



Consensual and Non-consensual Sexting Behaviors in Adolescence: A Systematic Review

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Received: 23 May 2022 / Accepted: 23 November 2022 / Published online: 13 December 2022
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Abstract

Sexting is considered a practice of sending, receiving, and forwarding sexually explicit content through electronic devices. Given a lack of research distinguishing the characteristics of different forms of sexting, this systematic review aimed to analyze studies of the characteristics that might influence individuals' engagement in consensual and non-consensual sexting behavior. This systematic review was conducted using three online databases (EBSCOhost, PubMed, and Web of Science). The search resulted in the extraction of 709 articles, of which 39 were considered eligible for inclusion. One study also was identified by a manual search, which resulted in a final sample of 40 articles published between 2012 and 2021. The results show that male adolescents are more likely to engage in both forms of sexting. Adolescents with some Big Five Personality traits (i.e., who score higher on conscientiousness, extroversion, and openness), spend more time online and are in a stable relationship were positively associated with consensual sexting. Adolescents who lack control and are more aggressive were more likely to engage in non-consensual sexting. This systematic review also revealed that there is insufficient research on the subject, mainly regarding non-consensual sexting and characteristics of who perpetrates this behavior.

Keywords Sexting · Non-consensual sexting · Adolescents · Risk factors · Consensual sexting

Introduction

Sexting is considered a normal and consensual form of sexual expression and demonstration of intimacy in romantic or sexual relationships between adolescents (e.g., Barroso et al., 2021) characterized as sharing sexually explicit

content through sending, receiving, or forwarding messages, photos, or videos via electronic devices (Barroso et al., 2021; Klettke et al., 2014). However, when there is no consent for such sharing, it can turn into problematic sexual behavior—non-consensual sexting—characterized by the intent to expose or harm someone, which is considered an aggressive behavior (Benotsch et al., 2013; Marengo et al., 2020). A recent meta-analysis (between 2016 to 2020) conducted to understand the sexting prevalence and trends of teens found that approximately one in five adolescents send, one in three receive, and one in seven forward sexts without consent (Mori et al., 2021). Since there is a tendency for this behavior to prevail and grow, and there is a need to prevent the negative outcomes of non-consensual sexting (Englander, 2019), understanding the reasoning behind such behavior and associated characteristics might be the first step for developing intervention programs. The present systematic review aims to summarize the existing evidence regarding factors and characteristics associated with perpetrators of consensual and non-consensual sexting and compare them.

During adolescence, individuals tend to engage in different behaviors, especially regarding risk taking (Kar et al., 2015) and risky sexual behavior. The Problem Behavior

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Theory, first proposed by Richard Jessor (1987), describes a problem behavior as a behavior that is not considered appropriate and desirable in adolescence from an adults' perspective. Adolescents who engage in one problem behavior (e.g., early sexual activity) have a tendency to engage in other problems behaviors (e.g., delinquency, alcohol use, and risky driving), resulting from dynamic and continuous interactions between personal and environmental factors. These factors influence adolescents' actions and may explain the development of risky sex behavior such as non-consensual sexting (Jessor, 1987). Even though sexting is a normative behavior and may be acceptable to society as a demonstration of intimacy, non-consensual sexting is considered an aggressive behavior since, most importantly, it lacks consent from the victim and places victims in a position of unwanted exposure of themselves or to unwanted sexual content. As non-consensual sexting impacted on both perpetrators and victims, and it is considered a risky sexual behavior since it involves the exposure of the body without consent, identifying and recognizing the factors that might have an influence on the perpetration of non-consensual sexting becomes a critical pathway for controlling, preventing, or reducing its occurrence.

Current Study

Research reveals a general lack of distinction between consensual and non-consensual sexting and a lack of literature regarding characteristics of individuals who engage in consensual and non-consensual sexting. The present systematic review sought to identify and summarize the scientific evidence base to answer two questions: “What are the main characteristics that influence engaging in consensual and non-consensual sexting behavior?” and “What are the main differences between someone who engages in consensual sexting and non-consensual sexting?”.

Methods

The current systematic literature review was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines. The guidelines aim to give a structure on how to report and identify evidence given in a comprehensively way as well as to reduce the risk of failure and bias to prevent misinformed conclusions (Moher et al., 2009).

Search and Study Selection Strategy

Studies were identified through a search in multiple databases from EBSCOhost, Web of Science, and PubMed.

This search was supplemented by a manual search to avoid publication and source selection biases. The search expression used was AB (“characteristic*” OR “feature*” OR “risk factor*” OR “factor*” OR “prevalence*”) AND AB (“sext*” OR “non consensual sext*” OR “abusive sext*” OR “secondary sext*” OR “not allow* sext*” OR “sext* under pressure” OR “aggravat* sext*”) and it was restricted by linguistic factors (i.e., English, Portuguese, and Spanish).

Inclusion and Exclusion Criteria

According with PRISMA guidelines, two independent reviewers selected studies for eligibility and data extraction to reduce the probability of missing studies or errors in its classification (Moher et al., 2009). Study selection was performed using the following inclusion criteria: (a) empirical and quantitative studies; (b) studies published in English, Portuguese, and/or Spanish; (c) studies with adolescent population, with ages between 10 and 24 years old, who engaged in consensual and non-consensual sexting behaviors. This age gap was decided since it aligns more closely with the contemporary biological patterns in adolescent growth and social role transitions that have changed over time (Sawyer et al., 2018); (d) variables related to factors that influence consensual and/or non-consensual sexting experiences within adolescents. Studies were excluded following the exclusion criteria: (a) missing data—studies that do not describe factors that influence sexting experience and/or the direction of the results; (b) studies that did not meet the criteria for empirical and/or quantitative studies; and (c) adult population (i.e., participants with 25 years old or over).

The agreement index in this systematic review, for the study selection process was assessed with Cohen's Kappa and revealed an almost perfect agreement $K = 95.49$, $p < 0.000$. The disagreements among searchers were discussed and resolved by consensus.

Identification and Screening

The search on data bases was made until April 30th, 2022. A total of 709 articles, published between 2012 and 2021, were identified through the used databases and search methods, and complemented with manual search in reference lists of eligible publications. Among them, a total of 609 articles were selected for eligibility analysis ($n = 101$ were removed for being duplicates) and the final sample comprised a total of 40 articles. Research objectives, methodological aspects such as sample and instruments, and characteristics of consensual and non-consensual sexting were extracted from each study (see Fig. 1).

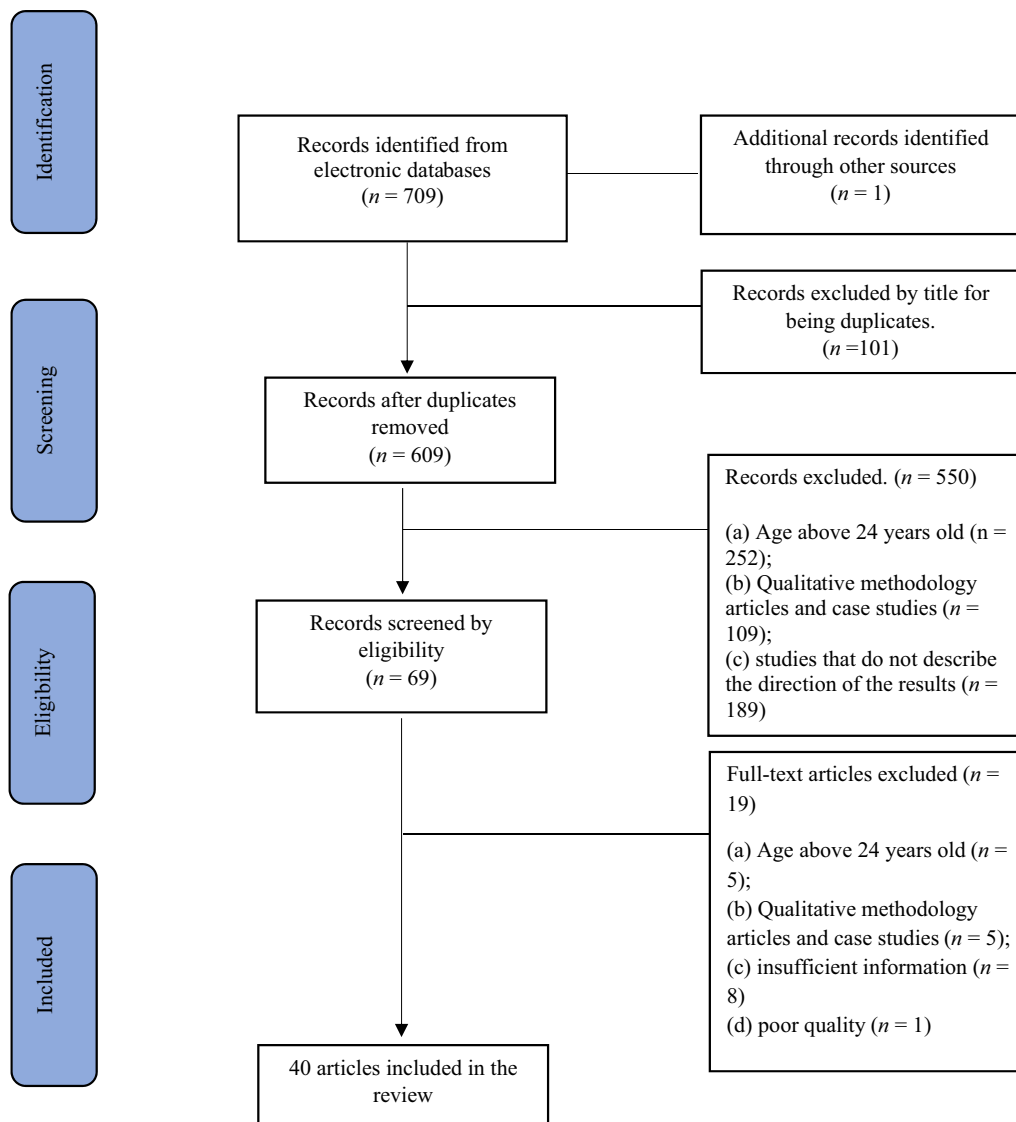


Fig. 1 Flowchart of Literature review process. in total 40 papers are cited in the current review

Quality and Risk Bias of Quantitative Studies

To assess the methodological quality of the included studies in this systematic literature review, the Quantitative Research Assessment Tool (QRAT; Child Care & Early Education Research Connections, 2019) was used by two independent reviewers. This tool has 12 items (e.g., “7. Numeric Tables. Are the means and standard deviations/standard errors for all the numeric variables presented?”), which can be rated at – 1, 0, 1 or NA (not applicable) where each question has different categorization for rates, except for the 12th question (e.g., “12. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?”), where NA is not an option, and it is related to the methodological aspects of

the included studies. According to the QRAT, studies with low scores should be considered more carefully compared to studies that have high scores, which are methodologically more robust. After assigning a score to each criterion of the 40 articles, and performing the calculations, the minimum score given was 5 and the maximum score was 9, a substantial part (56%) of the studies included in this review had a total score of six or higher (Table 1).

Results

Details about the 40 studies included in this systematic literature review can be observed in Table 2. Studies were published between 2013 and 2021, with most of them published

Table 1 Quality and risk of bias of quantitative studies

Study	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Total score
Alonso and Romero (2019)	1	-1	0	1	1	1	1	-1	1	1	1	0	6
Barroso et al. (2021)	1	1	0	1	1	1	1	0	1	1	0	0	8
Baumgartner et al. (2014)	0	1	1	1	1	1	-1	0	1	1	0	1	7
Beckmeyer et al. (2019)	1	1	1	-1	1	1	0	1	1	0	1	-1	6
Burén and Lunde (2018)	1	1	1	1	1	1	1	0	1	0	1	0	9
Casas et al. (2019)	0	0	0	1	1	1	1	0	1	1	0	0	6
Dodaj et al. (2020)	0	1	0	1	1	1	1	1	1	1	0	-1	7
Gámez-Guadix and Mateos-Pérez (2019)	0	1	0	1	1	1	0	1	1	1	0	-1	6
Gámez-Guadix and Santisteban (2018)	1	1	0	1	1	1	1	-1	1	0	1	0	7
Gámez-Guadix et al. (2017)	1	1	1	1	0	0	0	0	1	1	0	0	6
Gil-Llario et al., (2020a, 2020b)	0	1	0	1	1	1	1	0	1	1	-1	-1	6
Gil-Llario et al., (2020a, 2020b)	1	1	0	1	1	1	1	-1	0	0	1	0	6
Ghorashi (2019)	1	0	1	1	0	0	0	0	1	1	0	0	5
Hernández et al. (2021)	1	1	1	1	1	1	1	-1	-1	1	0	0	6
Houck et al. (2014)	1	1	0	0	1	1	-1	0	0	1	1	1	6
Kernsmith et al. (2018)	0	1	0	1	1	1	0	1	0	0	-1	1	5
Lee et al. (2016)	0	1	1	1	1	1	1	-1	0	1	1	-1	6
Lucic et al. (2019)	1	0	0	1	1	1	1	0	0	1	1	0	7
Machimbarrena et al. (2018)	0	0	0	1	1	1	1	-1	0	1	1	0	5
Marume et al. (2018)	1	1	0	1	1	1	0	-1	1	0	1	0	6
Molla-Esparza et al. (2020)	1	1	0	-1	1	1	-1	1	1	0	1	0	5
Morelli et al. (2017)	1	0	1	1	1	1	-1	0	0	1	1	0	6
Needham (2021)	1	1	1	1	1	1	0	1	-1	1	-1	0	6
Ojeda et al. (2020)	1	0	1	1	1	1	0	1	1	1	0	0	8
Olatunde and Balogun (2017)	1	0	0	1	0	1	1	1	1	1	1	0	8
Pineda, et al. (2019)	1	1	1	-1	1	0	1	1	-1	1	1	-1	5
Rey et al. (2019)	1	1	0	1	0	0	1	0	1	0	1	0	6
Rice et al. (2017)	1	1	1	1	1	1	0	0	-1	1	1	-1	6
Soriano-Ayala et al. (2020)	0	1	1	1	1	0	0	1	1	0	0	1	7
Strohmaier et al. (2014)	0	1	1	1	1	0	0	1	1	0	0	1	7
Van Ouytsel et al. (2014)	0	1	1	0	1	1	1	0	1	0	0	0	6
Van Ouytsel et al. (2019)	0	1	1	1	1	1	1	-1	1	0	0	0	6
Villacampa (2017)	0	1	-1	1	1	1	1	1	0	1	0	-1	5
Temple et al. (2012)	1	1	0	1	1	1	1	0	1	0	0	0	7
Walrave et al. (2014)	1	1	0	1	1	1	1	-1	0	1	0	0	6
West et al. (2014)	0	1	0	1	0	0	1	0	1	1	1	0	6
Woodward et al. (2017)	1	1	0	1	1	1	0	1	0	1	0	-1	6

Table 1 (continued)

Study	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Total score
Ybarra & Mitchell (2014)	1	1	0	1	1	1	1	0	0	0	0	-1	5
Yépez-Tito et al. (2018)	0	1	1	1	1	1	0	-1	1	1	0	0	6
Yoder et al. (2018)	0	0	-1	1	1	1	1	0	1	1	-1	-1	5

Item 1 population; *Item 2* sample size; *Item 3* randomized selection of participants, *Item 4* response and attrition rate, *Item 5* main variables or concepts, *Item 6* operationalization of concepts, *Item 7* numeric tables, *Item 8* missing data, *Item 9* appropriateness of statistical techniques, *Item 10* omitted variable bias, *Item 11* analysis of main effect variables, *Item 12* ethical approval

in the last 5 years ($n=28$). It was possible to verify that the minimum number of participants of all studies were 200 (Yoder et al., 2018) and the maximum of 14,946 (Baumgartner et al., 2014), with adolescent population with ages between 11 and 24 years old. Of the total sample, $n=16$ (Alonso & Romero, 2019; Barroso et al., 2021; Casas et al., 2019; Hernández et al., 2021; Kernsmith et al., 2018; Lee et al., 2016; Molla-Esparza et al., 2020; Needham, 2021; Ojeda et al., 2020; Pineda et al., 2019; Rey et al., 2019; Soriano-Ayala et al., 2020; Strohmaier et al., 2014; Villacampa, 2017; Walrave et al., 2014; Woodward et al., 2017) had the definition of consensual sexting. Most studies included analyzed both boys and girls sexting behavior, except for one study which only included a sample of boys ($n=200$; Yoder et al., 2018). A set of psychometric instruments was used to assess possible factors for consensual (see Table 2) and non-consensual sexting experiences (see Table 3). The main results of factors associated with sexting behavior were categorized into sociodemographic characteristics, personal characteristics, mental health, peer pressure, coercion and violence, and interpersonal relationships.

Consensual Sexting

Sociodemographic Characteristics

Age Age has been abroad studied factor associated with sexting experiences, where older adolescents are more prone to engage in consensual sexting which coincides with adolescents' pubertal timing (Burén & Lunde, 2018; Gil-llario et al., 2020a; Lee et al., 2016; Machimbarrena et al., 2018; Molla-Esparza et al., 2020; Ybarra & Mitchell, 2014), peaking at 16 and 17 years (Temple et al., 2012). Some studies found this peak in ages between 14 and 16 years (Baumgartner et al., 2014), 15 and 17 years (Beckmeyer et al., 2019; Gámez-Guadix et al., 2017), 17 years (Villacampa, 2017) and 14 to 17 years (late to middle adolescents; Yépez-Tito et al., 2018). In Gámez-Guadix & Pérez (2019) and Gámez-Guadix and Santisteban (2018) study, as adolescents get older, they are more prone to engage in sexting behavior. In Needham (2021) study, individuals with 16 years (52.4%) and 17 years (52.7%) had a high incidence of sexting behavior. Ojeda et al. (2020) found that adolescents with 14 to 16 years old were more prone to send sexual content (41.5%) in a population with ages between 12 and 16 years ($M_{age}=13.63$).

Gender It was possible to find gender differences in various studies, where male adolescents were more likely to engage in consensual sexting experiences (Alonso & Romero, 2019; Baumgartner et al., 2014; Dodaj et al., 2020; Gil-llario et al., 2020a; Marume et al., 2018; Molla-Esparza et al., 2020; Van Ouytsel et al., 2019; Rice et al., 2017; Temple

Table 2 Summary of the studies of specificities of consensual sexting behavior in adolescence

Author, date, design	Sample	Age range/ M_{age}	Research Objectives	Type of sexting	Measures of sexting	Main findings of risk factors
Alonso and Romero (2019) Longitudinal	N = 624 Female: 55% Male: 45%	12–19 years $M_{age} = 14.35$	Measure sexting, five-factor model personality traits and possible psychosocial consequences of sexting	Consensual	Frequency of Sexting Questionnaire	-Personality traits associated with consensual sexting: -High levels of extroversion, depression, impulsivity, and vulnerability -Low levels of agreeableness and conscientiousness
Beckmeyer et al. (2019) Cross-sectional	N = 2736 Female: NA Male: NA	14–17 years $M_{age} = NA$	-Adolescents' sexting frequency, who their sexting partners are and whether sexting is part of physical sexual intercourse	Consensual	NSSHB	-Wanting to have sexual and/or romantic relations -Having a love relationship (romanticism; communication facilitator) -Age -Previous sexual experience
Burén and Lumde (2018) Cross-sectional	N = 1653 Female: 822 (49.7%) Male: 831 (50.3%)	12–16 years $M_{age} = 14.16$	-Adolescents' experiences of sexting	Consensual	-SDQ -12 items that assessed sexting behaviors and experiences -6 items that measured online risk	-Gender -Age -Coercion and pressure from friends and partners -Support from friends
Gómez-Guadix et al. (2017) Cross-sectional	N = 3223 Female: 49.9% Male: 49.1% 1% did not indicate sex	12–17 years $M_{age} = 14.06$	-Prevalence and trends of sexting among adolescents by age and gender -To examine personality profiles of adolescents who have participated in sexting	Consensual	-SDQ -SBQ -BFL-S	-Form of sexual interaction -Age -Gender -Personality traits -Socialization -Sexual orientation
Gómez-Guadix and Mateos-Pérez (2019) Longitudinal	N = 1497 Female: 53.2% Male: 45.9% 0.9% not specified	12–14 years $M_{age} = 13.65$	-Relationship between sexting and two types of victimization in minors (Online sexual solicitations and cyberbullying)	Consensual	-SBQ -QSSIMA -Cyberbullying questionnaire	-Gender -Online grooming: blackmail and threat -Social status and increasing self-esteem
Gómez-Guadix and Santisteban (2018) Longitudinal	N = 1208 Female: 638 Male: 570	12–16 years $M_{age} = 13.57$	-To examine the relationship between demographic and psychological characteristics and the likelihood of being involved in sexting	Consensual	-SBQ -Socio-Economic Panel -BFL-S -Brief Symptom Inventory -Rosenberg Self-esteem Scale -Motivations for Sexting -Sexting Attitudes Scale -Impulsivity Scale -SS	-Being sexually active -Gender -Age -Personality -Psychological problems (depression) -Pressure/coercion from partner -Problematic internet use -Need for sexual exploitation -Previous sexting practice
Chorashi (2019) Cross-sectional	N = 944 Female: 572 (60.6%) Male: 372 (39.4%)	< 18 years $M_{age} = NA$	-Association between sexting and having a sexual partner and sexual activity in the Iranian environment	Consensual	-Questionnaire with sociodemographic questions, about sexting and having a sexual partner	-Gender -ICT -Culture -Love relationship -Impulsivity
Gil-Llario et al. (2020a) Cross-sectional	N = 788 Female: 376 (48%) Male: 408 (52%)	12–18 years $M_{age} = 14.44$	-Prevalence and analyze the explanatory variables for the initiation and maintenance of sexting behaviors	Consensual	-SDQ -SBQ -Motivations for Sexting -Sexting Attitudes Scale -Impulsivity Scale -Rosenberg Self-esteem Scale	-Gender -Age -Pressure from partner -Intimacy and interest -Being in a relationship -Feeling of wellbeing with themselves and loved ones

Table 2 (continued)

Author, date, design	Sample	Age range/ M_{age}	Research Objectives	Type of sexting	Measures of sexting	Main findings of risk factors
Gil-Llario et al. (2020b) Cross-sectional	N = 999 Female: 49.3% Male: 50.7%	13–18 years $M_{age} = 15.98$	-Compare the differences in prevalence, motives, and attitudes towards sexting between adolescents from two cultures: Colombia and Spain	Consensual	-SBQ	-Gender -Socio-cultural variables -Request by the partner -Submission in relationships -Substance use -Means to improve relational bonds -Adolescents identified as being at risk -Form of self-expression -Lack of maturity and attention -ICT -Maintaining relationships -Difficulties in controlling emotions
Houck et al. (2014) Cross-sectional	N = 420 Female: NA Male: NA	12–14 years $M_{age} = NA$	-To examine the prevalence of sexting, among a sample of at-risk adolescents -Associations between sexting and sexual behaviors, risk-related cognitions, and emotion regulation skills	Consensual	-Sexual Risk Behaviors Items from the Adolescent Risk Behavior Assessment and Psychosexual Development Inventory -Emotion Regulation Scale -Self-Efficacy Questionnaire for Children	-Gender -Being sexually active -Peer influence
Lucić et al. (2019) Cross-sectional	N = 319 Female: NA Male: NA	NA years $M_{age} = 16.15$	-Assessing the role of close peers in teen pornography use and sexting	Consensual	-Questionnaire related to sexting and pornography	-Gender -Being sexually active -Peer influence
Machimbarrena et al. (2018) Cross-sectional	3212 Female: 53.7% Male: 46.3%	11–21 years $M_{age} = 13.92$	-Comorbidity between internet risks -Profile of adolescents according to internet risks	Consensual	-CBQ -SBQ -GPIUS2	-Gender -Age -Profiles of adolescents with higher sexual risk
Needham (2021) Cross-sectional	N = 2198 Female: NA Male: NA	14–18 years $M_{age} = NA$	-To understand the perceptions and motivations of non-heterosexual adolescents in relation to sexting	Consensual	-GBTQ -SBQ	-Age -Greater vulnerability of LGBTI adolescents -Long distance relationships -Self-esteem and confidence
Temple et al. (2012) Longitudinal	N = 948 Female: 55.9% Male: 44.1%	14–19 years $M_{age} = 15.8$	-Prevalence and describe the nature of sexting (as sender and receiver) -Examine the Association between sexting and sexual behaviors	Consensual	-Issues related to sexting and sexual behaviors	-Gender -Age -Having a love relationship -Initial sexual approach
Van Ouytsel et al. (2014) Longitudinal	N = 1028 Female: 596 (58.0%) Male: 42.0%	15–18 years $M_{age} = 16.68$	-Association between adolescents' involvement in sexting and personality traits -Relationship between sexting and depression	Consensual	Rational-Experiential Inventory	-Depression -Personality factors -Gender -Financial stress
Van Ouytsel et al. (2019) Cross-sectional	N = 2626 Female: 1530 (58.4%) Male: 1096 (41.6%)	14–21 years $M_{age} = 16.14$	-Prevalence and correlates of transactional sexting	Consensual	-Teen Online Relationship and Online Self-Disclosure Project	-Gender -Sexual identity -Being sexually active
Woodward et al. (2017) Cross-sectional	N = 548 Female: 58.21% Male: 41.79%	NA years $M_{age} = 15.9$	-Examined how delinquency, social, and psychological factors were associated with sexting behavior	Consensual	-Questionnaire that collects data on sexting, depression, self-esteem, social skills, alcohol, and drugs, bullying and delinquency	-Substance use and alcohol consumption -Impulsivity and lack of self-control -Peer pressure and harassment -Single parent families
Ybarra & Mirchell (2014) Cross-sectional	N = 3715 Female: NA Male: NA	13–18 years $M_{age} = 16.3$ (male engaging in sexting) $M_{age} = 16.5$ (female engaging in sexting)	-Relationship between sexting, with risky sexual behaviors and psychosocial challenge in adolescence	Consensual	-ESDS -Youth Risk Behavior	-Gender -Age -Substance use -Self-esteem -Beginning love relationships -Sexual Orientation

Table 2 (continued)

Author, date, design	Sample	Age range/ M_{age}	Research Objectives	Type of sexting	Measures of sexting	Main findings of risk factors
Yoder et al. (2018) Cross-sectional	N = 200 Female: 0% Male: 100%	13–20 years $M_{age} = 17.17$	<ul style="list-style-type: none"> -Prevalence of sexting among youth -Association between developmental adversities, emotional motivations for sexting and relationship context -To determine the relationship between sexting and perpetration of dating violence 	Consensual	<ul style="list-style-type: none"> - Instrument childhood adversity in the home - CTQ - ASCQ 	<ul style="list-style-type: none"> - Dating violence - Young people who have been physically abused - Young people exposed to violence in their homes - Emotional motivations (reward anger, sadness, attention-seeking, emotional motivations (reward, anger, sadness, attention-seeking, or even loneliness) - Relationships either with friends or acquaintances

ICT Information and Communication Technology, CBQ Victimization Scale of the Cyberbullying Questionnaire; GPUS2 = Questionnaire for Online Sexual Solicitation and Interaction of Minors with Adults Generalized and Problematic Internet Use; GBTQ = Scale Gay, Bisexual, Transgender and Questioning; SBQ = Sexting Behavior Questionnaire; ASCQ = Attachment Style Classification Questionnaire; CTQ = Childhood Trauma Questionnaire; SDQ = Socio-demographic Questionnaire; QSSIMA = Questionnaire on Sexual Solicitations and Interactions of Minors with Adults; BFI-S = Personality characteristics Big Five Inventory

et al., 2012; Yépez-Tito et al., 2018) whereas other studies found that female adolescents are more prone to receiving sexts and send sexts, in a consensual way (Burén & Lunde, 2018; Ghorashi, 2019; Morelli et al., 2017; Pineda et al., 2019; Ybarra & Mitchell, 2014; Walrave et al., 2014) (Table 4).

Culture and Ethnicity In Baumgartner et al. (2014) study, traditionalism predicted gender differences across countries in the engagement of consensual sexting and Gil-Lharo et al. (2020b) also found that, when comparing Colombia and Spain, male Colombians were more prone to engage in consensual sexting. Ethnic minorities (e.g., Moroccan immigrants with low levels of adaptation in Spain) are more prone to engage in consensual sexting experiences as a way of being accepted in society (Soriano-Ayala et al., 2020).

Sexual Orientation Five studies found that sexual orientation was a factor for sexting experiences involvement, where LGBTI communities are associated to consensual sexting (Gámez-Guadix et al., 2017; Needham, 2021; Ojeda et al., 2020; Van Ouytsel et al., 2019; Ybarra & Mitchell, 2014).

Personal Characteristics

Personality Traits Six studies found that the Big Five Personality Traits (e.g., neuroticism or emotional instability, extroversion, openness to new experiences, agreeableness, and conscientiousness) have an influence on consensual sexting experiences (Alonso & Romero, 2019; Hernandez et al., 2021; Gamez-Guadix & Santisteban, 2018; Gámez-Guadix et al., 2017; Pineda et al., 2019; Olatunde & Balogun, 2017). Adolescents with high conscientiousness traits are more likely to practice consensual sexting, as it is related to a high level of impulse control, great sense of duty, planning, and organization (Hernández et al., 2021; Gamez-Guadix & Santisteban, 2018; Gamez-Guadix et al., 2017). It was also found that extroversion is also positively linked to consensual sexting, increasing experiences in adolescents who want to maintain interpersonal relationships, who need to socialize with greater likelihood of bold social interactions, and who tend to avoid loneliness with seeking companionship (Hernández et al., 2021; Van Ouytsel et al., 2014; Olatunde & Balogun, 2017; Temple et al., 2012). Regarding openness to new experiences (e.g., sensation seeking), results are similar, showing a significant positive relationship with consensual sexting (Alonso & Romero, 2019; Dodaj et al., 2020; Baumgartner et al., 2014; Gamez-Guadix & Santisteban, 2018; Pineda et al., 2019; Ojeda et al., 2020; Van Ouytsel et al., 2014; Rey et al., 2019; Villacampa, 2017).

Table 3 Summary of the studies of specificities of non-consensual sexting behavior in adolescence

Author, date	Sample	Age range/ M_{age}	Research Objectives	Type of Sexting	Measures of Sexting	Main Findings of Risk Factors
Barroso et al. (2021) Cross-sectional	N=4281 Female: 2264 Male: 2017	12–20 years $M_{age} = 14.51$	<ul style="list-style-type: none"> - Prevalence of non-consensual sexting in Portuguese adolescents - Psychological characteristics of sexting abusers in terms of emotional and behavioral problems, potential markers of psychopathy, childhood trauma and abuse, and different forms of aggression 	Non-Consensual	Two questions regarding sexting behavior	<ul style="list-style-type: none"> - Gender - Age - Behavioral aspects and emotional problems - Traits such as insensitivity, emotionlessness, lack of empathy, no remorse and lack of care for others - Childhood experiences - Youth exposed to violence or adversity at home - Coercion in dating - Expression of aggressive behavior
Baumgartner et al. (2014) Cross-sectional	N = 14,946 Female: 50.3% Male: 49.7%	11–16 years $M_{age} = 13.49$	<ul style="list-style-type: none"> - Predictors of sexting across 20 European countries: individual as well as country characteristics 	Non-Consensual	Secondary analysis of the data collected within the EU KIDS Online II Project	<ul style="list-style-type: none"> - Individual level characteristics - Curiosity of sexual exploration - Traditionalism leading to gender differences
Dodaj et al. (2020) Longitudinal	N = 3,59 Female: 216 (60%) Male: 143 (40%)	15–17 years $M_{age} = 16.32$	<ul style="list-style-type: none"> - Prevalence of sexting - To assess gender-specific sexting behaviors and the pattern of those behaviors - Relationship between sexting and psychological distress (depression, stress, and anxiety) 	Non-Consensual	SBQ - DASS	<ul style="list-style-type: none"> - Interest in new forms of sexual expression - Gender - Substance use - Pressure from friends - Stress - Depression
Hernández et al. (2021) Cross-sectional	N = 1763 Female: 50.99% Male: 49.01%	12–16 years $M_{age} = 14.56$	<ul style="list-style-type: none"> - To understand to what extent personality factors are related to victimization of online sexting and grooming 	Non-Consensual	<ul style="list-style-type: none"> - Sexting Scale - Grooming Scale - BFI-S - SSS - NPI 	<ul style="list-style-type: none"> - Personality traits - A means of social interaction and sexual disinhibition with a search for new sensations
Kernsmith et al. (2018) Cross-sectional	N = 1236 Female: NA Male: NA $M_{age} = NA$	6 th and 9 th grade NA years $M_{age} = NA$	<ul style="list-style-type: none"> - To determine the incidence of victimization and perpetration of coercive sexting in dating relationships, assessing age and gender differences 	Non-Consensual	<ul style="list-style-type: none"> - The Safe Dates Dating Violence perpetration and victimization scales - Sexual Coercion Subscale 	<ul style="list-style-type: none"> - Age - Gender - Sexual coercion and peer pressure - Dating violence

SBQ Sexting Behavior Questionnaire, BFI-S Personality characteristics Big Five Inventory, NPI The Narcissistic Personality Inventory

Sexual Arousal Two studies found that adolescents who are less inhibited and have more interest in sex tend to engage in consensual sexting experiences (Alonso & Romero, 2019; Molla-Esparza et al., 2020). Gil-Llario et al. (2020a) found that adolescents' pursuit of pleasure, stimulation, and satisfaction for their own and other sexual interests enhances the probability to engage in consensual sexting behaviors.

Time Spent Online In addition, there are several studies ($n=7$) regarding the excessive and continuous use of Information and Communication Technologies associated to experiences of consensual sexting (Gámez-Guadix & Santisteban, 2018; Ghorashi, 2019; Houck et al., 2014; Molla-Esparza et al., 2020; Olatunde & Balogun, 2017; Rice et al., 2017).

Substance and Alcohol Use Studies have linked that substance and excessive alcohol use are associated with the likelihood of adolescents engaging in consensual sexting (Dodaj et al., 2020; Gil-Llario et al., 2020b; Morelli et al., 2017; Temple et al., 2012; Ybarra & Mitchell, 2014; Woodward et al., 2017).

Interpersonal Relationships

Romantic Relationships Having a stable romantic relationship is associated with consensual sexting experiences involvement (Beckmeyer et al., 2019; Dodaj et al., 2020; Gil-Llario et al., 2020a; Houck et al., 2014; Ojeda et al., 2020; Olatunde & Balogun, 2017; Rey et al., 2019; Temple et al., 2012; Walrave et al., 2014). Several studies highlight that long-distance relationships are associated with engagement in consensual sexting experiences (Alonso & Romero, 2019; Needham, 2021; Temple et al., 2012; Yépez-Tito et al., 2018). Similarly, the desire to be in a sexual or initiate romantic relationships (Beckmeyer et al., 2019; Pineda et al., 2019; Ojeda et al., 2020; Temple et al., 2012; Ybarra & Mitchell, 2014) and being sexually active and/or having previous sexting experiences (Beckmeyer et al., 2019; Casas et al., 2019; Gil-Llario et al., 2020a; Gamez-Guadix & Mateos-Pérez, 2019; Van Ouytsel et al., 2019; Rice et al., 2017) are associated to consensual sexting.

Family Relationship A relationship has been found between consensual sexting and living in a single-parent family and less cohesive families (Hernández et al., 2021; Molla-Esparza et al., 2020; Woodward et al., 2017). In several studies ($n=11$), a positive significant relation was found between normalization of sexting behavior (e.g., new form of sexual expression and new form of socialization) by adolescents and engaging in consensual sexting behavior (Alonso & Romero, 2019; Casas et al., 2019; Dodaj et al.,

2020; Gamez-Guadix et al., 2017; Gil-Llario et al., 2020b; Houck et al., 2014; Olatunde & Balogun, 2017; Yépez-Tito et al., 2018; Temple et al., 2012; Villacampa, 2017; Walrave et al., 2014).

Family Background Family background was also seen as a predictor of consensual sexting behaviors. Living in a single-parent family environment was associated with an increased likelihood of having received sexts, and sending consensual sexts (Baumgartner et al., 2014; Molla-Esparza et al., 2020; Pineda et al., 2019; West et al., 2014; Ybarra & Mitchell, 2014).

Mental Health

Emotional Symptoms Consensual sexting behaviors is associated with the difficulty in controlling emotions (e.g., low emotional skills and subsequent low emotional well-being; Alonso & Romero, 2019; Houck et al., 2014). Yoder et al. (2018) concluded that emotional motivations (e.g., anger, sadness, seeking attention, and loneliness) are related to engagement in consensual sexting experiences.

Stress and Anxiety Stress and anxiety are also related to sexting experiences involvement (Dodaj et al., 2020). In Van Ouytsel et al. (2019) study, it was found that there is a relationship between financial stress and consensual sexting behavior.

Peer Pressure, Coercion, and Violence

Peer Pressure Peer pressure is one of the most mentioned factors in the literature, associated with adolescents who want to gain status and power are more likely to engage in consensual sexting experiences (Burén & Lunde, 2018; Dodaj et al., 2020; Gil-Llario et al., 2020b; Hernández et al., 2021; Rice et al., 2017; Soriano-Ayala et al., 2020; Walrave et al., 2014; West et al., 2014; Ybarra & Mitchell, 2014).

Violence Adolescents who are exposed to violence or adversity in their homes tend to engage in consensual sexting behaviors (Yoder et al., 2018).

Non-consensual Sexting

Sociodemographic Characteristics

Age As individuals get older, they become more prone to engage in non-consensual sexting, especially between the ages of 14–16 years, considered middle adolescents (Barroso et al., 2021). In Kernsmith et al. (2018) study, adolescents of the 9th grade self-reported engagement in non-con-

Table 4 Summary of the studies of specificities of consensual and non-consensual sexting behavior in adolescence

Author, date	Sample	Age range/ M_{age}	Research objectives	Type of sexting	Measures of sexting	Main findings of risk factors
Casas et al. (2019) Longitudinal	N = 1431 Female: 46.4% Male: 53.6%	11–18 years $M_{age} = 13.61$	- Degree of normalization, willingness to sext, need for popularity, participation in cybergossip, social competence, and previous sexting experience predicts sexting behavior - Gender differences	Consensual and Non-Consensual	- Normalization Sexting Questionnaire - Cybergossip Questionnaire for Adolescents - Need for popularity scale - Perceived Social Competence Scale	- Standardization of this practice - Need for popularity - Previous experience of sexting - Gender - Cybergossip
Lee et al. (2016) Cross-sectional	N = 1612 Female: 1036 (64.3%) Male: 576 (35.7%)	13–19 years $M_{age} = 16$	- Association between involvement with delinquent peer groups and involvement in sexting behavior - Peer pressure as a predictor of sexting behavior	Consensual and Non-Consensual	- Results reported from a survey published by the National Campaign to Prevent Teen and Unplanned Pregnancy	- Peer pressure - More delinquent youth - Age - Gender
Marume et al. (2018) Cross-sectional	N = 502 Female: 53.8% Male: 46.2%	12–18 years $M_{age} = NA$	- Relationship between sexting behavior and risky sexual practices in Zimbabwe	Consensual and Non-Consensual	- QSD - Sexting behavior and risky sexual practices	- Gender
Molla-Esparza et al. (2020) Cross-sectional	N = 647 Female: 338 (52.20%) Male: 309 (47.80%)	12–18 years $M_{age} = 13.70$	- Prevalence of sexting practices - Relationship between sexting experiences and sociodemographic variables, such as gender and age, family composition and work situation, school characteristics and the use of technological devices	Consensual and Non-Consensual	- Use of Technological Communication Devices and Social Media Questionnaire - QSD - SBQ	- Gender - Age - Stimulating/satisfying your own or others' sexual desires - Pressure, coercion, or blackmail - Influence from groups or peers - Needs for self-exploration and self-stimulation - Frequent use of ICT - Academic performance - Family environment
Morelli et al. (2017) Cross-sectional	N = 610 Female: 385 (63.1%) Male: 225 (36.9%)	13–20 years $M_{age} = 16.80$	- Investigating the relationships between sexting, cyber porn, and alcohol consumption	Consensual and Non-Consensual	- SBQ - Alcohol Use Disorders Identification Test - Cyber Pornography Use Inventory	- Alcohol consumption - Gender

Table 4 (continued)

Author, date	Sample	Age range/ M_{age}	Research objectives	Type of sexting	Measures of sexting	Main findings of risk factors
Ojeda et al. (2020) Cross-sectional	N = 3314 Female: 48.6% Male: 51.4%	12–16 years $M_{age} = 13.63$	<ul style="list-style-type: none"> - Prevalence of sexting, differentiation between behaviors - Relationships between sexting behaviors and gender, age, sexual orientation, having a romantic / sexual partner, the social networks used, the degree of normalization of sexting and the predisposition to participate 	Consensual and Non-Consensual	<ul style="list-style-type: none"> - Sexting Standardization Questionnaire 	<ul style="list-style-type: none"> - Age - Gender - Invitation to participate in sexual activities - Sexual orientation - Having a romantic/sexual partner - Being in a loving relationship - Exploration of sexuality - Normalization of sexting behaviors
Olatunde and Balogun (2017) Cross-sectional	N = 575 Female: 54.0% Male: 46.0%	14–24 years $M_{age} = NA$	<ul style="list-style-type: none"> - Prevalence, predictors, and associated sexual risk behaviors of sexting among young people in Nigeria 	Consensual and Non-Consensual	<ul style="list-style-type: none"> - 50-Item set of International Personality Item Pool Big-Five Factor Markers - 27-item Mobile Phone Problem Use Scale 	<ul style="list-style-type: none"> - Gender - Age - Extroversion - Excessive use of mobile phones - Maintaining social relationships, seeking fun and is a form of socialization - Maintenance of relationships
Pineda et al. (2019) Cross-sectional	N = 609 Female: 68.6% Male: 31.4%	15–18 years $M_{age} = 16.10$	<ul style="list-style-type: none"> - To analyze the incidence of this phenomenon and, at the same time, compare the early maladaptive schemes of adolescents who practice sexting, with those who do not 	Consensual and Non-Consensual	<ul style="list-style-type: none"> - Young Schema Questionnaire Long Form - SBQ - Questionnaire on technology and sexuality 	<ul style="list-style-type: none"> - Early sexual initiation and sexual affirmation - Gender - Peer and boyfriend pressure - Inherent need for acceptance - Opportunity to have a relationship - Personality traits
Rey et al. (2019) Cross-sectional	N = 2356 Female: 46.8% Male: 53.2%	11–18 years $M_{age} = 13.72$	<ul style="list-style-type: none"> - Emotional impact on those involved in sexting, but this impact varies by type of sexting and gender - Need for popularity would affect sexting and its emotional impact, but this relationship varies by gender 	Consensual and Non-Consensual	<ul style="list-style-type: none"> - Cybervictimization Emotional Impact Scale - Need for popularity scale 	<ul style="list-style-type: none"> - Social pressure from their peers - Romantic and enriching part of the relationship - Popularity - Desire and curiosity about new sexual experiences - Active emotions

Table 4 (continued)

Author, date	Sample	Age range/ M_{age}	Research objectives	Type of sexting	Measures of sexting	Main findings of risk factors
Rice et al. (2017) Cross-sectional	N=1208 Female: 51.5% Male: 48.5%	12–18 years $M_{age} = 16$	- Association between sexting behaviors and sending and receiving sexts - Sending and receiving sexts is associated with sexual activity and risky sex	Consensual and Non-Consensual	- Prevention's (CDC) Youth Risk Behavior Survey;	- Being sexually active - Peer influence - Constant and excessive texting - Lack of impulsiveness control
Soriano-Ayala et al. (2020) Cross-sectional	N=642 Female: NA Male: NA	12–17 years $M_{age} = 14.43$	- Identify existing beliefs around sexting across cultures and gender	Consensual and Non-Consensual	- Two sub-scales from the Sex and Tech survey	- Peer pressure - Recognition and power - Ethnicity - Fewer social and emotional skills
Strohmaier et al. (2014) Cross-sectional	N=175 Female: 61% Male: 33% 6% did not indicate sex	18–22 years $M_{age} = 19.34$	-Prevalence and motivations leading to the exchange of sexually explicit text messages	Consensual and Non-Consensual	- Online SBQ	- Genre - Love Relationship - Peer pressure
Villacampa (2017) Cross-sectional	N=489 Female: 245 (50.1%) Male: 244 (49.9%)	14–18 years $M_{age} = NA$	- Lifetime prevalence of adolescents in sexting behaviors - Profile of those who practice sexting, the dynamics of their participation and the emotional effects	Consensual and Non-Consensual	- Questionnaire with 30 items: sociodemographic and sexting-related questions	- Gender - Age - They practice sexting for fun - They don't think about the reason for practicing it, something unconscious - Form of sexual expression
Walrave et al. (2014) Cross-sectional	N=498 Female: 270 (54.0%) Male: 46.0%	15–18 years $M_{age} = NA$	- To assess the importance of the most salient beliefs that underpin the components of the theory of planned behavior (TPB), as this will allow us to gain insight into the characteristics of adolescent	Consensual and Non-Consensual	- SBQ	- Social peer pressure - Gender - Not thinking about the consequences - On going or desired relationship
West et al. (2014) Cross-sectional	N=949 Female: 649 (65.65%) Male: 326 (34.35%)	12–18 years $M_{age} = NA$	- Prevalence of sexting among a sample of adolescents in Cusco, Peru and identify the correlates of sexting between genders	Consensual and Non-Consensual	- Sociodemographic issues, sexting, and cyberbullying	- Genre - Peer influence - Parental control - Socio-cultural factors

Table 4 (continued)

Author, date	Sample	Age range/ M_{age}	Research objectives	Type of sexting	Measures of sexting	Main findings of risk factors
Yépez-Tito et al. (2018) Cross-sectional	N = 664 Female: 288 (43.4%) Male: 376 (56.6%)	12–18 years $M_{age} = 14.6$	- Psychometric properties of an instrument assessing sexting - Prevalence, profiles of sexting among adolescents and predictors of sexting	Consensual and Non-Consensual	- Sexting behavior Scale - SSES	- Gender - Age - Social status and reputation - Being in a loving relationship, being part of a romantic interaction - Expression of sexuality

ICT Information and Communication Technology, *SBQ* Sexting Behavior Questionnaire, *SSES* Survey of Socioeconomic Stratification

sensual sexting ($n = 39$, 85%) in comparison to 6th graders sexting ($n = 7$, 15%). Also, as youth mature, they tend to engage more in non-consensual sexting behavior (Lee et al., 2016).

Gender. Data revealed a sexual dynamic, especially, where more male adolescents perpetrate non-consensual sexting (Barroso et al., 2021; Lee et al., 2016; Kernsmith et al., 2018; Ojeda et al., 2020; Yépez-Tito et al., 2018).

Personal Characteristics

Personality Traits Seven studies found that there are significant correlations between engaging in non-consensual sexting experiences and adolescents with high impulsiveness, narcissism, and lack of control traits (Alonso & Romero, 2019; Gámez-Guadix et al., 2017; Gamez-Guadix & Mateos-Pérez, 2019; Gamez-Guadix & Santisteban, 2018; Ghorashi, 2019; Van Ouytsel et al., 2014; Pineda et al., 2019; Rice et al., 2017; Woodward et al., 2017). A relationship between non-consensual sexting experiences and high levels of callousness traits and lower levels of uncaring traits (Barroso et al., 2021). In addition, low levels of empathy, insensitivity, and lack of remorse are related to the perpetration of non-consensual sexting (Rey et al., 2019; Yoder et al., 2018).

Interpersonal Relationships

Romantic Relationships According to Ojeda et al. (2020), adolescents who had previous romantic/sexual partner, are related to non-consensual sexting behavior.

Family Relationship In Casas et al. (2019) study, adolescents who identified sexting as a form of sexual expression and a new form of socialization, were prone to engage in non-consensual sexting behavior.

Mental Health

Depressive Symptoms There were studies ($n = 3$) that examined the relationship of depression with sexting experiences involvement that found that adolescents who present depressive symptoms have difficulties in understanding the consequences of sending sexts, which can turn sexting experience into non-consensual sexting (Alonso & Romero, 2019; Dodaj et al., 2020; Van Ouytsel et al., 2014).

Stress and Anxiety Individuals with higher levels of anxiety and depression, are more prone to engage in non-consensual sexting, when compared to those who did not engage in such behavior (Barroso et al., 2021).

Peer Pressure, Coercion, and Violence

Peer Pressure and Coercion The need for popularity, greater social reinforcement, and recognition, and being accepted by others were also associated with perpetration of non-consensual sexting experiences (Alonso & Romero, 2019; Casas et al., 2019; Gil-Llario et al., 2020a; Gámez-Guadix & Mateos-Pérez, 2019; Lee et al., 2016; Molla-Esparza et al., 2020; Pineda et al., 2019; Rey et al., 2019; Yépez-Tito et al., 2018). It was found that pressure, coercion, and blackmail by intimate partners and peers are related to perpetration of non-consensual sexting (Burén & Lunde, 2018; Gamez-Guadix & Santisteban, 2018; Gamez-Guadix & Mateos-Pérez, 2019; Gil-Llario et al., 2020b; Lee et al., 2016; Pineda et al., 2019; Rey et al., 2019; Rice et al., 2017; Soriano-Ayala et al., 2020; Strohmaier et al., 2014; Woodward et al., 2017). Some authors report that online intimidation is associated with the perpetration of non-consensual sexting, as a form of revenge (Gámez-Guadix & Santisteban, 2018; Gámez-Guadix & Mateos-Pérez, 2019; Kernsmith et al., 2018; Molla Esparza et al., 2020; West et al., 2014; Woodward et al., 2017; Ybarra & Mitchell, 2014).

Violence It was found an association between adolescents with delinquent behavior and engagement in non-consensual sexting (Lee et al., 2016). Relationships guided by threats and violence scenarios are a factor for these victims to engage in coercive sexting (Kernsmith et al., 2018). It was also found that experiencing physical and emotional neglect, and sexual and emotional abuse during childhood, are associated with perpetration of non-consensual sexting behavior (Barroso et al., 2021). The practice of various forms of aggression (e.g., reactive, and proactive aggression) and the description of themselves with more physically and verbally aggressive, hostile, and angry were related to perpetration of non-consensual sexting behavior (Barroso et al., 2021). Adolescents exposed to violence or adversity in their homes are more prone to engage in non-consensual sexting behaviors (Barroso et al., 2021). It was also found that practices of grooming and cybergossip were related to non-consensual sexting perpetration (Casas et al., 2019; Machimbarrena et al., 2018).

Discussion

Sexting is considered the sharing of sexually explicit content (sending, receiving, or forwarding) via electronic devices (Alonso & Romero, 2019; Klettke et al., 2014). It can be seen as a normal and consensual form of sexual expression between adolescents (Barroso et al., 2020; Cooper et al., 2016), but if not consented to, it can also be characterized as an act of aggression and violence toward others. Studies

have shown several factors that influence adolescents' consensual and non-consensual sexting experiences. Thus, this systematic review aimed to answer the following questions: "What are the main characteristics that influence engaging in consensual and non-consensual sexting behavior?" and "What are the main differences between someone who engages in consensual sexting and non-consensual sexting?". Therefore, a systematic literature review was conducted with the purpose of summarizing the existing evidence regarding the factors associated with the engagement in consensual and non-consensual sexting experiences, following the PRISMA Guidelines (Moher et al., 2009), which integrated a total of 40 articles.

The increased use of technology has led adolescents to date through them and allowed them to express their sexual behavior online, through sexting, which is considered a healthy exploration of sexuality (Sessa, 2016). However, when this behavior is not consented by those involved, it is considered a risky and aggressive behavior known as non-consensual sexting. To understand what might influence adolescents to engage in such behavior, it is important to gather information regarding those who use sexting to share intimacy and those who use it as an aggressive behavior. In this sense, the Problem Behavior Theory (PBT; Jessor, 1987) might help us understand non-consensual sexting, which states that are several factors that have an impact on development of risky behavior, stating that in an adult's perspective, adolescents have the tendency to engage in behaviors that are seen as risky. According to PBT, risk behaviors are a result of individual factors (e.g., age and personality traits) and environmental context (e.g., childhood trauma) that can have an influence on how individuals view and behave in interpersonal relationships. In this sense, understanding the characteristics that are associated with adolescents who engage in both forms of sexting can give us clues for future intervention programs.

Several factors were found to be associated with engaging in consensual and/or non-consensual sexting behavior. The most prevalent factor on both forms of sexting is the age of the perpetrator: older adolescents are more likely to practice consensual sexting (Kernsmith et al., 2018; Lee et al., 2016). As adolescents get older, they become more exposed to technology and parents oversee less of their online activity, increasing their opportunity to engage in sexual behavior, as a form of expressing themselves in loving and intimate relationships (Beckmeyer et al., 2019; Kernsmith et al., 2018) and due to their need for sexual exploration (Englander & McCoy, 2017). Likewise, older adolescents were more likely to engage in non-consensual sexting (e.g., Barroso et al., 2021; Beckmeyer et al., 2019). Older adolescents are more interested in sexuality than younger ones (Baumgartner et al., 2014) and it can be related to their hormonal changes, where they tend to explore their sexual

curiosity and, depending on the circumstances, as acting out of revenge toward their former partners (Beckmeyer et al., 2019; Englander & McCoy, 2017).

Regarding gender, studies reported that boys are more predisposed to engage in consensual sexting, due to their search for more sensation on a sexual level (Gil-Llario et al., 2020a). This may be influenced by gender stereotypes that prevail in society and the unequal relationship models that derive from those stereotypes of femininity and masculinity (Yépez-Tito et al., 2018). In general, men are seen as individuals who are intrinsically predisposed to sexual behaviors and may be positively linked to increases in these behaviors (Gil-Llario et al., 2020a; Ramiro-Sánchez et al., 2018). Likewise, male adolescents are also more likely to perpetrate non-consensual sexting if they understand women as submissive and push for these practices and subsequently send them to accumulate "power and recognition" among their male peers (e.g., Ramiro-Sánchez et al., 2018; Reed et al., 2020). However, Dake et al. (2012) and Gámez-Guadix et al. (2017) found that gender had no influence in sexting behavior. An explanation for this lack of consensus can be found in Baumgartner et al.'s (2014) research, which was conducted in different European countries and concluded that gender had no effect on sexting behavior, although gender differences varied across countries.

Sexual orientation also was found to be related to consensual sexting behavior (Gámez-Guadix et al., 2017; Ybarra & Mitchell, 2014), which can be associated with the fact that the internet can be seen as a mean through which adolescents can maintain intimate relationships without fear of negative social relations and to express their sexual orientation that might be socially repressed (Brown et al., 2009; Ojeda et al., 2020) and due to its being a more secretive act (Gámez-Guadix et al., 2017; Ybarra & Mitchell, 2014). However, it becomes difficult to consider sexual orientation as a predictor since there are few studies about the subject, and no study has focused directly on it. However, some studies reported that sexual minority youth are not significantly more likely to engage in consensual sexting, but more closely related to non-consensual sexting (Ybarra & Mitchell, 2014; Van Ouytsel et al., 2019).

The synthesized evidence suggests that there is a relationship between some personality traits such as neuroticism, extroversion, conscientiousness, and openness to new experiences, and consensual sexting (Gámez-Guadix et al., 2017). Extroversion is related to social interactions and with a tendency to avoid loneliness, which can be associated with sexting due to being a mean of socialization in interpersonal relationships (Döring, 2014). Also, sexting can be associated with the need for seeking new sensations and emotions, as it provides intense, quick, and easy sensations (Hernández et al., 2021). Conscientiousness is also one of the most mentioned characteristics to describe adolescents who engage in

consensual sexting (Hernández et al., 2021; Gamez-Guadix & Santisteban, 2018), which is characterized by greater control of self-impulse, greater planning, organization, and a sense of duty. In contrast, non-consensual sexting has been linked to impulsivity (Cruz & Soriano, 2014) and lack of self-control and this may contribute to this practice, without considering the potential consequences (Coskunpinar et al., 2013). However, some studies concluded that adolescents are fully aware of the consequences of their actions (Dake et al., 2012; Van Ouytsel et al., 2014). As for neuroticism, related to emotional instability and the tendency to act rashly in response to negative emotions, it appears to facilitate sharing of sexual content, consensually (Coskunpinar et al., 2013). Results also suggest that narcissism is another relevant element of the personality profile that characterizes adolescents who engage in sexual erotic risks, such as non-consensual sexting (Alonso & Romero, 2019; Gámez-Guadix et al., 2017). Adolescents present themselves according to how they would like to be or how they would like others to perceive them to be, striving to be desired, admired and approved by other people, which increases engagement in non-consensual sexting (Hernández et al., 2021; McCain et al., 2016). Furthermore, there is an association between non-consensual sexting and high levels of callousness traits that can be explained by lack of guilt, lack of empathy, and shallow affect (Barroso et al., 2021) which may be related to individuals do not understand others' emotions towards sharing sexual content without consent.

Mental health has also been explored as a predictor of both forms of sexting. A relationship between consensual sexting and depression and anxiety (Dodaj et al., 2020) was found. Individuals with symptoms of depression, are emotionally more vulnerable, and need to be accepted by others and, therefore, engage in consensual sexting due to feelings of powerlessness and low self-esteem (Klettke et al., 2019). Also, individuals with depressive symptoms have impaired decision-making process which can make them more prone to engage in non-consensual sexting, not considering boundaries and what is more acceptable between peers (Van Ouytsel et al., 2014).

As for aggressive and violent behaviors, the reviewed literature showed that there were associations between adolescents with experiences of childhood trauma (e.g., neglect, physical, and sexual abuse) and non-consensual sexting (Barroso et al., 2021). Adolescents who experience childhood trauma are in a more vulnerable state and may seek close intimate relationships with others through inappropriate sexual messages (Mitchell et al., 2012). This suggests that such past experiences may shape adolescents' propensity to ignore interpersonal respect and trust (Barroso et al., 2021). Furthermore, non-consensual sexting is related to forms of violence in intimate relationships guided by pressure and coercion (Kernsmith et al., 2018), to exposure of violence in their home (Barroso et al.,

2021; Yoder et al., 2018), and to practices such as grooming and cybergossip (Casas et al., 2019; Machimbarrena et al., 2018). Since non-consensual sexting is related to reactive and proactive aggression, it can be considered an expression of aggressive behavior (Barroso et al., 2021). Also, substance abuse was found to be related to consensual and non-consensual sexting (Benotsch et al., 2013; Morelli et al., 2017).

Limitations

This systematic review has some limitations. One important limitation is the risk of reporting bias, as there is a language limitation because studies in English, Portuguese, and Spanish were selected, due being languages understood by the study's researchers. This may have limited reference to the diversity of cultural perspectives. Furthermore, in several studies, the concept of sexting was defined as act to send and/or receive sexually suggestive and/or sexually explicit images or texts (with or without permission). This definition does not allow for establishing whether the adolescent sexting experience is of a consensual or non-consensual nature and, therefore, the characteristics associated to these adolescents are not necessarily specific to any type of sexting. Thus, if the literature (e.g., Walker et al., 2011) has distinguished consensual sexting (the voluntary sending of sexual content) and non-consensual sexting (when an image is incorrectly used and sent without permission), considering this latter to be a form of sexual violence, it is also important pay more attention to the characteristics that have been associated to each type of sexting. When studying the characteristics of adolescents who practice sexting, there is a difficulty of establishing the causal nature of these characteristics. The use of the phrase predictor implies directionality; however, some of the studies included appear not done in a way to determine temporal order. Future studies need to incorporate different assessment across time to follow the same adolescents at different stages of their maturation process. Moreover, the results were analyzed according to the quality assessment previously conducted. Assessment of risk of bias and/or methodological quality of studies included in meta-analyses would be an important step in identifying limitations of individual studies. It should be noted that the approaches to coding risk of bias or methodological quality necessarily involve some subjectivity.

Future Directions

Although studies have emerged in this area, awareness of this behavior is relatively low, so it is important to explore further to understand how to deal with such behaviors and provide information, so that prevention and intervention campaigns can be adapted to reach the younger population and support them to understand the different forms of sexual

expression and make the most coherent and thoughtful choices regarding sexting behaviors. Moreover, the implementation of sex education discipline with themes regarding sexting behaviors are important. Therefore, it is necessary to consider the motivations behind sexting behavior as research has found that engaging in non-consensual sexting is generally not malicious in nature but may result from a desire to engage in a fun exchange or a failure to recognize the behavior as problematic (Barrense-Dias et al., 2019). Furthermore, technological developments make it imperative to promote healthy interpersonal development and digital citizenship (Mori et al., 2021). Also, the type of involvement/relationships that adolescents have with their parents has a great impact on future actions. Therefore, when creating interventions, parental involvement should be considered by raising awareness about sexting and its environment and promoting more open and understanding relationships between parents and adolescents, allowing them to communicate their problems and, above all, make them aware of the increased risks of sharing intimate content online.

Conclusion

Consensual sexting is characterized by sharing sexually explicit content through sending, receiving, or forwarding messages, photos, or videos via electronic devices between individuals, although, when used without the consent from one of those involved, it is considered non-consensual sexting. There has been a growing perspective that consensual sexting is a component of contemporary adolescents' sexual and romantic relationships; that is, adolescents' ongoing romantic and sexual relationships may include sexting behaviors that involve consent between partners which may correlate to romanticism and how much it facilitates intimacy. However, when sexting is used with the intent to hurt someone by sharing or resharing their intimacy, it becomes an aggressive behavior—non-consensual sexting. Results show that several personal characteristics are associated with consensual and non-consensual sexting, such as sociodemographic characteristics (e.g., sex, age), personal characteristics (e.g., parental practices), mental health (e.g., depression, anxiety), peer pressure, coercion and violence, and interpersonal relationships (e.g., characteristics and sexting experiences involvement). These findings allow researchers to have a broad perspective regarding both forms of sexting and to understand the problematic nature of non-consensual sexting, giving practitioners clues of what to consider when responding to adolescents who have engaged in sexting or when developing intervention programs on sexting.

Acknowledgements We gratefully acknowledge the Editor of *Adolescent Research Review* for the time and expertise and insightful

comments during the editorial process. The research leading to these results received funding from Calouste Gulbenkian Foundation.

Authors' Contributions RB conceived of the study, participated in its design and coordination and drafted the manuscript; ARM participated in the design and interpretation of the data, performed the statistical analysis and helped to draft the manuscript. ER conceived of the study, participated in its design and drafted the manuscript; PF conceived of the study, participated in its design and drafted the manuscript; SS participated in the design and interpretation of the data and helped to draft the manuscript. All authors read and approved the final manuscript.

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

Declarations

Conflict of interest The authors report none.

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