of "risky" sex. For example, Lewis et al. (2014) did not find gender differences in normative perceptions of "risky" sexual behavior. Conversely, Mehrotra et al. (2009) found that female risk perceptions from both steady and casual sexual partners than males'. However, the influence of relationship status does appear to be an important predictor of how "risky" sex is defined (Isaacs et al., 2019), and our findings further support this relationship (i.e. the partner-related theme). Finally, motivations for sex and subsequent risk perceptions may be influenced by attachment styles—specifically, anxious individuals may value most closeness to sexual partners and thus be more likely to broadly define "risky" sex (Segovia et al., 2019). Future work should investigate how sociodemographic variables influence individual's perceptions of "risky" sexual behavior.

Conclusions

The COVID-19 pandemic necessitates changes in what constitutes sexual risk. Individuals are navigating conventional messages of sexual risk, with a focus on unintended pregnancy or STI prevention, as well as COVID-19 related risks. However, there are a limited number of sexual risk messages that are tailored for the pandemic, leaving individuals guessing about ways to keep their sexual partners and themselves safe. The current study provides insight into the expanding concerns of individuals and offers opportunities for interventionist and public health specialist to develop tailored safer sexual practices campaigns. Future prevention and intervention work focusing on "risky" sex will fundamentally rely on the assurance that we accurately define "risky" sex. We cannot design safer sexual practices campaigns without understanding the nuances with which individuals are perceiving safer sex during the COVID-19 pandemic.

Data sharing/accessibility statement

Data will be made available upon reasonable request to the authors.

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