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Attitude toward Sexual Consent and Sext Dissemination Perpetration: The Mediating Role of the Empathy

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ABSTRACT

Our aims were to examine the relationship between the attitude toward sexual consent and sext dissemination perpetration (that is the act of sharing received sexting messages with audiences other than their original recipient) and explore the role of empathy as possible mediator variables of this relationships. We conducted cross-sectional research employing an online survey. Our convenience sample consisted of 940 young adults (79.4% females, 20.6% males, 98.0% Italian, 69.5% heterosexual) with mean age of 24.29 years ($SD = 2.89$). Our findings indicated a relationship between sext dissemination perpetration and both (a lack of) perceived behavioral control ($r = .068$) and a positive attitude toward establishing consent ($r = -.105$). In addition, the relationship between a positive attitude toward establishing consent and sext dissemination perpetration was found to be mediated by empathy, specifically the subdimension of emotional contagion. These findings highlight the complexity of interplay between attitudinal and emotional factors in dissemination of sex, which should be taken into account when designing interventions as well as further research. The implications of these findings for both practice and research are discussed.

KEYWORDS

Sexting; sext dissemination;
empathy; young adults

Introduction

With the development of digital technologies and the proliferation of the Internet, social media became a vehicle for the expression of sexuality among adolescents and young adults, to the extent that sexting has become a typical behavior among young people (Hu et al., 2023; Longobardi et al., 2021a, 2021b). Although there is not yet a broad consensus on the scientific definition, the term sexting generally refers to the practice of sharing sexually explicit content by sending, receiving, or forwarding messages, photos, or videos via electronic devices (Klettke et al., 2014). The fact that sexting

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is considered a typical expression of sexuality does not allow us to ignore the potential risks associated with it, including sext dissemination. Sext dissemination refers to the act of sharing received sexting messages with audiences other than the original recipient (Walker & Sleath, 2017). When done in a non-consensual manner, sext dissemination can be classified as interpersonal violence (Clancy et al., 2021, 2023) and can cause serious harm to the victim, such as negative reputation and increased psychological distress (Gassó et al., 2021). These considerations have led researchers to focus primarily on victims of sext dissemination, with less research available on perpetrators. This limitation hinders obtaining a comprehensive understanding of the situation and developing appropriate strategies to prevent and combat this phenomenon. In addition, sext dissemination can also have serious consequences for the perpetrators. Indeed, numerous Western countries have enacted laws with severe penalties for the non-consensual dissemination of sexual images sourced from others (Clancy et al., 2021). Furthermore, when a person is accused of committing acts such as sext dissemination, they are more likely to be rejected by others and forced into solitude, due to the social repudiation of this act by friends, acquaintances, and colleagues (Clancy et al., 2021). Therefore, it is important to expand the current knowledge of the perpetuation of sext dissemination by attempting to identify the risk factors and potential mechanisms involved. This study seeks to examine the relationship between attitudes toward sexual consent and perpetuation of sext dissemination, exploring the potential mediating role of empathy.

Attitude toward sexual consent and sext dissemination perpetuation

Among the factors potentially associated with the risk of sext dissemination perpetuation attitudes toward asking for consent to share photos is one factor that should be considered and has not been previously explored in the literature. Consent is an important aspect to consider when talking about sext dissemination, considering that less than 20% of sext disseminators claim to have had consent, resulting in non-consensual dissemination (Moyano et al., 2023). It is not easy to clearly define what sexual consent means. From a legal perspective, this term refers to the minimum age for free participation in activities of a sexual nature, while at least three conceptualizations of sexual consent can be found in the literature: Consent as an internal state of willingness; sexual consent as an explicit communication of consent; and consent as inferred or implied consent (Muehlenhard et al., 2016). In the absence of a universal definition of sexual consent, we generally understand this term to mean the (verbal or non-verbal) expression of a subject's agreement to perform sexual acts.

Research found an association between attitudes toward sexual consent and risk of engaging in sexual violence among adults (Moyano et al., 2023). According to a recent study by Moyano et al. (2023), results showed that males who reported sexual assault tended to underestimate the importance of obtaining sexual consent. In addition, there was a higher percentage of individuals classified as assailants who reported lower perceptions of behavioral control in obtaining sexual consent, as well as less positive views of the process of obtaining sexual permission compared to individuals who were not identified as assailants. Nevertheless, it is important to emphasize that there is a lack of research specifically examining the relationship between attitudes toward sexual consent and the occurrence of aggressive online behaviors, such as the prevalence of sext dissemination. Existing research, however, suggests a possible link between attitudes toward sexual activity and the prevalence of explicit messaging, although there has been no specific research on views about sexual consent. For example, van Oosten and Vandenbosch (2020) reveal a notable association between instrumental attitudes toward sexual behavior (i.e., a conception of sex as an activity exclusively aimed at personal enjoyment and pleasure) and an increased likelihood of individuals engaging in sext dissemination. This instrumental view of sexuality ('sex is just a game') seems to be very similar to the main reasons why adolescents and young adults engage in non-consensual sext dissemination, i.e. they seem to perceive non-consensual sext dissemination as fun, socially desirable and harmless (Clancy et al., 2023). In contrast, a study by Teran and Dajches (2020) found that the association between exposure to pornography and decreased self-efficacy in rejecting sexual advances among adolescents was influenced by their views on sexual consent. In summary, views on sexual consent may have an influence on sexual behavior in both offline and online contexts, including sext dissemination. Overall, this study seems to show that sexual attitudes can influence sext dissemination, and, in particular, more negative attitudes toward sexual consent may be associated with an increased risk of engaging in nonconsensual sext dissemination.

As noted earlier, the presence of unfavorable views about sexual consent has the potential to increase the likelihood of online sexual victimization, including the transmission of explicit messages or images, which is consistent with patterns in offline environments. The theory presented is consistent with the theoretical framework of Theory of Planned Behavior (TPB) as described by Ajzen (1991). Based on this theoretical framework, it is assumed that a person's behavior is influenced by several factors. These factors include attitudes, which refer to the individual's positive or negative evaluation of the behavior in question. In addition, intention plays a critical role, representing the individual's willingness to engage in a particular

behavior. Perceived behavioral control is another influential factor that reflects the individual's perception of their ability to control and perform the behavior. Finally, subjective norms are also considered, which relate to perceived societal pressures to engage in a particular behavior.

TPB is a theoretical framework that has been widely used to study sexual behavior, including individuals' attitudes toward sexual consent (Bednarchik et al., 2023). According to this theoretical perspective, the intention to engage in a behavior is the most important predictor of a person's actual behavior over time. Furthermore, the theory suggests that the intention to engage in a behavior varies depending on attitudes toward the behavior, subjective norms and perceived behavioral control. These factors appear to be central in explaining various sexual behaviors. This includes sexual consent behavior, as shown by the validation work of the Sexual Consent Scale- Revised formulated by Humphreys and Brousseau (2010). This scale, which is anchored in the TPB, reflects dimensions related to attitudes toward sexual consent (e.g. "I believe that sexual consent should always be obtained before engaging in sexual activity"), norms (e.g. "I think that obtaining sexual consent is more necessary in a new relationship than in a committed relationship") and perceived behavioral control (e.g. "I would have difficulty asking for consent because it would spoil the mood"). Along these lines, some recent findings (Glance et al., 2021) seem to suggest that attitudes toward sexual consent and perceived behavioral control are the dimensions that correlate most strongly with a person's ability to engage in sustained sexual consent and also seem to predict subtle coercive tactics. Similarly, a recent longitudinal study has shown that these dimensions significantly predict affirmative sexual consent behaviors (Bednarchik et al., 2023). Thus, the dimensions specified by the TPB appear to influence sexual behavior, including sexual consent behavior. However, no study has yet directly examined the relationship between attitudes toward sexual consent and the prevalence of sext dissemination. This is a limitation considering that lack of consent characterizes forms of sexual violence and non-consensual sext dissemination can be considered a form of sexual violence. From this perspective, it is therefore possible that individuals who develop unfavorable attitudes toward consent are at a higher risk of sext dissemination perpetration. Furthermore, it is important to consider that there are certain elements that could act as mediators in the link between sexual consent views and the prevalence of sext dissemination. The present study aims to examine the possible moderating function of empathy.

Attitude toward sexual consent, empathy and sext dissemination

Empathy is a fundamental psychological construct that plays a vital role in promoting prosocial actions and nurturing significant interpersonal

connections (Longobardi et al., 2021, 2022; Ulloa et al., 2017). The concept of “empathy” often denotes “an affective reaction that emerges in response to the emotional state or condition of another person and corresponds to that person’s emotional state or condition” (Eisenberg et al., 1991, p. 65). According to Thompson et al. (2022), there is a consensus among scholars and researchers that empathy is a complex concept that includes both cognitive empathy, which involves understanding others’ feelings, and affective empathy, which involves the capability to partake in the emotional experiences of others. More recently, the literature has also recognized a third component of empathy, namely emotional contagion (Carrè et al., 2013). This dimension of empathy corresponds to the automatic replication of another person’s emotions (Decety, 2010) and deficits in emotional contagion appear to play a role in explaining aggressive behavior and antisocial behavior (Kyranides et al., 2023). Indeed, emotional contagion can be understood as an indicator of the extent to which individuals are susceptible to being influenced by the emotions of others. Emotional contagion is the process by which individuals automatically and unintentionally repeat facial expressions during social interactions. According to cognitive models (Prochazova & Kret, 2017), a person who mimics emotional expressions tends to feel the specific emotion they have mirrored. This function therefore appears to be reduced or impaired in people who display aggressive or antisocial behavior. As a result, a protective factor against deviant behavior that can cause harm to others is lost.

The effect of empathy in the setting of sexual aggression risk (Morrow, 2020; Ritchie et al., 2022) seems to be substantial, and there are indications that this influence may extend to the spread of sexts as well. The so-called Dark Triad refers to a number of different but strongly interrelated personality traits, namely Machiavellianism (manipulation and deception of others, low emotionality and amorality), narcissism (grandiosity, egocentricity and non-tolerance of limits and criticism) and psychopathy (impulsivity, antisocial behavior and lack of remorse for the consequences of one’s own actions) (Paulhus & Williams, 2002). Overall, these personality traits are associated with a tendency toward antisocial and self-interested manner in order to satisfy one’s own needs or achieve one’s own goals without regard for the well-being and rights of others. These traits are inversely related to higher levels of empathy, particularly in terms of emotional empathy (Kyranides et al., 2023; Miao et al., 2019). Indeed, there is evidence from many sources indicating that persons who participate in the spread of sexually explicit material through electronic means tend to have higher levels of personality characteristics associated with the “Dark Triad” (Clancy et al., 2019, 2020). The findings of this research suggest that individuals who participate in the non-consensual dissemination of explicit

messages are likely to display personality characteristics associated with low levels of empathy.

Hence, people with elevated levels of empathy may have a reduced propensity to participate in the spread of sexually explicit content, maybe due to their heightened capacity to discern the emotional well-being of prospective victims. A recent study conducted in Italy by Rollero et al. (2023) revealed a positive correlation between adults' favorable attitudes toward sexting and their level of empathy toward potential victims of sext dissemination. This finding suggests that individuals with a more positive attitudes toward sexting may be less inclined to engage in potentially aggressive online behavior such as sext dissemination, as they are more inclined to understand the negative impact of sext dissemination on a potential victim's emotional well-being. Nevertheless, despite the interesting impetus from the Italian study by Rollero et al. (2023), the authors did not consider the correlation between individuals' views on consent and their level of empathy toward the potential consequences of sext dissemination. This is a limitation when we consider that sext dissemination, especially when it is non-consensual, can cause significant harm to victims.

It is important to note that negative views and attitudes toward sexual consent might have comparable effects as other sexual beliefs, such as the acceptance of rape myths or victim blaming. These beliefs are often associated with reduced levels of empathy (Maes et al., 2023). As a result, the presence of negative attitudes toward sexual consent may have the potential to cause individuals to create emotional distance from victims, thereby diminishing their ability to empathize with the victims' emotions. This, in turn, could potentially heighten the likelihood of engaging in aggressive behaviors, such as the dissemination of non-consensual explicit messages.

Aims of this study

The objectives of this study were (1) to examine the relationship between attitude toward sexual consent and sext dissemination perpetration, and (2) to explore the role of empathy as a potential possible mediating variable in the relationships between attitude toward sexual consent and sext dissemination perpetration. Specifically, we hypothesize that a positive attitude toward sexual consent is positively associated with empathy, which in turn is likely tends to be negatively associated with sext dissemination perpetration.

Method

Participants

A convenience sample consisting of 940 young adults was utilized for the study (79.4% females, 20.6% males, 98.0% Italian) with mean age of

24.29 years old ($SD = 2.89$, $Min. = 18$, $Max. = 35$). Of them, 69.5% self-identified as heterosexual, 13.6% as bisexual, 9.1% as homosexual, 7.5% other sexual orientation.

Instruments

Socio-demographic information

We asked participants to report on their demographic characteristic such as, current age, gender, sexual orientation, and nationality.

The sext dissemination behaviors questionnaire (SDBQ, Clancy et al., 2020)

The SDBQ assesses sexting behavior by asking about engagement in activities such as requesting, receiving, sending, and distributing sexually explicit images via mobile apps or text messages on a cell phone. It also assesses the frequency of sharing. In this study, 'sharing a sext' was defined as the distribution of sexually explicit images or messages that one has either received from someone else or created themselves. In order to provide a common understanding of the term, this definition has been communicated to respondents at the start of the survey. We used only two items related to the prevalence of sexting, which specifically asked participants about their behaviors concerning both sending their own sexts and distributing sexts received from others. This distinction was made clear in the survey instructions to avoid any ambiguity in participants' responses.

In this study, we used only two items related to the prevalence of sexting:

1. *"Have you ever received a sexually explicit image via text message or mobile app intended for yourself which you subsequently distributed to another person (this includes showing or sharing the image)? (Yes/No)."*
2. *"If yes, how many times have you ever distributed a sext?"*

These questions were selected because they are relevant to our research focus.

The basic empathy scale in adults (BES-A, Carré et al., 2013)

The BES-A assesses empathy in adults, and it is composed by 20 items divided into 3 subscales: emotional contagion by another person's emotion (6 items), which measures involuntary reproduction of another individual's feelings, cognitive empathy (8 items), which assess the ability to understand and mentalize other individual's affects, and emotional disconnection (6 items), defined as a response based on a mechanism of disconnection from

emotion that protects individuals from emotions considered to be unsustainable, such as, distress, pain, and extreme emotional impact. The item scored on 5-point Likert response scale (1 = never, 2 = Rarely, 3 = Occasionally, 4 = Often, 5 = Always). For each dimension, we computed the total scores as the sum of the items which make up each scale. Higher scores represented higher emotional contagion, cognitive empathy, and emotional disconnection, respectively. In the present study, we used the McDonald's Omega coefficient as measure of reliability (internal consistency). McDonald's Omega coefficient was adequate for Emotional Contagion ($\omega = .78$), Cognitive Empathy ($\omega = .81$), and it was acceptable for Emotional Disconnection ($\omega = .68$).

The sexual consent scale-revised (SCS-R, Humphreys & Brousseau, 2010)

The SCS-R assesses an individual's beliefs, attitudes, and behaviors with respect to how sexual consent should be and is negotiated between sexual partners. It consisted of 39 items divided into five dimensions: (lack of) perceived behavioral control (11 items), which measures how much behavioral control individuals perceived they had over sexual consent negotiations, positive attitude toward establishing consent (11 items), which measures favorable beliefs about establishing consent before sexual activity begins, sexual consent norms (7 items), which measures beliefs about the norms surrounding consent negotiations, indirect behavioral approach to consent (6 items), which measures the current use of indirect, nonverbal methods of negotiating consent, and awareness of consent (4 items), which measures the amount of awareness or general discussions individuals have regarding sexual consent. The items were rated on 7-point Likert response scale (1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree or disagree, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree). For each dimension, we computed the total scores as the sum of the items which make up each scale. Higher scores represented lower behavioral control regarding verbal sexual consent, more positive attitudes toward consent, lower belief that sexual consent is required in situations beyond sexual intercourse, higher use of indirect, nonverbal methods of negotiating consent, and more awareness or general discussions regarding sexual consent, respectively. In the present study, we used the McDonald's Omega coefficient as measure of reliability (internal consistency). McDonald's Omega coefficient was adequate for (lack of) perceived behavioral control ($\omega = .87$), positive attitude toward establishing consent ($\omega = .89$), sexual consent norms ($\omega = .83$), indirect consent behaviors ($\omega = .77$), and awareness of consent ($\omega = .77$).

Translation and validation of scales

The Italian versions of the scales initially developed and tested in English have been used for this study. To ensure the accuracy and validity of these scales in Italian, a rigorous back-translation process was employed. The English scales were translated into Italian and then independently translated back into English in order to check the consistency and equivalence of meaning. In addition, validation tests were carried out with the Italian versions of the scales prior to the study. These tests examined the reliability and validity of the scales in an Italian context and ensured that the measures were suitable for assessing the constructs of interest among Italian-speaking participants. The validation process included the assessment of construct validity, internal consistency and criterion validity, obtaining satisfactory results that supported the use of these scales in our research.

Procedure

A cross-sectional research strategy was adopted to conduct the study, using an online survey. We created a link to disseminate the questionnaire among the young adult Italian population. The link was shared through institutional social networks and the researchers' personal ones, and participants were asked to further spread the link among their contacts to widen the sample (snowball technique). Individuals who declared themselves to be adults (aged between 18 and 35 years) and native Italian speakers were eligible to participate. Before starting the online survey, participants received comprehensive information about the study and were asked to provide their consent electronically. Participation in the study was entirely voluntary and was not compensated. Before beginning the online survey, participants received comprehensive information about the study and were asked to provide consent electronically. Participation in the study was completely voluntary and was not remunerated.

Participants were guaranteed that their anonymity would be maintained during the study. In addition, it is worth noting that the study was conducted strictly according to the principles of the 1964 Declaration of Helsinki, as well as any subsequent revisions or similar ethical standards. The study was approved by the Institutional Review Board (IRB) of the University Turin under protocol number 0245430.

Statistical analysis

We double entered the data and checked for accuracy. Then, we examined whether continuous variables displayed a normal distribution. Moreover, we computed McDonald Omega's coefficient to assess internal consistency

of measures. We considered McDonald Omega's coefficient higher than .60 was considered acceptable (Nunnally & Bernstein, 1994).

After, we performed descriptive statistics for demographic characteristics. Specifically, we used percentage for the categorical variable and means (standard deviation) for the continuous variables. In addition, we carried out a bivariate correlation analysis to examine the strength and the direction of correlation coefficients between variables under study. We performed these statistical analyses using IBM SPSS software version 28.0 for Windows.

Subsequently, we used the lavaan R package (Rosseel, 2012) within jamovi's module SEMLj (Gallucci, 2021; The Jamovi Project, 2022), to specify and estimate the structural equation model (SEM) predicting sext dissemination perpetration from a correlations matrix. Moreover, we used the semPlot R package (Epskamp et al., 2019) on jamovi's module SEMLj to construct the path diagram. The hypothesized, tested, and estimated model comprised a sequence in which the latent positive attitude toward establishing consent measured by the 11 items in the SCS-R affected the latent emotional contagion measured by the 6 items in the BES, which in turn, affected sext dissemination perpetration. We employed the Diagonally Weighted Least Squares parameter (DWLS) estimation and robust standard methods on the polychoric correlations.

To assess the model fit, we used several indices: the Comparative Fit Index (CFI), the Tucker–Lewis Index (TLI), and the Goodness of Fit (GFI), for which the value is usually considered .90 (better if $>.95$) as appropriate to accept the model; the Root Mean Square Error of Approximation (RMSEA), with values lower than .08 (better if below .05) considered as satisfactory, and the chi-square test (Hu & Bentler, 1999; Marsh et al., 2004; Kline, 2011). We also computed The R^2 index ($R^2 < .02$ = very weak effect; .02 to .12 = weak effect; .13 to .26 = moderate effect; $R^2 > 0.26$ = substantial effect; Cohen, 1992). We interpreted all statistical analysis assuming a significance level of 5% (two-tails).

Results

Descriptive statistics and correlations matrix

Table 1 presents descriptive statistics and a correlation matrix. It can be noted that of five attitudes toward sexual consent dimensions only the (lack of) perceived behavioral control ($p = .037$) and the positive attitude toward establishing consent ($p = .001$) showed a statistically significant relationships with sext dissemination perpetration. Specifically, the (lack of) perceived behavioral control was positively related to sext dissemination ($r = .068$), while a positive attitude toward establishing consent was negatively

Table 1. Bivariate Correlations matrix.

	M	SD	1	2	3	4	5	6	7	8
1. Sex Dissemination perpetration	0.090	0.44	—							
2. (lack of) Control (SCS-R)	23.60	11.45	.068*	—						
3. Positive attitude (SCS-R)	57.54	13.30	-.105**	-.387***	—					
4. Indirect behavioral (SCS-R)	29.59	7.66	.037	.107**	-.283***	—				
5. Norms (SCS-R)	27.24	9.38	.027	.149***	-.253***	.478***	—			
6. Awareness (SCS-R)	17.015	6.73	-.013	-.239***	.388***	-.137***	-.226***	—		
7. Emotional Contagion (BES)	20.95	4.11	-.079*	-.035	.156***	-.001	-.036	.067*	—	
8. Cognitive Empathy (BES)	32.77	3.79	-.009	-.169***	.127***	.089**	-.079*	.162***	.366***	—
9. Emotional Disconnection (BES)	25.18	3.47	-.002	-.159***	.171***	-.006	-.098**	.118***	.435***	.371

Note. M: Mean; SD: Standard Deviation; BES: Basic Empathy Scale; MDS: Moral Disengagement Scale; SCS-R: Sexual Consent Scale-Revised.

* $p < .05$.
** $p < .01$.
*** $p < .001$.

associated with sext dissemination ($r = -.105$). This indicates that greater (a lack of) perceived behavioral control and a lower positive attitude toward establishing consent are associated with higher rates of sext dissemination perpetration.

Contrary to our expectations, the cognitive empathy ($r = -.009$, $p = .774$) and emotional disconnection ($r = -.002$, $p = .946$) were not statistically related to sext dissemination perpetration. Only the emotional contagion dimension showed a negative and statistically significant relationship with sext dissemination ($r = -.079$, $p = .015$), indicating that higher levels of emotional contagion were associated with lower sext dissemination perpetration. That is, individuals who higher levels of involuntary reproduction of another individual's feelings, showed lower sext dissemination perpetration.

Mediation model explaining sext dissemination perpetration: a structural equation model

We focused on the positive attitude toward establishing consent and emotional contagion in our investigation of their relationship with sext dissemination perpetration, as they were the only variables that demonstrated statistically significant relationships with each other and sext dissemination perpetration. Thus, we hypothesized two mediation models, which included a sequence in which the positive attitude toward establishing consent affected emotional contagion, which in turn, affected sext dissemination. Moreover, the first model (partial mediation model) also tested the direct effects of the positive attitude toward establishing consent on sext dissemination perpetration and, the second one (complete mediation model) only tested an indirect effect of the positive attitude toward establishing consent on sext dissemination mediated by emotional contagion, but not a direct one.

Both models presented an adequate general fit: the partial mediation model fit was $\chi^2(133) = 504.190$, $p < .001$, CFI = .990, TLI = .989, GFI = .993, RMSEA = 0.055 (95% CI [0.050, 0.060]), and the complete mediation model fit was $\chi^2(134) = 1022.522$, $p < .001$, CFI = .977, TLI = .974, GFI = .986, RMSEA = 0.084 (95% CI [0.079, 0.089]). The partial mediation model explained 5.6% ($R^2 = .056$) of the sext dissemination perpetration scores' variability whereas the complete mediation model explained 6% ($R^2 = .06$) of the variability. Both models, explained a small but relevant variability of the sext dissemination perpetration scores. We presented the parameters standardized estimations of both models in [Figure 1](#).

To compare the fit of both models, we used the difference between the CFIs (ΔCFI) of the models tested, which are independent of model

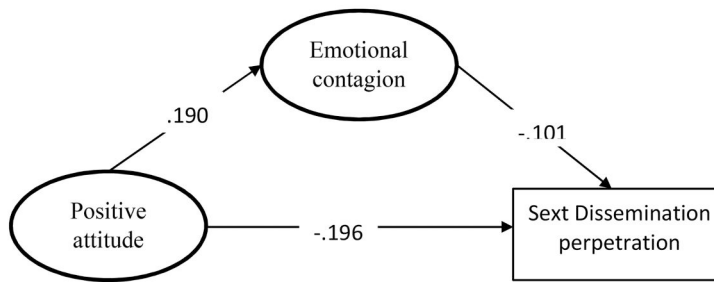
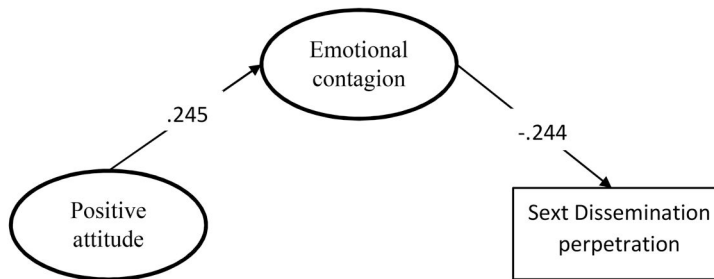
Partial mediation model**Complete mediation model**

Figure 1. Standardized coefficients of the models testing partial and complete mediation of the positive attitude toward establishing consent on sext dissemination perpetration.

Note. All parameters statistically significant ($p < .001$); errors and disturbances not shown for the sake of clarity.

parameters and sample size for testing two nested models (i.e., are robust statistics). A value of ΔCFI smaller than or equal to 0.010 could be considered negligible (Cheung & Rensvold, 2002). When both models were compared, the partial mediation model showed a better fit model, $\Delta\text{CFI} = 0.013$, so this model was retained.

Regarding the direct effects, a positive attitude toward establishing consent had a positive effect on emotional contagion ($\beta = .190$, $p < .001$), and negative impact on sext dissemination perpetration ($\beta = -.196$, $p < .001$), indicating that individuals with a more positive attitude toward consent exhibited a higher propensity for the involuntary reproduction of others' emotions and were less likely to engage in sext dissemination. Likewise, emotional contagion was negatively related to the sext dissemination perpetration ($\beta = -.101$, $p < .001$), indicating that individuals who experienced higher emotional contagion were less likely to participate in the sext dissemination.

The standardized indirect effect of a positive attitude toward establishing consent, partially mediated by emotional contagion, was $-.019$ ($p < .001$), indicating that individuals with a more positive attitude toward establishing

consent displayed heightened levels of involuntary reproduction of others' emotions, which, in turn, was linked to a lower likelihood of engaging in sext dissemination perpetration.

Discussion

Inspired by the TPB, the main aim of this research was to examine the correlation between attitudes toward sexual consent and the perpetration of sext dissemination. Furthermore, we aimed to investigate the potential mediating role of empathy on the relationship between attitudes toward sexual consent and the perpetration of sext dissemination.

The results of our study, as shown by bivariate correlations, suggest that only a limited number of aspects of views toward sexual consent displayed noteworthy connections with the perpetration of sext dissemination. More specifically, the aspects that were examined in this study were the perceived absence of behavioral control and a favorable attitude toward the establishment of consent. The findings of this study suggest that persons who participate in the distribution of sexually explicit messages may not fully recognize the significance of sexual permission. Specifically, they report a diminished sense of perceived behavioral control and have a more unfavorable attitude toward gaining consent. According to the TPB, perceived behavioral control is comparable to Bandura's concept of self-efficacy and refers to the level of comfort and awkwardness in asking for sexual consent. This finding suggests that individuals with a low degree of behavioral control may be more inclined to perpetrate sext dissemination, possibly due to a poor perception of being self-efficacious in discussing sexual consent with their partner (in this case, the person from whom they have received sexts). The perception of poor control over sexual consent could thus reflect a greater tendency to engage in non-consensual sext dissemination, associated with behavior characterized by bypassing the request for consent itself. Previous literature suggests that perceived behavioral control is linked to a range of sexual health behaviors (Lin et al., 2021; Simms & Byers, 2013) and some evidence has identified perceived behavioral control as a strong predictor of the intention to commit violence against a partner (Hou et al., 2020). Our study aligns with this direction and extends the current literature by highlighting an association between low perceived behavioral control and sext dissemination perpetration. Moreover, our research contributes to the literature an association between sext dissemination and another TPB dimension, which is a positive attitude toward establishing sexual consent. This dimension was found to be negatively associated with sext dissemination, indicating that individuals who exhibit an unfavorable attitude toward sexual consent are more likely to report higher sext

dissemination perpetration. The significance of these results lies in their ability to shed light on two aspects of views on sexual consent that have previously been shown to have a strong correlation with sexual violence (Moyano et al., 2023). Non-consensual sexting might be considered a manifestation of interpersonal violence, comparable to acts of sexual assault. Hence, harboring a negative disposition toward sexual consent might potentially serve as a contributing element to the involvement in the broadcast of explicit messages or media, often referred to as sext dissemination. While far from being considered definitive, our data suggest the importance of considering the dimensions prescribed by the Theory of Planned Behavior (TPB) in relation to sexual consent when understanding the risk of sext dissemination perpetration among young adults. More specifically, dimensions related to the attitude toward sexual consent and the perception of behavioral control could impact an individual's intention to act in a way that disregards the expression of another's sexual consent, potentially resulting in behavior such as non-consensual sext dissemination. In particular, a high (lack of) perceived behavioral control and an unfavorable attitude toward sexual consent could increase the risk of engaging in non-consensual sext dissemination. In addition, our analysis of bivariate correlations revealed a significant association between emotional contagion and sext dissemination perpetration. The phenomenon of emotional contagion, which pertains to the involuntary reproduction of another individual's feelings, has been shown to have a correlation with violent conduct (Kyranides et al., 2023). The available empirical data indicates that persons who engage in the distribution of sexually explicit material often have psychological characteristics that are linked to a diminished capacity for empathy, specifically in the realm of emotional empathy (Clancy et al., 2019, 2020). Nevertheless, there has been a dearth of empirical research examining the correlation between empathy and the distribution of sexually explicit content among individuals in the young adult demographic. The present research makes a valuable contribution to the existing literature by finding a robust association between reduced levels of emotional contagion and engagement in sext dissemination perpetration. Our hypothesis is that a decrease in empathy, namely in the affective aspect that involves challenges in establishing emotional connections with the feelings of others, could be associated with a greater probability of engaging in sext dissemination perpetration. Essentially, diminished emotional contagion might impair the perpetrator's ability to empathize with the victim of sext dissemination, potentially facilitating such behaviors. We must also consider that among the strongest motivations associated with non-consensual sext dissemination is the perception of it as an amusing and harmless act (Clancy et al.,

2023). Furthermore, compared to consensual sext dissemination, non-consensual sext dissemination has been more strongly linked to motives such as enhancing one's social status and retaliation (Clancy et al., 2023). These motivations seem to indicate a lack of empathy for potential victims and the harm they may experience, reinforcing the notion of a connection between empathic gaps and sext dissemination perpetration. However, it should be noted that our study only identified a significant association with emotional contagion, while the other two subdimensions of empathy (cognitive empathy and emotional disconnection) did not show significant associations with sext dissemination. These findings are surprising, and considering this is the first study to explore the association between the three components of empathy (cognitive empathy, emotional disconnection, and emotional contagion) and sext dissemination, further research will be necessary. Nonetheless, it is important to highlight that the literature on the relationship between empathy and deviant behaviors appears mixed, suggesting that the affective and cognitive components of empathy are more closely connected to forms of direct aggression (Ritchie et al., 2022), while sext dissemination might be seen as a form of indirect victimization. Further studies will be essential to understand these findings. The findings obtained via the use of structural equation modeling indicate that there is a direct negative relationship between a favorable disposition toward obtaining permission and engaging in the transmission of explicit sexual content without consent. Put simply, those who had a good attitude toward gaining sexual permission were less likely to engage in sext dissemination perpetration. Furthermore, the concept of emotional contagion has been identified as a potential mediator in the association between a favorable attitude toward obtaining permission and the perpetration of sext dissemination. The collective data indicate that the attitude toward obtaining permission significantly contributes to the heightened risk of disseminating sexts. It may be possible that when people fail to acknowledge the significance of acquiring sexual permission, they may exhibit a greater propensity to participate in the distribution of explicit messages without the explicit approval of the recipient, so encroaching upon their right to privacy. Our study also highlights the possible mediating role of empathy, particularly emotional contagion, in the link between attitudes toward sexual consent and sext dissemination. It is plausible that disregard for a partner's consent may lead to less empathetic attitudes toward the rights and dignity of others, ultimately leading to increased sext dissemination perpetration. A deficit in emotional empathy might hinder perpetrators from fully understanding the emotional repercussions for the victim, possibly facilitating the perpetration of these acts.

Limitations and future avenues of research

Our study has several limitations, warranting a cautious interpretation of the results. Firstly, the use of a convenience sample restricts the broader applicability of our findings across diverse cultural backgrounds. In addition, the diversity of the wider population, which could affect the generalizability of our findings, cannot be reflected in the demographic composition of our sample, which is predominantly female, Italian, and heterosexual. In order to evaluate the effects of these associations on various cultural and sex identities, further studies should be aimed at involving a more diverse population. Secondly, the cross-sectional design of our research allows for the examination of associations but constrains our capacity to establish causality and might introduce biases. For example, prior research has identified potential biases arising from use of mediation analyzes in cross-sectional studies (e.g., Maxwell et al., 2011; Maxwell & Cole, 2007). For instance, a variable that is found to be a potential mediator in a cross-sectional analysis might not be a mediator at all in a longitudinal analysis (Maxwell et al., 2011). Therefore, further research is needed to delve into the specific role of empathy as a mediator. Furthermore, we acknowledge the low magnitude of the correlation between perceived behavioral control and sext dissemination ($r = .068$). The large size of our sample (940 participants) may have played a role in detecting statistically significant correlations, albeit of practical insignificance.

Considering these limitations, we recommend that future research endeavors replicate the present study with a randomized sample (i.e., a more representative sample) and a longitudinal design to overcome some of the constraints associated with cross-sectional designs. While our study lays the groundwork by identifying empathy as a relevant factor, we recognize the importance of longitudinal investigations to provide more robust evidence regarding its mediating role in the relationships under examination. Longitudinal designs allow for a more robust examination of causal relationships over time, providing a clearer understanding of the dynamics involved.

Practical implications

Our study suggests several practical implications. Given the adverse impacts of non-consensual sext dissemination on victims' well-being, adopting preventive and educational strategies to inform both potential victims and aggressors is crucial. Firstly, we believe it is essential to implement sexual education programs that educate individuals about the risks associated with online sexual behaviors, such as non-consensual sext dissemination. Based

on our data, we recommend that these sexual education programs cover the topic of sexual consent, particularly concerning online sexual behavior and the associated risk of sext dissemination. We also advocate for awareness campaigns that emphasize the significance of sexual consent both generally and specifically within the online context to prevent serious consequences of non-consensual sext dissemination. Awareness campaigns, such as the use of posters, have proven effective in encouraging more positive attitudes and behavioral intentions regarding the request for sexual consent (Falcon et al., 2022). Beyond awareness campaigns, sexual education programs should help adolescents and young adults to develop an understanding of the importance of sexual consent and build skills in discussing and requesting consent online, especially in relation to sext dissemination. Lastly, considering the potential role of empathy in predicting sext dissemination perpetration, it could be beneficial to integrate into sexual education projects activities that increase awareness of the risks and negative impacts of non-consensual sext dissemination on victims, thereby fostering a deterrent against sext dissemination perpetration.

Conclusion

In conclusion, our study has provided new insights into the risk factors associated with sext dissemination perpetration among young adults. In particular, our study identified a significant association between sext dissemination perpetration and both a negative attitude toward sexual consent and a lack of perceived behavioral control, identifying emotional contagion as a potential mediating factor. Thus, our study suggests that a negative attitude toward sexual consent and a lack of perceived behavioral control may correspond with reduced levels of (emotional contagion), which could in turn elevate the risk of engaging in sext dissemination perpetration. In line with the Theory of Planned Behavior (TPB) framework, our data emphasize the importance of considering attitudes toward sexual consent as a risk factor associated with sext dissemination, suggesting that these attitudes, along with a lack of perceived behavioral control, may be linked to a higher likelihood of engaging in sext dissemination perpetration. These two dimensions could influence an individual's disregard for another's sexual consent, thereby increasing the risk of sext dissemination perpetration.

Disclosure statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this study.

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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Informed consent

Informed consent was obtained from all individual participants included in the study

Code availability

For this research we used SPSS 27 software available from our University.

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Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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