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Prevalence of multiple forms of sexting behavior among youth : a systematic review and meta-analysis

Reference:

Madigan Sheri, Ly Ahn, Rash Christina L., Van Ouytsel Joris, Temple Jeff R.- Prevalence of multiple forms of sexting behavior among youth : a systematic review and meta-analysis

JAMA pediatrics / American Medical Association - ISSN 2168-6203 - 172:4(2018), p. 327-335

Full text (Publisher's DOI): <https://doi.org/10.1001/JAMAPEDIATRICS.2017.5314>

To cite this reference: <https://hdl.handle.net/10067/1501130151162165141>

A Meta-Analysis of the Prevalence of Sexting Behavior Among Youth

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Short title: Meta-Analysis of Youth Sexting Behavior

Tables = 1

Figures = 3

Supplemental Tables = 4

Supplemental Figures = 6

Word count = 3498

Key Points

Question: What is the prevalence of sexting behavior among youth?

Findings: The mean prevalence for sending and receiving sexts in this meta-analysis were 14.8% and 27.4%, respectively, with prevalence rates increasing in recent years, and as youth age. The prevalence of forwarding a sext without consent and having a sext forwarded without consent were 12.0% and 8.4%, respectively.

Meaning: Sexting is becoming a more common practice among youth, thus, age-specific information on sexting and its potential consequences should regularly be provided as a component of sex education.

Abstract

Importance: The existing literature on sexting among youth shows that sexting is a predictor of sexual behavior and may be associated with other health outcomes and risky behaviors.

However, there remains a lack of consensus on the prevalence of sexting, which is needed to inform future research, intervention, and policy development.

Objective: To provide a meta-analytic synthesis of studies examining the prevalence of multiple forms of sexting behavior, analyzed by age, sex, geography, and method of sexting.

Data Sources: Electronic searches in MEDLINE, PsycINFO, EMBASE, and Web of Science were conducted from January 1990 until June 2016, yielding 1147 non-duplicate records.

Study Selection: Studies were included if: (1) participants were younger than 18 years of age and (2) the prevalence of sexting explicit images, videos, or messages was reported.

Data Extraction and Synthesis: Two independent reviewers extracted all relevant data.

Random-effects meta-analyses were used to derive mean prevalence rates. Thirty-nine studies (with 110,380 participants) met final inclusion criteria.

Main Outcomes and Measures: Meta-analyses of prevalence for sending, receiving, forwarding without consent, and having one's sext forwarded without consent.

Results: Studies were available for: sending (N=34), receiving (N=20), forwarding without consent (N=5), or having a sext forwarded without consent (N=4). The mean prevalence for sending and receiving sexts were 14.8% (95% CI: 12.8 to 16.8) and 27.4% (CI: 23.1 to 31.7), respectively. Moderator analyses revealed that effect sizes varied as a function of child age (prevalence increased with age), year of data collection (prevalence has increased over time), and sexting method (higher prevalence on mobile devices compared to computers). The prevalence

of forwarding a sext without consent was 12.0% (CI: 8.4 to 15.6), and having a sext forwarded without consent was 8.4% (CI: 4.7 to 12.0).

Conclusions and Relevance: The prevalence of sexting has increased in recent years and increases as youth age. However, further research focusing on non-consensual sexting is necessary to appropriately target and inform intervention, education, and policy efforts.

Introduction

Sexting – the sharing of sexually explicit images, videos, or messages through electronic means – has received mounting attention from the popular press and an accumulating amount of attention in the empirical literature. However, the true public health importance of youth sexting is unclear at present, as the field is handicapped by inconsistent information regarding its prevalence. With the published rate of youth sexting ranging from 1.3% to 60%¹⁻³, the extent to which healthcare professionals, school personnel, policy makers, and parents should be concerned about this behavior is unknown.

One of the first published studies on youth sexting was conducted in 2009, prior to the current prolific use of smartphones among youth⁴. Results indicated that 4% and 15% of 12-17 year-old youth reported sending and receiving nude or semi-nude images, respectively. Another study in 2012² revealed a relatively low prevalence of sexting among 10-17 year-old participants, with 2.5% to 7.1% of predominantly older youth sending or receiving sexts, respectively. This study² had notable strengths, including a nationally representative sample, an explicit definition of sexting, and a wide age range. However, several methodological limitations likely resulted in the underreporting of sexting, including the use of landlines to conduct the survey and interviews with youth in the presence of parents. More recent studies reveal that sexting is an increasingly common practice, with prevalence increasing each year until youth reach the age of 18³.

While it is increasingly clear that a sizeable number of adolescent males and females participate in sexting, research examining sex differences has been inconsistent. A minority of studies have found that females were more likely to send a sext than their male counterparts^{2,5,6}, while other studies have not revealed any gender differences with respect to *sending* sexts^{3,7,8}.

Some evidence suggests that adolescent males are more likely than females to *receive*⁹ and *request* sexts³.

Though research on sexting is no longer in its infancy, there is a lack of consensus on the prevalence of sexting behaviors, which is critically important to informing future research and policy. We aim to extend the literature by examining the mean prevalence of sending and receiving sexts, as well as the rate of non-consensual forwarding of sexts. Moreover, we aim to determine whether prevalence rates vary as a function of gender, age, and time, as well as other potential moderators.

Methods

Search Strategy and Study Selection

This meta-analysis was conducted following the recommendations and standards set by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). A medical librarian conducted an electronic search in MEDLINE, PsycINFO, EMBASE, and Web of Science (January 1990-June 2016), using the following combination of keywords: (youth*, adolescen* youth* child* girl* boy*, young people OR student*) and (image*, photo* or picture*, messag*) or (sext or sexting), or (sex*, nude, or explicit), or (cyber or internet or online). No language or publication restrictions were applied. References of all articles meeting study inclusion were also reviewed for additional studies, and online reports were also searched.

Studies met inclusion if: (1) participants were younger than 18 years of age; (2) the study reported the prevalence of one or more of: sending, receiving, forwarding without consent, or having one's sext forwarded without consent; (3) the definition of sexting was consistent with the sending, receiving, or forwarding of sexually explicit images, videos, and/or messages, a

definition consistent with previous literature reviews¹⁰; (4) both prevalence and sample size were provided; and (5) the study was available in English. Two authors reviewed the titles and abstracts of all studies identified in the search strategy.

Data Extraction

Extracted data included prevalence and sample size, as well as potential moderators, including: (a) age, examined continuously as a mean, and categorically stratified by age; (b) gender, examined as the percentage of males in the sample; (c) earliest year of data collection; (d) method of sexting (mobile device, computer, or both); (e) message content (images only, images/videos, or images/videos/explicit messaging). No study examined sexting via explicit text messaging alone; (f) study location (USA versus Europe); and (g) publication status. To avoid oversampling effect size estimates from individual studies, only the total study's sexting prevalence of sending, receiving and/or forwarding sexts are represented (rather than sexting data stratified by gender, age, or country). For the non-consensual forwarding of sext, data were extracted based on the total sample of youth in the study (as opposed to sexting youth only).

When data from more than one wave of data collection were provided, or when data from one sample were presented across multiple publications, we selected the wave or publication with the largest sample size and the most comprehensive data extraction information. To ensure accuracy and reliability, all studies were double-coded and discrepancies resolved by consensus.

Study Quality

To examine methodological quality and validity of findings, a 9-point critical appraisal assessment tool was developed based on previous meta-analyses¹¹⁻¹³. The coding criteria for the quality scoring of all studies meeting inclusion criteria are available in eTables 1 and 2. Articles were given a score of 0 ("No") or 1 ("Yes") for each criterion and summed to give a total score

out of 9. The classification system used identified studies of low (≤ 2), moderate (3-5), or high quality (≥ 6)¹⁴.

Calculation of Effect Sizes

All data were extracted and entered into Comprehensive Meta-Analysis (CMA) Version 3.0 software¹⁵. A series of meta-analyses were conducted for each type of sexting behavior, presented as a mean prevalence, with associated 95% confidence intervals (CI) around the estimate. CMA transforms the prevalence rate into a logit event rate effect size with a computed standard error. Subsequently, effect sizes are weighted by the inverse of their variance, giving greater weight to studies with larger sample sizes and thus more precise estimates. Finally, logits are re-transformed into proportions to facilitate ease of interpretation. Random effect models were selected to calculate effect sizes as they represent a more conservative estimate of the mean prevalence.

Sensitivity Analysis and Publication Bias

Outlier detection was used to determine if the mean prevalence for each sexting behavior was affected by extreme values¹⁶. Inspection of box plots¹⁷ derived in SPSS (version 23.0) were examined and detected outliers were removed from the calculation of the effect size if prevalence rates were affected by these values. Publication bias was examined using visual inspection of funnel plots and the Egger test^{18,19}.

Assessment of Statistical Heterogeneity and Subgroups

The Q and I^2 statistics were computed to assess for statistical heterogeneity of effect sizes^{20,21}. A significant Q statistic suggests that study variability in effect size estimates is greater than sampling error and moderators should be explored. The I^2 statistic examines the rate of variability across studies due to heterogeneity rather than chance. The I^2 statistic ranges from 0 to

100 and can be interpreted as no (0%) and maximal (100%) heterogeneity. Between-study heterogeneity was examined using the Q statistic (categorical moderators) and meta-regressions^{22,23}.

Results

As detailed in the PRISMA flow diagram (see Figure 1), our electronic search yielded 1,147 non-duplicated records. A total of 122 articles were identified as potentially meeting inclusion criteria and full-text articles were retrieved. Upon review of all full text articles, 41 studies met inclusion criteria.

Study Quality Evaluation

The average study quality score across the 41 articles meeting inclusion criteria was 6.2 (see eTables 1-2). Two studies (4.9%)^{24,25} fell in the low quality range, 10 studies in the moderate (24.4%), and the remaining 29 studies (70.7%) fell in the high quality range. The 2 studies deemed to have low methodological quality were removed from analyses. Thus, the remaining 39 studies were used in subsequent meta-analyses.

Sample Characteristics of Included Studies

A total of 39 studies met all study and methodological inclusion criteria. Studies were available for sending (N=34), receiving (N=20), forwarding without consent (N=5), or having a sext forwarded (N=4) without consent. Table 1 provides a summary of included studies. In total across the 39 studies, 110,380 participants were included, with a mean age of 15.16 years (range = 11.9-17.0). On average, 47.2% of participants were male. Twenty-two studies (56.4%) were from the US, 12 (30.8%) from Europe 2 from Australia (5.1%), one (2.6%) from Canada, one from South Africa (2.6%), and one from South Korea (2.6%). Eighteen (46.2%) studies

examined sexting using mobile devices *and* computers, 6 (15.4%) studies using computers only, 14 (35.9%) on sexting via mobile devices only, and one (2.6%) study provided insufficient information for determination. Eleven studies (28.2%) asked participants about sexting via images, 14 studies (35.9%) via images or videos, 7 studies (17.9%) via images and/or explicit messages 7 studies (17.9%) via images, videos, and/or explicit messages. Note that no study examined sexting via sexually explicit messaging alone. Finally, 31 studies (79.5%) were published in peer-reviewed journals, and 8 studies (20.5%) were unpublished.

Sending a Sext

Combined Prevalence: The random effects analysis of the 34 studies yielded a mean prevalence of 14.8% (95% CI: 12.8 to 16.8; see Figure 2). The Egger's test provided evidence that studies with smaller sample sizes had more extreme prevalence estimates ($p < .001$; see Figure e1). A sensitivity analysis was conducted to determine the presence of potential outliers and one study was identified. Heterogeneity of effect sizes remained present with ($Q = 3765.13$, $p < .001$; $I^2 = 99.04$) and without ($Q = 3699.53$, $p < .001$; $I^2 = 99.08$) the outlying study; thus, potential moderators were explored with all studies included, and results are reported in eTable 3.

A meta-regression analysis revealed a linear increase in prevalence as age increased ($\beta = .037$; 95% CI: .024-.050). Effect sizes were also moderated by year of study data collection, with a demonstrated increase in the prevalence of sending a sext over time ($\beta = .026$; CI: .012-.039). Messaging outlet also explained between study variability, with a higher prevalence of sexting on mobile devices ($k = 13$; 13.4%; CI: 9.0 to 17.7) compared to computers ($k = 4$; 5.5%; CI: 2.3 to 8.6). Prevalence was not moderated by gender, geographical location, message content, or publication status.

Receiving a Sext

Combined Prevalence: The random effects analysis of the 20 studies yielded a mean prevalence of 27.4% (CI: 23.1 to 31.7; see Figure 3). The Egger's test provided evidence that studies with smaller sample sizes had more extreme prevalence estimates ($p < .001$; see Figure e2). No outliers were detected. Heterogeneity of effect sizes was present ($Q = 1415.99, p < .001$; $I^2 = 98.66$) and results of moderator analyses are presented in eTable 4.

The prevalence of receiving a sext increased as age increased ($\beta = .068$; 95% CI: .035-.10). Meta-regression analyses revealed that year of study data collection explained between study heterogeneity. Specifically, the prevalence of receiving a sext has increased over time ($\beta = .060$; 95% CI: .032-.088). Effect sizes also varied as a function of messaging outlet, with a higher prevalence of sexting on mobile devices ($k = 9$; 27.6%; CI: 20.7 to 34.6) compared to computers ($k = 4$; 13.6%; CI: 9.8 to 17.4). Prevalence was not moderated by gender, message content, geographical location, or publication status.

Forwarding a Sext Without Consent

The random effects analysis of the 5 studies yielded a mean prevalence of 12.0% (CI: 8.4 to 15.6; see eFigure 3). No publication bias (Egger's test = .21, see eFigure 4) or outliers were detected. Heterogeneity of effect sizes was present ($Q = 33.64, p < .001$; $I^2 = 88.11$), and moderators were explored. Neither age ($\beta = -.051$; 95% CI: -.113-.105), nor gender ($\beta = .002$; 95% CI: -.005-.009) moderated prevalence. No other moderators could be explored due to limited studies at each level of the moderators.

Having a Sext Forwarded Without Consent

The random effects analysis of the 4 studies yielded a mean prevalence of 8.4% (CI: 4.7-12.0; see eFigure 5). No publication bias (Egger's test = .45, see eFigure 6) or outliers were

detected. Heterogeneity of effect sizes was present ($Q = 151.26, p < .001; I^2 = 98.02$), and moderators were explored. Neither age ($\beta = -.017; 95\% \text{ CI: } -.077-.042$), nor gender ($\beta = .010; 95\% \text{ CI: } -.005-.025$) moderated prevalence rates. No other moderators could be explored due to limited studies at each level of the moderators.

Discussion

The heightened media attention over youth sexting has portrayed widespread involvement in this phenomenon, which in turn has created alarm in the public domain. However, the documented prevalence of youth sexting in emerging research varies considerably, creating difficulty in interpreting the composite of findings to either support or refute media portrayals. The present meta-analysis established that a sizeable minority of youth engage in sexting (1 in 7 send sexts; 1 in 4 receive sexts), with rates varying as a function of age, year of data collection, and method of sexting. Of particular concern is the prevalence of non-consensual sexting, with 12% of youth (1 in 8 youth) reporting that they have forwarded a sext.

The meta-analysis revealed that the prevalence of receiving sexts was higher than sending sexts. As methods of assessing sexting typically use analogous items to measure both the sending and receiving of sexts^{2,26}, the source of this discrepancy is likely not methodological in nature. Klettke, Hallford, Mellor¹⁰ suggest that this discrepancy may occur for several reasons: some respondents may underreport their active engagement in sexting, some sexters may send the same picture to multiple people, and/or those who receive a sext might not reciprocate the message.

Youth were more likely to send and receive sexts with increasing age. A higher rate among older youth is expected and generally corresponds to the age of sexual identity and

exploration²⁷, which lends credence to the notion that youth sexting may be an emerging, and potentially normal, component of sexual behavior and development²⁸. Moreover, the increase in prevalence rates with age is commensurate with older youth having greater access to, and/or owning smartphones in comparison to younger youth⁴. That said, there is a growing trend for tweens to have access to smartphones: in 2016, the average age of first smartphone possession was 10.3 years²⁹. However, there is very limited knowledge of sexting in youth under the age of 12. To our knowledge, the only existing study on sexting in youth under the age of 12 is from Mitchell et al.², who reported that 1% of 10-11 year old youth (N=218) appeared in, created, or received nude images or videos. As these data were collected in 2010-2011; however, this finding is likely outdated given the proliferation of smartphones and the trend for earlier age at first smartphone possession. Relationships among tweens are often transient^{30,31}, which may make them more vulnerable to having sexts forwarded without consent. Moreover, given their relative cognitive naiveté, tweens may be particularly vulnerable to sextortion (i.e., nude images and/or videos are used as a form of threat or blackmail)³², and like youth who report early sexual debut, may be at risk for a host of risky behaviors and negative consequences³³.

With smartphone ownership becoming near ubiquitous in recent years⁴, our finding that the prevalence of youth sexting was higher in more recent studies was not surprising. The finding that rates of sexting were also higher via mobile devices relative to computers was expected, as mobile phones are a portable, convenient technology that allows for immediate, rapid, and seemingly private communication. These latter two findings help explain the relatively low prevalence found in many early studies on sexting^{2,4}. Moreover, in recent years, smartphone apps have been developed that may (seemingly) facilitate privacy in the sharing and storing of videos/images, which may have increased both awareness of, and motivation for, engaging in

sexting. For example, the 4% prevalence of sexting found in the Pew study⁴ in 2009 is often cited as evidence that youth sexting is not common; however, this study took place prior to many youth having access to mobile devices. Thus, inclusion of these earlier studies in our meta-analyses may have underestimated the mean prevalence of youth sexting.

It has been suggested that females may be more likely to sext due to perceived pressure by male peers to send nude images^{34,36}. Indeed, media portrayals of sexting often implicate adolescent girls as the senders of naked photos and adolescent boys as the requesters. However, this popular belief and empirical proposition was not supported by the current meta-analysis, which found no significant gender differences in the rate of sending or receiving sexts.

Results of this meta-analysis reveal that 12.0% and 8.4% of youth have forwarded a sext (perpetrator of non-consensual sexting) or have had their sext forwarded (victim of non-consensual sexting) without consent, respectively. Neither age nor gender appeared to affect the prevalence of this phenomenon. The negative outcomes of this behavior have increasingly gained attention in the media, as a growing number of cases highlight how non-consensual forwarding of sexts can lead to harassment by peers, cyberbullying, or blackmailing. In extreme cases, the deleterious effects of non-consensual forwarding of explicit photos have been implicated in youth suicide³⁵. Moreover, non-consensual sexting may be a prelude to, or marker of, in-person sexual assault³⁶. An important caveat is that the sample sizes for the meta-analyses on non-consensual sexting were small, warranting additional research in this area.

Public Health and Policy Implications

There are several public health and policy implications of the findings reported herein. A sizable minority of youth are sexting. It is possible that this behavior may be a relatively normal part of sexual behavior and identity formation in the digital age. Consequently, efforts and

resources to criminalize sexts should be redirected to educational programs on digital citizenship and healthy relationships. Moreover, given that the average age of first smartphone acquisition is 10.3 years²⁹, it is important for middle school educators, pediatricians, and parents to have ongoing conversations with tweens regarding sexting and digital citizenship. Several gold-standard resources for engaging in conversations regarding mobile use and responsibilities, as well as sexting behavior, are available^{37,38}.

The rate of non-consensual sexting among younger youth is concerning, and, with respect to legislation on sexting, should continue to be a primary concern for policy-makers. As parents, health care providers, school administrators, and law enforcement authorities continue to grapple with educating youth on sexting, it is promising to see that policy makers are responding to this problem by introducing and amending legislation (e.g. laws against revenge porn) that makes it a criminal offense to share intimate images of a person without the person's consent.³⁹ However, because many existing laws were intended to punish adult behavior, policy makers must be aware of the implications of these laws for adolescent offenders, while not introducing legal loopholes for adult offenders.

Limitations

While this meta-analysis includes a robust number of studies on sending and receiving sexts, there are comparatively fewer studies on non-consensual sexting. Moreover, there were too few studies to examine the solicitation of sexts. A larger sample size in a meta-analytic inquiry leads to greater precision in estimations of prevalence and increased capacity to detect factors that increase or decrease mean prevalence rates. In the non-consensual sexting meta-analyses, we could not adequately assess for potential moderators due to small sample sizes, and accordingly, lack of statistical power. This meta-analysis is also limited in that it focuses solely

on prevalence rates and not on variables that predict a proclivity for engaging in sexting behavior. Recent studies are devoting more attention to attitudinal and behavioral risks for sexting by examining motivations for sexting³⁴, perceived risks associated with sexting^{26,40}, and negative experiences resulting from sexting³⁴. These studies contribute to a more nuanced understanding of factors that motivate youth to sext, and their results can inform the development and delivery of educational interventions. Finally, meta-analyses are reliant on the methods used in individual studies. A notable limitation of sexting research in general is variability in definitions and sampling techniques¹⁰. For example, while some studies define sexting as the sharing of sexually explicit images, videos, *and/or* text messages, others define sexting as the sharing of nude *images or videos* only. Moreover, many studies examined herein reported a combined prevalence rate for images, videos, and/or messages, rendering it impossible to parse out the prevalence for each digital method. The field of sexting would benefit from a uniform definition of sexting and future research should strive toward the methodological practice of providing prevalence rates for each messaging method (images, videos, texts) in order to better understand the nuances of youth sexting. As noted by Mitchell et al.², this methodological clarity is also important for policy makers seeking to draw on the existing literature to create or amend policies on the non-consensual sharing of nude images/videos in particular.

Conclusions

Contrary to some earlier findings⁴, results indicated that consensual sexting is becoming a more common practice among youth, with 14.8% and 27.4% of youth sending and receiving sexts, respectively. Moreover, higher prevalence rates were found in more recent studies, with

older youth, and with youth using a mobile device to sext. Troublingly, approximately 1 in 8 youth report either forwarding or having a sext forwarded without their consent. An important area of future inquiry will be the identification of variables associated with non-consensual sexting, as well as the evaluation of the effectiveness of educational campaigns and legal policies striving to mitigate non-consensual sexting in youth.

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Figure Legend

Figure 1: PRISMA flow diagram detailing the search strategy.

Figure 2. Forest plot of the effect sizes for each study included in the meta-analysis on the prevalence of sending a sext.

Legend: Forest plot of studies included in the meta-analysis. Contributing studies are sorted in alphabetical order. Observed estimate and 95% CIs are indicated for each sample. The overall summary estimate for sending a sext was 14.8% (95% CI: 12.8 to 16.8).

Figure 3. Forest plot of the effect sizes for each study included in the meta-analysis on the prevalence of receiving a sext.

Legend: Forest plot of studies included in the meta-analysis. Contributing studies are sorted in alphabetical order. Observed estimate and 95% CIs are indicated for each sample. The overall summary estimate for receiving a sext was 27.4% (CI: 23.1 to 31.7).

Table 1. Characteristics for All Studies Included in the Meta-Analyses on Youth Sexting

	<i>N</i> ^a	Mean Study Age	% Male	Sexting Type ^b	Message Format ^c	Message Content ^d	Geography ^e
Baumgartner (2014) ⁴¹	14,946	13.49	49.7	S	both	P, V, M	EU ^e
Campbell (2014) ⁴²	552	14.88	52.4	S, R	mobile	P, V	US
Cox Communications (2009) ^{6*}	655	15.50	50.0	S, R, FW-V	both	P	US
Dake (2012) ⁷	1289	14.58	51.7	S	both	P, V, M	US
Dowdell (2011) ⁴³	2,077	16.03	44.6	R	online	P	US
Fleschler (2013) ⁴⁴	1,034	16.34	37.4	S, R, FW-P	both	P, V, M	US
Harris (2013) ^{45*}	123	16.60	44.7	S, R, FW-P	both	P, V, M	US
Houck (2014) ⁴⁶	410	12.34	53.4	S	both	P, M	US
Kerstens (2014) ⁴⁷	4,453	13.90	51.2	S, R	online	P, V	NL
Kopecky (2015) ⁴⁸	1,237	14.00	44.9	S	both	P, V	CZ
Kopecky (2014) ⁴⁹	21,372	14.00	44.6	S, FW-V	online	P, V, M	CZ
Lee-C (2016) ⁵⁰	1612	16.00	35.7	S	mobile	P, V	KR
Lee-M (2015) ^{51*}	683	15.50	47.0	S, R	unspecified	P, V	AU

Lenhart (2009) ^{4*}	800	15.07	53.6	S, R	mobile	P, V	US
Lippman (2014) ⁵²	51	14.55	51.0	S, R	mobile	P, V	US
Livingstone (2014) ⁵³	15,619	13.50	50.0	R	online	P, M	EU
Marcum (2014) ⁵⁴	1,617	15.77	49.9	S	mobile	P	US
Mishna (2010) ⁵⁵	2,186	14.50	45.3	FW-V	both	P, M	CA
Mitchell (2012) ²	1,560	14.20	49.7	R	online	P, V	US
Murray (2014) ⁵⁶⁺	467	15.96	48.4	S, R, FW-P	both	P, V	US
O'Sullivan (2014) ⁵⁷	269	17.00	34.0	S, R	both	P	US
Patrick (2015) ⁵⁸	2,114	16.00	38.4	S, R	both	P, V	AU
Rice (2012) ⁸	1,714	15.23	51.9	S	mobile	P, M	US
Rice (2014) ⁵⁹	841	11.86	51.5	S, R	mobile	P, M	US
Ricketts (2015) ⁶⁰	1,617	15.77	49.0	S	mobile	P	US
Schloms-Madlener (2013) ⁶¹⁺	189	14.00	50.6	S	both	P	ZA
Sevcíková (2016) ⁶²	17,016	16.00	49.0	S	online	P, V, M	EU
Sex and Tech Survey (2008) ^{63*}	163	14.50	49.0	S	both	P, V	US
Strassberg (2013) ⁹	606	15.90	54.3	S, R	mobile	P	US

Temple (2012) ³	948	15.80	44.1	S	both	P	US
van Ouytsel (2014a) ⁶⁴	1,028	16.68	42.0	S	both	P	BE
van Ouytsel (2014b) ⁶⁵	329	16.71	39.8	S, R	both	P, V	BE
Vanden Abeele (2014) ⁶⁶	1,943	15.28	50.6	S	mobile	P, V	BE
Velarde (2014) ⁶⁷⁺	635	--	53.4	S, R, FW-P	mobile	P	US
Walrave (2014) ⁶⁸	498	16.50	46.0	S	mobile	P, M	BE
Walrave (2015) ⁶⁹	217	16.72	38.2	S	both	P, V, M	BE
Wolfe (2016) ⁷⁰	625	14.79	51.5	R	mobile	P, V	US
Wood (2015) ⁷¹	3,170	15.27	50.0	S, R, FW-V, FW-P	mobile	P, M	EU
Ybarra (2014) ⁷²	3,715	15.50	43.3	S	both	P	US

Abbreviations:

^a *N* varies slightly based on sexting type. *N*s reported here reflect receiving messages

^b S = study focuses on *sending* messages; R = study focuses on *receiving* messages; FW-V = study focuses on whether respondents *had sexts shared with others without their consent*; FW-P = study focuses on whether respondents *shared others' sexts without their consent*

^c Mobile = study focuses on sexting via *mobile devices*; Online = study focuses on sexting over the *internet*; Both = study focuses on sexting via *either a mobile device or the internet*; Unspecified = study does not provide sufficient information to determine the mode of sexting

^d P = pictures; V = videos; M = sexually explicit messages

^e AU = Australia; BE = Belgium; CA = Canada; CZ = Czech Republic; EU = Europe multi-national; KR = Republic of Korea; NL = Netherlands; ZA = South Africa

* unpublished study (e.g., commissioned report, public survey)

+ unpublished dissertation