

EXHIBIT 30

AUGUST 2024

Youth Perspectives on Online Safety, 2023

An annual report of youth attitudes and experiences

Research conducted by Thorn in partnership with BSG



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Acknowledgments

Understanding the complex intersection of technology and child sexual abuse empowers us to safeguard kids from the ever-evolving threats they face online. Without direct insights from kids who are encountering these issues every day, we risk falling behind in developing valuable resources for them to navigate the digital age safely.

Thank You

We are grateful to the kids who took the time to participate in our research. Without their gracious participation, we would not be able to share these key insights about self-generated child sexual abuse material and the hurdles to disclosure from online harms.

This report was commissioned and published by Thorn. Thorn is a 501c(3) organization with a mission to build technology to defend children from sexual abuse. For more information about Thorn, please visit our website: www.thorn.org. For inquiries about this research, please send an email to research@thorn.org.

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Suggested citation

Thorn. (2024). Youth Perspectives on Online Safety, 2023. Available at: https://info.thorn.org/hubfs/Research/Thorn_23_YouthMonitoring_Report.pdf

Introduction

Since 2019, Thorn has undertaken multiple research initiatives focused on better understanding the experiences, challenges, and risks that young people are facing in online spaces today. Thorn's past research with youth has investigated their attitudes and experiences with online grooming, sharing "nudes," nonconsensual reshares, as well as how they do – or do not – navigate attempts at disclosure of their online sexual experiences.

This report presents the latest year of data in Thorn's annual monitoring research and, where available, a look at how the data has changed over time. As we enter our fifth year of collecting data, we have streamlined the resulting report, focusing on three key areas:

- The **Annual Recap** elevates the key metrics that we track each year and compares the most recent survey data to prior years at a high level.
- The **Discussion** underscores two to three areas of interest whether that be emerging trends in the data set or topics that warrant deeper exploration.
- The **Appendix** provides supplemental data, including additional demographics not showcased in the main body of the report and a historical overview of year-over-year data collection.

It remains our hope that this ongoing research will elevate young people's experiences, support the qualified development of data-driven prevention strategies and interventions, and inspire more research into not only the risks kids may face online but also how they are currently attempting to navigate them with the tools they have available.

Discussion: At a glance

1. **Young people anticipate confronting risky situations online and they view platforms as an important part of helping them avoid and defend against threats should they arise.**
2. **Minors are navigating financial threats and offers in some online sexual interactions.**
3. **Generative AI technologies are being used by young people to create non-consensual explicit imagery ("deepfakes") of peers.**

Annual Monitoring Portfolio

Below is a complete list of reports that comprise our annual youth monitoring portfolio, categorized by year of data collection.

2019	2020	2021	2022	2023
● Thorn. (2020). Self-Generated Child Sexual Abuse Material: Attitudes and Experiences.	● Thorn. (2021). Responding to Online Threats: Minors' Perspectives on Disclosing, Reporting, and Blocking. ● Thorn. (2021). Self-Generated Child Sexual Abuse Material: Youth Attitudes and Experiences in 2020.	● Thorn. (2022). Self-Generated Child Sexual Abuse Material: Youth Attitudes and Experiences in 2021. ● Thorn. (2023). Responding to Online Threats: Minors' Perspectives on Disclosing, Reporting, and Blocking in 2021.	● Thorn. (2023). Youth Perspectives on Online Safety, 2022: an Annual Report of Youth Attitudes and Experiences.	● Thorn. (2024). Youth Perspectives on Online Safety, 2023

Methodology & Research Design

Research into youth experiences online continues to present unique challenges within an ever-changing digital environment. Survey authors have included here a brief discussion of some of these challenges and their corresponding mitigation strategies.

Challenges

CHALLENGE: The issues and risks associated with online child sexual exploitation exist within a dynamic online environment where the technologies and platforms intersecting with this issue area are in constant flux, as are the habits of the kids who use them.

Action: *This research relies on dynamic social research methodologies, which enable faster data collection and analysis to ensure it best reflects the current digital landscape. Because design limitations restrict the number of platforms shown to participants, this survey includes a diverse but non-exhaustive list of platforms, with top priority given to social platforms. The final list is informed by historical research, external reports, and expert consultation and is reevaluated for the needs of each individual survey.*

CHALLENGE: Attitudes towards sexuality vary widely across demographics.

Action: *This is a universal issue, but the way it impacts kids differs across demographics. This research aims to identify trends among kids overall, as well as within some significant subgroups – such as age and gender groups. A secondary objective was to get a broad*

understanding of how trends around this issue manifest differently across demographics. To this end, enhanced quotas were used in 2021, 2022, and 2023 to ensure large enough base sizes of 9-17-year-olds of color for analysis. Nevertheless, given sample size limitations, some of the data points within subgroups are more appropriately viewed as starting points.

CHALLENGE: Entrenched stigma and sensitivity surrounding the topic may lead to an undercounting of the scale and frequency.

Action: *Asking individuals – especially kids – to open up about a subject as delicate and personal as sharing nude images of themselves likely activates self-report bias, where participants lean into more socially desirable responses. It also requires the design of survey instruments that are safe and supportive. The sequence was important in our research instruments: each sensitive question was prefaced with a note acknowledging the potential difficulty of discussing the topic and reiterating the anonymity of the responses. Questions were also written in a manner that gave the space or permission for individuals to answer generally about “people they know” in lieu of exclusively asking respondents point-blank about their own online experiences. Resources for additional information and referrals for real-time support were highlighted in all survey instruments.*

Research Design

This research represents a continuation of Thorn's initial research, originally performed in 2019 and refielded annually thereafter. It presents the results of a quantitative survey tool to collect self-reported data from minors aged 9–17.¹

QUANTITATIVE ONLINE SURVEY

As in previous years, the research in 2023 was designed to identify and monitor changes in minors' behaviors and attitudes related to SG-CSAM and their perceptions and behaviors related to harmful online experiences compared to data collected in prior years.

In total, 1,040 minors from across the United States participated in an 18-minute online survey from November 3 to December 1, 2023. Specifically, sample makeup included:

- n=338 9–12-year-olds
- n=702 13–17-year-olds

As in 2021, the 2023 research cohort² incorporated an increased recruitment of minor participants who identified as persons of color. The subsequent racial and ethnic breakdown of participants in 2023 was:

- n=345: White
- n= 695: Persons of color (POC) (e.g., total respondents that identified as a racial or ethnic group other than "white")
 - n=297: African American/Black/Caribbean American
 - n=250: Hispanic or Latino

- n=240 Other POC
 - n=167: Asian or Pacific Islander
 - n=64: Native American or American Indian
 - n=3: Middle Eastern
 - n=13: Other

To ensure a representative sample nationwide, data was weighted to age, gender, race, and geography based on U.S. Census data.

Results and Reporting

Due to rounding, many of the figures included in this report may not have columns or rows that add up to exactly 100 percent. Some questions also featured multi-select response options, which have been noted.

Privacy and Safety

Ensuring the privacy and safety of those who chose to participate in this research was paramount. All participant responses were anonymized. Minor participants were recruited via existing youth panels or directly through caregivers at the time of this survey. Caregiver consent was required for minors' participation in youth panels, as well as for those minors recruited directly for the survey. In addition, help resources were provided to participants in the event they wanted to learn more about the topics discussed or needed professional support to talk about these issues.

¹ In the context of this report, and unless otherwise noted, the term "minors" is used to describe young people represented in the survey sample (9–17 year olds).

² Base sizes for racial and ethnic subgroups will not add up to the total base size of n=1,040 because some participants identified as multiple racial or ethnic identities.

ANNUAL RECAP

The Digital Landscape

Every year, minors report using a wide range of platforms, no matter the platform's intended user base or age verification tools and policies. Minors are participating in a dynamic digital landscape, and their engagement with different platforms varies year over year. As was the case in prior years, in 2023, minors surveyed reported using some platforms more frequently than others.³

In 2023, the top five platforms ever used by minors were YouTube (98%), TikTok (84%), Roblox (80%), Minecraft (78%), and Fortnite (73%) (Fig 1). The three platforms that showed the most notable increases in usage rates among minors in 2023 were GTA (+9%), Roblox (+8%), and Facebook (+5%) (Fig 1).

The five platforms with the highest daily usage rates were YouTube (83%), TikTok (64%), Snapchat (48%), Facebook (47%), and Instagram (45%) (Fig 2).

As has been the case in prior years, minors continued to report using applications designed for adult users (aged 18 or older) to foster romantic

or sexual experiences. In 2023, more than 1 in 6 (17%) minors reported they have used a dating app (e.g., Tinder, Grindr, Hinge, Bumble, or Tagged), and 1 in 6 (16%) reported they have used a pornography website (Fig 3). Similar to prior years, teens reported higher usage of these sites and applications than minors aged 9-12; likewise, boys reported higher usage than girls. Teens were 3x more likely to report having used a dating app than 9-12-year-olds and were also 3x more likely to report using a pornography site. It is notable that across ages, genders, and other major demographics, minors were more likely to report having used a dating app than having used a pornography site (Fig 3).

Use of secondary accounts⁴ (i.e., accounts designed to keep content private from some groups like caregivers or friends) decreased slightly (-6%) overall in 2023, with some variance across demographics. (Fig 4).

³ Platforms where data is not available (Fig 1, 2, and 7) are platforms added in subsequent surveys. For more detail on how platforms were selected for this survey, see the Methodology & Research Design section of this report.

⁴ Such as, but not limited to, "finstas" or "fake instagrams."

Fig 1 | Platform usage rates -
ever usedQ14B. How often do you use/
check/play each of the following?

	All Minors			Ages 9-12			Ages 13-17		
	2023	(+/-) from 2022	(+/-) from 2019	2023	(+/-) from 2022	(+/-) from 2019	2023	(+/-) from 2022	(+/-) from 2019
Amino	3%	-2	-	3%	-1	-	4%	-2	-
Among Us	50%	+1	-	55%	+3	-	46%	0	-
BeReal	14%	+3	-	12%	+6	-	16%	+1	-
Call of Duty	64%	+2	-	56%	0	-	71%	+5	-
Chatroulette	4%	-1	-	2%	-3	-	5%	0	-
Discord	48%	+2	+16	42%	+6	+19	53%	-2	+14
Emerald Chat	3%	-	-	3%	-	-	3%	-	-
Facebook	72%	+5	+17	59%	+6	+8	81%	+3	+23
Fortnite	73%	+2	+21	73%	+1	+13	74%	+5	+29
Google Hangouts/ Google Meet	47%	-2	+21	39%	+2	+18	53%	-6	+23
GTA	63%	+9	+16	56%	+8	+11	69%	+9	+21
Instagram	69%	0	+1	50%	-1	-6	83%	-1	+6
Kik	18%	-1	0	15%	+1	-3	20%	-2	+3
Live.me	6%	-2	-	4%	-1	-	8%	-3	-
Marco Polo	11%	0	-7	12%	+3	-11	10%	-2	-4
Messenger	72%	+4	+20	59%	-1	+8	82%	+7	+29
Minecraft	78%	-2	-	78%	-2	-	77%	-3	-
Monkey	4%	-2	-13	3%	0	-14	5%	-2	-11
Omege	14%	-1	-	10%	-1	-	17%	0	-
Reddit	44%	0	+12	36%	+6	+12	51%	-4	+13
Roblox	80%	+8	-	87%	+11	-	74%	+5	-
Signal	5%	-3	-7	5%	-1	-7	6%	-3	-6
Snapchat	72%	+4	+4	59%	+5	-2	81%	+1	+8
Telegram	20%	0	+7	16%	+1	+3	23%	0	+10
TikTok	84%	+2	+32	75%	+1	+20	91%	+3	+42
Tor/Onion Browser	6%	+1	-	4%	+1	-	7%	+1	-
Triller	5%	-3	-	4%	-3	-	7%	-3	-
Tumblr	31%	-5	+6	26%	0	+5	35%	-8	+7
Twitch	45%	+1	+15	40%	+5	+12	48%	-3	+16
WhatsApp	43%	-3	+16	34%	+1	+11	51%	-6	+21
Whisper	7%	0	-	5%	+1	-	8%	-1	-
Wink	5%	-3	-	4%	-2	-	6%	-3	-
Wishbone	4%	-2	-	2%	-3	-	5%	-2	-
Wizz	4%	-	-	2%	-	-	6%	-	-
X (Twitter)	49%	-3	+8	36%	+1	+8	59%	-7	+9
YouNow	5%	-2	-	6%	+1	-	4%	-4	-
YouTube	98%	0	+3	97%	0	+3	99%	0	+3
Yubo	4%	-2	-	4%	-1	-	4%	-2	-

Omege is no longer active as of
November 2023.

Fig 2 | Platform usage rates
- at least once per day

Q14B. How often do you use/
check/play each of the following?

	All Minors			Ages 9-12			Ages 13-17		
	2023	(+/-) from 2022	(+/-) from 2019	2023	(+/-) from 2022	(+/-) from 2019	2023	(+/-) from 2022	(+/-) from 2019
Amino	1%	0	-	1%	+1	+1	1%	-1	+1
Among Us	13%	+1	-	16%	+2	-	11%	0	-
BeReal	6%	+1	-	7%	+4	-	5%	-2	-
Call of Duty	24%	0	-	18%	-2	-	28%	+1	-
Chatroulette	1%	0	-	1%	0	-	1%	0	-
Discord	23%	0	+9	14%	-2	+4	29%	+1	+11
Emerald Chat	1%	-	-	1%	-	-	1%	-	-
Facebook	47%	+5	+18	35%	+6	+6	57%	+5	+28
Fortnite	29%	0	+6	26%	-7	-5	31%	+5	+15
Google Hangouts/ Google Meet	14%	-3	+6	9%	-2	+1	17%	-5	+8
GTA	24%	+6	+10	19%	+2	+4	27%	+7	+14
Instagram	45%	+1	-1	26%	-3	-8	59%	+2	+4
Kik	7%	+1	+2	6%	+2	-1	9%	+3	+6
Live.me	2%	-2	-	1%	-1	-	3%	-2	-
Marco Polo	3%	+1	0	4%	+2	0	3%	+1	0
Messenger	44%	+5	+17	32%	+2	+5	53%	+7	+27
Minecraft	31%	+2	-	35%	+2	-	27%	+1	-
Monkey	1%	0	-3	1%	0	-5	1%	-1	-2
Omegle	3%	-1	-	3%	-1	-	4%	-1	-
Reddit	12%	-2	+1	10%	+1	-2	14%	-4	+3
Roblox	43%	+7	-	56%	+9	-	33%	+5	-
Signal	2%	0	-3	1%	0	-2	2%	-1	-4
Snapchat	48%	+3	0	33%	+2	-8	59%	+4	+5
Telegram	9%	0	+5	6%	-2	+2	11%	+1	+7
TikTok	64%	+2	+34	50%	-6	+17	74%	+8	+46
Tor/Onion Browser	1%	-1	-	1%	-1	-	2%	0	-
Triller	2%	0	-	2%	0	-	2%	-1	-
Tumblr	8%	-3	-	6%	-4	-1	9%	-3	+1
Twitch	17%	0	+7	14%	0	+2	20%	0	+11
WhatsApp	19%	-1	+7	14%	0	+3	22%	-4	+8
Whisper	1%	-2	-	1%	-1	-	2%	-1	-
Wink	1%	-2	-	1%	-3	-	1%	-1	-
Wishbone	1%	0	-	0%	-1	-	2%	+1	-
Wizz	1%	-	-	0%	-	-	2%	-	-
X (Twitter)	19%	-6	+1	13%	-4	-1	24%	-7	+2
YouNow	1%	-1	-	1%	0	-	2%	0	-
YouTube	83%	0	+4	83%	-3	0	83%	+1	-1
Yubo	1%	0	-	1%	0	-	1%	-1	-

The remainder of the report focuses
only on platforms with base sizes above
n=100 for "ever used". Omegle is no
longer active as of November 2023.

Fig 3 | Dating and pornography site usage rates

QApps. Do you use any of the following dating or adult apps?

Any Dating App		(+/-) from 2022	(+/-) from 2020
All Minors	17%	-2	0
Ages 9-12	8%	-3	-13
Ages 13-17	23%	-1	+9

Only Fans		(+/-) from 2022	(+/-) from 2020
All Minors	10%	-2	-
Ages 9-12	4%	-4	-
Ages 13-17	15%	0	-

Pornography Site		(+/-) from 2022	(+/-) from 2020
All Minors	16%	-4	-
Ages 9-12	7%	-5	-
Ages 13-17	22%	-5	-

"Any dating app" includes participant selection for Tinder, Grindr, Bumble, Hinge, Tagged, or "Other". Tagged was not included in years prior to 2023. "Only Fans" and "Pornography Site" were not asked prior to 2022.

Fig 4 | Use of secondary accounts

Q17. Some people have a "finsta"— or multiple accounts on one social network so that they can share some stuff more privately. Across the social media platforms or apps that you use, do you have a second private account that allows you to share content without certain people such as your parents, family, or people at school seeing it?

		2023	(+/-) from 2022	(+/-) from 2019
All Minors	Yes	21%	-6	-2
	Prefer not to say	2%	-1	-9
	No	77%	+6	+11
Ages 9-12	Yes	14%	-4	0
	Prefer not to say	2%	+1	-9
	No	84%	+4	+9
Girls	Yes	18%	+3	+3
	Prefer not to say	2%	0	-8
	No	79%	-4	+4
Boys	Yes	10%	-11	-3
	Prefer not to say	2%	+1	-9
	No	88%	+10	+11
Ages 13-17	Yes	26%	-8	-3
	Prefer not to say	3%	0	-8
	No	71%	+8	+11
Girls	Yes	28%	-3	-10
	Prefer not to say	2%	-2	-8
	No	70%	+5	+18
Boys	Yes	23%	-11	+2
	Prefer not to say	3%	0	-10
	No	75%	+11	+8
LGBTQ+	Yes	36%	-7	-1
	Prefer not to say	4%	0	-12
	No	61%	+9	+15
Non-LGBTQ+	Yes	18%	-6	-1
	Prefer not to say	2%	0	-7
	No	80%	+7	+9
African American	Yes	26%	-3	+4
	Prefer not to say	1%	-2	-9
	No	73%	+5	+6
Hispanic/Latino	Yes	28%	-4	+5
	Prefer not to say	3%	-1	-12
	No	69%	+5	+7
Other POC	Yes	14%	-9	*-14
	Prefer not to say	5%	+1	*-7
	No	82%	+9	*+22
White	Yes	19%	-7	-2
	Prefer not to say	2%	0	-6
	No	79%	+7	+7

*Base size <100

Potentially Harmful Online Experiences

KEY METRICS

1 in 3

minors reported having an online sexual interaction.

More than

1 in 4

minors reports having an online sexual interaction with another minor. The same amount report online sexual interactions with adults.

1 in 5

9-12-year-olds reported having an online sexual interaction with someone they believed to be an adult.

More than

1 in 17

minors reported having personally experienced sextortion.

The internet creates both risks and rewards for minors: on the one hand, it can provide opportunities for connection, exploration, and education, but at the same time, it can expose minors to harm. In 2023, more than half (59%) of minors reported they had a potentially harmful online experience, and more than 1 in 3 (35%) minors reported they had an online sexual interaction (Fig 5).

In line with previous years, minors continue to report having online sexual interactions with adults and other minors at similar rates. In 2023, the same share of minors reported having had an online sexual interaction with someone they believed was younger than 18 (28%) as reported having had one with someone they believed was 18 or older (28%). Unsurprisingly, teens were more likely than younger minors to report having these experiences. Still, 1 in 5 (20%) 9-12-year-olds reported having an online sexual interaction with someone they believed to be an adult (Fig 6).

Understanding how often young people are having potentially harmful online sexual interactions is important, but we must also identify where these experiences are happening to develop effective solutions. This research analyzed where minors report having online sexual experiences in two different ways: (1) the share of all minors who have

had a given experience on a specific platform, and (2) the share of a platform's minor users who have had a given experience. The former helps inform where the greatest number of minors are having online sexual interactions, while the latter illustrates which platforms have the highest rate of these experiences among its minor users. In other words, more minors overall may have an online sexual interaction on some of the more widely used platforms. However, there may be a greater likelihood of users having an online sexual interaction on lesser-used platforms.

In 2023, the top platforms where the most minors reported having had an online sexual experience were Snapchat (16%), Instagram (14%), Messenger (13%), Facebook (12%), TikTok (11%), X (8%), and WhatsApp (8%) (Fig 7). However, when looking exclusively at minor platform users, the top five platforms with the highest rates of online sexual interactions were different. Minor platform users were most likely to indicate they had experienced an online sexual interaction on Omegle (36%), Kik (23%), Snapchat (23%), Telegram (22%), Instagram (20%), and Marco Polo (20%) (Fig 7). Notably, Omegle shut down after the fielding of the 2023 survey had begun.

While minor platform users generally reported fairly consistent rates of online sexual interactions with

users they believed to be adults from 2022 to 2023, minor users of Marco Polo were the most likely to report an increase (+5%) (Fig 7).

In 2023, a new question was added to the survey to assess the scale of sextortion among minors.⁵ Sextortion is the threat to leak explicit imagery depicting the victim if they do not comply with demands. Roughly 1 in 17 minors reported they had experienced sextortion (Fig 7A).

Minors who reported being victims of sextortion identified a range of threat types by perpetrators (Fig 7B). While this sample is small and thus should be treated as directional, participants identified demands such as returning to (or entering into) a relationship, engaging in sexual acts, sharing explicit imagery of themselves, peers, or siblings, and paying the extorter money.

Fig 5 | **Rates of potentially harmful online experiences among minors**

Q19B. Please indicate if you have ever experienced any of the following on a platform. Please select all that apply and remember that your answers are anonymous.

	All Minors			Ages 9-12			Ages 13-17		
	2023	(+/-) from 2022	(+/-) from 2020	2023	(+/-) from 2022	(+/-) from 2020	2023	(+/-) from 2022	(+/-) from 2020
Potentially harmful online experience	59%	+1	+11	52%	-3	+5	65%	+5	+16
Online sexual interaction	35%	+2	+2	25%	+3	-2	43%	+2	+6
...asked me to send a nude photo or video	23%	+3	+5	14%	+3	0	31%	+3	+11
...asked me to go 'on cam' with a nude or sexually explicit stream	13%	0	+1	8%	-2	0	17%	+2	+2
...shared a nude photo or video of themselves with me	14%	-1	-4	9%	+2	-4	19%	-3	-2
...shared a nude photo or video of another kid with me	8%	-1	-2	5%	-2	-4	11%	+1	-1
...sent me sexual messages	26%	+1	+5	18%	+3	+3	32%	-1	+6
Bullied/made uncomfortable online	52%	+1	+14	48%	0	+10	55%	+2	+17
...bullied me	41%	+4	+17	33%	-8	+5	46%	+12	+24
...made me feel uncomfortable	35%	-1	+8	37%	+9	+15	33%	-9	+3

Fig 6 | **Percentage of minors who have had an online sexual interaction with peers or adults**

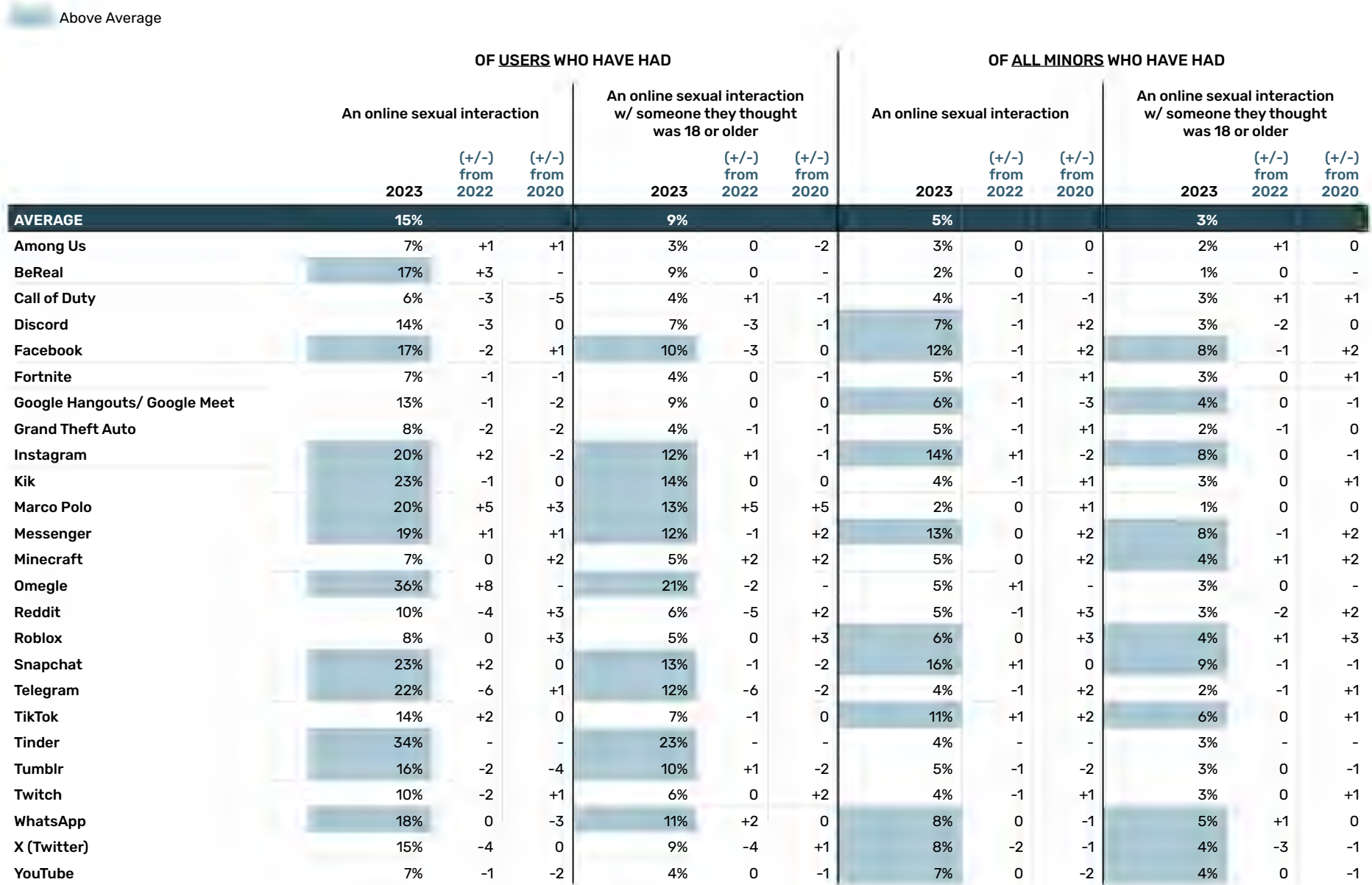
Q19B. Please indicate if you have ever experienced any of the following on a platform. Please select all that apply and remember that your answers are anonymous.

	Someone I believed was younger than 18...			Someone I believed was 18 or older...		
	2023	(+/-) from 2022	(+/-) from 2020	2023	(+/-) from 2022	(+/-) from 2020
All Minors	28%	+4	+5	28%	-1	+3
Ages 9-12	21%	+6	+2	20%	+1	+1
Ages 13-17	35%	+3	+8	35%	-2	+6

5 Thorn and National Center for Missing and Exploited Children (NCMEC). (2024). Trends in Financial Sextortion: An investigation of sextortion reports in NCMEC CyberTipline data.

Fig 7 | Online sexual interactions involving both peers and adults, by platform

Q20. For each of the following platforms, please indicate if you have ever experienced any of the following.



Averages in this chart are calculated from all platforms tested in the research and take into account the relative base sizes of each platform.

NEW**Fig 7A | Sextortion: Percentage of minors threatened to have their sexual images shared**

QB1. Has anyone ever threatened to show a sexual image of you to another person or post it online in order to make you do something? Note: By sexual image, we mean a picture or video (real or fake) that shows you nude, only partly clothed, or in a sexual pose.

	2023
Yes	6%
Prefer not to say	2%
No	93%

NEW**Fig 7B | Sextortion: What the sextorter demanded**

Among minors who have been threatened to have their nudes shared

QB2. Thinking of all the times this happened to you, what did the person threatening you want from you?

All Minors	2023
Make you do something else	*27%
Money	*26%
More sexual pictures or videos of you	*23%
Sexual pictures or videos of someone else (friend, sibling, others)	*23%
Make you stay in or go back to a relationship with them	*22%
Meet online (by webcam, for example)	*20%
Tell you to harm yourself	*17%
Meet you in person	*17%
Prefer not to answer	*14%

Question was multiple select. *Base size <100

SG-CSAM

KEY METRICS

1 in 7

minors have shared their own SG-CSAM.

Among minors who have shared their own SG-CSAM,

1 in 3

reported having done so with an adult.

1 in 4

minors agree that it is normal for people their age to share nudes with each other.

Roughly

1 in 8

minors know a friend who has received money or gifts in exchange for SG-CSAM.

Many minors' online sexual experiences involve receiving requests for and/or sharing nude content. In 2023, 1 in 7 (13%) minors reported they had shared a nude image or video of themselves with someone else, with slight shifts among individual demographic groups (Fig 8).

Among minors who reported having shared their own self-generated child sexual abuse material (SG-CSAM), there was a slight decrease (-9%) in those who indicated they had done so in the past year. However, the overall numbers obscure directional changes among girls and boys. Compared to 2022, fewer boys who reported having shared SG-CSAM reported having done so in the past year (-18%), but more girls reported having shared this content in 2023 (+11%) (Fig 9).

Overall, in 2023, minors' perception that it is normal for people their age to share nudes with each other was generally consistent with the year prior, with nearly 1 in 4 (23%) agreeing that it is normal (Fig 10). Encouragingly, from 2019 to 2023, there has been a general downward trend in minors reporting that it is normal for their peers to share nudes with each other, driven primarily by responses from teens.

Among minors who have shared SG-CSAM, the strong majority (83%) have shared with someone

who they know offline. However, still, nearly half (46%) reported having done so with someone they only knew online (Fig 11). Minors who had shared SG-CSAM were also more likely to do so with someone they believed to be under the age of 18 (69%) than with someone they believed to be an adult (34%) (Fig 12).

In 2023, based on emerging concerns about the commercialization of SG-CSAM,⁶ a new question was added to capture data on this phenomenon. While the majority of minors reported their friends had not experienced this, roughly 1 in 8 (13%) minors reported they had a friend who had received money or gifts in exchange for SG-CSAM, with another 7% who selected "prefer not to say" (Fig 12A).

In 2023, 15% of minors who have not shared their own SG-CSAM reported they had at least considered it (Fig 13). When asked a follow-up question about what influenced their decision, the leading consideration was fear of the image being leaked or shared and the harm or consequences that could come from that.

⁶ Thiel, David, et al. Stanford Internet Observatory. (2023). Cross-Platform Dynamics of Self-Generated CSAM. <https://stacks.stanford.edu/file/druid:jd797tp7663/20230606-sio-sg-csam-report.pdf>

"I know a few times where people in my school got hacked [sic] breakups that people are vengeful. I don't want to risk my stuff being out there like that. I think the people in my school send nudes to like their boyfriends or girlfriends but not to like strangers or anything."

CIS MALE, 15, AFRICAN AMERICAN/BLACK/ CARIBBEAN AMERICAN AND LATINO, MIDWEST

"I decided not to because I didn't want my photo to get leaked and my parents to find out. My sister did it once and the man ended up being an adult who tried to blackmail her."

CIS MALE, 17, LATINO, MIDWEST

Fig 8 | Experiences sharing SG-CSAM – Ever

Q40X: Have you ever sent or shared a nude photo or video of yourself either directly with someone else or with your social media followers?

	2023	(+/-) from 2022	(+/-) from 2019
All Minors	13%	-1	+2
Girls	13%	+2	+1
Boys	13%	-3	+4
Ages 9-12	8%	+2	+2
Girls	7%	+1	+4
Boys	8%	+1	+1
Ages 13-17	17%	-3	+2
Girls	17%	+1	-2
Boys	17%	-5	+6
LGBTQ+	25%	+1	+4
Non-LGBTQ+	11%	-1	+3
African American	10%	-4	-1
Hispanic/Latino	16%	+2	+5
Other POC	11%	-5	*-1
White	14%	0	+3

Numbers shown reflect the percentage of minors who reported they had shared their own nude imagery. *Base size <100

Fig 9 | Experiences sharing SG-CSAM in the past year

Among kids who have shared their own nudes

Q40XT: And have you sent or shared a nude photo or video of yourself either directly with someone else or with your social media followers in the past year?

	2023	(+/-) from 2022	(+/-) from 2021
All Minors	69%	-9	+1
Girls	*78%	*+11	*+20
Boys	*67%	*-18	-8

*Base size <100

Fig 10 | **Percentage of minors who agree sharing nudes with peers is normal**

Q40. How strongly do you agree with the following statement: "It's normal for people my age to share nudes with each other."

	2023	(+/-) from 2022	(+/-) from 2019
All Minors	23%	-1	-4
Girls	20%	+2	-6
Boys	24%	-5	-4
Ages 9-12	12%	-2	-1
Girls	11%	+4	+1
Boys	13%	-8	-3
Ages 13-17	31%	-1	-8
Girls	28%	0	-11
Boys	33%	-2	-5
LGBTQ+	34%	-7	-5
Non-LGBTQ+	20%	-2	-5
African American	18%	-7	-10
Hispanic/Latino	26%	-2	-4
Other POC	28%	+8	*+7
White	23%	-1	-4

Numbers shown reflect the net percentage of minors who selected they "strongly agree" or "somewhat agree." *Base size <100

Fig 11 | **Sharing nudes with someone you know vs. a stranger**

Among minors who've shared their own nudes

Q44. And had you met the person or people you shared this nude photo/video with in real life before you shared it?

	Had met the person(s) before			Had met some of the person(s) but not all			Had not met the person(s) before		
	2023	(+/-) from 2022	(+/-) from 2019	2023	(+/-) from 2022	(+/-) from 2019	2023	(+/-) from 2022	(+/-) from 2019
All Minors	54%	+6	-8	29%	-2	+2	17%	-4	+7
Ages 9-12	**48%	-	-	**26%	-	-	**26%	-	-
Ages 13-17	56%	+5	*-4	30%	0	*+2	14%	-4	*+3
LGBTQ+	**56%	**+14	**+5	**24%	**+6	**+18	**20%	**+8	**+13
Non-LGBTQ+	54%	+4	*-16	30%	-1	*+12	16%	-3	*+4
African American	**56%	**+16	**+22	**32%	**+7	**+21	**11%	**+24	**0
Hispanic/Latino	**46%	**+3	**+25	**36%	**+17	**+21	**18%	**+15	**+4
Other POC	-	-	-	-	-	-	-	-	-
White	*62%	*+9	*+11	*21%	*-12	*-19	*16%	*+2	*+7

Data for minors aged 9-12 and Other POC is not featured because all related data had a base size of <25. *Base size <100, **Base size <50

Fig 12 | **Perceived age of recipient**

Among minors who've shared their own nudes

Q46. Have you ever sent or shared nude photo(s)/video(s) of yourself with any of the following...?

	Someone aged 18 or older			Someone under the age of 18			Someone whose age you didn't know			Other		
	2023	(+/-) from 2022	(+/-) from 2020	2023	(+/-) from 2022	(+/-) from 2020	2023	(+/-) from 2022	(+/-) from 2020	2023	(+/-) from 2022	(+/-) from 2020
All Minors	34%	-2	-7	69%	+3	+12	26%	-2	-4	3%	-1	-1
Girls	*36%	*+12	*-5	*71%	*+4	*+3	*15%	*-11	*-11	*2%	*-6	*+1
Boys	*30%	*-9	-10	*65%	*-7	+18	*33%	*+3	-1	*4%	*+2	-2

Question was multiple select. Answer choice "Other" was included as an option for minors who might feel uncomfortable disclosing their perception of the age of the person(s) with whom they have shared SG-CSAM.

*Base size <100

NEWFig 12A | **Perceptions of friends trading nudes for gifts**

QB3. To the best of your knowledge, have any of your friends ever been given money or gifts by someone they only know online in exchange for nude photos/videos or an explicit live stream?

	Yes	Prefer not to say	No
All Minors	13%	7%	80%
Girls	13%	9%	78%
Boys	12%	7%	81%
Ages 9-12	11%	6%	84%
Girls	10%	7%	82%
Boys	11%	4%	85%
Ages 13-17	14%	9%	77%
Girls	16%	10%	75%
Boys	14%	9%	78%
LGBTQ+	18%	10%	71%
Non LGBTQ+	12%	7%	81%
African American	13%	8%	79%
Hispanic/Latino	13%	10%	77%
Other POC	13%	5%	82%
White	13%	7%	80%

Fig 13 | **Percentage of minors who considered sharing a nude, but chose not to**

Q41. Even though you have never shared a nude photo, have you ever considered doing so?

	2023	(+/-) from 2022	(+/-) from 2019
All Minors	15%	+2	+4
Girls	13%	-1	+2
Boys	15%	+3	+4

Numbers shown reflect percentage of minors who selected 'yes.'

Nonconsensual Resharing

KEY METRICS

Fewer than
1 in 10
minors reported having
nonconsensually reshared
SG-CSAM.

1 in 5
minors reported having seen
nonconsensually reshared
SG-CSAM.

1 in 8
minors, aged 9-12, reported
having seen nonconsensually
reshared SG-CSAM.

Roughly
1 in 3
exclusively or predominantly
blame the person in the image
rather than the resharer.

In 2023, 7% of minors reported having reshared someone else’s SG-CSAM (Fig 14). Notably, there was an increase in minors reporting having shared someone else’s imagery in 2022. In 2023, data returned to a rate similar to what had been seen in the years before 2022.

In 2023, nearly 1 in 5 (19%) minors reported they had seen nonconsensually reshared images of others, down 4% from the year prior and 2% overall from 2019 when this question was first asked (Fig 15).

Minors’ perceptions of blame in situations involving nonconsensually reshared SG-CSAM in 2023 also reflected consistency with past years; they were more likely to ultimately blame the resharer (62%) as

opposed to the person in the image. However, still, roughly 1 in 3 minors associated blame either solely or predominantly on the victim whose images were leaked (38%) (Fig 16).

In 2023, Thorn’s annual monitoring survey also asked about generative AI (GAI) being used by peers to create CSAM, including “deepfake” nude imagery of real children that can then be shared without their consent. The results found that the majority of minors do not believe their peers are using this technology to create explicit images of other kids. However, roughly 1 in 10 minors (11%) reported they knew of cases where their peers had done so, while another 10% reported they preferred not to answer (Fig 16A).

Fig 14 | Experiences resharing SG-CSAM

Q50. Have you ever shared a nude photo or video of someone else without that person’s knowledge online?

	2023	(+/-) from 2022	(+/-) from 2019
Yes	7%	-8	-2
Prefer not to say	1%	0	-6
No	92%	+8	+8

Fig 15 | **Experiences having seen nonconsensually reshared SG-CSAM**

Q49. Have you ever been shown or sent a nude photo or video of someone at your school or someone else your age in your community without that person's knowledge?

	All Minors			Ages 9-12			Ages 13-17		
	2023	(+/-) from 2022	(+/-) from 2019	2023	(+/-) from 2022	(+/-) from 2019	2023	(+/-) from 2022	(+/-) from 2019
Yes	19%	-4	-2	13%	-2	+2	24%	-5	-5
Prefer not to say	2%	0	-7	1%	0	-8	2%	-1	-7
No	79%	+4	+9	86%	+2	+6	74%	+6	+12

Fig 16 | **Perceptions of blame**

Q51. In your opinion, if a nude photo or video of someone gets out, who is to blame? // Q52. And if a nude photo or video of someone gets out, who is **most** to blame?

		2023	(+/-) from 2022	(+/-) from 2019
All Minors	Resharer's fault alone	51%	+3	+11
	Both (lean resharer)	11%	-1	0
	Both (lean person in photo)	10%	-3	-1
	Victim's fault alone	28%	+2	-10
Ages 9-12	Resharer's fault alone	51%	+2	+10
	Both (lean resharer)	13%	+1	+1
	Both (lean person in photo)	10%	-3	+1
	Victim's fault alone	27%	0	-11
Ages 13-17	Resharer's fault alone	52%	+4	+13
	Both (lean resharer)	10%	-3	-1
	Both (lean person in photo)	10%	-3	-2
	Victim's fault alone	28%	+2	-10

NEW

Fig 16A | **Perceptions of peers using AI to create CSAM**

QB4. To the best of your knowledge, have any of your friends or classmates ever used AI tools to generate nudes of other kids?

		2023
All Minors	Yes	11%
	Prefer not to say	10%
	No	80%

Responding to Online Risks

KEY METRICS

1 in 6

minors who experienced an online sexual interaction did not disclose their experience to anyone.

2x

Minors who have had an online sexual interaction were nearly twice as likely to use online reporting tools than to seek offline help.

In 2023, 1 in 6 (18%) minors who had an online sexual interaction indicated they had not disclosed their experience to anyone (Fig 17). Consistent with previous years, the leading rationales among those who did not disclose their online sexual experience were because they “felt [it] was not a big deal” (38%) and/or they “felt embarrassed and worried [about] being judged” (38%) (Fig 18).

As was the case in past years, in 2023, minors who have had an online sexual interaction and disclosed their experience were more likely to use online safety tools than they were to turn to offline support systems, such as a caregiver or a friend. Among minors who have had an online sexual interaction, they were nearly twice as likely to use online reporting tools (79%) than they were to seek offline help (46%) (Fig 19). There was almost no change in the share of minors who had an online sexual interaction who said they sought offline support, compared to 2022 (-1%) (Fig 19).

For minors who have had an online sexual interaction and have disclosed their experience, blocking tools remained the most commonly used online safety tool to respond to these situations (66%), while fewer of these minors indicated they

had used a reporting tool in response (41%, a decrease of 11%) (Fig 20).

But, while online tools remained the most widely used means of responding to online sexual interactions in 2023, it was also the case that minors reported greater trust in the advice and support from offline relationships than those made online. While 1 in 6 (17%) minors felt they could trust their online-only friendships, they were much more likely (63%) to trust friends they knew offline (Fig 21).

Like in years prior, when minors were asked what would increase their likelihood to use a platform’s reporting tool, more than 3 in 4 (77%) indicated anonymity in their report would make them more likely to engage with reporting tools (Fig 22). Approximately half of all minors indicated that they wanted more information from platforms about how to protect themselves online from both uncomfortable and risky sexual experiences, as well as how to block and report people, and overall 4 in 5 minors indicated they wanted the platforms they use to provide them with information or tools to navigate potentially harmful online experiences (Fig 23).

Fig 17 | **Percentage of minors who did not disclose their potentially harmful online experience**

Among minors who have had...

Q33. Earlier you indicated that you have experienced the following on a platform. For the scenarios you experienced, which of the following, if any, did you turn to for support?

	2023	(+/-) from 2022	(+/-) from 2020
... a potentially harmful online experience	19%	0	-5
... an online sexual interaction	18%	-1	-8

Numbers shown reflect the percentage of minors who selected "no one."

Fig 18 | **Reasons why minors did not disclose their potentially harmful online experience**

Among minors who turned to 'no one' for support who have had...

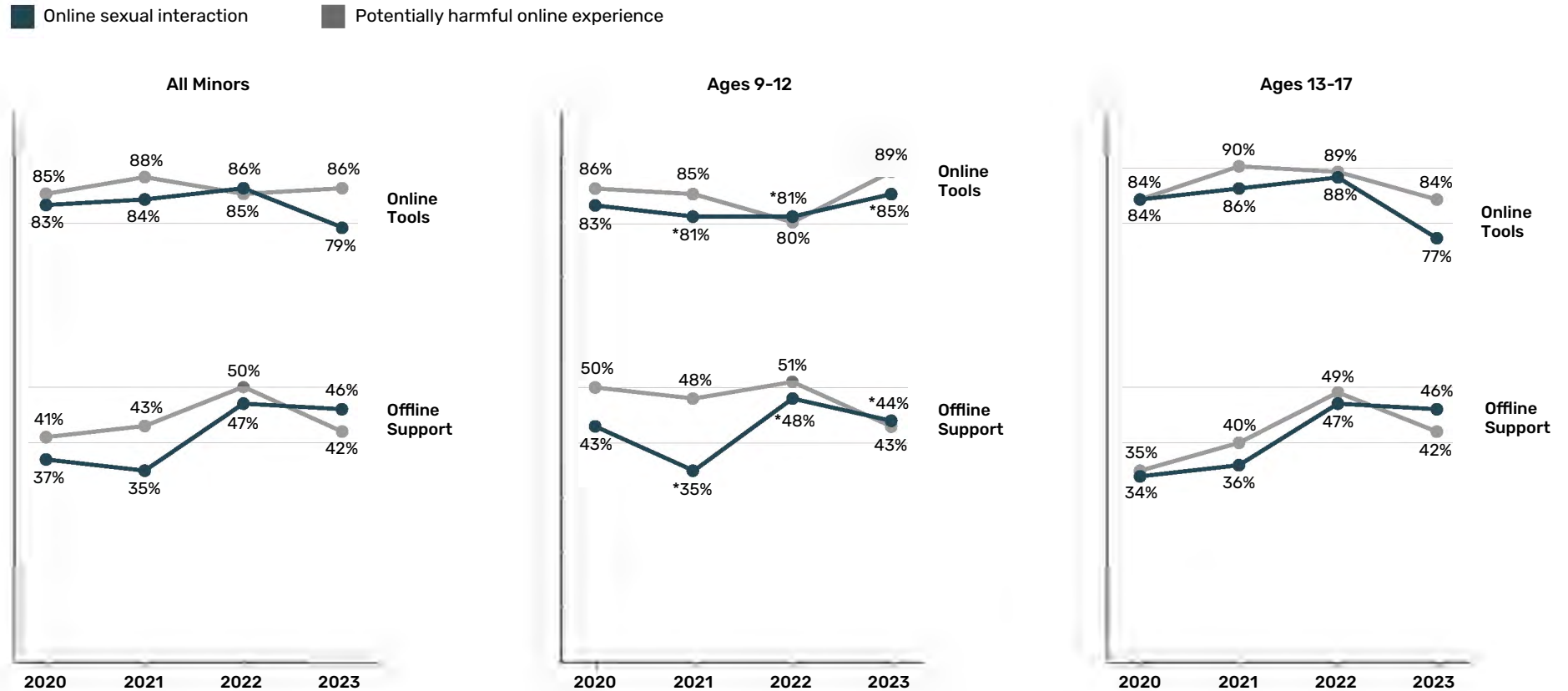
Q34. Which of the following describe why you did not look for additional support following experiences you have had on a platform?

	a potentially harmful online experience			an online sexual interaction		
	2023	(+/-) from 2022	(+/-) from 2020	2023	(+/-) from 2022	(+/-) from 2020
You felt this was not a big deal	43%	-11	-19	*38%	*-9	*-11
You felt embarrassed and worried of being judged	35%	+1	+12	*38%	*+3	*+21
You worried about being in trouble with your family	13%	-4	-6	*16%	*-5	*-10
You worried about not being allowed to use a platform	11%	-6	-4	*12%	*-2	*-7
You felt like you were to blame or partly to blame for the situation	10%	-7	-5	*11%	*-6	*-1
You worried your report would not be anonymous	8%	-5	-16	*4%	*-12	*-19
You worried about police or law enforcement getting involved	7%	-12	-8	*3%	*-17	*-16
You worried about losing friends	6%	-3	-2	*7%	*-2	*-2
You worried about getting bullied at school	4%	-7	-1	*4%	*-8	*+2
You worried about being in trouble with your school	3%	-6	-2	*5%	*-7	*-1

*Base size <100

Fig 19 | **Percentage of minors using online safety tools vs. seeking offline support**
Among minors who have had...

Q21A. You indicated that you have experienced the following. For each, when this happened to you, which of the following did you do in response?



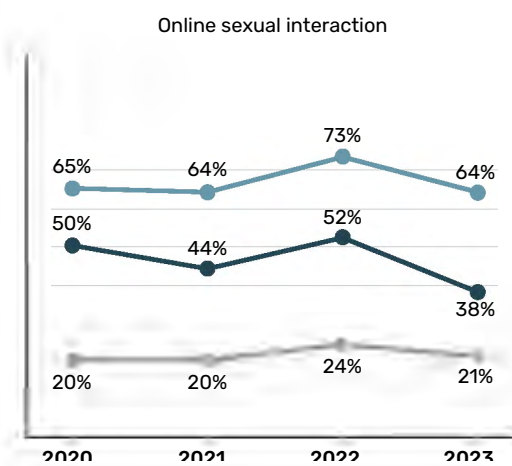
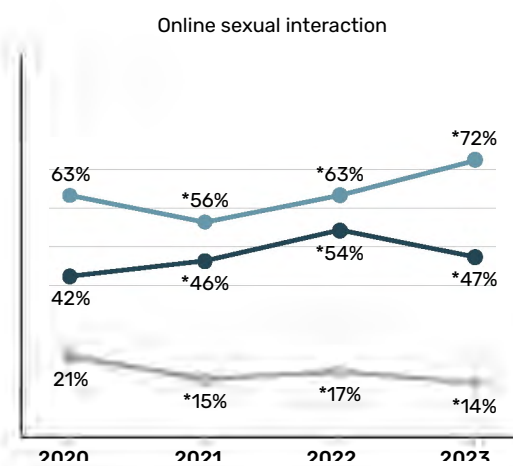
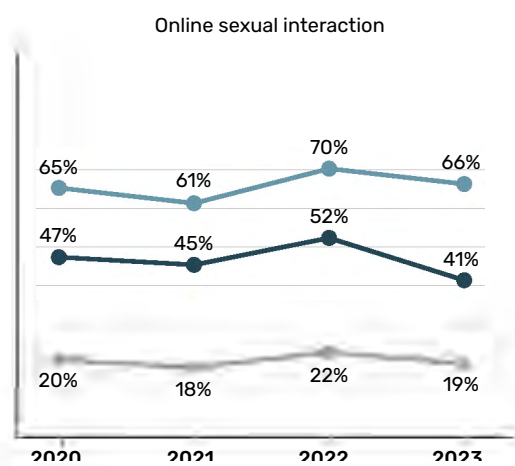
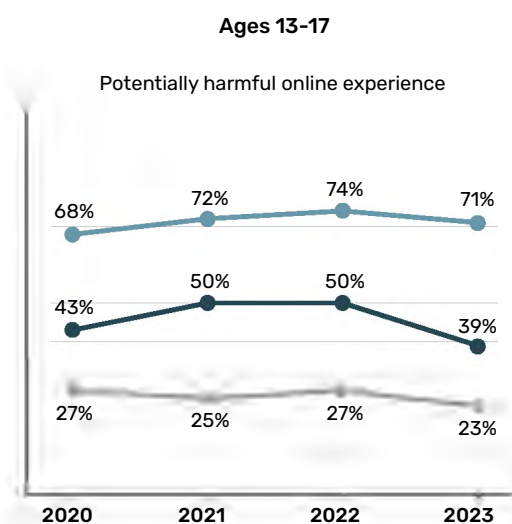
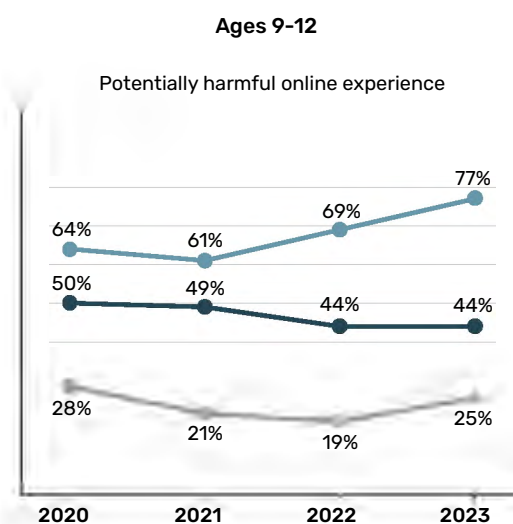
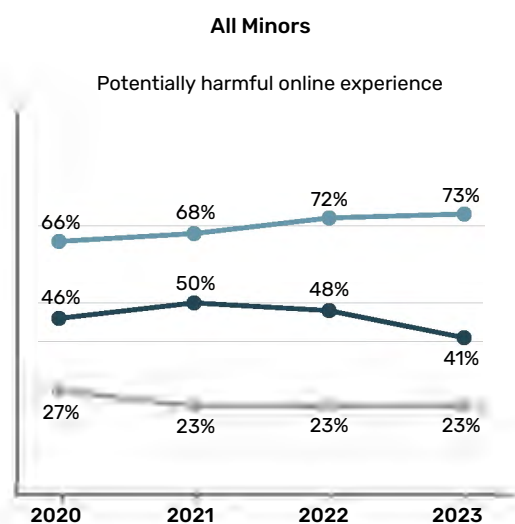
Question was multiple select. "Online tools" reflects the net percentage of minors who selected "Block the person," "Report the person to the platform," or "Mute the person." "Offline support" reflects the net percentage of minors who selected "Tell a friend what happened" or "Tell a parent, caregiver, or other trusted adult what happened." *Base size <100

Fig 20 | **Minors' use of online safety tools, by tool type**

Among minors who have had...

Q21A. You indicated that you have experienced the following. For each, when this happened to you, which of the following did you do in response?

Block Report Mute



Question was multiple select. *Base size <100

Fig 21 | **Who kids trust**

Q11. How much do you agree or disagree with each of the following statements?

Participants were asked to rate their level of agreement with the given statement on a scale of 1-7, with 1 being “completely disagree” and 7 being “completely agree”. Values shown represent the percentage of respondents who strongly agreed (i.e., net 6-7).

	I can trust my friends who I know in real life		I can trust my friends who I only know online	
	2022	2023	2022	2023
All Minors	64%	63%	22%	17%
Ages 9-12	62%	61%	22%	14%
Ages 13-17	65%	64%	22%	19%
LGBTQ+	62%	50%	30%	13%
Non-LGBTQ+	64%	66%	21%	18%
African American	57%	66%	23%	16%
Hispanic/Latino	64%	61%	24%	16%
Other POC	53%	62%	17%	17%
White	68%	62%	23%	17%

Fig 22 | **What makes minors more likely to use online reporting tools**

Q30. Regardless of the specific situation, if another user on a platform did something that made you feel uncomfortable or unsafe, would knowing the following make you more or less likely to report them to the platform?

Numbers reflect net percentage of minors who selected “much more likely” or “somewhat more likely.”

	2023	(+/-) from 2022	(+/-) from 2020
Report would be anonymous	77%	-1	+9
Report would be evaluated and responded to by a real human being who works for the platform	71%	+2	+3
Believe the person is lying about who they are or their identity in some way	68%	+1	+7
Only know the person online	62%	-4	+1
Report would go to an independent organization for review	56%	+2	+1
Know the person offline/in real life	40%	-2	0
Report would be evaluated and responded to by an artificial intelligence program or bot	40%	+2	+1
The reported user would know you were the one who reported them	33%	-1	-4
Possibility of being kicked off of the platform in response	33%	-1	-1

Fig 23 | **Desired platform resources and actions as expressed by minors**

Q32. Thinking about the platforms you use, would you want them to provide you with any of the following when you use the platform?

Question was multiple select.

	2022	2023
Information on how to report people	53%	52%
Information on how to block people	54%	51%
Information on how to protect yourself online from uncomfortable or risky sexual experiences	49%	45%
Tutorial videos on how to report or block someone	40%	35%
Pop-up messages that check in on how safe you feel on their platform	39%	39%
Support or counseling if you've had a bad experience on their platform	31%	30%
None of the above	17%	21%

Discussion

The value of digital life today for youth is undeniable, but so too are the ever-evolving risks kids face within their digital lives. It is essential that we understand the totality and nuance of the risks kids face online in order to develop systems that can protect them effectively.

Thorn's annual monitoring research is an enabler to that understanding; it facilitates the continued observation of the online sexual risk landscape over time. Since initiating data collection in 2019, some areas of concern have persisted, and some new concerns have emerged. As we continue to build and refine our understanding of this issue, these emerging insights illuminate some of the vulnerabilities we must work on to protect kids and provide direction in developing tools and systems to support them.

Young people anticipate confronting risky situations online and they view platforms as an important part of helping them avoid and defend against threats should they arise.

Online spaces provide valuable opportunities for young people to explore and connect, but they also pose very real risks. For many young people, potentially harmful online experiences have become an inevitable component of their digital lives. The majority of minors (59%) report they have had a potentially harmful online experience – a sustained increase from 2020 (+11%) – and roughly 1 in 3 (35%) report they have had an online sexual interaction (Fig 24).

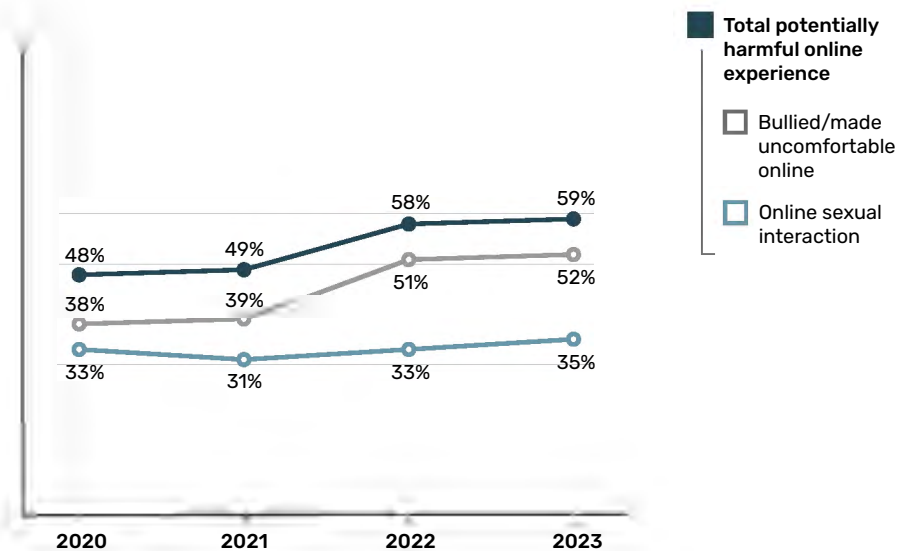
Several factors might contribute to a minor's decision not to take action when faced with a harmful online experience, and the increase in perceived normalcy of these encounters is one of them. Each year, when asked why they did not disclose their harmful online experience to anyone, the leading reason was that they "felt [it] was not a big deal" (Fig 18).

"This stuff happens all the time. Everyone would just think I was making a big deal out of nothing and ignore it anyway."

TRANSGENDER/NON-BINARY, 14, NATIVE AMERICAN OR AMERICAN INDIAN, MIDWEST

Fig 24 | **Rates of potentially harmful online experiences among minors over time**

Q19B. Please indicate if you have ever experienced any of the following on a platform. Please select all that apply and remember that your answers are anonymous.



“It wasn’t a huge deal at the time. It’s the internet. Unfortunately, it happens all the time.”

CIS MALE, 13, ASIAN OR PACIFIC ISLANDER, WEST

In the face of these risks, young people continue to look to online platforms to help them avoid and respond to potentially harmful online experiences, particularly those of a sexual nature. This opportunity and responsibility should not be neglected.

For kids who do choose to take action when navigating a sexual interaction online, platform safety tools such as blocking and reporting are the first line of defense. Minors consistently prefer online safety tools over offline support networks such as family or friends. Among these tools, blocking is strongly preferred over reporting by young people. While blocking can disrupt continued harassment for one minor, it does not trigger the content moderation protocols associated with reporting that

could result in removing a bad actor from the platform and stopping wider abuse that might be at work. Worryingly, reporting was at its lowest rate since data collection started in 2020 (Fig 20).

Despite a decrease in the use of reporting tools, young people remain interested in learning how to better leverage online safety tools to defend against such threats. In fact, roughly half report they want platforms to provide more information about online safety as well as how to report and block people (Fig 23).

Reporting and blocking systems need to be accessible, effective, and trusted for them to serve platform users, including young people, fully. Kids show us these are preferred tools in their online safety kit and are seeking more from platforms in how to use them. There is a clear opportunity to better support young people through these mechanisms.

Minors are navigating financial threats and offers in some online sexual interactions.

There is increasing worry about emerging commercial components in the production, spread, and weaponization of apparent SG-CSAM. This is taking different forms across young people’s experiences.

Reports of minors attempting to advertise and sell their own explicit imagery or live streams⁷ have highlighted the risks not only of minors being approached and offered money or gifts in exchange for their own material but also of cases wherein a minor has attempted to sell imagery of another minor.

In the 2023 survey, 1 in 8 (13%) minors reported they believed a friend had either been given money or gifts by someone they only knew online in exchange for SG-CSAM (Fig 12A).

A recent report from Thorn⁸ has also highlighted an increase in cases of financial sextortion against minors, where someone is threatened leveraging explicit images in exchange for payment. Sextortion is, sadly, not a new threat for young people;⁹ however, the increasing frequency of financially motivated sextortion signals an evolution in the tactics, motivations, and offender and victim profiles.

7 Thiel, David, et al. Stanford Internet Observatory. (2023). Cross-Platform Dynamics of Self-Generated CSAM. <https://stacks.stanford.edu/file/druid:jd797tp7663/20230606-sio-sg-csam-report.pdf>

8 Thorn and National Center for Missing and Exploited Children (NCMEC). (2024). Trends in Financial Sextortion: An investigation of sextortion reports in NCMEC CyberTipline data.

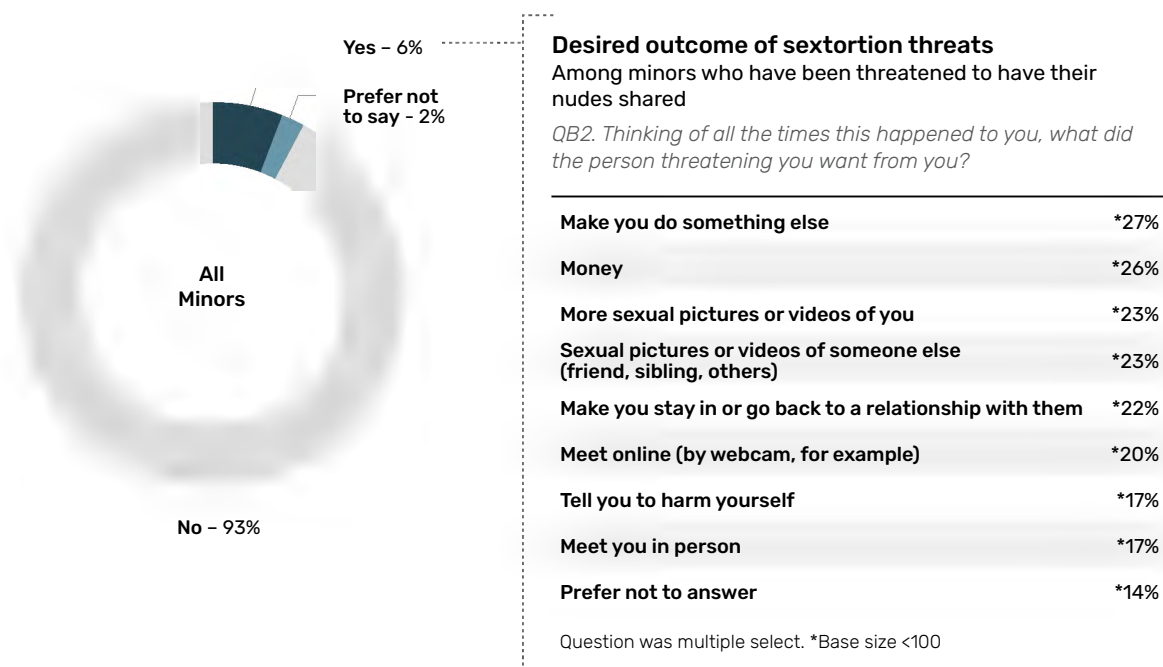
9 Thorn. (2017). Sextortion: Summary findings from a 2017 survey of 2,097 survivors. https://info.thorn.org/hubfs/Research/Sextortion_Wave2Report_121919.pdf

In the 2023 survey, 6% of minors reported someone had threatened to leak an explicit image depicting them if they did not comply with a threat, with teen girls the most likely to have experienced this (Fig 25). Among those who had experienced sextortion, roughly one-quarter reported the perpetrator demanded money as part of the sextortion.¹⁰

These findings point to areas of risk with limited research and limited public discussion. In both cases, additional attention is needed to better understand the pathways leading to these risks, the opportunities for interventions to combat abuse of technology for these purposes, and the best practices for data-driven safeguarding messaging to reduce the harms of these risks on young people.

Fig 25 | **Percentage of minors threatened to have their sexual images shared, by age and gender**

QB1. Has anyone ever threatened to show a sexual image of you to another person or post it online in order to make you do something? Note: By sexual image, we mean a picture or video (real or fake) that shows you nude, only partly clothed, or in a sexual pose.



Generative AI technologies are being used by young people to create nonconsensual explicit imagery (“deepfakes”) of peers.

As has been widely reported across both popular media¹¹ and by organizations working in the child-safety ecosystem¹², generative AI tools are being used to create CSAM. This adds another tool for perpetrators to create new and custom material, revictimizing survivors whose original abuse may already be known to investigators and offering means to create

highly realistic abuse imagery from benign sources such as school photos and social media posts.

The use of generative AI in the production of CSAM, whether from inception or in post-abuse modification, does not change that the

¹⁰ Base sizes for this data point were small and thus any findings should be considered directional.

¹¹ Singer, Natasha. “Teen Girls Confront an Epidemic of Deepfake Nudes in Schools.” 2024. <https://www.nytimes.com/2024/04/08/technology/deepfake-ai-nudes-westfield-high-school.html>

¹² NCMEC. “Generative AI CSAM is CSAM.” 2024. <https://www.missingkids.org/blog/2024/generative-ai-csam-is-csam>

resulting photos are still child sexual abuse material and pose significant harm to the minors depicted in and threatened with the images.¹³

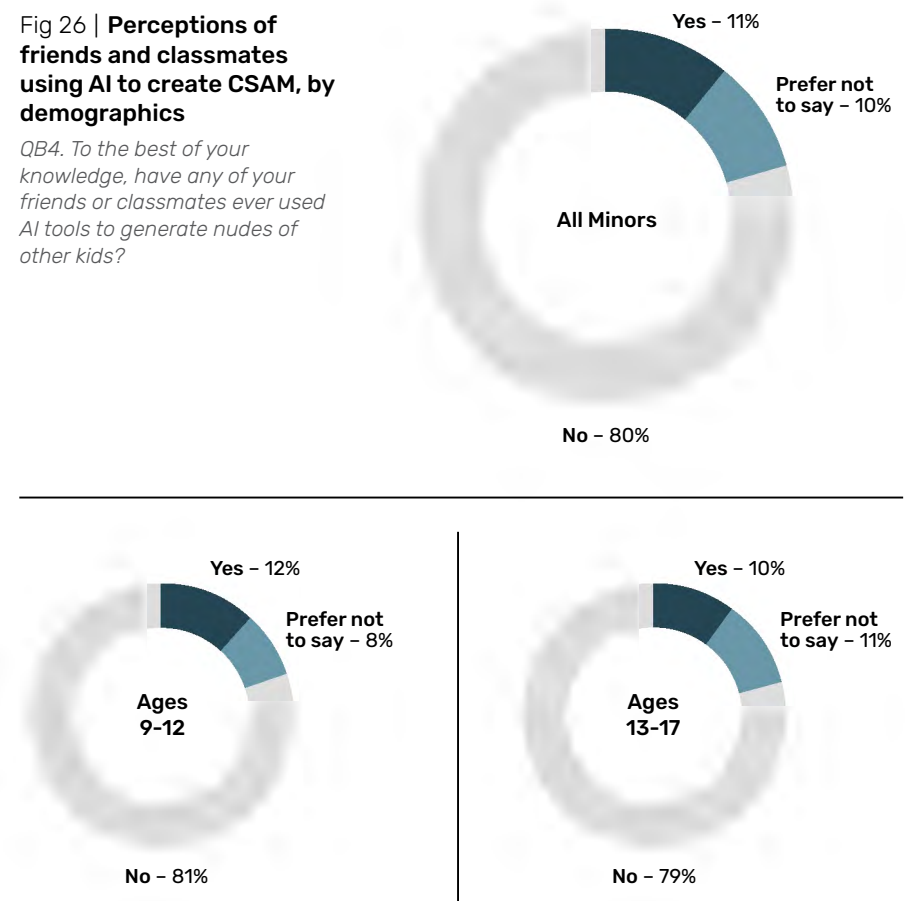
In 2023, Thorn's annual monitoring survey asked minors about their experiences with generative AI being used to create CSAM. One in ten minors reported that their friends or classmates had used AI tools to generate nudes of other kids (Fig 26).

While the motivation behind these events is more likely driven by adolescents acting out than an intent to sexually abuse, the resulting harms to victims are real and should not be minimized in attempts to wave off responsibility.

Significant work is needed within the tech industry to address the risks posed by generative AI technologies to children. However, that work is not a gatekeeper to addressing the behaviors surrounding these harms. While the technology may be new, peer-based bullying, harassment, and abuse are not. It is critical that we speak proactively and directly about the harms caused by "deepfake nudes" and reinforce a clear understanding of what conduct is unacceptable in our communities and schools, regardless of the technology being used.

Fig 26 | Perceptions of friends and classmates using AI to create CSAM, by demographics

QB4. To the best of your knowledge, have any of your friends or classmates ever used AI tools to generate nudes of other kids?



Today's digital world is rapidly changing, presenting new and sometimes unexpected challenges for young people as they explore and grow. It's important for us to continue developing strategies that prioritize creating safe digital environments and implementing effective safeguarding measures. These strategies should be informed by the experiences and perspectives of young people themselves, ensuring they are relevant and impactful in addressing their needs and concerns.

13 Thiel, David, et al. Stanford Internet Observatory and Thorn. (2023). Generative ML and CSAM: Implications and Mitigations. <https://stacks.stanford.edu/file/druid:jv206yg3793/20230624-sio-cg-csam-report.pdf>

Annex

The data provided in this section supplements the report's data. These tables include more detailed views, including year-to-year results and additional demographic groups.

Fig a-01 | Platform usage rates, by year – ever used

Q14B. How often do you use/check/play each of the following?

	All Minors					Ages 9-12					Ages 13-17				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Amino	-	10%	6%	5%	3%	-	8%	4%	4%	3%	-	11%	7%	6%	4%
Among Us	-	43%	43%	49%	50%	-	23%	44%	52%	55%	-	59%	42%	46%	46%
BeReal	-	-	-	11%	14%	-	-	-	6%	12%	-	-	-	15%	16%
Call of Duty	-	48%	52%	62%	64%	-	45%	48%	56%	56%	-	51%	55%	66%	71%
Chatroulette	-	-	4%	5%	4%	-	-	5%	5%	2%	-	-	4%	5%	5%
Discord	32%	34%	34%	46%	48%	23%	20%	24%	36%	42%	39%	45%	43%	55%	53%
Emerald Chat	-	-	-	-	3%	-	-	-	-	3%	-	-	-	-	3%
Facebook	55%	62%	61%	67%	72%	51%	66%	52%	53%	59%	58%	60%	67%	78%	81%
Fortnite	52%	47%	57%	71%	73%	60%	47%	61%	72%	73%	45%	47%	54%	69%	74%
Google Hangouts/ Google Meet	26%	64%	51%	49%	47%	21%	63%	47%	37%	39%	30%	65%	54%	59%	53%
GTA	47%	39%	44%	54%	63%	45%	36%	40%	48%	56%	48%	42%	47%	60%	69%
Instagram	68%	76%	66%	69%	69%	56%	65%	49%	51%	50%	77%	85%	79%	84%	83%
Kik	18%	14%	13%	19%	18%	18%	11%	10%	14%	15%	17%	16%	15%	22%	20%
Live.me	-	-	7%	8%	6%	-	-	6%	5%	4%	-	-	7%	11%	8%
Marco Polo	18%	10%	10%	11%	11%	23%	12%	11%	9%	12%	14%	8%	9%	12%	10%
Messenger	52%	62%	64%	68%	72%	51%	69%	61%	60%	59%	53%	56%	66%	75%	82%
Minecraft	-	62%	71%	80%	78%	-	57%	72%	80%	78%	-	65%	70%	80%	77%
Monkey	17%	7%	6%	6%	4%	17%	7%	6%	3%	3%	16%	8%	6%	7%	5%
Omegle	-	-	13%	15%	14%	-	-	9%	11%	10%	-	-	17%	17%	17%
Reddit	32%	32%	34%	44%	44%	24%	20%	26%	30%	36%	38%	41%	41%	55%	51%
Roblox	-	47%	59%	72%	80%	-	42%	66%	76%	87%	-	50%	54%	69%	74%
Signal	12%	2%	5%	8%	5%	12%	3%	6%	6%	5%	12%	2%	5%	9%	6%
Snapchat	68%	71%	68%	68%	72%	61%	67%	58%	54%	59%	73%	74%	77%	80%	81%
Telegram	13%	11%	13%	20%	20%	13%	17%	13%	15%	16%	13%	7%	14%	23%	23%
TikTok	52%	69%	75%	82%	84%	55%	66%	69%	74%	75%	49%	71%	80%	88%	91%
Tor/Onion Browser	-	-	-	5%	6%	-	-	-	3%	4%	-	-	-	6%	7%
Triller	-	7%	6%	8%	5%	-	8%	5%	7%	4%	-	7%	7%	10%	7%
Tumblr	25%	40%	34%	36%	31%	21%	45%	27%	26%	26%	28%	36%	39%	43%	35%
Twitch	30%	36%	33%	44%	45%	28%	30%	25%	35%	40%	32%	41%	39%	51%	48%
WhatsApp	27%	47%	44%	46%	43%	23%	55%	39%	33%	34%	30%	40%	47%	57%	51%
Whisper	-	4%	5%	7%	7%	-	5%	5%	4%	5%	-	4%	4%	9%	8%
Wink	-	5%	5%	8%	5%	-	6%	6%	6%	4%	-	5%	4%	9%	6%
Wishbone	-	-	7%	6%	4%	-	-	5%	5%	2%	-	-	8%	7%	5%
Wizz	-	-	-	-	4%	-	-	-	-	2%	-	-	-	-	6%
X (Twitter)	41%	59%	51%	52%	49%	28%	56%	39%	35%	36%	50%	62%	61%	66%	59%
YouNow	-	7%	6%	7%	5%	-	10%	6%	5%	6%	-	5%	5%	8%	4%
YouTube	95%	97%	98%	98%	98%	94%	98%	97%	97%	97%	96%	97%	98%	99%	99%
Yubo	-	-	7%	6%	4%	-	-	5%	5%	4%	-	-	9%	6%	4%

Fig a-02 | Platform usage rates, by year – at least once per day

Q14B. How often do you use/check/play each of the following?

	All Minors					Ages 9-12					Ages 13-17				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Amino	-	3%	2%	1%	1%	-	4%	2%	0%	1%	-	3%	2%	2%	1%
Among Us	-	23%	10%	12%	13%	-	13%	13%	14%	16%	-	31%	7%	11%	11%
BeReal	-	-	-	5%	6%	-	-	-	3%	7%	-	-	-	7%	5%
Call of Duty	-	18%	15%	24%	24%	-	20%	14%	20%	18%	-	16%	15%	27%	28%
Chatroulette	-	-	1%	1%	1%	-	-	1%	1%	1%	-	-	1%	1%	1%
Discord	14%	19%	17%	23%	23%	10%	12%	12%	16%	14%	18%	25%	20%	28%	29%
Emerald Chat	-	-	-	-	1%	-	-	-	-	1%	-	-	-	-	1%
Facebook	29%	36%	36%	42%	47%	29%	45%	32%	29%	35%	29%	28%	39%	52%	57%
Fortnite	23%	17%	19%	29%	29%	31%	22%	23%	33%	26%	16%	13%	16%	26%	31%
Google Hangouts/ Google Meet	8%	33%	17%	17%	14%	8%	36%	16%	11%	9%	9%	30%	18%	22%	17%
GTA	14%	12%	12%	18%	24%	15%	14%	11%	17%	19%	13%	11%	13%	20%	27%
Instagram	46%	50%	42%	44%	45%	34%	40%	26%	29%	26%	55%	59%	55%	57%	59%
Kik	5%	4%	3%	6%	7%	7%	5%	3%	4%	6%	3%	3%	3%	6%	9%
Live.me	-	-	2%	4%	2%	-	-	2%	2%	1%	-	-	2%	5%	3%
Marco Polo	3%	2%	3%	2%	3%	4%	3%	4%	2%	4%	3%	1%	3%	2%	3%
Messenger	27%	32%	34%	39%	44%	27%	38%	32%	30%	32%	26%	27%	36%	46%	53%
Minecraft	-	20%	25%	29%	31%	-	23%	30%	33%	35%	-	17%	21%	26%	27%
Monkey	4%	2%	2%	1%	1%	6%	2%	3%	1%	1%	3%	2%	2%	2%	1%
Omegle	-	-	4%	4%	3%	-	-	4%	4%	3%	-	-	4%	5%	4%
Reddit	11%	10%	10%	14%	12%	12%	8%	9%	9%	10%	11%	12%	10%	18%	14%
Roblox	-	17%	25%	36%	43%	-	22%	35%	47%	56%	-	13%	17%	28%	33%
Signal	5%	1%	2%	2%	2%	3%	2%	3%	1%	1%	6%	1%	2%	3%	2%
Snapchat	48%	47%	42%	45%	48%	41%	40%	29%	31%	33%	54%	52%	52%	55%	59%
Telegram	4%	6%	6%	9%	9%	4%	10%	5%	8%	6%	4%	3%	7%	10%	11%
TikTok	30%	45%	53%	62%	64%	33%	41%	45%	56%	50%	28%	49%	59%	66%	74%
Tor/Onion Browser	-	-	-	2%	1%	-	-	-	2%	1%	-	-	-	2%	2%
Triller	-	2%	3%	2%	2%	-	2%	2%	2%	2%	-	2%	3%	3%	2%
Tumblr	8%	13%	11%	11%	8%	7%	18%	10%	10%	6%	8%	9%	12%	12%	9%
Twitch	10%	14%	10%	17%	17%	12%	14%	7%	14%	14%	9%	14%	11%	20%	20%
WhatsApp	12%	26%	20%	20%	19%	11%	39%	20%	14%	14%	14%	16%	20%	26%	22%
Whisper	-	1%	2%	3%	1%	-	1%	3%	2%	1%	-	1%	2%	3%	2%
Wink	-	2%	2%	3%	1%	-	2%	2%	4%	1%	-	2%	2%	2%	1%
Wishbone	-	-	2%	1%	1%	-	-	2%	1%	0%	-	-	2%	1%	2%
Wizz	-	-	-	-	1%	-	-	-	-	0%	-	-	-	-	2%
X (Twitter)	18%	28%	24%	25%	19%	14%	30%	19%	17%	13%	22%	27%	29%	31%	24%
YouNow	-	3%	2%	2%	1%	-	5%	2%	1%	1%	-	1%	1%	2%	2%
YouTube	79%	80%	79%	83%	83%	79%	78%	78%	84%	83%	78%	81%	79%	82%	83%
Yubo	-	-	2%	1%	1%	-	-	2%	1%	1%	-	-	2%	2%	1%

Fig a-03 | Platform usage rates among minors with SG-CSAM experiences - at least once per day

Q14B. How often do you use/check/play each of the following?

	2020			2021			2022			2023		
	Shared	Shown	Reshared	Shared	Shown	Reshared	Shared	Shown	Reshared	Shared	Shown	Reshared
Amino	2%	3%	*2%	5%	5%	9%	5%	2%	4%	6%	3%	*1%
Among Us	21%	33%	*21%	14%	14%	11%	13%	11%	14%	18%	14%	*16%
BeReal	-	-	-	-	-	-	7%	7%	7%	15%	11%	*10%
Byte	2%	2%	*3%	7%	3%	9%	7%	5%	7%	-	-	-
Call of Duty	22%	23%	*26%	19%	19%	17%	42%	33%	37%	42%	29%	*35%
Chatroulette	-	-	-	7%	6%	11%	3%	1%	3%	5%	3%	*5%
Discord	19%	22%	*19%	19%	24%	21%	40%	28%	34%	36%	32%	*31%
Emerald Chat	-	-	-	-	-	-	-	-	-	3%	3%	*2%
Facebook	50%	45%	*62%	62%	53%	68%	67%	53%	56%	71%	65%	*55%
Fortnite	14%	20%	*18%	18%	20%	20%	35%	31%	33%	41%	33%	*37%
Google Hangouts/ Google Meet	44%	45%	*60%	40%	29%	53%	34%	24%	26%	20%	16%	*20%
Grand Theft Auto	21%	22%	*23%	16%	14%	17%	33%	26%	26%	30%	27%	*42%
Instagram	65%	67%	*71%	65%	62%	64%	74%	58%	56%	75%	68%	*42%
Kik	7%	6%	*7%	8%	6%	11%	12%	12%	10%	14%	15%	*12%
Live.me	-	-	-	6%	4%	8%	6%	5%	6%	5%	5%	*2%
Marco Polo	6%	3%	*7%	10%	6%	12%	3%	1%	4%	6%	6%	*8%
Messenger	47%	40%	*63%	61%	50%	69%	66%	52%	54%	62%	60%	*52%
Minecraft	14%	19%	*11%	23%	17%	25%	32%	27%	38%	39%	32%	*34%
Monkey	4%	3%	*4%	5%	6%	9%	5%	2%	3%	6%	3%	*5%
Omegele	-	-	-	12%	10%	18%	8%	6%	5%	7%	6%	*8%
OnlyFans	4%	4%	*4%	11%	9%	15%	-	-	-	-	-	-
Reddit	18%	17%	*24%	16%	13%	18%	34%	23%	26%	28%	20%	*15%
Roblox	10%	16%	*20%	16%	19%	13%	34%	30%	38%	49%	43%	*28%
Signal	4%	1%	*3%	7%	5%	13%	8%	4%	4%	7%	5%	*4%
Slack	3%	3%	*5%	9%	5%	12%	-	-	-	-	-	-
Snapchat	71%	64%	*72%	62%	61%	64%	65%	60%	55%	65%	67%	*52%
Tagged	3%	2%	*3%	6%	4%	11%	6%	4%	3%	-	-	-
Telegram	12%	7%	*11%	15%	11%	21%	25%	18%	23%	25%	15%	*20%
TikTok	60%	58%	*62%	66%	72%	70%	77%	70%	70%	82%	76%	*66%
Tor/Onion Browser	-	-	-	-	-	-	7%	4%	7%	8%	4%	*5%
Triller	7%	3%	*6%	10%	8%	12%	6%	4%	7%	8%	7%	*8%
Tumblr	26%	18%	*37%	36%	24%	51%	26%	17%	24%	23%	10%	*16%
Twitch	20%	25%	*21%	15%	14%	16%	35%	24%	28%	36%	29%	*19%
VSCO	7%	7%	*6%	9%	8%	14%	8%	5%	5%	-	-	-
WhatsApp	39%	30%	*53%	45%	35%	53%	50%	29%	35%	43%	32%	*27%
Whisper	3%	4%	*6%	8%	8%	15%	8%	4%	6%	5%	3%	*4%
Wickr	-	-	-	6%	4%	9%	4%	3%	5%	-	-	-
Wink	5%	4%	*3%	6%	5%	9%	8%	4%	9%	2%	2%	*2%
Wishbone	-	-	-	5%	3%	9%	2%	1%	4%	3%	2%	*2%
Wizz	-	-	-	-	-	-	-	-	-	3%	3%	*4%
X (Twitter)	41%	33%	*53%	55%	45%	62%	48%	34%	38%	44%	28%	*26%
YouNow	3%	4%	*9%	11%	7%	17%	4%	3%	6%	5%	4%	*4%
YouTube	78%	85%	*88%	75%	78%	72%	82%	80%	82%	89%	85%	*87%
Yubo	-	-	-	7%	5%	12%	5%	2%	6%	5%	3%	*4%

*Base size <100

Fig a-04 | **Dating app and pornography site usage rates, by year**

QApps. Do you use any of the following dating or adult apps?

	Any Dating App				Only Fans		Pornography Site	
	2020	2021	2022	2023	2022	2023	2022	2023
All Minors	17%	22%	19%	17%	12%	10%	20%	16%
Girls	11%	16%	12%	15%	6%	8%	12%	12%
Boys	23%	28%	25%	17%	18%	12%	28%	18%
Ages 9-12	21%	21%	11%	8%	8%	4%	12%	7%
Girls	14%	18%	3%	6%	3%	3%	6%	6%
Boys	27%	24%	19%	9%	14%	4%	17%	8%
Ages 13-17	14%	22%	24%	23%	15%	15%	27%	22%
Girls	9%	14%	19%	22%	9%	11%	16%	17%
Boys	19%	31%	30%	24%	22%	17%	37%	26%
LGBTQ+	19%	22%	21%	25%	12%	16%	31%	28%
Non LGBTQ+	17%	22%	19%	15%	12%	9%	19%	13%
African American	18%	28%	21%	14%	13%	8%	21%	15%
Hispanic / Latino	15%	33%	19%	17%	10%	12%	23%	19%
Other POC	11%	11%	9%	20%	8%	11%	16%	19%
White	20%	17%	21%	16%	14%	10%	21%	14%

"Any dating app" includes participant selection for Tinder, Grindr, Bumble, Hinge, Tagged, or "Other". Tagged was not included in years prior to 2023. "Only Fans" and "Pornography Site" were not asked prior to 2022.

Fig a-05 | Use of secondary accounts, by year

Q17. Some people have a “finsta”— or multiple accounts on one social network so that they can share some stuff more privately. Across the social media platforms or apps that you use, do you have a second private account that allows you to share content without certain people such as your parents, family, or people at school seeing it?

		2019	2020	2021	2022	2023
All Minors	Yes	23%	27%	22%	27%	21%
	Prefer not to say	11%	7%	6%	3%	2%
	No	66%	66%	72%	71%	77%
Ages 9-12	Yes	14%	25%	16%	18%	14%
	Prefer not to say	11%	2%	3%	1%	2%
	No	75%	73%	81%	80%	84%
Girls	Yes	15%	21%	16%	15%	18%
	Prefer not to say	10%	1%	4%	2%	2%
	No	75%	78%	80%	83%	79%
Boys	Yes	13%	28%	16%	21%	10%
	Prefer not to say	11%	4%	2%	1%	2%
	No	77%	68%	82%	78%	88%
Ages 13-17	Yes	29%	30%	27%	34%	26%
	Prefer not to say	11%	11%	8%	3%	3%
	No	60%	60%	65%	63%	71%
Girls	Yes	38%	32%	25%	31%	28%
	Prefer not to say	10%	10%	9%	4%	2%
	No	52%	58%	67%	65%	70%
Boys	Yes	21%	27%	28%	34%	23%
	Prefer not to say	13%	10%	6%	3%	3%
	No	67%	63%	65%	64%	75%
LGBTQ+	Yes	37%	36%	28%	43%	36%
	Prefer not to say	16%	9%	11%	4%	4%
	No	46%	55%	61%	52%	61%
Non-LGBTQ+	Yes	19%	25%	20%	24%	18%
	Prefer not to say	9%	5%	4%	2%	2%
	No	71%	69%	75%	73%	80%
African American	Yes	22%	28%	24%	29%	26%
	Prefer not to say	10%	5%	2%	3%	1%
	No	67%	66%	74%	68%	73%
Hispanic/Latino	Yes	23%	29%	29%	32%	28%
	Prefer not to say	15%	5%	7%	4%	3%
	No	62%	66%	65%	64%	69%
Other POC	Yes	*28%	29%	22%	23%	14%
	Prefer not to say	*12%	11%	6%	4%	5%
	No	*60%	60%	72%	73%	82%
White	Yes	21%	26%	18%	26%	19%
	Prefer not to say	8%	7%	6%	2%	2%
	No	72%	66%	76%	72%	79%

*Base size <100

Fig a-06 | Rates of potentially harmful online experiences among minors, by year and demographics

Q19B. Please indicate if you have ever experienced any of the following on a platform. Please select all that apply and remember that your answers are anonymous.

	Potentially harmful online experience				Bullied/made uncomfortable online				...bullied me				...made me feel uncomfortable			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	48%	49%	58%	59%	38%	39%	51%	52%	24%	27%	37%	41%	27%	28%	36%	35%
Girls	50%	50%	56%	62%	42%	41%	51%	56%	27%	27%	36%	48%	30%	30%	38%	36%
Boys	43%	48%	58%	55%	30%	37%	49%	46%	21%	27%	39%	33%	20%	24%	32%	31%
Ages 9-12	47%	44%	55%	52%	38%	36%	48%	48%	28%	26%	41%	33%	22%	22%	28%	37%
Girls	46%	41%	50%	54%	38%	32%	44%	49%	29%	22%	35%	39%	19%	20%	28%	39%
Boys	48%	46%	59%	49%	36%	38%	51%	45%	26%	27%	46%	29%	24%	22%	28%	34%
Ages 13-17	49%	53%	60%	65%	38%	42%	53%	55%	22%	28%	34%	46%	30%	32%	42%	33%
Girls	54%	58%	61%	69%	46%	48%	56%	62%	24%	30%	36%	55%	39%	39%	46%	35%
Boys	40%	49%	57%	60%	25%	37%	47%	47%	16%	26%	33%	36%	16%	25%	35%	29%
LGBTQ+	57%	62%	73%	70%	45%	54%	67%	65%	29%	32%	45%	56%	34%	45%	55%	47%
Non-LGBTQ+	46%	46%	55%	57%	37%	36%	47%	49%	24%	26%	35%	37%	25%	24%	33%	32%
African American	58%	53%	51%	57%	39%	39%	41%	46%	27%	28%	24%	35%	20%	25%	35%	27%
Hispanic/Latino	48%	53%	60%	60%	36%	40%	52%	50%	24%	29%	40%	40%	27%	28%	36%	34%
Other POC	36%	43%	51%	59%	29%	39%	49%	54%	23%	25%	32%	41%	24%	35%	39%	38%
White	50%	48%	63%	62%	41%	39%	54%	55%	25%	26%	43%	43%	29%	27%	37%	37%

	Online sexual interaction				...asked me to send a nude photo or video				...asked me to go 'on cam' with a nude or sexually explicit stream				...shared a nude photo or video of themselves with me			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	33%	31%	33%	35%	18%	16%	20%	23%	12%	10%	13%	13%	18%	14%	15%	14%
Girls	34%	35%	32%	40%	22%	20%	22%	28%	14%	10%	14%	16%	18%	16%	13%	15%
Boys	29%	27%	32%	30%	12%	11%	17%	18%	9%	9%	13%	10%	16%	11%	16%	13%
Ages 9-12	27%	20%	22%	25%	14%	10%	11%	14%	8%	6%	10%	8%	13%	9%	7%	9%
Girls	26%	21%	20%	32%	14%	10%	11%	20%	10%	4%	9%	11%	11%	11%	6%	9%
Boys	27%	20%	24%	18%	14%	10%	11%	8%	6%	8%	12%	5%	15%	7%	8%	8%
Ages 13-17	37%	39%	41%	43%	20%	21%	28%	31%	15%	12%	15%	17%	21%	17%	22%	19%
Girls	41%	46%	41%	46%	28%	28%	31%	34%	16%	14%	17%	20%	25%	20%	20%	21%
Boys	31%	33%	39%	39%	11%	13%	22%	26%	12%	10%	14%	13%	17%	14%	23%	17%
LGBTQ+	42%	50%	52%	48%	24%	27%	38%	35%	19%	12%	19%	23%	22%	27%	32%	27%
Non-LGBTQ+	30%	26%	30%	33%	16%	13%	17%	21%	10%	9%	12%	11%	17%	10%	13%	12%
African American	37%	36%	35%	37%	16%	19%	22%	21%	12%	13%	19%	12%	16%	13%	14%	14%
Hispanic/Latino	33%	34%	36%	39%	19%	15%	23%	25%	12%	11%	15%	15%	18%	18%	16%	17%
Other POC	26%	32%	26%	31%	14%	22%	21%	19%	10%	8%	10%	11%	17%	13%	14%	10%
White	34%	28%	35%	36%	20%	15%	21%	26%	14%	8%	13%	13%	18%	12%	17%	15%

Fig a-06 continued | **Rates of potentially harmful online experiences among minors, by year and demographics**

Q19B. Please indicate if you have ever experienced any of the following on a platform. Please select all that apply and remember that your answers are anonymous.

	...shared a nude photo or video of another kid with me				...sent me sexual messages			
	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	10%	9%	9%	8%	21%	17%	25%	26%
Girls	10%	10%	7%	8%	25%	19%	26%	31%
Boys	10%	8%	12%	8%	15%	13%	23%	20%
Ages 9-12	9%	6%	7%	5%	15%	8%	15%	18%
Girls	9%	7%	4%	4%	16%	8%	15%	25%
Boys	9%	6%	10%	6%	13%	9%	16%	11%
Ages 13-17	12%	11%	10%	11%	26%	23%	33%	32%
Girls	11%	12%	8%	12%	32%	29%	34%	35%
Boys	11%	11%	13%	10%	17%	17%	29%	28%
LGBTQ+	17%	15%	10%	11%	32%	32%	48%	36%
Non-LGBTQ+	9%	8%	9%	8%	18%	13%	21%	24%
African American	11%	12%	9%	10%	22%	19%	26%	27%
Hispanic/Latino	11%	9%	7%	8%	21%	16%	27%	28%
Other POC	8%	9%	6%	5%	18%	20%	20%	23%
White	12%	8%	11%	10%	22%	17%	27%	26%

Fig a-07 | **Percentage of minors who have had an online sexual interaction with peers or adults, detailed**

Q19B. Please indicate if you have ever experienced any of the following on a platform. Please select all that apply and remember that your answers are anonymous.

SOMEONE I BELIEVED WAS 18 OR OLDER...	Online sexual interaction				...asked me to send a nude photo or video				...asked me to go 'on cam' with a nude or sexually explicit stream			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	25%	22%	29%	28%	12%	9%	17%	16%	9%	6%	11%	9%
Girls	26%	25%	28%	33%	15%	11%	18%	21%	10%	7%	12%	13%
Boys	22%	19%	28%	22%	7%	7%	14%	11%	6%	5%	11%	5%
Ages 9-12	19%	14%	19%	20%	8%	4%	8%	9%	5%	3%	9%	6%
Girls	16%	15%	18%	27%	7%	3%	9%	14%	6%	3%	9%	9%
Boys	21%	13%	20%	13%	8%	4%	8%	5%	3%	3%	10%	3%
Ages 13-17	29%	29%	37%	35%	15%	14%	23%	21%	12%	9%	13%	11%
Girls	34%	34%	36%	38%	22%	16%	25%	26%	13%	11%	15%	16%
Boys	23%	24%	34%	30%	7%	9%	19%	16%	9%	7%	11%	7%
LGBTQ+	32%	40%	45%	37%	16%	17%	33%	23%	15%	11%	16%	17%
Non-LGBTQ+	22%	18%	26%	26%	10%	7%	14%	14%	7%	5%	11%	7%
African American	25%	29%	33%	29%	13%	13%	18%	16%	9%	10%	18%	7%
Hispanic/Latino	27%	26%	33%	31%	14%	11%	19%	17%	10%	8%	14%	11%
Other POC	19%	24%	24%	22%	9%	13%	18%	12%	9%	4%	10%	5%
White	27%	19%	29%	30%	13%	8%	16%	18%	9%	5%	10%	10%

SOMEONE I BELIEVED WAS 18 OR OLDER...	...shared a nude photo or video of themselves with me				...shared a nude photo or video of another kid with me				...sent me sexual messages			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	12%	10%	11%	10%	6%	5%	6%	5%	16%	11%	20%	20%
Girls	14%	12%	10%	11%	6%	6%	4%	5%	19%	12%	20%	26%
Boys	9%	6%	12%	9%	6%	4%	9%	4%	11%	10%	18%	13%
Ages 9-12	8%	6%	5%	7%	5%	3%	6%	2%	10%	4%	12%	14%
Girls	7%	8%	4%	8%	3%	4%	2%	1%	10%	3%	11%	22%
Boys	8%	5%	5%	6%	6%	1%	9%	3%	9%	6%	13%	6%
Ages 13-17	15%	13%	17%	12%	7%	7%	6%	7%	20%	16%	26%	24%
Girls	20%	16%	14%	14%	8%	8%	5%	7%	26%	18%	28%	29%
Boys	9%	8%	18%	11%	5%	6%	8%	6%	12%	13%	22%	18%
LGBTQ+	17%	22%	23%	16%	10%	11%	5%	8%	26%	23%	40%	28%
Non-LGBTQ+	10%	7%	10%	9%	5%	4%	6%	4%	13%	8%	17%	18%
African American	10%	10%	12%	10%	5%	6%	5%	5%	12%	15%	21%	20%
Hispanic/Latino	14%	12%	14%	12%	5%	5%	6%	4%	18%	12%	24%	20%
Other POC	10%	10%	12%	7%	5%	5%	3%	3%	16%	13%	19%	16%
White	11%	9%	11%	10%	7%	5%	8%	6%	16%	10%	21%	21%

Fig a-07 | **Percentage of minors who have had an online sexual interaction with peers or adults, detailed**

Q19B. Please indicate if you have ever experienced any of the following on a platform. Please select all that apply and remember that your answers are anonymous.

SOMEONE I BELIEVED WAS YOUNGER THAN 18...	Online sexual interaction				...asked me to send a nude photo or video				...asked me to go 'on cam' with a nude or sexually explicit stream			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	23%	22%	24%	28%	11%	11%	14%	17%	8%	5%	7%	9%
Girls	24%	26%	23%	32%	15%	14%	15%	21%	9%	5%	7%	11%
Boys	21%	19%	24%	24%	7%	7%	12%	12%	6%	5%	8%	6%
Ages 9-12	19%	16%	15%	21%	8%	7%	6%	10%	6%	4%	5%	5%
Girls	19%	16%	12%	26%	10%	8%	4%	15%	8%	3%	2%	8%
Boys	19%	17%	18%	15%	7%	6%	7%	5%	3%	5%	7%	2%
Ages 13-17	27%	27%	32%	35%	14%	13%	20%	22%	9%	6%	10%	12%
Girls	28%	34%	33%	37%	19%	18%	23%	26%	9%	7%	10%	13%
Boys	23%	21%	29%	32%	6%	8%	15%	17%	8%	6%	9%	9%
LGBTQ+	30%	34%	43%	40%	17%	17%	30%	28%	9%	5%	13%	19%
Non-LGBTQ+	22%	20%	21%	26%	10%	9%	11%	14%	7%	5%	7%	7%
African American	24%	25%	25%	30%	8%	9%	15%	15%	6%	6%	8%	8%
Hispanic/Latino	23%	24%	27%	32%	11%	10%	16%	17%	7%	4%	9%	9%
Other POC	20%	27%	19%	22%	11%	16%	16%	13%	7%	5%	7%	9%
White	25%	20%	27%	30%	13%	10%	13%	19%	9%	5%	8%	9%

SOMEONE I BELIEVED WAS YOUNGER THAN 18...	...shared a nude photo or video of themselves with me				...shared a nude photo or video of another kid with me				...sent me sexual messages			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	10%	7%	10%	10%	7%	6%	6%	6%	13%	10%	17%	19%
Girls	10%	7%	8%	9%	7%	7%	5%	6%	16%	13%	17%	23%
Boys	10%	6%	11%	9%	6%	6%	7%	6%	9%	6%	15%	15%
Ages 9-12	7%	4%	3%	5%	5%	5%	3%	3%	9%	5%	8%	14%
Girls	6%	3%	2%	4%	8%	4%	4%	2%	10%	6%	8%	20%
Boys	8%	4%	5%	4%	3%	6%	3%	4%	6%	4%	8%	8%
Ages 13-17	13%	10%	14%	14%	8%	7%	8%	8%	17%	14%	23%	23%
Girls	13%	10%	13%	13%	7%	9%	7%	8%	20%	19%	23%	26%
Boys	12%	8%	15%	14%	8%	6%	10%	8%	11%	8%	20%	21%
LGBTQ+	11%	12%	22%	20%	10%	9%	8%	9%	21%	19%	35%	28%
Non-LGBTQ+	10%	6%	7%	8%	6%	6%	6%	6%	11%	8%	13%	17%
African American	9%	6%	7%	9%	7%	8%	6%	7%	15%	8%	17%	20%
Hispanic/Latino	9%	9%	10%	11%	7%	5%	4%	6%	15%	10%	17%	21%
Other POC	11%	5%	11%	6%	7%	6%	5%	5%	9%	11%	15%	15%
White	12%	7%	10%	10%	7%	6%	8%	7%	14%	11%	19%	19%

Fig a-08 | Online sexual interactions involving both peers and adults by platform, by year

Q20. For each of the following platforms, please indicate if you have ever experienced any of the following.

Above Average

	OF USERS WHO HAVE HAD								OF ALL MINORS WHO HAVE HAD							
	An online sexual interaction				An online sexual interaction w/ someone they thought was 18 or older				An online sexual interaction				An online sexual interaction w/ someone they thought was 18 or older			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
Average	13%	14%	14%	15%	8%	8%	9%	9%	4%	4%	5%	5%	2%	2%	3%	3%
Among Us	6%	4%	6%	7%	5%	2%	3%	3%	3%	2%	3%	3%	2%	1%	1%	2%
BeReal	-	-	14%	17%	-	-	9%	9%	-	-	2%	2%	-	-	1%	1%
Call of Duty	11%	7%	9%	6%	5%	3%	3%	4%	5%	3%	5%	4%	2%	1%	2%	3%
Discord	14%	15%	17%	14%	8%	8%	10%	7%	5%	5%	8%	7%	3%	3%	5%	3%
Facebook	16%	20%	19%	17%	10%	10%	13%	10%	10%	12%	13%	12%	6%	6%	9%	8%
Fortnite	8%	7%	8%	7%	5%	3%	4%	4%	4%	4%	6%	5%	2%	2%	3%	3%
Google Hangouts/ Google Meet	15%	16%	14%	13%	9%	8%	9%	9%	9%	8%	7%	6%	5%	4%	4%	4%
Grand Theft Auto	10%	6%	10%	8%	5%	3%	5%	4%	4%	3%	6%	5%	2%	1%	3%	2%
Instagram	22%	20%	18%	20%	13%	11%	11%	12%	16%	13%	13%	14%	9%	7%	8%	8%
Kik	23%	26%	24%	23%	14%	11%	14%	14%	3%	3%	5%	4%	2%	1%	3%	3%
Marco Polo	17%	20%	15%	20%	8%	9%	8%	13%	1%	2%	2%	2%	1%	1%	1%	1%
Messenger	18%	20%	18%	19%	10%	9%	13%	12%	11%	12%	13%	13%	6%	5%	9%	8%
Minecraft	5%	5%	7%	7%	3%	2%	3%	5%	3%	3%	5%	5%	2%	2%	3%	4%
Omegle	-	37%	28%	36%	-	22%	23%	21%	-	5%	4%	5%	-	3%	3%	3%
Reddit	7%	11%	14%	10%	4%	7%	11%	6%	2%	4%	6%	5%	1%	2%	5%	3%
Roblox	5%	5%	8%	8%	2%	3%	5%	5%	3%	3%	6%	6%	1%	2%	3%	4%
Snapchat	23%	22%	21%	23%	15%	10%	14%	13%	16%	14%	15%	16%	10%	7%	10%	9%
Telegram	21%	19%	28%	22%	14%	10%	18%	12%	2%	2%	5%	4%	1%	1%	3%	2%
TikTok	14%	13%	12%	14%	-	-	-	7%	9%	9%	10%	11%	5%	4%	6%	6%
Tinder	-	-	-	34%	-	-	-	23%	-	-	-	4%	-	-	-	3%
Tumblr	20%	23%	18%	16%	12%	11%	9%	10%	7%	7%	6%	5%	4%	4%	3%	3%
Twitch	9%	9%	12%	10%	4%	5%	6%	6%	3%	3%	5%	4%	2%	2%	3%	3%
WhatsApp	21%	20%	18%	18%	11%	9%	9%	11%	9%	8%	8%	8%	5%	4%	4%	5%
X (Twitter)	15%	19%	19%	15%	8%	8%	13%	9%	9%	10%	10%	8%	5%	4%	7%	4%
YouTube	9%	8%	8%	7%	5%	3%	4%	4%	9%	8%	7%	7%	5%	3%	4%	4%

Fig a-09 | Potentially harmful online experiences, by platform

Q20. For each of the following platforms, please indicate if you have ever experienced any of the following // Q14B. How often do you use/check/play each of the following?

	Minors who have ever used each platform				Minors who have had a potentially harmful online experience				Minors who have had an online sexual interaction			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
Among Us	43%	43%	49%	50%	8%	6%	11%	9%	3%	2%	3%	3%
BeReal	-	-	11%	14%	-	-	3%	4%	-	-	2%	2%
Call of Duty	48%	52%	62%	64%	9%	9%	15%	14%	5%	3%	5%	4%
Discord	34%	34%	46%	48%	7%	10%	14%	17%	5%	5%	8%	7%
Facebook	62%	61%	67%	72%	17%	21%	24%	30%	10%	12%	13%	12%
Fortnite	47%	57%	71%	73%	8%	11%	16%	17%	3%	4%	6%	5%
Google Hangouts/ Google Meet	64%	51%	49%	47%	15%	14%	11%	12%	9%	8%	7%	6%
Grand Theft Auto	39%	44%	54%	63%	6%	8%	11%	14%	4%	3%	6%	5%
Instagram	76%	66%	69%	69%	26%	24%	24%	27%	16%	13%	13%	14%
Kik	14%	13%	19%	18%	4%	4%	7%	8%	2%	3%	5%	4%
Marco Polo	10%	10%	11%	11%	2%	2%	2%	3%	1%	2%	2%	2%
Messenger	62%	64%	68%	72%	18%	22%	21%	28%	11%	12%	13%	13%
Minecraft	62%	71%	80%	78%	10%	11%	14%	15%	3%	3%	5%	5%
Omegele	-	14%	15%	14%	-	7%	6%	8%	-	5%	4%	5%
OnlyFans	-	-	-	10%	-	-	-	6%	-	-	-	5%
Pornography Sites	-	-	-	16%	-	-	-	6%	-	-	-	5%
Reddit	32%	34%	44%	44%	4%	6%	11%	11%	2%	4%	6%	5%
Roblox	47%	59%	72%	80%	9%	12%	18%	21%	3%	3%	6%	6%
Snapchat	71%	68%	68%	72%	26%	23%	24%	30%	16%	14%	15%	16%
Telegram	11%	13%	20%	20%	5%	4%	8%	7%	2%	2%	5%	4%
TikTok	69%	75%	82%	84%	18%	19%	22%	24%	9%	9%	10%	11%
Tinder	-	-	-	12%	-	-	-	6%	-	-	-	4%
Tumblr	40%	34%	36%	31%	11%	12%	11%	10%	7%	7%	6%	5%
Twitch	36%	33%	44%	45%	6%	6%	11%	11%	3%	3%	5%	4%
X (Twitter)	59%	51%	52%	49%	16%	17%	17%	14%	9%	10%	10%	8%
WhatsApp	47%	44%	46%	43%	15%	13%	13%	14%	9%	8%	8%	8%
YouTube	97%	98%	98%	98%	19%	17%	18%	19%	9%	8%	7%	7%

Question was multiple select. Percentages of those who had a potentially harmful online experience and those who had an online sexual interaction are among all participants, not users of each platform.

Fig a-10 | **Sextortion: Percentage of minors threatened to have their sexual images shared, by demographic**

QB1. Has anyone ever threatened to show a sexual image of you to another person or post it online in order to make you do something?
 Note: By sexual image, we mean a picture or video (real or fake) that shows you nude, only partly clothed, or in a sexual pose.

2023		
All Minors	Yes	6%
	Prefer not to say	2%
	No	93%
Ages 9-12	Yes	3%
	Prefer not to say	1%
	No	96%
Girls	Yes	2%
	Prefer not to say	1%
	No	96%
Boys	Yes	3%
	Prefer not to say	0%
	No	97%
Ages 13-17	Yes	8%
	Prefer not to say	2%
	No	90%
Girls	Yes	10%
	Prefer not to say	2%
	No	88%
Boys	Yes	6%
	Prefer not to say	2%
	No	92%
LGBTQ+	Yes	8%
	Prefer not to say	2%
	No	90%
Non-LGBTQ+	Yes	5%
	Prefer not to say	1%
	No	94%
African American	Yes	5%
	Prefer not to say	1%
	No	94%
Hispanic/Latino	Yes	9%
	Prefer not to say	1%
	No	90%
Other POC	Yes	5%
	Prefer not to say	1%
	No	93%
White	Yes	5%
	Prefer not to say	2%
	No	93%

Fig a-11 | **Experiences sharing SG-CSAM, by year**

Q40X: Have you ever sent or shared a nude photo or video of yourself either directly with someone else or with your social media followers?

	2019	2020	2021	2022	2023
All Minors	11%	17%	18%	14%	13%
Girls	12%	14%	13%	11%	13%
Boys	9%	19%	22%	16%	13%
Ages 9-12	6%	14%	14%	6%	8%
Girls	3%	11%	13%	6%	7%
Boys	7%	18%	15%	7%	8%
Ages 13-17	15%	19%	22%	20%	17%
Girls	19%	17%	14%	16%	17%
Boys	11%	20%	28%	22%	17%
LGBTQ+	21%	32%	26%	24%	25%
Non-LGBTQ+	8%	13%	16%	12%	11%
African American	11%	14%	19%	14%	10%
Hispanic/Latino	11%	20%	31%	14%	16%
Other POC	*12%	8%	8%	16%	11%
White	11%	19%	13%	14%	14%

Numbers shown reflect the percentage of minors who reported they have shared their own nude imagery. *Base size <100

Fig a-12 | **Experiences sharing SG-CSAM in the past year, by year and demographics**

Among kids who have shared their own nudes

Q40XT. And have you sent or shared a nude photo or video of yourself either directly with someone else or with your social media followers in the past year? Please remember that your answers are anonymous.

	2021	2022	2023
All Minors	68%	78%	69%
Girls	*58%	*67%	*78%
Boys	75%	*85%	*67%
Ages 9-12	**74%	-	**61%
Ages 13-17	65%	77%	72%
LGBTQ+	*53%	**90%	**76%
Non-LGBTQ+	74%	74%	66%
African American	*66%	**73%	**67%
Hispanic/Latino	*76%	**74%	**75%
Other POC	-	-	-
White	*65%	*81%	*70%

Note: Numbers shown reflect, among minors that have shared their own nudes, the percentage who reported they have shared their own nude imagery in the past year. Some data for minors aged 9-12 and other POC is not featured because all related data had a base size of <25. *Base size <100, **Base size <50.

Fig a-13 | **Perceptions of normalcy, by year**

Q40. How strongly do you agree with the following statement: "It's normal for people my age to share nudes with each other."

	2019	2020	2021	2022	2023
All Minors	27%	28%	25%	24%	23%
Girls	26%	27%	20%	18%	20%
Boys	28%	30%	27%	29%	24%
Ages 9-12	13%	21%	14%	14%	12%
Girls	10%	16%	13%	7%	11%
Boys	16%	26%	15%	21%	13%
Ages 13-17	39%	34%	33%	32%	31%
Girls	39%	37%	26%	28%	28%
Boys	38%	32%	37%	35%	33%
LGBTQ+	39%	34%	36%	41%	34%
Non-LGBTQ+	25%	27%	22%	22%	20%
African American	28%	28%	25%	25%	18%
Hispanic/Latino	30%	31%	37%	28%	26%
Other POC	*21%	23%	19%	20%	28%
White	27%	28%	20%	24%	23%

*Base size <100

Fig a-14 | **Sharing nudes with someone you know versus a stranger, by year**
Among minors who've shared their own nudes

Q44. And had you met the person or people you shared this nude photo/video with in real life before you shared it?

		2019	2020	2021	2022	2023
All Minors	Had met the person(s) before	62%	50%	57%	48%	54%
	Had met some of the person(s) but not all	27%	36%	30%	31%	29%
	Had not met the person(s) before	10%	15%	13%	21%	17%
Girls	Had met the person(s) before	*65%	*50%	*61%	*44%	*60%
	Had met some of the person(s) but not all	*23%	*45%	*24%	*31%	*28%
	Had not met the person(s) before	*12%	*5%	*15%	*25%	*12%
Boys	Had met the person(s) before	**59%	47%	54%	*55%	*50%
	Had met some of the person(s) but not all	**33%	31%	35%	*27%	*32%
	Had not met the person(s) before	**8%	22%	10%	*19%	*19%
Ages 9-12	Had met the person(s) before	-	*42%	**50%	-	**48%
	Had met some of the person(s) but not all	-	*44%	**39%	-	**26%
	Had not met the person(s) before	-	*14%	**11%	-	**26%
Ages 13-17	Had met the person(s) before	*60%	54%	60%	51%	56%
	Had met some of the person(s) but not all	*28%	31%	26%	30%	30%
	Had not met the person(s) before	*11%	15%	14%	18%	14%
LGBTQ+	Had met the person(s) before	**51%	*59%	*54%	**42%	**56%
	Had met some of the person(s) but not all	**42%	*28%	*21%	**30%	**24%
	Had not met the person(s) before	**7%	*13%	*25%	**28%	**20%
Non-LGBTQ+	Had met the person(s) before	*70%	45%	58%	50%	54%
	Had met some of the person(s) but not all	*18%	41%	34%	31%	30%
	Had not met the person(s) before	*12%	13%	8%	19%	16%
African American	Had met the person(s) before	**78%	**40%	*55%	**40%	**56%
	Had met some of the person(s) but not all	**11%	**33%	*25%	**25%	**32%
	Had not met the person(s) before	**11%	**27%	*21%	**35%	**11%
Hispanic/Latino	Had met the person(s) before	**71%	**34%	*59%	**49%	**46%
	Had met some of the person(s) but not all	**15%	**49%	*34%	**19%	**36%
	Had not met the person(s) before	**14%	**17%	*7%	**33%	**18%
Other POC	Had met the person(s) before	-	-	-	-	-
	Had met some of the person(s) but not all	-	-	-	-	-
	Had not met the person(s) before	-	-	-	-	-
White	Had met the person(s) before	*51%	58%	*58%	*53%	*62%
	Had met some of the person(s) but not all	*40%	30%	*27%	*33%	*21%
	Had not met the person(s) before	*9%	12%	*15%	*14%	*16%

Data for minors aged 9-12 and Other POC is not featured in select years because all related data had a base size of <25. *Base size <100
**Base size <50

Fig a-15 | **Perceived age of recipient, by year and demographics**

Among minors who've shared their own nudes

Q46. Have you ever sent or shared nude photo(s)/video(s) of yourself with any of the following...?

	Someone aged 18 or older				Someone under the age of 18				Someone whose age you didn't know				Other			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	41%	42%	36%	34%	57%	53%	66%	69%	30%	24%	28%	26%	4%	4%	4%	3%
Girls	*41%	*32%	*24%	*36%	*68%	*59%	*67%	*71%	*26%	*21%	*26%	*15%	*1%	*7%	*8%	*2%
Boys	40%	48%	*39%	*30%	47%	46%	*72%	*65%	34%	27%	*30%	*33%	6%	2%	*2%	*4%
Ages 9-12	*36%	**50%	-	**26%	*45%	**43%	-	**72%	*37%	**24%	-	**24%	*1%	**5%	-	**9%
Ages 13-17	43%	38%	36%	37%	63%	58%	64%	69%	25%	24%	25%	26%	6%	3%	5%	1%
LGBTQ+	*36%	*45%	**36%	**41%	*62%	*61%	**53%	**72%	*31%	*24%	**27%	**37%	*3%	*8%	**3%	**0%
Non-LGBTQ+	45%	41%	36%	31%	52%	49%	70%	67%	30%	23%	28%	19%	5%	2%	5%	4%
African American	**20%	*35%	**40%	**6%	**72%	*47%	**62%	**80%	**20%	*28%	**36%	**22%	**0%	*2%	**3%	**7%
Hispanic/Latino	**40%	*48%	**41%	**22%	**57%	*50%	**62%	**82%	**36%	*21%	**39%	**19%	**4%	*1%	**6%	**5%
White	41%	*41%	*29%	*41%	52%	*59%	*75%	*60%	25%	*23%	*23%	*28%	5%	*7%	*2%	*2%

Question was multiple select. Answer choice "Other" was included as an option for minors who might feel uncomfortable disclosing their perception of the age of the person(s) with whom they have shared SG-CSAM. Some data for minors aged 9-12 and Other POC is not featured because all related data had a base size of <25. *Base size <100, **Base size <50

Fig a-16 | **Consequences of resharing someone else's nudes, by year**

Among minors who've nonconsensually reshared

Q50A. After you reshared a nude photo or video of someone else without that person's knowledge online, which, if any, of the following happened?

	2019	2020	2021	2022	2023
The person in the photo or video found out	*13%	*18%	34%	15%	*10%
Your friends thought it was funny	*12%	*15%	34%	17%	*15%
Your friends got mad at you	*15%	*19%	28%	10%	*10%
You got in trouble at school	*12%	*20%	27%	11%	*11%
You regretted sending it	*20%	*23%	26%	18%	*19%
You got in trouble with your parents or caregivers	*8%	*29%	23%	18%	*14%
You got in trouble with the police	*8%	*12%	21%	11%	*7%
The person in the photo or video felt bad	*15%	*22%	20%	16%	*12%
You felt bad for the person in the photo or video	*19%	*22%	20%	17%	*14%
Nothing happened	*32%	*17%	9%	33%	*41%

Question was multiple select. *Base size <100

Fig a-17 | **Percentage of minors who considered sharing a nude, but chose not to, by year**

Q41. Even though you have never shared a nude photo, have you ever considered doing so?

Numbers shown reflect percentage of minors who selected 'yes.'

	2019	2020	2021	2022	2023
All Minors	11%	12%	10%	13%	15%
Girls	11%	11%	11%	14%	13%
Boys	11%	12%	9%	12%	15%

Fig a-18 | **Experiences re-sharing SG-CSAM, by year**

Q50. Have you ever shared a nude photo or video of someone else without that person's knowledge online?

Numbers shown reflect percentage of minors who selected 'yes.'

	2019	2020	2021	2022	2023
Yes	9%	7%	9%	15%	7%
Prefer not to say	7%	6%	2%	1%	1%
No	84%	86%	89%	84%	92%

Fig a-19 | **Experiences re-sharing SG-CSAM, by gender**

Q50. Have you ever shared a nude photo or video of someone else without that person's knowledge online?

Numbers shown reflect percentage of minors who selected 'yes.'

	2019	2020	2021	2022	2023
All Minors	9%	7%	9%	15%	7%
Girls	7%	6%	5%	11%	6%
Boys	11%	9%	12%	19%	9%

Fig a-20 | Experiences having seen nonconsensually reshared SG-CSAM, by year and demographics

Q49. Have you ever been shown or sent a nude photo or video of someone at your school or someone else your age in your community without that person's knowledge?

		2019	2020	2021	2022	2023
All Minors	Yes	21%	25%	20%	23%	19%
	Prefer not to say	9%	7%	5%	2%	2%
	No	70%	68%	74%	75%	79%
Ages 9-12	Yes	11%	17%	13%	15%	13%
	Prefer not to say	9%	4%	3%	1%	1%
	No	80%	79%	84%	84%	86%
Girls	Yes	9%	17%	12%	12%	13%
	Prefer not to say	8%	4%	4%	1%	1%
	No	84%	79%	84%	86%	87%
Boys	Yes	13%	18%	15%	18%	14%
	Prefer not to say	9%	4%	1%	0%	2%
	No	79%	79%	84%	82%	85%
Ages 13-17	Yes	29%	31%	25%	29%	24%
	Prefer not to say	9%	10%	8%	3%	2%
	No	62%	60%	67%	68%	74%
Girls	Yes	32%	30%	24%	30%	26%
	Prefer not to say	7%	11%	9%	2%	1%
	No	61%	59%	67%	68%	73%
Boys	Yes	27%	31%	28%	30%	21%
	Prefer not to say	12%	8%	6%	1%	2%
	No	61%	61%	67%	69%	76%
LGBTQ+	Yes	29%	28%	25%	28%	24%
	Prefer not to say	12%	10%	11%	5%	2%
	No	59%	62%	64%	67%	74%
Non-LGBTQ+	Yes	20%	24%	19%	23%	18%
	Prefer not to say	8%	5%	3%	1%	1%
	No	73%	71%	78%	76%	81%
African American	Yes	29%	21%	24%	25%	21%
	Prefer not to say	7%	5%	3%	4%	2%
	No	64%	74%	73%	71%	78%
Hispanic/Latino	Yes	21%	27%	28%	24%	20%
	Prefer not to say	12%	8%	6%	1%	1%
	No	67%	65%	66%	75%	80%
Other POC	Yes	*20%	24%	15%	18%	18%
	Prefer not to say	*12%	11%	5%	5%	2%
	No	*68%	65%	79%	77%	80%
White	Yes	19%	24%	16%	23%	21%
	Prefer not to say	7%	7%	6%	1%	2%
	No	74%	69%	78%	76%	78%

*Base size <100

Fig a-21 | **Perceptions of friends and classmates using AI to create CSAM, by demographics**

QB4. To the best of your knowledge, have any of your friends or classmates ever used AI tools to generate nudes of other kids?

	Yes	Prefer not to say	No
All Minors	11%	10%	80%
Ages 9-12	12%	8%	81%
Girls	9%	8%	83%
Boys	13%	7%	79%
Ages 13-17	10%	11%	79%
Girls	14%	11%	75%
Boys	7%	12%	81%
LGBTQ+	8%	14%	78%
Non-LGBTQ+	11%	9%	80%
African American	11%	9%	80%
Hispanic/ Latino	11%	12%	76%
Other POC	15%	12%	73%
White	9%	9%	82%

Fig a-22 | **Percentage of minors who did not disclose their potentially harmful online experience, by year and demographics**

Q33. Earlier you indicated that you have experienced the following on a platform. For the scenarios you experienced, which of the following, if any, did you turn to for support?

	Among minors who have had a potentially harmful online experience				Among minors who have had an online sexual interaction			
	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	24%	16%	19%	19%	26%	14%	19%	18%
Girls	26%	19%	19%	14%	28%	17%	18%	13%
Boys	18%	12%	18%	22%	21%	9%	19%	23%
Ages 9-12	12%	9%	10%	14%	10%	*7%	*7%	*11%
Girls	*15%	*12%	*9%	*11%	**13%	**15%	**10%	**10%
Boys	9%	*4%	*11%	*18%	*9%	0%	**5%	**16%
Ages 13-17	32%	21%	25%	21%	34%	16%	24%	20%
Girls	34%	23%	25%	16%	36%	17%	21%	15%
Boys	*26%	18%	24%	25%	*30%	13%	26%	26%
LGBTQ+	34%	31%	*26%	*16%	*33%	*22%	*28%	*9%
Non-LGBTQ+	19%	11%	17%	18%	22%	9%	16%	19%
African American	*21%	13%	16%	13%	*28%	9%	*16%	11%
Hispanic/Latino	34%	22%	23%	21%	*36%	16%	*21%	19%
Other POC	**27%	*23%	*26%	19%	**21%	*20%	**31%	*19%
White	18%	14%	16%	18%	21%	13%	17%	17%

Numbers shown reflect the percentage of minors who selected "no one." *Base size <100, **Base size <50

Fig a-23 | **Reasons why minors did not disclose their potentially harmful online, by year**

Among minors who turned to 'no one' for support who have had...

Q34. Which of the following describe why you did not look for additional support following experiences you have had on a platform?

	a potentially harmful online experience				an online sexual interaction			
	2020	2021	2022	2023	2020	2021	2022	2023
You felt this was not a big deal	62%	*51%	54%	43%	*49%	*49%	*47%	*38%
You felt embarrassed and worried of being judged	23%	*26%	34%	35%	*17%	*28%	*35%	*38%
You worried about being in trouble with your family	19%	*21%	17%	13%	*26%	*33%	*21%	*16%
You worried about not being allowed to use a platform	15%	*12%	17%	11%	*19%	*12%	*14%	*12%
You felt like you were to blame or partly to blame for the situation	15%	*16%	17%	10%	*12%	*24%	*17%	*11%
You worried your report would not be anonymous	24%	*10%	13%	8%	*23%	*12%	*16%	*4%
You worried about police or law enforcement getting involved	15%	*12%	19%	7%	*19%	*17%	*20%	*3%
You worried about losing friends	8%	*7%	9%	6%	*9%	*7%	*9%	*7%
You worried about getting bullied at school	5%	*2%	11%	4%	*2%	*2%	*12%	*4%
You worried about being in trouble with your school	5%	*2%	9%	3%	*6%	*4%	*12%	*5%

*Base size <100

Fig a-24 | **What makes minors more likely to use online reporting tools, by year**

Q30. Regardless of the specific situation, if another user on a platform did something that made you feel uncomfortable or unsafe, would knowing the following make you more or less likely to report them to the platform?

	2020	2021	2022	2023
Report would be anonymous	68%	75%	78%	77%
Report would be evaluated and responded to by a real human being who works for the platform	68%	71%	69%	71%
Believe the person is lying about who they are or their identity in some way	61%	67%	67%	68%
Only know the person online	61%	61%	66%	62%
Report would go to an independent organization for review	55%	54%	54%	56%
Know the person offline/in real life	40%	42%	42%	40%
Report would be evaluated and responded to by an artificial intelligence program or bot	39%	40%	38%	40%
The reported user would know you were the one who reported them	37%	34%	34%	33%
Possibility of being kicked off of the platform in response	34%	37%	34%	33%

Numbers shown reflect net percentage of minors who selected "much more likely" or "somewhat more likely."

Fig a-25 | What makes minors more likely to use online reporting tools, by demographics

Q30. Regardless of the specific situation, if another user on a platform did something that made you feel uncomfortable or unsafe, would knowing the following make you more or less likely to report them to the platform?

	Report would be anonymous				Report would be evaluated and responded to by a real human being who works for the platform				Only know the person online			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	68%	75%	78%	77%	68%	71%	69%	71%	61%	61%	66%	62%
Girls	74%	74%	79%	79%	70%	72%	70%	74%	65%	61%	65%	66%
Boys	63%	77%	77%	74%	66%	70%	69%	68%	58%	62%	67%	61%
Ages 9-12	70%	79%	79%	80%	68%	72%	71%	73%	67%	63%	67%	66%
Girls	76%	77%	77%	82%	74%	74%	74%	77%	70%	65%	64%	71%
Boys	65%	83%	79%	77%	64%	71%	70%	67%	66%	61%	69%	60%
Ages 13-17	67%	72%	77%	75%	67%	71%	68%	70%	57%	60%	65%	60%
Girls	72%	71%	81%	76%	67%	71%	66%	70%	61%	58%	65%	61%
Boys	62%	71%	75%	72%	68%	69%	69%	69%	52%	62%	65%	61%
LGBTQ+	70%	68%	82%	78%	66%	71%	71%	69%	66%	60%	73%	59%
Non-LGBTQ+	69%	77%	78%	77%	68%	72%	69%	72%	61%	62%	66%	64%
African American	65%	72%	72%	75%	66%	71%	71%	72%	63%	61%	61%	59%
Hispanic/Latino	60%	74%	75%	79%	63%	74%	64%	70%	57%	61%	65%	62%
Other POC	71%	76%	81%	81%	66%	74%	72%	74%	62%	58%	60%	68%
White	73%	76%	80%	76%	71%	70%	72%	70%	63%	62%	69%	61%

	Believe the person is lying about who they are or their identity in some way				Report would go to an independent organization for review				Know the person offline/in real life			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	61%	67%	67%	68%	55%	54%	54%	56%	40%	42%	42%	40%
Girls	62%	68%	68%	71%	54%	51%	54%	57%	37%	40%	38%	44%
Boys	60%	65%	67%	66%	56%	55%	55%	55%	44%	44%	46%	37%
Ages 9-12	61%	71%	69%	70%	60%	57%	56%	55%	48%	48%	40%	40%
Girls	59%	71%	70%	76%	58%	56%	56%	58%	43%	48%	34%	43%
Boys	64%	71%	69%	63%	63%	59%	57%	52%	53%	47%	45%	36%
Ages 13-17	60%	63%	66%	67%	50%	51%	53%	56%	34%	38%	43%	40%
Girls	64%	66%	67%	67%	50%	48%	53%	56%	32%	34%	41%	44%
Boys	58%	61%	65%	68%	50%	53%	54%	57%	37%	42%	46%	38%
LGBTQ+	60%	62%	75%	61%	62%	47%	53%	49%	38%	38%	36%	37%
Non-LGBTQ+	62%	68%	67%	70%	53%	56%	55%	58%	41%	44%	43%	42%
African American	54%	67%	64%	65%	52%	51%	54%	53%	45%	49%	43%	47%
Hispanic/Latino	61%	68%	70%	67%	57%	64%	54%	56%	41%	53%	43%	41%
Other POC	51%	64%	69%	72%	54%	48%	52%	51%	37%	35%	37%	33%
White	65%	67%	67%	68%	53%	51%	55%	56%	39%	38%	41%	41%

Numbers reflect net percentage of minors who selected "much more likely" or "somewhat more likely."

Fig a-25 | **What makes minors more likely to use online reporting tools, by demographics**

Q30. Regardless of the specific situation, if another user on a platform did something that made you feel uncomfortable or unsafe, would knowing the following make you more or less likely to report them to the platform?

	Report would be evaluated and responded to by an artificial intelligence program or bot				The reported user would know you were the one who reported them				Possibility of being kicked off of the platform in response			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
All Minors	39%	40%	38%	40%	37%	34%	34%	33%	34%	37%	34%	33%
Girls	34%	38%	35%	41%	26%	32%	30%	32%	29%	36%	28%	34%
Boys	45%	42%	42%	39%	48%	38%	38%	34%	40%	38%	40%	33%
Ages 9-12	46%	42%	37%	40%	41%	38%	34%	31%	40%	41%	34%	32%
Girls	40%	43%	30%	43%	31%	36%	28%	31%	34%	43%	30%	30%
Boys	52%	42%	44%	35%	53%	41%	39%	31%	46%	40%	37%	32%
Ages 13-17	34%	38%	39%	40%	33%	31%	34%	34%	29%	33%	35%	34%
Girls	30%	33%	38%	39%	22%	29%	31%	33%	24%	31%	27%	37%
Boys	39%	42%	40%	43%	43%	35%	38%	36%	34%	36%	43%	34%
LGBTQ+	39%	33%	42%	33%	35%	31%	33%	25%	35%	34%	35%	30%
Non-LGBTQ+	40%	42%	38%	42%	37%	36%	35%	35%	34%	38%	35%	35%
African American	44%	46%	40%	42%	37%	42%	38%	38%	40%	42%	36%	38%
Hispanic/Latino	39%	50%	40%	40%	36%	45%	39%	35%	33%	45%	39%	37%
Other POC	40%	31%	34%	34%	32%	23%	21%	29%	36%	29%	27%	32%
White	38%	35%	38%	40%	37%	30%	35%	32%	33%	33%	33%	30%

Numbers reflect net percentage of minors who selected "much more likely" or "somewhat more likely."

Fig a-26 | **Desired platform resources and actions as expressed by minors, by demographics**

Q32. Thinking about the platforms you use, would you want them to provide you with any of the following when you use the platform?

	Information on how to report people		Information on how to block people		Information on how to protect yourself online from uncomfortable or risky sexual experiences		Tutorial videos on how to report or block someone		Pop-up messages that check in on how safe you feel on their platform		Support or counseling if you've had a bad experience on their platform		None of the above	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
All Minors	53%	52%	54%	51%	49%	45%	40%	35%	39%	39%	31%	30%	17%	21%
Girls	59%	56%	57%	55%	50%	51%	44%	36%	39%	44%	30%	33%	15%	18%
Boys	46%	50%	53%	49%	48%	41%	38%	35%	41%	33%	31%	27%	18%	24%
Ages 9-12	52%	56%	58%	57%	52%	45%	48%	40%	44%	41%	33%	31%	16%	19%
Girls	63%	59%	61%	62%	52%	52%	54%	43%	43%	44%	32%	33%	13%	17%
Boys	41%	53%	55%	53%	51%	39%	41%	36%	44%	36%	33%	29%	19%	22%
Ages 13-17	54%	50%	52%	47%	47%	45%	35%	32%	36%	37%	28%	29%	17%	22%
Girls	56%	54%	53%	49%	48%	50%	37%	30%	36%	45%	29%	32%	17%	18%
Boys	50%	47%	52%	46%	45%	43%	36%	34%	38%	30%	29%	26%	17%	26%
LGBTQ+	55%	45%	51%	48%	55%	40%	36%	30%	36%	41%	41%	30%	16%	24%
Non-LGBTQ+	52%	53%	55%	52%	48%	46%	41%	36%	39%	38%	28%	30%	17%	20%
African American	50%	48%	50%	47%	49%	51%	39%	35%	37%	42%	34%	35%	18%	23%
Hispanic/Latino	47%	51%	54%	50%	51%	48%	43%	41%	39%	40%	32%	31%	17%	19%
Other POC	57%	48%	57%	55%	50%	52%	42%	31%	37%	43%	32%	34%	16%	16%
White	56%	55%	56%	53%	49%	40%	40%	33%	41%	37%	29%	28%	17%	22%

Question was multiple select.



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