MUNI FSS

JOURNAL OF PSYCHOSOCIAL RESEARCH ON CYBERSPACE
CYBERPSYCHOLOGY

Thomas, M. F., Binder, A., & Matthes, J. (2021). Sexting during social isolation: Predicting sexting-related privacy management during the COVID-19 pandemic. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 15*(3), Article 3. https://doi.org/10.5817/CP2021-3-3

Sexting During Social Isolation: Predicting Sexting-Related Privacy Management During the COVID-19 Pandemic

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Abstract

During the global COVID-19 pandemic, many people were physically separated from their romantic or sexual partners and added sexting to their sexual repertoire. Sexting involves the exchange of sensitive data and thus necessitates personal and interpersonal privacy management strategies such as information control and privacy boundary communication. This study investigates the psychological predictors of sexting-related privacy management. In an online survey with 494 young adults, we tested demographic, psychological, and behavioral correlates of sexting-related privacy management. Negative binomial regressions revealed that age, gender, and asynchronous sexting frequency positively predicted sexting-related privacy management. COVID-19-related social isolation moderated the positive effect of asynchronous sexting frequency: Asynchronous sexting frequency had a positive effect on sexting-related privacy management only in individuals with low or mean COVID-19-related social isolation. For those who perceived high COVID-19-related social isolation, asynchronous sexting frequency had no positive effect. This suggests that in a context of social isolation, even frequent sexters are willing to sacrifice their privacy. Relationship status, privacy concerns, rejection sensitivity, and synchronous sexting frequency were not related to sexting-related privacy management. The results highlight the various effects of COVID-19-related social isolation.

Keywords: Sexting; privacy management; sexual privacy; COVID-19; social isolation; Communication Privacy Management theory

Introduction

During the global COVID-19 pandemic, many individuals were isolated from their significant others, and sexting (i.e., sexual exchange via media) represented a possibility for maintaining intimacy. Researchers investigating sexual and romantic impacts of the pandemic have found that during the lockdown, sexting was a frequent addition to people's sexual repertoire (Lehmiller et al., 2020). Sexting, the exchange of personal erotic photos or videos via electronic devices (Mori et al., 2020), is a common sexual behavior among young adults and can improve relationship satisfaction (Drouin et al., 2017; McDaniel & Drouin, 2015). Yet, sharing intimate data comes with a dramatic privacy risk as sensitive data could be disseminated to unintended audiences (Mori et al., 2020). Although privacy management during sexting is of paramount importance, the "systematic study of privacy management strategies for sexual materials remains to be carried out" (De Wolf, 2020, p. 1064).

This study investigated demographic (i.e., age, gender, relationship status), psychological (i.e., privacy concerns, rejection sensitivity), and behavioral (i.e., synchronous, asynchronous, and unwanted sexting) factors associated with sexting-related privacy management. One of our key hypotheses was that the frequency of sexting behavior would be associated with sexting-related privacy management because those experienced in sexting may be more

aware of privacy risks (Zemmels & Khey, 2015). We add to the literature by examining the moderating role of COVID-19-related social isolation in the relationship between sexting behavior and sexting-related privacy management. The reason is that in a state of fear and social isolation, as during the COVID-19 pandemic, the need for intimacy may be highly salient (Mikulincer & Florian, 2000), while the need for privacy protection moves to the background. To test these predictions, we conducted an online survey among young adults in Austria during the first COVID-19-related lockdown.

According to Communication Privacy Management theory (Petronio, 2002, 2015), privacy management means defining information with potential vulnerabilities as *private* and drawing symbolic privacy boundaries around it. With these boundaries, information owners control access to their private information. The theory asserts that individuals believe they own information even after disclosing it to confidants. Privacy management then refers to both personal information control as well as interpersonal boundary negotiations (Petronio, 2015). This means that individuals control who may access which of their private information (personal information control). As soon as information is shared between communication partners, they need to negotiate together what is public and what is private information (interpersonal boundary negotiations; Petronio, 2015). In line with this theory, sexters rely not only on personal information control but also on interpersonal privacy management (De Wolf, 2020). Examples of personal sexting-related privacy management are anonymizing sexts and creating plausible deniability (Döring, 2014; Renfrow & Rollo, 2014). Examples of interpersonal sexting-related privacy management are communicating and enforcing privacy boundaries with sexting partners – that is, coordinating the limits between public and private information (De Wolf, 2020; Döring, 2014; Geeng et al., 2020).

Some research has been conducted on the psychological predictors of sexting-related privacy expectations and concerns (Hasinoff & Shepherd, 2014). In their survey and focus group, Hasinoff and Shepherd (2014) found that emerging adults generally expected privacy during sexting and disapproved of nonconsensual dissemination of sexts. Gender and relationship length further predicted sexting-related privacy norms: Women had higher privacy concerns than men, and privacy was more normative if the relationship with the sexting partner was longer. Concerning privacy management strategies, 65% reported they would use a "digital lock" for their sexts. However, Hasinoff and Shepherd (2014) did not examine which predictors made sexting-related privacy management more or less likely.

Research has found that certain media platform affordances (e.g., visibility, spreadability, and message permanence) predict sexting-related privacy expectations (Van Ouytsel et al., 2017), challenges (Walrave et al., 2018), and privacy management strategies (Kahlow, 2020). Yet, there is not much research on the *psychological* predictors of sexting-related privacy management, that is, which psychological factors predict the employment of privacy protection strategies. The only study we are aware of (Rothmüller, 2020a) examined the effect of sexual orientation on sexting-related privacy management and found that sexual minorities employed more privacy protection strategies than heterosexuals. We add to prior research by investigating the role of demographic (age, gender, relationship status), psychological (privacy concerns, rejection sensitivity), and behavioral (synchronous, asynchronous, and unwanted sexting) factors associated with sexting-related privacy management. Investigating sexting-related privacy management gained particular importance during the global COVID-19 pandemic as many people were separated from their partners and sexting provided a possible form of intimate interaction.

Privacy protection behaviors are foremost predicted by online privacy concerns (H. Chen et al., 2017; H.-T. Chen & W. Chen, 2015; De Wolf, 2020; Gruzd & Hernández-García, 2018; Mamonov & Benbunan-Fich, 2018). Lutz and Ranzini (2017) differentiated online privacy concerns into institutional (i.e., concerns about the trustworthiness of the platform or app) and social (i.e., concerns about the trustworthiness of the communication partner) privacy concerns. Both are associated with the perceived risk of sexting (Kahlow, 2020). Although Kahlow (2020) related social and institutional privacy concerns to the perceived risk of sexting, privacy concerns have not been related, in consequence, to sexting-related privacy management. On the basis of Communication Privacy Management theory (Petronio, 2015), we expected that individuals with high online privacy concerns would perceive more risk in different online situations and therefore also during sexting. We hypothesized higher levels of institutional *(H1a)* as well as social privacy concerns *(H1b)* to be associated with increased sexting-related privacy management.

As a second predictor of sexting-related privacy management, we tested rejection sensitivity. This predictor was not grounded in Communication Privacy Management theory (Petronio, 2015) but in findings from sexting

research. Rejection sensitivity and related constructs of attachment insecurity have been related to negative consequences of sexting (Brenick et al., 2020; Galovan et al., 2018; Weisskirch et al., 2017). Individuals with high rejection sensitivity are afraid of rejection in their close relationships and may try to avoid rejection by giving in to their peers' or partners' wishes (Hafen et al., 2014). They perceive little power and control in their relationships, making it difficult for them to negotiate and enforce protection during sexual interactions. Hence, they are more likely to comply with unprotected sex against their will (Berenson et al., 2015; Edwards & Barber, 2010; Woerner et al., 2016), unwanted sexting (Drouin & Tobin, 2014; Henry et al., 2017; Klettke et al., 2019), and unwanted online privacy intrusion by a partner (Bhogal & Howman, 2019; Reed et al., 2016). Research has not yet investigated the relationship between rejection sensitivity and sexting-related privacy management. But since rejection sensitivity is associated with decreased protection behaviors in several offline and online interactions, we expected rejection sensitivity to also be associated with decreased protection behaviors when it comes to sexting-related privacy (*H2*).

As a third predictor of sexting-related privacy management, we conceptualized sexting frequency during the COVID-19 pandemic mitigation measures. We distinguished between asynchronous and synchronous interactions as this distinction has proven relevant for privacy management (Jiang et al., 2013). Asynchronous sexting describes the exchange of (storable) photos, videos, or audio files, while synchronous sexting refers to live sexual interactions via (video-)call.

Communication Privacy Management theory asserts that the more information individuals share, the more privacy protective measures they will adopt (Petronio, 2015). Prior research could not confirm this for the general use of social media (Baruh et al., 2017). Yet, for sexting, frequency has been related to privacy concerns: Women who had sexted reported higher privacy concerns than women who had never sexted (Zemmels & Khey, 2015). The authors argue that more frequent sexters may have experienced situations of privacy turbulence or otherwise become more aware of the risks than those without sexting experience. However, the authors did not measure consequent privacy management. Furthermore, frequent sexters are generally more active online (Delevi & Weisskirch, 2013; Galovan et al., 2018; McDaniel & Drouin, 2015) and may thus have higher digital literacy, which is necessary for rigorous privacy management (Baruh et al., 2017), than individuals who sext less. The relationship between sexting frequency and sexting-related privacy management has not been examined; nevertheless, based on the available body of evidence, we expected more frequent asynchronous (*H3a*) and synchronous (*H3b*) sexting to be associated with higher levels of sexting-related privacy management.

As motivations for engaging in sexting, young people report loneliness or satisfying the need for closeness (Albury et al., 2013). Due to the COVID-19 pandemic mitigation measures, many people felt socially isolated (Killgore et al., 2020). For those experiencing fear and loneliness, the need for intimacy may be more prominent than the opposing need for boundary protection (Mikulincer & Florian, 2000). Similarly, research suggests that individuals with a high need for intimacy are less likely to use barrier protection during sex with their steady partner (Gebhardt et al., 2003).

Individuals weigh the risks of a disclosure against its benefits (Dinev & Hart, 2006). Communication Privacy Management theory (Petronio, 2002) conceptualizes the risk-benefit ratio of a disclosure as a catalyst criterion for the development of privacy management strategies. In line with this, the desire for gratification can take precedence over privacy concerns (H.-T. Chen & Kim, 2013). On this basis, we theorize that more frequent sexters may trade privacy for closeness and lower their boundary protection if they experience high COVID-19-related social isolation. More specifically, we predicted that COVID-19-related social isolation moderates the effect of asynchronous (*H4a*) and synchronous (*H4b*) sexting frequency on sexting-related privacy management. This means that the effect of synchronous and asynchronous sexting frequency on sexting-related privacy management decreases with higher levels of COVID-19-related social isolation. The first COVID-19-related lockdown in Austria lasted from mid-March to early May 2021. Data collection for the present study took place in the last two out of seven weeks of lockdown and we asked participants about their (sexting) experiences of the preceding weeks.

The active sending of sexts is much more common among adults than adolescents – with a prevalence of 38–50% as compared to 10–15% in teens (Klettke et al., 2014; Madigan et al., 2018; Mori et al., 2020). Nevertheless, most sexting research focuses on adolescents, and there have been repeated calls for sexting research in adults (McDaniel & Drouin, 2015; Wiederhold, 2011). According to Erikson's model of psychosocial development (1968),

the most important task of young adulthood (18 to 40 years) is forming romantic relationships and thereby navigating the conflict between intimacy and isolation. Empirically, individuals under the age of 40 had higher odds of having engaged in sexting than over 40-year-olds (Wysocki & Childers, 2011). We therefore targeted a young adult sample between 18 and 40 years old. Since this is a rather wide age range wherein sexting experiences could vary, we included age as a control variable in the present study. Among adolescents, studies consistently find that sexting prevalence increases with age (e.g., Klettke et al., 2014). Among adults, however, six out of seven studies that Klettke and colleagues reviewed (2014) found no effect of age. Only Wysocki and Childers (2011) found an effect between adults over and under the age of 40. However, the few studies on adult sexting focus on emerging adults until 24 or 29 years old and research on sexting in adults over the age of 30 is extremely scarce.

Method

The study was designed in accordance with the Declaration of Helsinki and was approved by the Institutional Review Board of the Department of Communication (Approval ID: 20200416_011). Moreover, all participants provided their informed consent.

Participants

We recruited young adults via social media, primarily Facebook groups for young people in Vienna, and explicitly informed them beforehand that the study will be about sexting. After excluding five participants between 49 and 62 years old because they did not belong to the target group of young adults (Erikson, 1968),[1] the sample consisted of 494 young adults between 18 and 40 years of age (M = 24.37, SD = 3.88), of which 322 self-identified as women, 171 as men, and one person chose the option "other". The majority of participants (56.5%) held a high school diploma, 37.7% held a university degree, and 5.8% did not complete high school. Most (80.8%) identified as heterosexual, 13.0% identified as bisexual, queer, or pansexual, 4.0% identified as homosexual, and 2.2% preferred not to answer the question of sexual orientation. About half (53.0%) reported being in a committed relationship and 47.0% reported being single.

Measures

Dependent Variable

Sexting-related privacy management was gauged with a self-report questionnaire (Rothmüller, 2020a, 2020b). Participants were asked if, during sexting, they had taken privacy protection measures. From a list of 14 options, participants could select all that applied: "no, none," "did not show my face," "hid tattoos or other identifying features," "rouged or disguised myself," "used an anonymous email address that I do not use otherwise," "kept the background blurry or neutral," "made clear arrangements for use and reuse," "used a program with end-to-end encryption," "involved only people whom I know from offline life," "communicated clear borders (and consequences)," "broke ties if boundaries were crossed," "reported the person if boundaries were crossed," "kept my name and whereabouts secret," "activated virus protection and firewall." Adding up all items but the first, we arrived at one formative score from 0 to 13 (M = 2.43, SD = 2.14). Cronbach's alpha was .68, possibly because different items assumed different sexting situations and therefore may not always apply. For scales with heterogeneous components, coefficient alpha can seriously underestimate the true reliability and thus, lambda 4, which was acceptable (λ_4 = .72), is recommended (Osburn, 2000).

Independent Variables

Social and institutional privacy concerns were measured with the privacy attitudes questionnaire (Stutzman et al., 2011) adapted by Lutz and Ranzini (2017). Participants indicated their level of concern (on a scale from 1 = *not at all* to 7 = *very high*) regarding different online privacy risks that may arise when exchanging personal data online. Four items measured social privacy concerns; they asked participants about their concern about identity theft, hacking, stalking, or nonconsensual dissemination of personal information, respectively (M = 3.10, SD = 1.52, α = .85). Four items that measured institutional privacy concerns asked participants about their agreement with four statements about the handling of personal data by online platforms/apps (M = 5.11, SD = 1.38, α = .82).

Rejection sensitivity was measured using 10 items from the rejection sensitivity questionnaire (Downey & Feldman, 1996). Participants were asked to indicate their concern with five social situations (e.g., "I find it hard to ask a friend to go on holiday with me" or "...for a big favor") and their expected acceptance likelihood regarding each situation ("I would expect this friend to willingly agree") on a scale from 1 (*fully disagree*) to 7 (*fully agree*). We multiplied the concern about each of the five situations with the corresponding expected acceptance likelihood (reversed to indicate rejection expectation) and computed an index ranging from 1 to 49 (M = 14.99, SD = 11.66). In comparison to the original study, which showed high reliability (α = .83; Downey & Feldman, 1996), reliability in our study was lower (α = .65). The reason is probably that we used only 10 out of 36 items. Yet, all items correlated above .35 with the corrected item-total and reliability was not improved by deleting an item.

We asked for sexting frequency during the preceding weeks, that is, during the first introduction of pandemic mitigation measures in Austria (end of April until the beginning of May 2020). Based on prior sexting research (Drouin et al., 2013; Schreurs et al., 2020), we measured asynchronous sexting frequency using six items asking participants to indicate on a scale from 1 (*never*) to 7 (*very often*) how often in the preceding weeks they had sent sexy texts, sexy audio messages, a picture of themselves in underwear or swimwear, a naked picture, a video of themselves in underwear or swimwear, or a naked video, respectively (M = 1.91, SD = 1.14, α = .85).

We assessed synchronous sexting with two items adapted from Drouin et al. (2013) asking for the frequency of two sexting activities in the preceding weeks, namely live phone sex and live video sex (e.g., masturbating together in front of the camera) on a scale from 1 (*never*) to 7 (*very often*; M = 1.35, SD = 0.96, α = .80).

To gauge COVID-19-related social isolation, we asked participants to indicate their agreement with five statements about the COVID-19-related lockdown on a scale from 1 (*fully disagree*) to 5 (*fully agree*). The statements were: "It does not bother me to stay at home for a while because of the coronavirus." (reversed), "It is no problem for me to stay home until further notice because of the coronavirus." (reversed), "I feel lonely due to the coronavirus." "I feel like I have cabin fever." "I feel isolated from other people because of the coronavirus" (M = 2.84*, SD* = 0.97*,* α = .78).

Control Variables

As control variables, we included age in years (De Wolf, 2020; Zemmels & Khey, 2015), self-identified gender (De Wolf, 2020; Dhir et al., 2017; Hasinoff, 2015; Youn & Hall, 2008), and relationship status (Dir et al., 2013; Drouin et al., 2017; Drouin et al., 2013). We further included unwanted sexting, which we measured by one item ("How often have you agreed to send a romantic or sexual partner sexual content, for example sexy messages or pictures, although you actually did not want to?"), from 1 *(never)* to 6 *(very often*; M = 1.64*, SD* = 1.16*)*, similar to Drouin and Tobin (2014).

Data Analysis

We chose negative binomial regression analysis because the distribution of the dependent variable was negatively skewed by the fact that most participants used very few sexting-related privacy management strategies. In the first step, we included only the main effects, and in the second step, we added the interactions. We analyzed the entire sample, including participants who reported they had not sexted in the past weeks but still reported sexting-related privacy management, indicating that they did have earlier sexting experiences. We used the function glm.nb from the R package MASS (Venables & Ripley, 2002). Significant interactions were probed using the simple_slopes function from the package reghelper (Hughes, 2020). Additionally, as suggested by Hayes and Matthes (2009), we tested regions of significance using the johnson_neyman function from the package interactions (Long, 2019).

Results

Main Effects

All coefficients can be found in Table 1. We found no effects of social (*B* = -0.02, *p* = .433; *H1a*) or institutional privacy concerns (*B* = -0.03, *p* = .313; *H1b*) on sexting-related privacy management. Thus, H1a and H1b did not find support. With regard to participants' levels of rejection sensitivity, we did not find an impact on participants' sexting-related privacy management (*B* = 0.00, *p* = .741). Thus, H2 had to be rejected.

Our analysis revealed a significant main effect of asynchronous sexting frequency on participants' sexting-related privacy management (*B* = 0.17, *p* < .001), indicating that the more frequently participants sexted by exchanging files, the more rigorous their sexting-related privacy management (*H3a*). We found, however, no effect of synchronous sexting on sexting-related privacy management (*B* = 0.04, *p* = .321). Thus, H3b was rejected.

Table 1. *Negative Binomial Regression Predicting Sexting-Related Privacy Management (Step 1).*

Predictor	*B*	*SE*(*B*)	*Z*	*p*
Age	0.03	0.01	3.05	.002
Gender (female)	0.24	0.09	2.62	.009
Relationship Status (in a relationship)	-0.03	0.09	-0.35	.729
Social Privacy Concerns	-0.02	0.03	-0.78	.433
Institutional Privacy Concerns	-0.03	0.03	-1.01	.313
Rejection Sensitivity	0.00	0.01	-0.33	.741
COVID-19-related Social Isolation	0.03	0.04	0.74	.459
Asynchronous Sexting	0.17	0.04	4.28	<.001
Synchronous Sexting	0.04	0.04	0.99	.321
Unwanted Sexting	0.06	0.03	1.85	.064

Interactions

Table 2. *Negative Binomial Regression Predicting Sexting-Related Privacy Management (Step 2).*

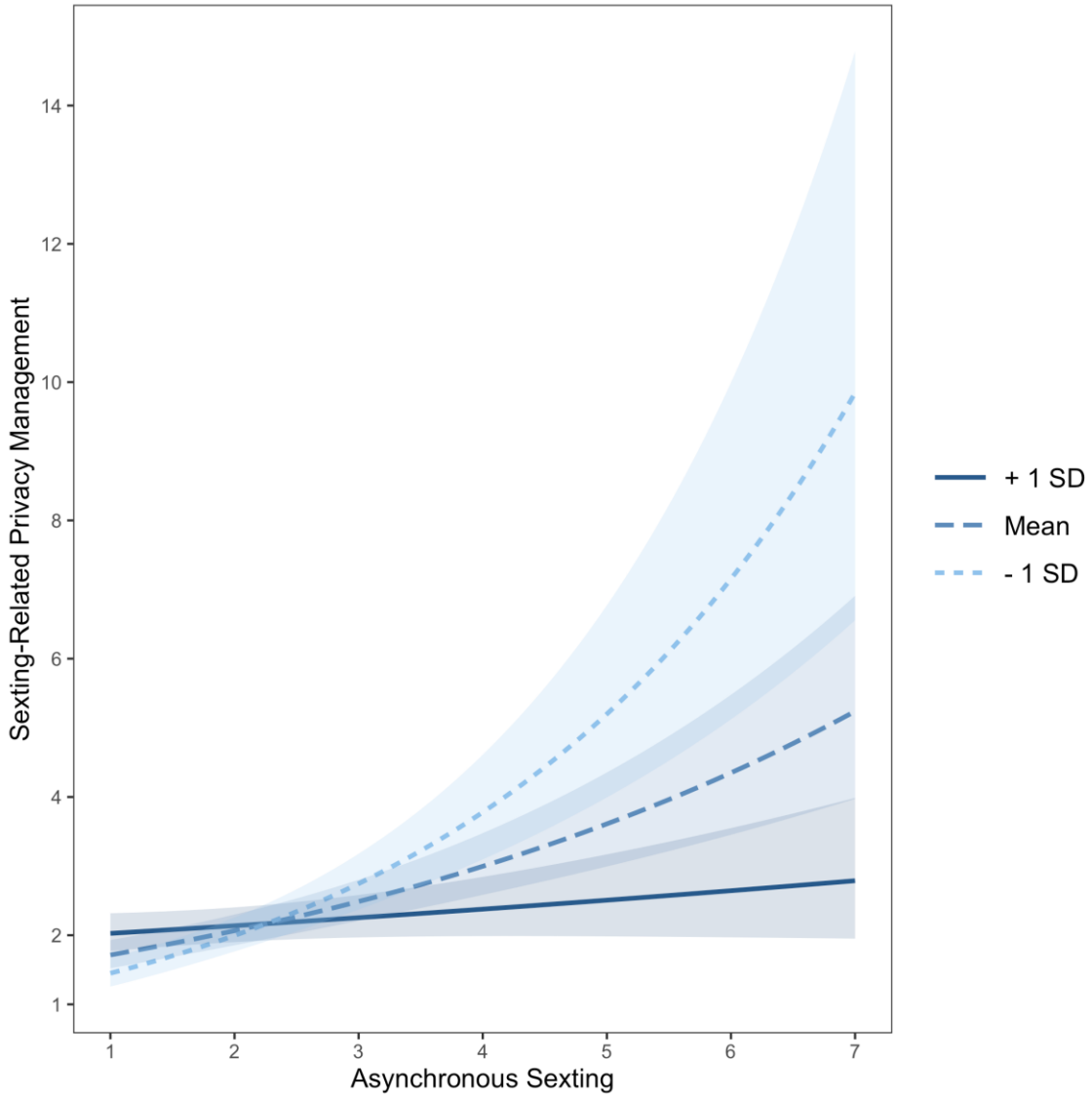
Predictor	*B*	*SE*(*B*)	*Z*	*p*
Age	0.03	0.01	3.15	.002
Gender (female)	0.23	0.09	2.54	.011
Relationship Status (in a relationship)	-0.02	0.08	-0.18	.856
Social Privacy Concerns	-0.03	0.03	-1.19	.233
Institutional Privacy Concerns	-0.03	0.03	-0.93	.353
Rejection Sensitivity	0.00	0.01	-0.15	.879
COVID-19-related Social Isolation	0.05	0.04	1.10	.272
Asynchronous Sexting	0.19	0.04	4.69	<.001
Synchronous Sexting	0.02	0.04	0.35	.728
Unwanted Sexting	0.06	0.03	1.82	.068
COVID-19-related Social Isolation × Asynchronous Sexting	-0.14	0.04	-3.32	<.001
COVID-19-related Social Isolation × Synchronous Sexting	0.00	0.04	-0.10	.917

The coefficients of the interaction effects can be found in Table 2. We found an interaction effect of asynchronous sexting frequency and COVID-19-related social isolation on sexting-related privacy management (*B* = -0.14, *p* < .001; *H4a*). This effect is displayed in Figure 1. For individuals with low COVID-19-related social isolation (-1SD, 1.87/5), asynchronous sexting frequency had a positive effect on sexting-related privacy management (*B* = 0.32, *SE* = 0.06, *p* < .001). At mean levels of COVID-19-related social isolation (2.84/5), the effect of asynchronous sexting frequency was positive (*B* = 0.19, *SE* = 0.04, *p* < .001). However, at high levels of COVID-19-related social isolation

(+1SD, 3.81/5), asynchronous sexting frequency had no effect (*B* = 0.05, *SE* = 0.05, *p* = .310). Johnson-Neyman regions of significance revealed that asynchronous sexting frequency had a positive effect on sexting-related privacy management up to a COVID-19-related social isolation level of 3.54 on a 5-point scale.

The interaction between synchronous sexting and COVID-19-related social isolation did not indicate any effects on sexting-related privacy management (*B* = 0.00, *p* = .917). Thus, H4b was rejected.

Figure 1. *COVID-19-Related Social Isolation Attenuates the Positive Main Effect of Asynchronous Sexting Frequency*.



Discussion

This study investigated the predictors of young adults' sexting-related privacy management. The subject seems particularly important because sexting involves the exchange of highly sensitive data that untrustworthy sexting partners could misuse (Mori et al., 2020). During the COVID-19 pandemic, sexting-related privacy management became pressing because more people than usual relied on computer-mediated communication to maintain romantic or sexual relationships. We therefore examined the psychological predictors of sexting-related privacy management during the COVID-19 pandemic.

Foremost, we must point out that the use of sexting-related privacy management strategies was rather low and concentrated around two strategies (*Mdn* = 2.00). Fifty-three percent of participants reported involving only individuals they personally knew from offline life and 43.3% reported not showing their face in digital images. Both of these most-used strategies classify as personal information control, according to Communication Privacy Management theory (Petronio, 2002).

Concerning demographic control variables, we found that age and gender but not relationship status significantly predicted sexting-related privacy management. The older people get, the more rigorously they engage in sexting-related privacy management. Extant research indicates that although adults grow more concerned about privacy as they get older, on social media, older adults use fewer privacy management strategies than younger adults (Kezer et al., 2016; Van den Broeck et al., 2015). In contrast, we found that among 18- to 40-year-olds, age was associated with *increased* privacy management.

Gender is a core criterion of Communication Privacy Management theory (Petronio, 2015). Our finding that women reported increased privacy management compared to men is in line with the theory and with earlier research indicating that women are generally more concerned about their privacy and more likely to employ privacy protective measures than men (Baruh et al., 2017; De Wolf, 2020). Specifically, for the case of sexting, women are likely more rigorous in their privacy management because, due to sexual double standards, they fear higher reputational damage than do men in case of a leaked sext (Ringrose et al., 2013). Discourse analysis showed that popular discourse often made women responsible for cases of sexting privacy violations and blamed the female victim rather than the male perpetrator (Hasinoff, 2015).

Whether young adults were single or in a relationship was not related to privacy management. We suggest that in addition to relationship status, future research should account for individuals' sexting motivations and the context in which sexting happens. Theoretically, privacy management depends on the perceived benefits of disclosure (Petronio, 2002), and empirically, young adults perceive different privacy norms depending on the relational context – that is, whether a person sexts within a committed relationship or in the context of a casual hook-up (Hasinoff & Shepherd, 2014; Van Ouytsel et al., 2017). As a consequence, social privacy concerns and sexting-related privacy management strategies may depend on sexting motivation and the relational context. However, more research is needed to understand the effect of sexting motivation and relational context.

Social or institutional privacy concerns did not predict participants' sexting-related privacy management. Individuals concerned about the trustworthiness of online communication partners or apps did not resort to more sexting-related privacy management. This was unexpected and at odds with Communication Privacy Management theory (Petronio, 2015) and previous research (De Wolf, 2020). However, many studies find discrepancies between privacy attitudes and behaviors (Barth & de Jong, 2017; Gerber et al., 2018). This phenomenon has been called the *privacy paradox* (Norberg et al., 2007) and can be explained with individuals' cost-benefit analysis. That is, even though users are concerned, they trade their privacy for other benefits (H.-T. Chen & Kim, 2013). An alternative explanation for the privacy paradox could be privacy fatigue. That is, users are emotionally exhausted and feel cynical about online privacy (H. Choi et al., 2018; Hoffmann et al., 2016). Future research should take these predictors into account because privacy fatigue seems a better predictor of privacy management than privacy concerns (H. Choi et al., 2018). In addition, future studies should measure not only individuals' concerns about privacy violations but also the perceived likelihood of their occurrence. Further qualitative research should inventory the kinds of privacy concerns and strategies individuals have around sexting in order to enrich existing measures of both sexting-related privacy concerns and management.

Additionally, there was no effect of rejection sensitivity on sexting-related privacy management. We expected that those with high rejection sensitivity would report less sexting-related privacy management because they have been shown to employ fewer protection behaviors in other romantic areas out of fear of rejection (Drouin & Tobin, 2014; Henry et al., 2017; Klettke et al., 2019). However, they reported just as much sexting-related privacy management as those with low rejection sensitivity. An explanation could be that those with high rejection sensitivity may employ privacy management even though they find it difficult because they fear a data leak much more than those with low rejection sensitivity. While people with high rejection sensitivity may be highly sensitive to the potential reputational damage, those with low sensitivity may downplay the risk or not perceive the social damage as very detrimental (Romero-Canyas & Downey, 2013).

As expected on the basis of Communication Privacy Management theory (Petronio, 2015) and of prior research showing higher privacy concerns in more frequent sexters (Zemmels & Khey, 2015), we found that asynchronous sexting frequency was predictive of sexting-related privacy management. Individuals who more frequently exchanged sexy photos or other files during the lockdown also employed more privacy management strategies. This suggests that frequent sexting may generate expert knowledge and have beneficial consequences compared

to infrequent sexting. This underscores the need to move beyond researching whether or not young people sext (Walrave et al., 2015) and which risk factors contribute to the "sexting epidemic" (McGovern & Lee, 2018) and take positive outcomes (Klettke et al., 2018) of sexting into consideration. We asked about the sexting frequency during a very extraordinary time span, namely the first COVID-19-related lockdown. Future research should investigate if asynchronous sexting under normal or extraordinary positive circumstances, or lifetime sexting frequency, also has a positive (possibly even stronger) effect on privacy management.

We found no effect of synchronous sexting frequency on sexting-related privacy management. One explanation might be that when exchanging data asynchronously (i.e., in the form of storable files), it is more apparent that these files could be forwarded to others, which, in turn, positively influences sexting-related privacy management. For synchronous sexting such as live calls, the possibility of data storage, dissemination, or data breaches is less apparent. Therefore, sexters might perceive synchronous interactions as automatically safer with regard to data privacy than asynchronous interactions. In line with that, users report fewer institutional privacy concerns about the ephemeral media platform Snapchat compared to other social media platforms (T. R. Choi & Sung, 2018; Elder, 2017; Van Ouytsel et al., 2017). In ephemeral media, users do not by default have permanent access to messages, but messages apparently "self-destruct" after a specified time. It is thus less apparent that ephemeral media platforms still permanently archive sensitive user data and can be subject to data breaches (e.g., Buchanan, 2014). Additionally, Walrave et al. (2018) argue that privacy violations may be less likely in synchronous interactions because sexters have to cope with the other person's immediate reaction, so there is less online disinhibition. Yet, this is the first study that explicitly distinguishes between asynchronous and synchronous sexting and its effects on sexting-related privacy management. Clearly, more inductive and experimental research is needed to understand the underlying psychological mechanisms.

We controlled for whether participants had given in to sexting even though they did not really want to. The control variable unwanted sexting was marginally significant, indicating its relevance for privacy management (Drouin & Tobin, 2014). We did not, however, control for the possibility that individuals had sent unsolicited sexts to others without the receivers' consent (Mandau, 2020). Future research should include this control variable because it likely influences privacy management.

We hypothesized that in a state of social isolation, the social benefits of unprotected online self-disclosure could take precedence over privacy concerns (H.-T. Chen & Kim, 2013). Indeed, our results showed that in individuals with low and mean levels of social isolation, frequent asynchronous sexting was associated with more sexting-related privacy management. Yet, in individuals with high levels of COVID-19-related social isolation, the positive effect of asynchronous sexting frequency disappeared. This suggests that in a state of social isolation, even experienced sexters, who are more likely aware of the privacy problems and protections, may give in to unprotected sexting. For synchronous sexting, we found no interaction effect, likely because there was also no main effect.

The finding that social isolation moderates the effect on sexting-related privacy management could also have implications beyond the COVID-19 pandemic. Practically, it suggests that social isolation due to any reason could decrease privacy protection. Furthermore, theoretically, this finding challenges the notion of a purely rational cost-benefit calculus (Dinev & Hart, 2006). In line with our finding, experimental studies show that affective states are influential moderators when it comes to privacy decisions (Alashoor et al., 2018; Kehr et al., 2015). Alashoor and colleagues (2018) found that when social media users were in a positive mood state, perceived benefits had a stronger effect on disclosure than in a negative mood state and perceived risks had no effects on disclosure. In a negative mood state, however, the effect of perceived risks was more pronounced than in a positive mood state and the effect of perceived benefits was nonsignificant. Alashoor and colleagues explained that, in a positive mood, people tend to underestimate risks (see also Kehr et al., 2015), while in a negative mood, people are more tuned in to risks and benefits seem less tempting. According to this rationale, social isolation (comparable to a negative mood) should be linked to more rigorous privacy management. Yet, we found that among the socially isolated, even more frequent sexters were incautious – presumably because the perceived benefits of disclosure were highly salient. This shows that social isolation, as a concrete emotion expressing a social need, has different effects than a diffuse negative mood. With its presumed emphasis on perceived social benefits, the role of social isolation even seems to have a similar role as positive mood in privacy decisions. Although different, our finding

as well as previous findings (Alashoor et al., 2018; Kehr et al., 2015) underscore the role of affective states for privacy decisions, which seems a promising avenue for future, also post-pandemic, research.

This study has some notable limitations. First, it is cross-sectional, which prevents inferences about timely order and causality, and relies on self-report data, which comes with well-known limitations (Scharkow, 2019). In addition, the sample was limited to highly educated young adults. Upcoming studies should replicate this research in more diverse age and educational groups. Third, results should be interpreted with caution because the scale measuring sexting-related privacy management (Rothmüller, 2020a) has not been empirically validated yet. However, to the best of our knowledge, it is the only currently available measure of sexting-related privacy management, and future research should aim at ameliorating scale properties. Our results should serve as a starting point for future qualitative and quantitative research.

Despite the aforementioned limitations, this study revealed demographic, psychological, and behavioral predictors of sexting-related privacy management, which seems especially important during the global COVID-19 pandemic. We found that age and female gender were positive predictors of sexting-related privacy management. Moreover, asynchronous sexting was associated with sexting-related privacy management. However, COVID-19-related social isolation moderated the positive effect of asynchronous sexting frequency: Asynchronous sexting frequency had a positive effect only in individuals who reported low or mean COVID-19-related social isolation. In those who suffered from high COVID-19-related social isolation, sexting frequency did not have a positive effect on privacy management. The results highlight the importance of COVID-19-related social isolation as a significant stressor for young adults, with adverse effects on sexting-related privacy management.

Footnote

1. Including the five older participants in the sample did not significantly change any results.

Acknowledgments

We thank Annika Schordie and Diana El Masri for their help in collecting the data for this study.

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Editorial record: First submission received on October 6, 2020. Revisions received on February 27, 2021 and May 26, 2021. Accepted for publication on June 1, 2021.
Editor in charge: Lenka Dedkova

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