

Happy or Unhappy? Mental Health Correlates of Receiving Sexts and Unsolicited Sexual Images

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Abstract

This study investigated the prevalence of receiving sexts among adolescents and its relationship with depressive symptoms and self-esteem. A survey was administered to 728 high school students in Sweden in 2019 and 2020 (50.4% girls and 46.4% boys) using a cross-sectional design. Findings showed that significantly more boys (28.4%) than girls (12.6%) reported having happily received a sexual picture, while significantly more girls (48.8%) than boys (s.2%) reported having received an unwanted sexual picture at least once in their life. Happily receiving a sexual picture was not related to any of the investigated mental health correlates among girls, whereas it was positively associated with depressive symptoms among boys. Receiving an unsolicited sexual picture was associated with higher depressive symptoms and lower self-esteem for both boys and girls. This work offers a novel approach to studying the reception of sexual images by teenagers Practical implications of the present findings are discussed.

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Data Availability Statement included at the end of the article

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Introduction

Digital technology often mediates adolescents' communication, including their sexual behaviors and related emotions. A specific type of sexual behavior that takes place online is sexting, defined as the sending, receiving, and forwarding of sexual texts and self-taken sexual images through digital devices (Klettke et al., 2014). The present study will focus on the reception of sexual images, in particular on the difference between happily receiving sexual images and receiving unsolicited sexual images, depicting a nude or semi-nude person.

According to previous research, sexting can be framed as a normative behavior that is part of adolescent typical development (Patchin & Hinduja, 2019; Symons et al., 2018). Its outcomes can be positive in terms of contributing to romantic relationships and self-expression (Hasinoff, 2015). For instance, exchanging sexually explicit images allows adolescents to obtain peers' validation of their body image, which in turn may increase their sense of self-esteem (Graham Holmes et al., 2021). Sexting could serve as a means to approach a potential partner, to foster the feelings of intimacy and bonding in an existing relationship, and to have an alternative way of reaching sexual gratification without intercourse (Doyle et al., 2021; Graham Holmes et al., 2021). Participating in sexting is also a way to seek acceptance and popularity in the peer group (Del Rey et al., 2019). In short, exchanging sexual images can be a fun way for adolescents to experiment with their sexuality, if the exchange happens consensually.

However, sexting can also include non-consensual acts, such as pressuring someone to send sexts, distributing sexual pictures without the consent of the people depicted, or sending someone unsolicited sexual images. An unsolicited sexual image is a picture that contains sexual elements and that is sent to someone who did not ask for it (Fisico, 2021; Marcotte et al., 2020). Such pictures lack prior approval or consent from the recipient and thus the act of sending them may be considered a form of image-based sexual abuse (Hayes & Dragiewicz, 2018; Marcotte et al., 2020; Mishna et al., 2023; Oswald et al., 2020; Ringrose et al., 2021a). Unsolicited sexual pictures may be perceived as intrusive by those who receive them, causing feelings of discomfort and loss of control as the receiver is forcefully exposed to sexual pictures that they did not ask for (Amundsen, 2021; Fisico, 2021; Mandau, 2020; Marcotte et al., 2020). This violates their control of the contents they want to see and

their right to make free choices, which is a type of violation specific to sexual violence (Marcotte et al., 2020). Receiving unsolicited sexual images is associated with being a target of other forms of sexual violence, such as sexual assault and intimate partner violence (DeKeseredy et al., 2019).

Importantly, current research has failed to establish unique associations of receiving sexts and mental health, due to collapsing distinct sexting behaviors. Research has started to gain some momentum, however, on issues around motivations for sexting (Bianchi et al., 2021) and it is paramount to separate out positive sexting experiences (e.g., fun, consensual, etc.) from negative experiences (i.e., aggravated, non-consensual) to better understand the phenomenon. To this aim, we decided to take a novel approach in this paper by asking participants if they received sexual images that they were “happy to receive” or ones that “they did not want to receive.” The present research extends previous literature by disentangling positive and negative experiences of sexting, while looking at their associations with depression and self-esteem.

Gender Differences

Receiving sexts is relatively common among young people, with recent meta-analyses showing that one in three young people receive sexts (Madigan et al., 2018; Mori et al., 2022). In terms of consensual sexting, previous research showed that 15.9% of boys frequently received a sexual image, compared to 6.2% of girls (Foody et al., 2021). In contrast, the non-consensual receiving of sexual images is more frequent among girls, with 21.9% of girls frequently receiving an unwanted sexual image, compared to 7.5% of boys (Foody et al., 2021). A possible explanation is offered by the Sexual Scripting Theory, which posits that the sexual behavior of an individual is guided by their beliefs about what is appropriate in a sexual interaction and what is expected from them and their partner at the socio-cultural level (Simon & Gagnon, 1986). Sexual scripts are gender-specific, as the sexual behavior expected from men and women are different in most cultures (Symons et al., 2018). Therefore, there may be different societal expectations of boys’ and girls’ sexual behavior in heterosexual relationships, especially during adolescence. For example, boys might feel pressured to respond positively to sexual pictures they receive, even if unsolicited, as hegemonic masculinity envisages that boys should be constantly invested in sexual advances and imagery and not express their feelings of discomfort to avoid appearing weak (Hunehäll Berndtsson, 2022; Marcotte et al., 2020; Matthews et al., 2018). In contrast, societal expectations dictate that girls should not share their nude pictures, even if they are pressured to do so, as their role is to put

a limit to boys' requests and preserve their reputation (Symons et al., 2018). Receiving a sexual picture might be interpreted as evidence of having sent a sexual picture in the first place (even if untrue); such behavior is considered unacceptable and shameful while exposing girls to criticism and slut-shaming (Ringrose et al., 2021a, 2021b).

Mental Health Correlates of Receiving Sexual Pictures

Much of the research investigating the mental health correlates of sexting has focused just on the sending of sexual pictures, by measuring the frequency of this behavior (e.g., de Santisteban & Gámez-Guadix, 2018; Wachs et al., 2021). Other studies, instead, collapsed sending, receiving, and sharing sexual pictures in their assessment, to measure the extent participants were involved in sexting in general (e.g., Foody et al., 2021). This leaves us with just a handful of studies focused specifically on the reception of sexual images and its mental health correlates. In general, the research appears to suggest negative outcomes for teenagers who receive sexts, such as an association with behavioral problems, including conduct and emotional problems (Foody et al., 2021). Yet, when it has been parsed out, there appears to be no associations between consensually receiving sexual pictures and depression, anxiety, impulsivity, hostility, emotion dysregulation, aggressive temperament, stress and self-esteem among adolescents and young adults (Klettke et al., 2019; Lu et al., 2021). However, emotional responses to unsolicited sexual pictures are reportedly negative, with targets expressing feeling "grossed out," "disrespected," and "violated" by the unwanted picture (Marcotte et al., 2020). Feelings of discomfort, confusion and lack of control are also common among targets of unsolicited sexual pictures (Fisico, 2021; Mandau, 2020). Therefore, it is not surprising that receiving unwanted sexts is associated with distress (Valiukas et al., 2019). Young adults and adolescents who receive unwanted sexual pictures also reported depressive symptoms, which resonates with what has been found among the targets of sexual harassment (Klettke et al., 2019; Lu et al., 2021). Furthermore, a relationship has been found between receiving unsolicited sexual pictures and low self-esteem among young adults, possibly because the targets of this behavior feel objectified, which in turn lowers their sense of self (Klettke et al., 2019). However, little is known about the association between self-esteem and sending/receiving solicited and unsolicited sexual images during adolescence. Adolescence is characterized by physical, psychological, and social changes and transitions (Skogbrott Birkeland et al., 2012). Self-esteem may act as an indicator of how adolescents face and manage the challenges they are confronted with, including sexting.

The Present Study

Much of the research on this topic frames sexting as a risky behavior, linking it to harmful outcomes in terms of mental health (Barrense-Dias et al., 2017; Krieger, 2017; Symons et al., 2018). However, it is not clear whether such negative outcomes are linked to consensually receiving sexts (Krieger, 2017). Furthermore, most of the research on the reception of sexts focuses on young adults (Klettke et al., 2019; Valiukas et al., 2019; YouGov, 2018), with only a few studies sampling adolescents (Livingstone & Görzig, 2014; Lu et al., 2021). Therefore, the present study aims to advance our knowledge in relation to sexting in several ways. First, as noted in a recent systematic review (Barroso et al., 2023), existing definitions and assessments of sexting do not always allow us to establish whether adolescents' experience of receiving sexts is of positive or negative nature. To address this, the present study aims to disentangle the experience of being "happy to receive" a sext from the experience of receiving one when "you didn't want it," and to investigate this between teenage boys and girls. Second, the present study aims to advance our knowledge in relation to the associations between receiving sexts and depression and self-esteem respectively. To these aims, the following hypotheses were formulated:

H1: In terms of the prevalence of sexting, we expected that girls would receive more unsolicited sexual images than boys.

H2: We expected that receiving unsolicited sexual images would be positively associated with depression and negatively associated with self-esteem.

H3: In terms of happily receiving sexts, we expected it to be negatively associated with depression and positively associated with self-esteem.

Method and Materials

Participants

The questionnaire was completed by 728 high school students in Sweden. The sample was balanced for girls (50.4%) and boys (46.4%), while the remaining participants identified as non-binary (1%) or did not report their gender (2.2%). Participants' age varied between 12 and 19 years of age ($M=14.35$, $SD=1.29$). Most participants identified as heterosexual (85.6%), followed by bisexual (8.1%), pansexual (1.9%), lesbian (1.3%), asexual (1%), and gay (0.5%). A percentage of participants (1.7%) reported their sexual orientation as "other."

Procedure

Data collection took place between October 2019 and May 2020 in Sweden. Participants were recruited through the authors' network through two methods. First, the study was advertised on the authors' website through a recruitment campaign. Second, information letters about the project, along with consent forms, were sent to the networks' schools and interested school principals were asked to contact the researcher. Once consent from the principal was given, information and consent forms were sent out to the parents if the student was under 15 years of age. In total, five schools participated in data collection. The survey was completed during school hours, and it was administered using the Esmaker platform, where students could choose to fill in the survey in either English or Swedish. Before completing the survey, participants were informed that their answers were anonymous and that they could opt out at any time. This work was approved by the Ethics Review Committee at Dublin City University and the Karolinska Ethics Board in Sweden.

Instruments

At the beginning of the survey, participants were asked to self-identify their gender and their sexual orientation, and to indicate their age. The other variables of interest are outlined below.

Receiving Sexts. The sexting items adopted in this study were based on previous literature (Foody et al., 2021; Patchin & Hinduja, 2019). Participants were asked two questions assessing the frequency with which they had received sexual pictures in their life. One question assessed the *positive reception* of sexual images, and it was phrased as "Have you ever received a sexual image (e.g., nude or semi-nude) from someone (and been happy to receive it)?" The item specifically asked if respondents were happy about receiving the sexual image to reflect the positive emotions that receiving a sexual picture might elicit. The other question investigated the *negative reception* of sexual images, asking "Have you ever received a sexual image (e.g., nude or semi-nude) from someone when you didn't want it?" Both questions were answered on a 4-point Likert scale, ranging from 1 = *never* to 4 = *many times*, and they were developed specifically for the present study.

Depressive Symptoms. The short version of the Moods and Feelings Questionnaire (Angold & Costello, 1987) was adopted to assess depressive

symptoms. Participants were provided with 13 statements and were asked to indicate how they had felt in the previous 2 weeks. Answers were given on a three-point Likert scale (1 = *not true*, 2 = *sometimes*, and 3 = *true*). Sample items are “I felt miserable or unhappy” and “I thought nobody really loved me.” A total score was computed by averaging participants’ responses across all items, so that higher scores indicated higher levels of depressive symptoms ($\alpha = .93$).

Self-Esteem. Participants’ self-esteem was assessed using the Rosenberg’s Self-Esteem Scale (Rosenberg, 1965). The scale included 10 items describing both positive and negative views about the self. Answers were provided on a 4-point Likert scale (1 = *strongly agree*, to 4 = *strongly disagree*). Sample items are “On the whole, I am satisfied with myself” and “At times I think I am no good at all.” A total score was computed by reverse-scoring the 5 items measuring positive feelings about the self and by averaging participants’ answers across the items, so that a higher total score indicated a higher self-esteem ($\alpha = .88$).

Data Analysis

The present study adopted a cross-sectional design. Statistical analyses were performed using SPSS 27 version. Non-binary respondents and respondents who did not disclose their gender were coded as missing values, as their sample size ($N=22$) was too low to be analyzed separately. Descriptive statistics and a correlation matrix were run for all the investigated variables.

To examine H1, frequencies of the two receiving behaviors were calculated on the overall sample and for boys and girls separately. Subsequently, a chi-square test was conducted to check for significant differences between boys and girls in terms of receiving sexual pictures across both questions. To do this, the two variables investigating receiving sexts had been previously recoded by collapsing the response options “once,” “a few times,” and “many times” into a single value, as the frequencies of the single response options were too low for the chi square analysis. The resulting variables were nominal and had two categories: participants who never received a sexual picture (happy to/did not want it), and participants who received a sexual picture at least once in a lifetime (happy to/did not want it).

To investigate H2 and H3, four regressions with interaction terms were performed using the PROCESS macro for SPSS. Two of the regressions examined the association of the unwanted receiving of sexual images (labeled as “negative reception”) and its interaction with gender (predictor variables)

with depression and self-esteem levels (outcome variables). The remaining two regressions included the same outcome variables, whereas happily receiving sexual pictures (labeled as “positive reception”) and its interaction with gender were the predictor variables.

Results

Descriptive Analyses and Bivariate Correlations

Both positive reception ($M=1.37$, $SD=0.81$) and negative reception ($M=1.81$, $SD=1.06$) of sexual images correlated positively with age ($M=14.35$, $SD=1.29$), indicating that older adolescents received sexual pictures more often than younger adolescents. Receiving unsolicited sexual images (i.e., negative reception) was also positively correlated with depressive symptoms ($M=1.66$, $SD=0.55$) and negatively correlated with self-esteem ($M=2.84$, $SD=0.67$), meaning that receiving unwanted sexual pictures more often was related with higher depressive symptoms and lower self-esteem. No such association was observed for the positive reception of sexual images.

Gender Differences in Receiving Sexual Images

Frequencies of the reception of sexual images are reported in Table 1 both by gender and in total. A chi-square test was conducted to test the differences in girls’ and boys’ reception of sexual images. Significantly more girls than boys reported receiving an unwanted sexual picture at least once in their life (i.e., negative reception), $\chi^2(1)=14.35$, $p<.001$, while more boys than girls reported happily receiving a sexual picture at least once (i.e., positive reception), $\chi^2(1)=25.18$, $p<.001$. In both cases Cramer’s V statistic was significant ($p<.001$) with values of .15 and .20 respectively, thus indicating a significant association between the variables.

Receiving Sexts, Depressive Symptoms, and Self-Esteem

Four regressions with interaction terms were conducted after mean centering the variables. Two of them analyzed the negative reception of sexual images, gender, and their interaction as the predictor variables, and depressive symptoms and self-esteem as the outcome variables separately. The remaining two regressions investigated the positive reception, gender and their interaction as the predictor variables, and depressive symptoms and self-esteem as the outcome variables separately.

Table 1. Frequencies for Receiving Sexual Images Across Both Questions Divided by Gender.

	Never	At least once
	N (%)	N (%)
<i>Positive reception: Have you ever received a sexual image from someone (and been happy to receive it)?</i>		
Girls	297 (87.4)	43 (12.6)
Boys	224 (71.6)	89 (28.4)
Total	545 (74.9)	145 (19.9)
<i>Negative reception: Have you ever received a sexual image from someone when you didn't want it?</i>		
Girls	174 (51.2)	166 (48.8)
Boys	206 (65.8)	107 (34.2)
Total	400 (54.9)	290 (39.8)

Negative Reception. Regarding the negative reception of sexual images, results showed that receiving unwanted pictures ($B=0.11, t=5.93, p < .001$; Table 2) and being a girl ($B=-0.37, t=-9.68, p < .001$) predicted higher levels of depressive symptoms, while the interaction between the negative reception and gender was not significant. With regards to the regression for self-esteem, frequently receiving unwanted sexual pictures ($B=-0.10, t=-4.11, p < .001$; Table 2) and being a girl ($B=0.41, t=8.29, p < .001$) resulted in a significant association with lower self-esteem, while the interaction between negative reception and gender did not yield any significant results.

Positive Reception. With regards to the positive reception of sexual images, the first regression model showed that being a girl was associated with higher depressive symptoms ($B=-0.42, t=-10.45, p < .001$; Table 3). Despite the main effect for positive reception not being significant, its interaction with gender was significant ($B=0.12, t=2.09, p = .037$). Analysis of the simple slopes displayed that, for boys, the relationship between positive reception and depressive symptoms was significant ($B=0.08, t=2.56, p = .011$; Figure 1), indicating that depressive symptoms increased as the positive reception of sexual images increased. No significant interaction effect was found for girls. With regards to self-esteem, being a boy ($B=0.46, t=9.07, p < .001$; Table 3) was associated with higher self-esteem, whereas no significant effect of the positive reception and of its interaction with gender was observed.

Table 2. Regression Analyses With Interaction Terms for the Negative Reception of Sexual Images.

Predictors	Depressive symptoms				Self-esteem					
	R ²	B	SE	t ₍₆₄₉₎	95% CI	R ²	B	SE	t ₍₆₄₉₎	95% CI
Intercept	0.20***	1.65***	0.02	85.57	[1.61, 1.69]	0.14***	2.85***	0.02	115.34	[2.80, 2.90]
Negative reception		0.11***	0.02	5.93	[0.09, 0.15]		-0.10***	0.02	-4.11	[-0.15, -0.05]
Gender		-0.38***	0.04	-9.68	[-0.45, -0.30]		0.41***	0.05	8.29	[0.31, 0.51]
Negative reception × gender		-0.06	0.04	-1.51	[-0.13, 0.02]		0.00	0.05	0.06	[-0.09, 0.10]

***p < .001.

Table 3. Regression Analyses With Interaction Terms for the Positive Reception of Sexual Images.

Predictors	Depressive symptoms				Self-esteem					
	R ²	B	SE	t ₍₆₄₉₎	95% CI	R ²	B	SE	t ₍₆₄₉₎	95% CI
Intercept	0.16***	1.64***	0.02	81.84	[1.60, 1.68]	0.12***	2.86***	0.03	112.99	[2.81, 2.91]
Positive reception		0.01	0.03	0.45	[-0.04, 0.07]		-0.03	0.04	-0.85	[-0.10, 0.04]
Gender		-0.42***	0.04	-10.45	[-0.50, -0.34]		0.46***	0.05	9.07	[0.36, 0.56]
Positive reception × gender		0.12*	0.06	2.09	[0.01, 0.23]		-0.12	0.07	-1.63	[-0.26, 0.02]

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

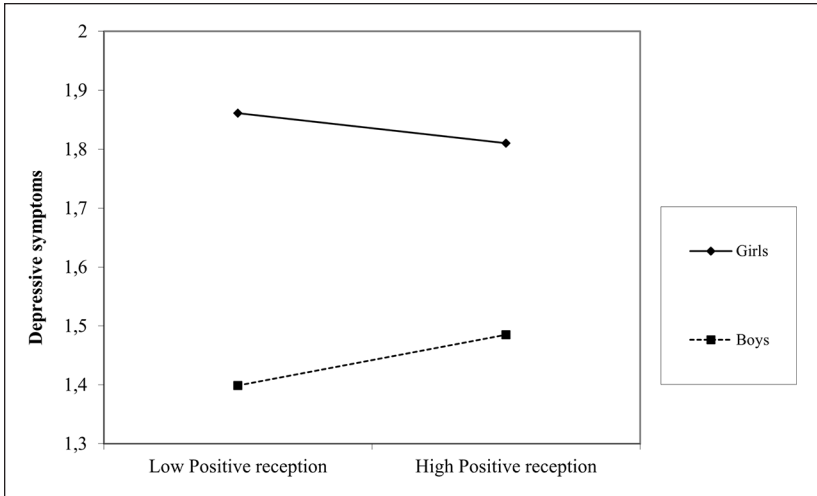


Figure 1. Moderating effect of gender on the relationship between positive reception and depressive symptoms.

Discussion

The present study focused on the positive and negative reception of sexual images among adolescents, to investigate whether its prevalence differed between boys and girls and to examine its links with depressive symptoms and self-esteem. We considered it important to differentiate between the positive reception of sexts and the negative reception of them, as the lack of distinction between the two has led to mixed results in previous studies (Krieger, 2017). Moreover, such distinction is fundamental to avoid any moral panic around the consensual reception of sexual images (Scarcelli, 2020) and to focus on the potential harms of unsolicited sexual images for adolescents' mental health.

Gender Differences in the Reception of Sexual Pictures

Results showed that a minority of respondents were happy to receive a sexual image at least once in their life (19.9%), while receiving an unwanted sexual image seemed to be a more common experience. Approximately 40% reported having received an unwanted image at least once, while 55% never received an unwanted sexual image. A significant difference was found between boys' and girls' frequency of receiving sexual pictures. Significantly

more boys (28.4%) than girls (12.6%) reported being happy to receive a sexual picture at least once. Such findings are in line with previous literature, showing that boys are more likely than girls to receive a sexual picture that they asked for (Klettke et al., 2019). This could be related to the gender roles in sexting within a heterosexual couple whereby boys are expected to be those who ask for sexual pictures to prove their ability to flirt with girls, while girls are expected to send sexual pictures, sometimes after being pressured or convinced to do so by boys (Klettke et al., 2014; Symons et al., 2018). However, our survey did not assess whether participants had asked for the sexual picture, nor the gender of the person who sent it. When it comes to unwanted sexual images, findings from the present study showed that roughly half of girls received such a picture at least once (48.8%), a significantly higher portion compared to boys (34.2%). The percentage of girls receiving an unwanted image is in line with the numbers found in previous studies (Klettke et al., 2019; Marcotte et al., 2020; Mishna et al., 2023; YouGov, 2018). It could be assumed that a portion of our female respondents received unwanted pictures by boys, who see the sending of unsolicited pictures as a normalized behavior aimed at flirting with a girl or complimenting her (Mandau, 2020; Oswald et al., 2020; Ringrose et al., 2021b).

Negative Reception

The findings indicated that receiving an unwanted sexual image was related to higher depressive symptoms and lower self-esteem. For the most part, these results confirm what was found in previous studies regarding the reception of unwanted sexual images (Gassó et al, 2020; Klettke et al., 2019; Lu et al., 2021). Furthermore, they resonate with previous research showing that teenagers involved in different forms of non-consensual and pressured sexting, such as having one's own sexual pictures disseminated, being forced to send a sext or receiving unwanted online sexual solicitation, report higher depression, anxiety, and even non-suicidal self-harm (Gassó et al, 2020; Wachs et al., 2021; Zetterström Dahlqvist & Gillander Gådin, 2018). Such mental health issues are in line with those found in targets of sexual harassment. Young people who receive unwanted touching, sexual comments, or bad treatment for refusing sex show increased depressive symptoms over time (Bucchianeri et al., 2014; McGinley et al., 2016). These findings show a common thread between receiving unwanted sexual images, other forms of non-consensual sexting, and sexual harassment, thus reinforcing the idea that they form part of the same continuum of sexual violence (Hayes & Dragiewicz, 2018; Marcotte et al., 2020; Mishna et al., 2023; Oswald et al., 2020; Ringrose et al., 2021a).

Previous research has suggested that depressive symptoms in young people who receive unwanted sexts could be mediated by their degree of perceived control. Young people might feel a lack of control when receiving sexual images they have not requested. Such images are perceived as a way through which the sender shows their power and exerts control over the receiver (Amundsen, 2021). Perceived control plays a role in sexual violence as well, and it is a characteristic that distinguishes it from other types of trauma (Marcotte et al., 2020; Ulloa et al., 2016). Targets of sexual violence might feel that they do not have any control over the possible recurrence of their abuse; this experience of lack of control can lead to distress and depression (Frazier, 2003). Similarly, being a target of non-consensual sexting and online sexual harassment is associated with a lower perceived control over one's life, which in turn originates in depressive symptoms (Snaychuk & O'Neill, 2021).

With regards to the link between unwanted sexual images and self-esteem, a possible explanation to our findings could be that teenagers experience a decrease in self-esteem as they are blamed by their peers for receiving unsolicited sexual images. This could be especially true for girls. Girls who receive a nude (even if unwanted), might be considered responsible for it as if they did something to deserve that picture, such as sending a picture of themselves in the first place (Ringrose et al., 2021a). In general, sending a nude and being involved in sexting is not socially accepted for female adolescents, who could be criticized and stigmatized for these behaviors, even if they did not consensually participate in them (Barrense-Dias et al., 2017; Ricciardelli & Adorjan, 2019). This experience of criticism and slut-shaming is a predictor of depressive symptoms and health problems (Goblet & Glowacz, 2021), and it is reasonable to expect that it could be associated with lower self-esteem. Conversely, receiving a nude is considered an accomplishment for boys, who tend to be praised for it (Ricciardelli & Adorjan, 2019; Symons et al., 2018).

Positive Reception

The positive reception of sexual pictures was neither associated with depressive symptoms for girls nor with self-esteem (for boys and girls) in the present study. For the most part, these findings are in line with previous literature that did not find any association between consensually receiving sexual images and indicators of poor mental health (Klettke et al., 2019; Lu et al., 2021). Research showed that other forms of positive sexting, like voluntarily sending a romantic partner a nude picture, are not associated with lower self-esteem or

depressive symptoms (Wachs et al., 2021). Interviews with young people about their perception of consensual sexting (i.e., sending, receiving and forwarding of images) show that they consider this practice a way to flirt, develop and maintain sexual intimacy, and increase confidence about their body image (Bonilla et al., 2021; Doyle et al., 2021; Graham Holmes et al., 2021). These findings, added to the lack of positive association between consensually receiving sexual pictures and mental health problems, support the idea that the practice of exchanging sexual pictures may be a normative behavior for adolescents, as long as the images are shared with the consent of all the parties involved. Yet, this does not explain the finding that the positive reception of sexts was associated with depressive symptoms for boys, which suggests that the more frequently boys received sexual images (and were happy to receive them), the higher their depressive symptoms levels were. Interestingly, this unique relationship between sexting and depressive symptoms for males only has been reported elsewhere. For example, Frankel et al. (2018) found an association between consensual sexting and depressive symptoms for their male participants in a large cross-sectional study ($N=6021$). Giving that the current work is also cross-sectional, the direction of the relationship cannot be deciphered here. Indeed, depressive symptoms and mental health difficulties may be predictors of consensual sexting (Dodaj et al., 2020). Klettke et al. (2019) have suggested that youth who suffer from depressive symptoms are specifically vulnerable to peer opinions and may consensually sext to feel in control.

Another possible explanation that aligns with the Sexual Scripting Theory (Simon & Gagnon, 1986) could concern the influence of societal expectations on boys. Considering society generally suggests boys are inherently invested in sexual relationships, they might feel pressured to appear “happy” when they receive a sexual picture, even when unwanted (Hunehäll Berndtsson, 2022). Hiding their feelings, in addition to receiving an unwanted picture, might lead boys to experience depressive symptoms. Indeed, the experience for boys might be more complex with feelings of mixed emotions that could give rise to depressive symptoms. For example, boys may initially feel happy when receiving sexts (as they had asked for them), but they might feel bad as they realize that the person sending them (e.g., a girl) felt pressured into it. However, more research is needed to explore these assumptions in relation to receiving sexts specifically.

Strengths, Limitations, and Future Directions

The present study offers a novel approach to studying the reception of sexual images by teenagers. First, we approached the subject under the lens of

positive and negative experiences when receiving sexts. In order to fully involve our sample of adolescents, we tried to present them with questions that might be more in line with the way they talk themselves. As such, we focused on whether or not they were “happy to receive” sexual images, versus receiving ones when they “did not want to.” Such an approach is lacking in the literature which often does not separate consensual from the non-consensual practice, or more importantly, does not frame the research in words that a teenager might more readily understand and relate to (Doyle et al., 2021; Wachs et al., 2021).

Although this study contributes to the literature, it is not exempt from limitations. The design of the research was cross-sectional, indicating that conclusions cannot be drawn about the causal relations between the variables. Future research studies adopting a longitudinal design are needed to shed light on the associations reported here. In addition, the current conclusions take for granted heterosexual relationships among our adolescent sample as we did not determine the gender of the person sending the pictures. Both issues could be addressed in future research designed to parse out the complex relationship between adolescent gender and image sharing.

Data Availability Statement

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

Declaration of Conflicting Interests

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Ethics Approval Statement

This work was approved by the Ethics Review Committee at Dublin City University and the Karolinska Ethics Board in Sweden.

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