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# A review of mixed methods research on sexting

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#### **Abstract**

Backgrounds: Given the negative consequences associated with sexting experiences, researchers, practitioners, and policymakers have called for more thorough research on sexting. Research on sexting behaviour has primarily used quantitative methods. In recent years, mixed methods research has gained prominence in the field of sexting. However, to date, no systematic review of mixed methods studies on sexting has been conducted. The purpose of this article is to review empirical mixed methods studies on sexting.

*Methods*: A thematic synthesis of the qualitative data and a narrative review of the quantitative data were conducted in accordance with standardised templates by study design (PRISMA guidelines). Ten databases were searched and eleven peer-reviewed articles from 2014 to 2022 that met the inclusion criteria were identified.

Results: Qualitative and quantitative results were organized into three themes: the nature and extent of sexting, motivation for sexting and the consequences and outcomes of sexting. This mixed-methods systematic review shows that sexting is widespread among youth, there are various reasons for involvement in it and it can have both positive and negative consequences.

*Conclusion:* The results of this study may be helpful to both practitioners working with youth and policy makers to better understand the phenomenon of sexting.

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## 1. Introduction

Nowadays, young people belong to a special generation that grows up in the digital world and engages in interactions and activities in the way they create, consume, and share digital content, (i.e., ideas, information, media, etc.) (Orben, 2020; Temple-Smith et al., 2015). A new technology-driven behaviour that has evoked the interest of researchers and practitioners is

sexting. According to the most recent research, sexting is considered "the sending or receiving of sexually explicit messages or photos via a cell phone or other media device" (Raine et al., 2020) or "the sharing of sexual media content over the Internet" (Molla Esparza et al., 2020). Barrense-Dias et al. (2017) distinguished the definition of sexting into four categories: (1) actions, including sending, receiving, and forwarding content, (2) type of media (images, text, or video), (3) sexual content, and (4) transmission models. Sexting is considered by some authors as part of the adolescent representation of sexuality online (Santos et al., 2021). In addition, Barense-Dias et al. (2017) noted a trend of not defining sexting as an issue or problem in itself, as it does not necessarily have negative consequences or lead to undesirable outcomes. In this context, Klettke et al. (2019) propose an inclusive discourse on sexting in which sexting behaviours are presented on a continuum from consensual sexting to non-consensual and forced sexting. Non-consensual forwarding of sexts is considered a type of online sexual harassment behaviour (van Oosten & Vandenbosch, 2020). Therefore, non-consensual and forced sexting may result in more psychological problems than other forms of exchanging sexually explicit content (Gassó et al., 2021). According to some research (Sesar & Dodaj, 2019), boys are more likely to engage in sexting, for example, in the context of intimate relationships, especially sexting with friends, which is an indicator of involvement in non-consensual sexting. Sesar and Dodaj (2019) explain young men's frequent involvement in sexting by their tendency to use an expressive suppression strategy. This strategy is particularly prominent among men with a traditional or masculine ideology (Liaqat et al., 2020), suggesting that young men are often encouraged to limit their emotions in situations of high arousal and activity (Brody & Hall, 2000). An additional motive for participating in sexting may be body image reinforcement (Bianchi et al., 2021), with young men and women who are dissatisfied with their bodies less likely to participate in sexting (Sicari, 2020).

It is difficult to estimate the prevalence of sexting because the measures used vary widely (Sesar & Dodaj, 2019) and because the phenomenon can rarely be explicitly researched (Courtice & Shaughessy, 2021). However, studies have found that sexting is widespread among young people. The results of a comprehensive meta-analysis that examined research from the United States, Canada, Europe, Australia, South Korea, and South Africa found that the average prevalence of sending sexts among teens was 14.8%, the prevalence of receiving sexts was 27.4%, the prevalence of forwarding sexts without consent was 12.0%, and the prevalence of receiving forwarded sexts was 8.4% (Madigan et al., 2018). A recent meta-analysis of 50 studies published in 2018 and later found that sexting behavior among emerging adults ranged from 15.0% to 38.3%, depending on the type of message, with reciprocal sexting being the most

common and non-consensual sexting the least common (Mori et al., 2020). A national survey (Barrense-Dias et al., 2018) of young adults found that more than 50% of participants had already sent sexy images of themselves, 62% had received such images, and 15% had shared the content they received with third parties. The most recent available study from Belgium reports that during the pandemic period COVID-19, 40.9% of adolescents engaged in at least one type of sexting (Maes & Vandenbosch, 2022).

One of the main concerns of researchers is the type of research methods used in studies of young people's sexting behaviour. Since the appropriateness of quantitative and qualitative research methods depends on the assumptions of the researcher and the phenomenon being studied, combining the two methods is counterintuitive, yet mixed research methods are not uncommon (Yauch & Steudel, 2003). By combining qualitative and quantitative methods, researchers can gain insight into young people's thoughts and feelings about themselves and their perceptions of the world around them (Dennehy et al., 2020) and obtain results that are not possible with quantitative methods (Currin et al., 2020).

The focus of this article is on the findings obtained from the limited number of mixed-method studies on sexting among youth. Therefore, this mixed-methods review combines findings from qualitative and quantitative research on the prevalence and nature of sexting to focus on the same overlapping or complementary questions (Harden & Thomas, 2010). In this article, we first provide a rationale for the review that also identifies some of the gaps in our understanding of sexting. We then review current research on mixed-method sexting and assess the findings of these studies. We also discuss directions for mixed methods research on sexting.

Consistent with previous literature on youth sexting, we hypothesize that youth engage in sexting because it is considered normal behavior among youth. The experiences and consequences of sexting among youth will be positive, but also negative, which we expect to confirm through quantitative and qualitative research.

## 1.1 Current research methodologies used in sexting research

Numerous researchers have addressed the issue of sexting in recent years. Most researchers addressing the issue of sexting have traditionally used quantitative methods to obtain statistical results. In quantitative sexting research, most authors have focused on examining the prevalence, risk factors, consequences, and outcomes of sexting among adolescents and young adults (e.g., Barrense-Dias et al., 2017; Buljan Flander et al., 2021; Burić et al., 2018; Dake et al., 2012; Dodaj et al., 2019, 2020; Doering, 2012; Frankel et al., 2018; Gordon-Messer et al., 2012; Gordon-Messer et al., 2013; Hudson et. al., 2014; Kumari & Srivastavove, 2017; Strassberg et

al., 2013; Strohmaier et al., 2014; Temple et al., 2012; Vanden Abeele et al., 2014; Villacampa, 2017). Quantitative findings indicated individual differences in sexting (in terms of sociodemographic characteristics, cognitive characteristics, personality traits, intimate relationship characteristics, attachment, etc.) as well as differences in contextual, i.e., cultural, and social, values related to sexting among youth (e.g., Alonso & Romero, 2019; Englander & McCoy, 2018; Houck et al., 2014; Reed et al., 2018; Ybarra & Mitchell, 2014).

Unfortunately, overreliance on quantitative studies has limited our understanding of certain aspects of the sexting phenomenon. Burkett (2015) noted that the lack of quantitative research on sexting has primarily focused on examining the prevalence of sexting among adolescents, which is why less is known about the everyday nature of sexting and why it is often viewed as risky and deviant behaviour. The qualitative approach to sexting research offers different perspectives to explain sexting among young people as a complex phenomenon and to move the discussion away from focusing exclusively on prevalence and risk. Qualitative studies of sexting have focused on examining the definition of sexting, the potential consequences of sexting (based on personal experiences or the experiences of others), and the reasons and motivations for young people's involvement in sexting (e.g., Barrense-Dias et al., 2019; Korkmazer et al., 2019; Lippman & Campbell, 2014; Mandau, 2021; Ringrose et al., 2012; Stanley et al., 2016). For this purpose, interviews, focus groups, open-ended written questionnaires, online ethnography, media, and legal analyses have been widely used in recent years (Anastassiou, 2017). Given the advantages of combining quantitative and qualitative research methods, the number of researchers who have adopted a mixed-methods approach continues to grow.

#### 1.2 Review of mixed methods studies on sexting

#### 1.2.1 Rationale for the review

Several reviews of studies on sexting have been published (Anastassiou, 2017; Gassó et al., 2019; Handschuh et al., 2019; Klettke et al., 2014; Kosenko et al., 2017; Madigan et al., 2018; Molla Esparza et al., 2020; Mori et al., 2019; Van Ouytsel et al., 2015). Some sexting researchers (e.g., Gassó et al., 2019; Klettke et a., 2014; Madigan et al., 2018) have conducted reviews of studies that identified characteristics of sexting behaviour and associated correlates and explored how these correlates vary with demographic variables. Other researchers have reviewed studies that have examined the relationship between sexting and consequences, particularly psychological maladjustment (e.g., Gassó et al., 2019; Handschuh et al., 2019; Mori et al., 2019; Van Ouytsel et al., 2015). These reviews of research studies have greatly improved our understanding of

youth sexting behaviour, which has important implications for research and practice. Regrettably, however, these reviews have not been inclusive of studies that used mixed methods. To our knowledge, only Anastassiou (2017) recently reviewed qualitative research and mixed methods research on adolescent sexting and grouped the findings into four categories. The first two categories, reflecting positive effects on well-being, were (1) pleasure and amusement and (2) a safe relief of sexual frustration. The other two categories reflecting negative effects on well-being were (3) reputational harm and (4) feeling threatened. A review of sexting by Anastassiou (2017) cites various qualitative methods for identifying sexting (e.g., interviews, focus groups...), but argues that creative participatory online approaches are needed to understand the complexity of sexting. Currin et al. (2020) argue that with researchers' increasing access to large sexting samples through computational science methods and the ubiquity of text messaging, mixed methods analyses are becoming increasingly necessary. They noted that the use of mixed methods can promote interdisciplinarity in the field, which can only advance the theory and practise of sexting studies.

According to Yuach & Steudel (2003), there are fundamental differences between quantitative and qualitative approaches at two levels. The first level refers to different types of data or evidence. Quantitative data are "numbers" collected through surveys or other measurement methods, while qualitative data are "words" collected through interviews, group discussions, and observations. The second level refers to the fact that the two methods are presented as two completely different research paradigms. Mixed methods studies provide a great systematic integration of quantitative and qualitative data (Malina et al., 2011). Mixed methodology points to the potential benefits of qualitative and quantitative methods (Greense et al., 1989) and allows researchers to explore perspectives and relationships "between layers of multi-layered research questions" (Shorten & Smith, 2017), which is characteristic of sexting research. Courtice & Shaughnessy (2021) noted that researchers can use mixed methods to gain valuable information from adolescents and adults about how future participants might interpret items in a measure. Therefore, research on sexting using a mixed methods approach could provide insight into the prevalence of this behaviour as well as the context or perceptions of sexting by youth (Van Ouytsel & Dhoest, 2022).

#### 2. Method

## 2.1 Design and search strategy

The purpose of this literature review was to analyse mixed methods research on adolescent sexting. The scoping review was deemed the most beneficial method because it explores new

findings about mixed methods sexting research (Armstrong et al., 2011). Additionally, this approach was chosen to "identify and examine characteristics or factors related to a particular concept" (Munn et al., 2018), in this case, the nature and prevalence of sexting among adolescents.

We systematically searched the following scientific databases: Google Scholar, PsychINFO, ScienceDirect, ERIC, PubMed, ProQuest, MEDline, PsycARTICLES, ISI Web of Knowledge, and PsycEXTRA using the key search terms "Youth\*" AND "Sexting\*" OR "Sext\*" OR "Sexual texting\*" OR "Sexual messaging\*" AND "Mixed method\*" OR "Mixed methods\*". Keywords were based on those used in the two most recent literature reviews on sexting (Doyle et al., 2021; Molla-Esparza et al., 2020) and the targeted methods approach. This search was conducted in English and Croatian on September 5, 2021, reflecting the authors' language proficiency.

#### 2.2 Inclusion and exclusion criteria

Selection was based on the title and abstract of the article. Full articles were retrieved if inclusion criteria were met. Studies that described the nature of sexting (including motivation, associated emotions, and outcomes) and/or the prevalence of sexting were also included. Eleven papers met the criteria and were included in the review (Table 1). In addition, the following inclusion criteria had to be met for the article to be considered complete:

- the article contained original data from a mixed-methods study;
- the article was written in English or Croatian;
- the study participants were youth aged up to 25 years, as this is the age range most commonly used in research on youth sexting (Anastassiou, 2017).

Articles that did not include a mixed-methods study design or a reference to sexting in their abstract were excluded from further processing. Articles that reported only on the adult population were omitted. Duplicate publications were also excluded. No time limit for published articles was specified as an exclusion criterion (the earliest article was published in 2014). In addition, several studies met the exclusion criteria because they did not include the specific methodology mentioned previously, (i.e., study design). In addition, two articles were excluded from the review because they involved an adult-only population.

**Table 1.** Studies included in the systematic review

Authors and publication year	Prevalence	Methods	Participants	Age range of participants	Country	Main purpose	Outcomes
Harris & Davidson (2014)	N/A	Survey and focus groups	Youth and adults	N/A	USA	Understand and compare youths' and adults' perspectives on sexting and related topics.	The results show that youth and adults view sexting as a new part of youth social life. Youths indicated that sexting can be problematic under certain circumstances. Youth and adult attitudes toward the perceived consequences of sexting differed significantly.
Hasinoff & Shepherd (2014)	All respondents consider maintaining privacy while sexting as an expected social norm.	Survey and focus groups	Youth	18 - 24	Canada	To examine the specific norms young people use to decide whether to share sexually suggestive photos.	The majority of respondents felt that sharing private images was never or rarely acceptable. In addition, tolerance of privacy violations depended on a number of specific contextual factors.
Graham Holmes et al. (2021)	45.5% men and 53.4% women reported having ever sent an explicit sext, 66.5% men and 65% women reported having received an explicit sext, while 9.7% men and 7.2% women reported forwarding sexually explicit content.	Survey and content analysis	Youth	M = 21,9	USA	To examine the prevalence of sexting; to examine the perceived positive and negative consequences of sexting; and to identify predictors of future sexting.	A significant number of participants reported sexting. Participants described positive and negative consequences of sexting. Context is important for understanding future sexting behavior.
Jules et al. (2017)	N/A	Survey and focus groups	Youth	18 - 24	Barbados & UK	To examine the relationship between susceptibility to online peer influence and sexual risk taking on Facebook.	A positive correlation has been found between youth' susceptibility to peer influence online and risky sexual behaviour. Sexting is considered dangerous but is consistent with the psychosocial challenges of youth.

Lloyd (2018)	Sexting occurred in all 21 schools visited, according to the focus groups.	Focus groups, observations, case reviews and reviews of policies and procedures	Youth	13 - 21	UK	Identify factors and barriers to preventing and responding to harmful sexual behaviour (sharing sexual images) in schools and develop useful tools and resources.	The inconsistency of laws and policies on sexting poses challenges for schools. School personnel viewed the consensual sharing of images and the misuse of images as one and the same. Youth were able to articulate the meaning and implications of abuse through image sharing.
McGovern et. al. (2016)	The young people surveyed often judged the actions of others who sexted very harshly. Many expressed gendered beliefs that women are pressured into sexting or do so only to get a man's or woman's attention. Men were implied to be sexting to get noticed or to show off.	Survey, focus groups, media analysis and legal analysis	Youth	18 - 20	Australia	To document young people's perceptions of sexting, analysing public discourse on sexting, and examining the legal framework for sexting.	While we often hear about the negative experiences and consequences of sexting, it is increasingly recognised that young people's experiences with sexting are much more diverse.
Nygård (2018)	Sexting is common among Norwegian youth.	Survey and focus groups	Youth	16 - 20	Norway	To examine youths' prevalence and understanding of Snapchatenabled sexting practises.	Sexting is widespread among Norwegian youth. The survey explicitly refers to consensual sexting, while group discussions often focused on issues of non-consensual sexting.
Stanley et al. (2016)	Between 6% and 44% of young women and 15% and 32% of young men reported sending sexually explicit content to a partner. Between 9% and 49% of young women and	Survey and interviews	Youth	14 - 17	Bulgaria, Cyprus, England, Italy, and Norway	To investigate whether pornography use is related to sexting between intimate partners; clarifying the relationship between sexting and pornography.	Sexting is normalised and perceived positively by most youth, but it also has the potential to reproduce sexist features of pornography such as control and humiliation.

20% to 47% of young

	men reported sending sexually explicit photos/texts.						
Stephen et al. (2017)	_	Survey and focus groups	Youth/ High school students	M=17.5	Kenya	To determine the influence of sexting on adolescent sexual risk behaviour.	Results show a high prevalence of masturbation, pornography, multiple sexual partners, and frequent sexual intercourse among adolescents engaging in sexting in Kenya.
Van Ouytsel & Dhoest (2022)	71.1% - 72.3%	Survey and focus groups	Youth and adults (non-heterosexual men)	18 - 77	Belgium	To examine the prevalence, context, and perceptions of sexting among non-heterosexual men of different generations in Belgium.	The qualitative interviews revealed that sexting is perceived as a risky but unproblematic practice by non-heterosexual men of all generations.
Yeung et al. (2014)	50.1% of respondents said they had ever sent an explicit sext, 65.5% admitted to receiving an explicit sext, 8.3% said they had forwarded the photo to another person.	Survey and focus groups	Youth	16 - 25	Australia	To Provide insights into sexting behaviours and attitudes among adolescents.	The findings suggest that sexting is a common practice among youth in Australia. The findings also suggest a distinction between consensual sexting and non-consensual sharing of explicit material

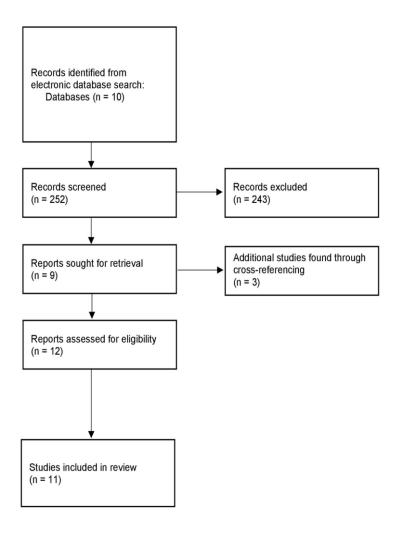
**Note:** N/A - Not applicable

## 2.3 Screening

The literature relevant to this study was reviewed according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses - PRISMA guidelines, an evidence-based protocol for systematic reviews (Liberati et al., 2009; Moher et al., 2009). The article abstracts and full texts of the studies were scanned by three independent reviewers. Through this preliminary

search, 252 journal articles were found. In addition, two articles were identified by cross-referencing articles originally found. Finally, nine articles met the criteria and were included in the study. A visual summary according to Subirana et al. (2005) of the search process is provided in Figure 1.

Figure 1. Diagram of the study selection process (Subirana et al., 2005)



#### 2.3 Data extraction and analyses

The authors extracted data from the quantitative studies using a customised Excel spreadsheet that included the following: Sample characteristics, study design, prevalence, and results obtained, as well as the authors' explanations of their findings. Prevalence and association results were compared, and authors' explanations of their results were analysed thematically.

The authors coded and analysed the qualitative studies using a deductive and inductive approach supported by NVivo. The first author created a preliminary coding framework. All authors then independently coded the data and discussed the results.

#### 3. Results

## 3.1 Study Characteristics

A total of 11 published articles met the inclusion criteria, all of which were mixed-methods research articles. These articles included results from 4 continents (North America, Europe, Africa, and Australia) except 2 (Asia and South America). All but 1 of the mixed-methods studies were conducted on mixed-sex samples. Participants in the studies included in the systematic review were adolescents and young adults aged 13 to 25 years. In the articles studied, the range of sexting was from 2% to 72.3%, with receiving sexually explicit content being the most common form of sexting, followed by sending and then, to a lesser extent, forwarding.

## 3.2 Summary of quantitative findings

Table 2 summarizes the results of the core quantitative papers. For the quantitative results, we report the effects for all qualifying sexting indicators analysed in the study.

**Table 2.** Summary of quantitative findings

Category	Studies	Summary of findings
The nature and extent of sexting	Hasinoff & Shepherd (2014); Graham Holmes et. al (2021); Lloyd (2018); Nygård (2018); Stanley et al. (2016); Stephen et al. (2017); Van Ouytsel & Dhoest (2022); Yeung et al. (2014)	<ul> <li>sexting is a common practice among youth,</li> <li>high prevalence among high school students,</li> <li>maintaining privacy when sexting is an expected social norm,</li> <li>the expectation that sexting provides privacy for the expression of sex.</li> </ul>
Determinants and motives for sexting	Stanley et al. (2016); Stephen et al. (2017); Yeung et al. (2014)	- males, emerging adults, youth without a high school diploma, with more than five sexual partners, who did not always use condoms, non-heterosexuals who used drugs and frequently drank alcohol sexted more often.  - LGBQ youth and young women were more likely to send sext, while males and LGBQ youth were more likely to exchange sexts with people they were not in a romantic relationship,  - watching pornography was associated with sexting (receiving sexually explicit content - images/messages) in some European countries,  - most youth sext because they view sexting as a source of information about sex, to strengthen their relationship with their partner, or/and to start something.
Perceived outcomes of sexting	Graham Holmes et al. (2021); Nygård (2018); Stephen et al. (2017); Yeung et al. (2014)	<ul> <li>sexting is associated with risky (sexual) behaviour online and offline,</li> <li>sexting is considered less risky than in previous studies,</li> <li>sexting has positive and negative consequences.</li> </ul>

## 3.2.1 The nature and extent of sexting

Regarding the quantitative results, the most important finding is the prevalence of sexting among young people. Approximately 50.1% of participants from the United States reported ever sending an explicit sext, 65.5% reported receiving an explicit sext, while 8.3% reported forwarding sexually suggestive content (Graham Holmes et al., 2021). Yeung and colleagues (2014) found that 50.1% of Australian study participants reported ever sending an explicit sext, 65.5% reported receiving an explicit sext, and 8.3% reported forwarding the photo to another person. In the United Kingdom, Lloyd (2018) found that sexting was recorded in all 21 schools they visited as part of their research. In addition, between 6% and 44% of young women and 15% and 32% of young men in Europe (Bulgaria, Cyprus, England, Italy, and Norway) reported sending sexually explicit content to a partner, while between 9% and 49% of young women and 20% to 47% of young men reported receiving a sexual image/message (Stanley et al., 2016). In Belgium, the prevalence of sexting among non-heterosexual youth ranged from 71.1% among Generation "Z" to 72.3% among Millenials (Van Ouytsel & Dhoest, 2022). Nygård (2018) found that sexting is prevalent among Norwegian youth. In Africa, Stephen et al. (2017) found a high prevalence of sexting among adolescents, with 65% sexting daily, 25% weekly, 8% rarely, and 2% reporting that they did not sext. Stephen et al. (2017) found that 74.2% of youth engage in sexting with the expectation that it will provide them privacy for expressing sex. Similarly, 79% of participants have a high expectation of privacy when sexting and believe that sharing such content is always or almost always not right, while almost all participants indicated that maintaining privacy when sexting is an expected social norm (Hasinoff & Shepherd, 2014). In addition, female participants were significantly more opposed to photo sharing and more concerned about privacy than male adolescents.

#### 3.2.2 Determinants and motives for sexting

Regarding the determinants of sexting, Yeung et al. (2014) found that males, emerging adults, non-heterosexuals, youth who did not graduate from high school, had more than five sexual partners, did not always use condoms, youth who used drugs, and frequently drank alcohol were more likely to engage in sexting. Graham Holmes et al. (2021) found that LGBQ youth and young women were more likely to send sext. Among senders, females and heterosexuals were more likely to send sexually explicit content to a romantic partner, while males and LGBQ youth were more likely to send and receive sexually explicit content to/from others with whom they were not currently romantically involved (Graham Holmes et al., 2021). Viewing online

pornography was associated with the highest risk of sending and receiving sexts among male adolescents in almost all countries (except Cyprus) (Stanley et al., 2016).

Stephen et al. (2017) identified several reasons why youth sext. 84% of them find that sexting is a source of information for their questions about sex, 82.5% want to strengthen their romantic relationship, while some sext because they want to start something (21% women; 39% men). The same authors also found that 75% of adolescents indicated that continued viewing of sexting as a taboo topic made them more likely to sext.

## 3.2.3 Perceived outcomes of sexting

Graham Holmes et al. (2021) found that 84.7% of young people who sext had positive outcomes and 79.9% had negative outcomes, with self-assessment and affirmation being the most frequently cited positive outcomes and concern that someone other than the recipient might see the sexually explicit content being the most frequently cited negative outcomes. Many young people who engage in daily sexting reported higher prevalence of a wide range of sexual behaviours such as frequent masturbation (65%), multiple sexual partners (62%), and viewing pornography (40%) (Stephen et al., 2014). In contrast, only Nygård (2018) found that sexting was less associated with psychological risk than previous research. An Australian survey found that adolescents often harshly condemn others who sext and that many youths expressed gendered beliefs that men push women to sext (McGovern et al., 2016).

## 3.3 Summary of qualitative findings

In relation to sexting experiences, four themes were identified from the thematic synthesis of the qualitative studies: (1) sexting is widespread and normalised among youth and (2) sexting can have positive consequence, and (3) sexting can have negative consequences.

Theme	Studies
Sexting is widespread and normalized among youth	Hasinoff & Shepherd 2014; Stanley et al., 2016; Van Ouytsel & Dhoest, 2022; Yeung et al., 2014
Positive sexting consequences	Hasinoff & Shepherd, 2014; Graham Holmes et al., 2021; Jules et al., 2017; McGovern et al., 2016; Stanley et al., 2016; Stephen et al., 2017; Van Ouytsel & Dhoest, 2022
Negative sexting consequences	Graham Holmes et al., 2021; Harris & Davidson, 2014; Hasinoff & Shepherd, 2014; Loyd, 2018; McGovern et al., 2016; Nygård, 2018; Staneley et al., 2016; Stephen et al., 2017; Van Ouytsel & Dhoest, 2022

## 3.3.1 Sexting is widespread and normalized among youth

Sexting is a reasonable and common practise and is often perceived as normal by youth (Hasinoff & Shepherd 2014; Stanley et al., 2016; Van Ouytsel & Dhoest, 2022; Yeung et al., 2014). As reported by some of the authors of the mixed methods studies:

"It's become now like a normal thing now. I feel like it's a milestone for teenagers..." (Yeung et al., 2014, p. 335).

"It's just a game...many people do it..." (Stanley et al., 2016, p. 17).

"We're all here and we all do it and we're careful." (Van Ouytsel & Dhoest, 2022, p. 5).

Sexting is also perceived as a non-problematic practise by non-heterosexual men, including Generation "Z" and Millennials, because it is a less embarrassing way to communicate about sex and sexual topics (Stephen et al., 2017). Understanding the circumstances in which sexting occurred is very important, and some authors also emphasise context to understand future sexting behaviour (Graham Holmes et al., 2021).

## 3.3.2 Positive sexting consequences

Many young people believe that sexting has positive outcomes or consequences (Graham Holmes et al., 2021; Hasinoff & Shepherd, 2014; Jules et al., 2017; McGovern et al., 2016; Stanley et al., 2016; Stephen et al., 2017; Van Ouytsel & Dhoest, 2022).

Youth consider sexual arousal, masturbation, orgasm, and validation as positive outcomes of sexting (Graham Holmes et al., 2021; Stephen et al., 2017). Some youths mention creation of mutual trust, for example, one male participant noted:

"We're all here and we all do it and we're careful." (Van Ouytsel & Dhoest, 2022, p. 5).

Young people also find sexting beneficial for romantic or sexual relationships, while others find it amusing and/or entertaining, for example, a participant noted:

"I'm sure there are plenty of people who are entertaining each other in any way they want with mobile phones.." (McGovern et al., 2016, p. 438).

Some authors (McGovern et al., 2016; Stanley et al., 2016) found that in addition to flirting, sexual stimulation, feeling sexy, and viewing sexting as a safe substitute for sex were all cited by youth as positive aspects of sexting. It can be beneficial for youth to communicate about sexual topics because it creates a safer environment that encourages youth to explore their sexuality and sexual interests (Jules et al., 2017).

## 3.3.3 Negative sexting consequences

The qualitative results show that young people also perceive various negative aspects of sexting. Nygård (2018) also found that non-consensual sexting was talked about more than consensual sexting in the qualitative phase. Young people believe that sexting can be problematic in certain circumstances (Harris & Davidson, 2014). In addition, sexting is perceived as risky by non-heterosexual males of Generation "Z" and Millennials (Van Ouytsel & Dhoest, 2022).

Many youths consider the following to be negative consequences of sexting: shame and guilt about forwarding sexting without consent, a broken relationship with the sender or viewer, and no control over the dissemination of sexually explicit content (Graham Holmes et al., 2021; Hassinoff & Shepherd). For example:

"Felt worthless afterwards because it felt like I had to be loved by showing someone my body instead of my heart" (Graham Holmes et al., 2021, p. 7).

"...I mean, to post it on Facebook would be like a revenge thing - I can't imagine someone having a happy relationship or being healthy even, to be posting [it] online" (Hasinoff & Shepherd, 2014, p. 2943).

Adolescents often cite embarrassment and a range of legal problems as negative consequences of sexting (Harris & Davidson, 2014). The irreversibility of sexting has also been cited by adolescents as one of the greatest risks to their reputation (McGovern et al., 2016). It has also been noted that sexting can have the side effect of unintentionally reproducing pornography, as well as the negative attributes of manipulative control, humiliation, and reputational damage (Staneley et al., 2016). Some participants described following:

"The longer I was on that platform, the more I was treated like an object and not as a person" (Van Ouytsel & Dhoest, 2022, p. 5).

Another potentially risky aspect is that many participants who sext have multiple partners with whom they share sexually explicit content (Stephen et al., 2017).

In the four studies reviewed, few youths talked about non-consensual sharing of sexts, coercion, pressure, or other abusive elements of sharing sexually explicit content. For example, one participant described as follows:

"To punish someone or get even in some inappropriate way - for example, a guy can try to punish a girl for breaking up with him by sharing her naked photos" (Stanley et al., 2016, p. 17).

Adults (i.e., teachers and school staff) often distinguished between consensual and non-consensual sexting, while youth only thought of abuse through sharing images (Lloyd, 2018). Some youth described harassment and coercion in the form of constantly receiving sexting or solicitation of sexually explicit content (Graham Holmes et al., 2021). Youth articulated the possibility that young women are often coerced into sexting (McGovern et al., 2016). Among non-heterosexual Millennials, there was also unsolicited receipt of sexually explicit content and some participants even indicated that they felt "raped online" (Van Ouytsel & Dhoest, 2022):

"Perhaps it's put strongly, but I actually think it's important to use that word because sometimes I would wake up with three different boys sending me unsolicited nudes" (Van Ouytsel & Dhoest, 2022, p. 5).

In addition, some participants mentioned pressure to respond to unsolicited sexts. Thus, McGovern and colleagues (2016) noted that some youth felt coerced or pressured to send or receive sexually explicit content. One from their study participant noted:

"Once when I was in Year 11, I was sitting on the school bus going home and I had my Bluetooth turned on and so did a bunch of other girls and boys around me. This message came and a guy was like, 'Oh receive it, it's really funny'. And I opened it and it was a picture of the genitals of the guy sitting next to me" (McGovern et al., 2016, p. 436-437).

#### 4. Discussion

To our knowledge, this is the first mixed method review to systematically examine the evidence on sexting among young people. Across quantitative and qualitative studies conducted in different regions, we found that sexting is widespread, common, and normal among adolescents and emerging adults. Three common themes emerged from the data: (1) the nature and extent of sexting; (2) motivation for sexting; and (3) the consequences and outcomes of sexting.

Recently, several systematic reviews and meta-analyses have been conducted to examine the prevalence of sexting (Klettke et al., 2014; Madigan et al., 2018; Molla Esparza et al., 2020). Madigan et al. (2018) conducted a meta-analysis on the prevalence of various forms of sexting behaviour analysed by age, gender, geographic location, and method of sexting. The authors found that the prevalence of sexting has increased in recent years and increases with youth age. According to the study, between 14.8% and 27.4% of youth engaged in consensual sexting (sending and receiving), while between 8.4% and 12% of youth engaged in non-consensual sexting (Madigan et al., 2018). Klettke et al. (2014) found that the estimate of sending sexually explicit texts or photos among adolescents was 10.2%, while the estimate of receiving sexually

explicit photos or texts was 15.64% (95% CIs). A systematic review by Molla Esparza et al. (2020) found that receiving sexts had a higher prevalence than sending or forwarding sexually explicit content. The same authors also noted an increase in the prevalence of sexting over time.

A clear finding that emerged from both qualitative and quantitative data is that (consensual) sexting is common, widespread, and normalized among adolescents and emerging adults. Prevalence of sexting varies substantially mostly because of difference in use of research methodology (Mori et al., 2020). However, meta-analysis conducted by Madigan et al. (2018) underlines that the prevalence of sexting has increased by time and also that sexting behaviour increases with age of youths. Therefore, sexting can be viewed as a modern and common form of (digital) communication among adolescents and emerging adults (Dodaj et al., 2021, 2022).

Also, this review indicates that privacy plays an important role in the sexting behaviour of adolescents and emerging adults. Youth expect privacy when sexting and reject non-consensual sharing (Hasinoff & Shepherd, 2014). In sexting, privacy handling can be personal or interpersonal. Personal privacy handling in sexting could refer to the creation of non-identifiable content (e.g., blurring the face in photos), while interpersonal privacy handling in sexting could mean communicating about the implementation of privacy boundaries with partners (e.g., setting privacy boundaries for shared content) (De Wolf, 2020; Döring, 2014; Geeng et al., 2020; Renfrow & Rollo, 2014). Wachs et al. (2021) also point out that sexting is an intimate communication and therefore requires privacy and consent. However, when privacy is violated and sexting is forwarded without knowledge, non-consensual dissemination occurs. Therefore, privacy management can be a protective factor against non-consensual sexting, leading to fewer negative outcomes and consequences.

Multiple reasons for sexting were found in previous research (Bianchi et al., 2021a; 2021b; Lee & Crofts, 2015; Van Ouytsel et al., 2017). The most prevalent motives for engaging in sexting were mutual interest among love partners, impressing or flirting with love interest, while few youths mentioned being coerced or pressured by peers (DeMatteo, 2014; Strohmaier et al., 2014). Youths also differentiated positive and negative motivations for sexting with positive being romantic interest and possible negative being pressure to sexts because of the fear of losing their significant other (especially among girls) (Van Ouytsel et al., 2016). Harris (2017) noted four multiple goals in sexting: relationship maintenance, flirting, sexual solicitation, and conversation. In the context of the multiple goals theory, the results of this study suggest that conversation, relationship maintenance, and flirting could be goals of consensual sexting, while sexual solicitation could be considered a goal of non-consensual sexting. Thus, consensual

sexual discussion with a partner, and a desire to be seen as playful and fun. On the other hand, non-consensual sexting can often be described by a desire to engage in risky offline and online sexual behaviour (to have sex, date, get the person in the mood to have sex later, or get the person to come over, etc.) (Harris, 2017).

Consistent with this research, previous studies have shown that adolescents reported more positive consequences of sexting (79.3%), such as feeling sexually aroused or improving their relationship with a romantic partner or love interest, while a smaller number of youths (20.7%) reported negative consequences, such as increased self-consciousness about their own bodies or unusual jealousy, while 2% of adolescents who sext reported that they had attempted suicide (Hudson & Marshall, 2017). Similar findings were made in a study by Strohmaier et al. (2014), who found that, by and large, adolescents experienced few negative consequences from sharing sexually explicit content. In addition, the authors reported that the most common negative consequences of sexting among adolescents were humiliation and reputation damage. Overall, sexting was significantly associated with cyber dating abuse and cybervictimization (Reyns et al., 2013; Van Ouytsel et al., 2016). Negative consequences have been noted more frequently for girls, who are often victims of cyberbullying or bullying when self-generated sexually explicit content is not shared consensually (Lippman & Campbell 2014; Walker et al., 2013). For example, Hudson & Marshall (2017) emphasized that all individuals involved in sexting (senders, recipients, and forwarders) may be at risk of negative social consequences.

The distinction of sexting consequences in this review into positive and negative can be viewed through the prism of the framework proposed by Dodaj & Sesar (2020), who consider sexting from both a normal (relational and reactive sexting) and a deviant perspective (forced and violent sexting) driven by different motivations. Relational and reactive (sending and receiving) sexting categories can be considered consensual sexting due to their intimate or fun and playful characteristics. Forced and violent sexting can be classified under the broader concept of nonconsensual sexting, as it takes place in a coercive and abusive context.

This review has several methodological limitations that should be noted. First, there are few mixed-method studies on sexting. This is one of the reasons that the data from the studies reviewed are heterogeneous and therefore difficult to compare. In addition, the relative inconsistency of the methods used in the articles reviewed made it difficult to conduct a meta-analysis, so a systematic review was conducted. In addition, only research published in a limited number of languages was included in this systematic review. Studies from a number of countries

were included in this review, with the exception of countries from Asia and South America. The aforementioned limitations may have resulted in relevant studies being overlooked. In addition, this review focused on adolescents and young adults, which also limited the number of published studies. Nevertheless, it provided valid and valuable data in terms of the age range of the sample. Regarding limitations related to qualitative findings, the only qualitative data available were those of the authors in the manuscript, which may not represent all qualitative data from the research (Luckett et al., 2013). However, this review highlights some important aspects of sexting research, including prevalence, consent, privacy, and outcomes. Notwithstanding the diversity of included research noted above, this review highlighted themes that were present in all included studies.

#### 5. Conclusions

Mixed methods are on the rise in research because methods can clearly influence what can and cannot be understood about a particular phenomenon. This review provides insights into the prevalence and nature of sexting based solely on the design of mixed-methods studies and will therefore be helpful and a valuable resource for conducting future sexting studies. Three interrelated themes were identified in the context of the qualitative and quantitative findings of the studies reviewed: the nature and extent of sexting, motivation for sexting and the consequences and outcomes of sexting. This systematic review calls for the use of mixedmethod study designs in sexting research in the future. The findings of this review highlight the importance of combining qualitative and quantitative data due to the comprehensive approach to sexting as a complex phenomenon. In this review, we have encountered several gaps in the literature that need to be addressed. The first is the inconsistent measurement of sexting in the studies reviewed. Thus, there is a need for a universal definition of sexting and a standardized measurement of sexting to provide more homogeneous and comparable research data for conducting future systematic reviews. In addition, more longitudinal mixed-method studies are needed to better understand the development of sexting among youths. Due to the lack of highquality studies based on a consistent methodology, informing policymakers and practitioners about evidence-based best practices in managing sexting is problematic. It would be beneficial to include youths at various stages of the future sexting research process to develop and implement age-appropriate intervention programs to reduce the negative psychological consequences of sexting.

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## **Conflict of Interest Statement**

The authors declare that the research was conducted in the absence of any potential conflict of interest.

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