



Engaging in risky online behaviour: Initial findings on prevalence and associated factors at age 12 from the Growing Up in Scotland survey



CRIME AND JUSTICE

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factors at age 12 from the Growing Up in
Scotland Survey**

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1. Executive Summary



Online communication is commonplace among children and young people. Unfortunately, the increased accessibility of the internet has resulted in more opportunities for children to engage in risky online behaviours. Participating in these behaviours could result in children being exposed to upsetting or distressing content online and, potentially, serious forms of victimisation such as sexual harrasment (Livingstone & Görzig, 2014; Notten & Nikken, 2016).

At present, there is a lack of information on the extent to which children in Scotland are engaging in these risky online behaviours. There is also little information on factors which may be associated with risky online behaviour engagement in a Scottish setting. This report uses 2017-18 data from the Growing up in Scotland (GUS) study to begin to provide answers to these questions, specifically within a representative cohort of over 3,000 12-year-old children in Scotland.

Data in this report were collected and analysed in a pre-pandemic context, therefore, frequencies reported here should be understood as occurring before COVID-19 impacted on Scotland. Emerging evidence suggests that frequencies of some of the factors outlined, e.g. time spent online, life satisfaction, and online safeguarding, may have altered as a result of the pandemic (Generation Scotland, 2020; IWF, 2020; UNICEF, 2020). Despite the importance of such evidence, this report does not include any examinations of these potential changes since the beginning of lockdown in March 2020. Future exploration is welcome to increase understanding of any potential changes in these factors during COVID-19, an examination of which was beyond the scope of this report.

Six questions from the GUS survey were used to identify individuals engaging in risky online behaviours, these are shown in Figure 1.

Figure 1. The six risky online behaviours measured

	Have you added someone to your friends/contacts list who you have never met face-to-face?
	Have you sent personal information to someone who you have never met face-to-face?




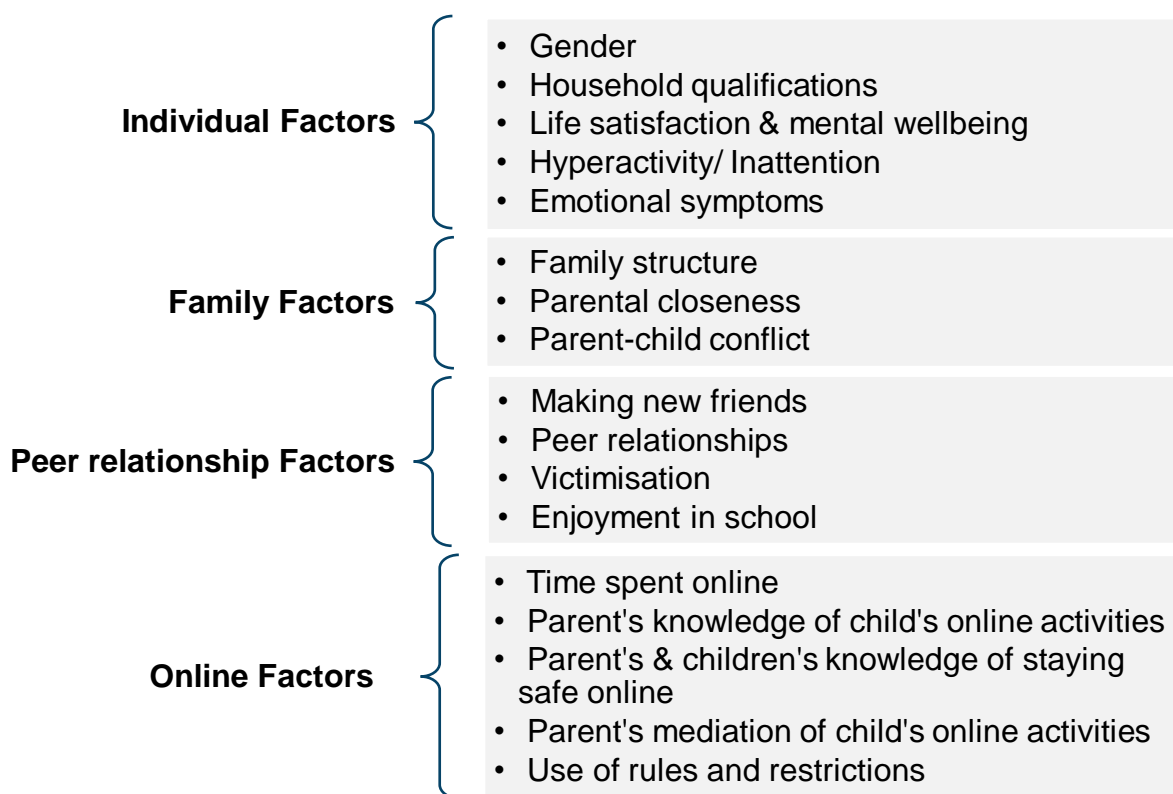
	Have you sent a photo or video of yourself to someone who you have never met face-to-face?
	Have you met up with someone face-to-face who you first made contact with online?
	Have you done anything online that you know your parents would not want you to do?
	Have you lied to your parents about what you do online?

Figure 2. Groups of risk factors explored in this report



The risk factors selected for analysis, shown above in Figure 2, were drawn from a review of available literature. Key sources used are listed in the reference list. However, a full discussion of the literature is not given here because a comprehensive review was not completed as part of this project.

Only statistically significant results are presented here. Where significant, the strength of the association is also presented (very weak, weak, moderate, strong) ¹. It is important to note that these analyses cannot be used to draw conclusions regarding causality but, rather, should be used as a preliminary insight into the strength of associations between factors measured. For further information on the methodology, see [Appendix 10.1](#).

Findings from the analyses indicate that in Scotland:

- Most children (60%) aged 12 have not engaged in any of the risky online behaviours explored here. Indeed, less than one in ten children reported engaging in each behaviour. This low prevalence for risky online behaviours should be kept in mind when interpreting the role of other potentially associated risk factors.
- Of those that had engaged in risky online behaviours, the largest percentage of children (~33%) had only engaged in one or two of the six risky online behaviours.
- The most common behaviour children reported having engaged in was adding someone to their friends/ contacts list who they had never met face-to-face (33%).

Results from analyses exploring the associated risk factors are discussed below, and are structured according to each of the four groups of risk factors (see Figure 2).

Individual Factors - [Chapter 4](#), pages 18-26:

- Boys were more likely than girls to have engaged in four specific risky online behaviours: adding someone to their friends/ contacts list they had not met face-to-face, doing something online their parents would not want them to, lying to their parents about what they had done online, and meeting up with someone who they had first made contact with online. Though it should be noted that these differences were small.
- The Scottish Index of Multiple Deprivation (SIMD) quintiles were not associated with the likelihood of engaging with risky online behaviour.
- Children whose parents had no qualifications were more likely to have met up with someone who they had first made contact with online. Children from households with degree level qualification were the least likely to have

¹ For more information on significance and association testing, please see [article](#) by Sullivan and Fein (2012).

sent personal information online to someone they had never met face-to-face (though differences were small).

- Children with lower levels of life satisfaction were more likely to have engaged in almost all of the individual behaviours. No association was found between life satisfaction and meeting up with someone face-to-face who they had first made contact with online.
- Children with lower levels of mental wellbeing were more likely to have engaged in all six of the risky online behaviours.
- Children who reported average levels of hyperactivity/ inattention were less likely to have engaged in each of the six risky online behaviours, in particular, adding someone online that they had never met face-to-face.
- There was little association between those children who had higher emotional symptoms scores (used to measure social, emotional and behavioural development) and their participation in risky online behaviours. However, those who reported higher emotional symptoms scores were more likely to have done something online that they know their parents would not want them to do. No other associations were found.

Family Factors – [Chapter 5](#), pages 27-31

- There was little association between family structure (lone parent family vs. couple family), and participating in risky online behaviours. However, children of lone parent families were more likely to have reported sending personal information to someone that they had never met face to face.
- Children who identified themselves as being less close to their parents (either resident mother or father) were more likely to have engaged in risky online behaviour. In particular, these children were more likely to have lied to their parents about what they do online.
- Children whose parents identified high levels of parent-child conflict were more likely to have engaged in all bar one (meeting up with someone they had first made contact with online) of the six risky online behaviours.

Peer Relationship Factors – [Chapter 6](#), pages 32-39

- Children who said they found it very easy to make friends at secondary school were more likely to have met up with someone they first made

contact with online. There was, however, no association between ease of making friends and any of the other behaviours.

- Children with higher peer-closeness were less likely to have added someone to their friends/ contacts list that they had never met face-to-face, to have done something online that their parents would not want them to, or to have lied to their parents about what they did online.
- Around half of children had experienced face-to-face victimisation. These children were more likely to have participated in four of the six behaviours. Fifteen per cent of children had experienced online victimisation. Those who had were more likely to have engaged in all of the risky online behaviours.
- Most children had a high engagement/ enjoyment of school. Those who had a lower engagement/ enjoyment were more likely to have engaged in all six risky online behaviours.

Online Safeguarding Factors – [Chapter 7](#), pages 40-46:

- The largest percentage of children reported spending one to three hours a day on social media (34%). Those children who said they spent more than seven hours a day on social media on an average school day were more likely to have engaged in all six risky online behaviours.
- Most children felt their parents knew almost everything or quite a lot about what they did online (81%). This broadly matched how much parents felt they knew (82%). Children who felt their parents knew almost everything about what they did online were less likely to have engaged in all six risky online behaviours.
- Most children felt they knew a lot about protecting themselves online (71%). Those who said they knew more about protecting themselves online were less likely to have added someone to their friends/ contacts list who they had never met face-to-face. They were also less likely to have lied to their parents about what they did online.
- Just over half of parents felt they knew quite a lot about protecting personal information online, or protecting their child from strangers online. Children reported knowing more about both these issues than parents. However, children whose parents knew less about protecting their child online were no more likely to engage in any of the behaviours than those children whose parents felt they knew a great deal.

- Most parents spoke often or very often to their children about staying safe online, with 70% talking to their children about how to behave on social networks. However, no association was found between how much parents spoke to their children about staying safe online and their participation in any of the risky online behaviours.
- Most parents mentioned having rules about what their child could do online. Only one in ten parents did not have any rules or restrictions on what their child did online. Children whose parents used two or more of the five measured rules/ restrictions² were less likely to have added someone to their friends/ contacts list who they had never met face-to-face. No statistically significant associations were found between any of the other risky online behaviours.

² The five rules/restrictions were: rules about what the child can do; technical restrictions on what children can see, rules about how much time the child could spend online, rules about when the child can use the internet, and other rules or restrictions.

2. Introduction

Online communication is prevalent in today's society, especially among older children and adolescents. This rise in online communication has increased the opportunity for online risk taking, as well as the potential for harm.

Considering crime in Scotland, it is estimated that around half of the growth in all sexual crimes recorded by the police between 2013-14 and 2016-17 was due to a rise in cyber crime (Scottish Government, 2017). Cyber crime are crimes where the internet is used as a means to commit the crime. These cyber crimes were reported to account for around half of 'Other sexual crimes'³ recorded in Scotland between 2013-14 and 2016-17. The most common crime within this category was 'Communicating indecently and cause to view sexual activity or images'. When this crime was committed online, victims and perpetrators tended to be much younger than when it was offline. Three quarters of victims of this cyber crime were under the age of 16 in 2016-17, with an average age of 14. In a quarter of cases both the victim and perpetrator were under the age of 16.

Using 2017-18 data from the Growing up in Scotland (GUS) study (see [Section 2.1](#)), this report seeks to provide an initial insight into children's online risk taking. It aims to estimate the prevalence of risky online behaviours in Scotland amongst 12-year-olds using pre-existing data. It also aims to provide an insight into associations between online risk taking and individual, family, peer relationship, and online safe guarding factors. In doing this, this report offers a first step towards understanding the frequencies and associations with children's online risk taking in Scotland.

2.1 COVID-19

However, it is important to recognise the current context of the COVID-19 pandemic, and its potential implications in relation to this report's findings. It should be noted that the data collection and analyses for this report were conducted between 2017 and 2019 before the COVID-19 pandemic. As a result, the findings do not consider the impact of the pandemic, and the potential consequent changes in the factors examined. For example, since the COVID-19 pandemic, school closures, and social distancing restrictions have increased children's use of online digital platforms (Generation Scotland,

³ For more information on crime groupings, see the [Recorded Crime in Scotland 2018-19](#) bulletin

2020). As a result, the frequencies of time spent online are likely to have increased from the frequencies reported here. Additionally, there are concerns regarding the increased risk of online child harassment and sexual exploitation (UNICEF, 2020). The Internet Watch Foundation (IWF) reported a 50% increase in reports of online child sexual abuse during lockdown (IWF, 2020). However, the relationships between these risks (online child harassment and sexual exploitation) and engagement in risky online behaviour has not yet been explored.

Another important point to regard is the potential changes in frequencies of the associated factors as a result of the COVID-19 pandemic. Despite that analyses conducted in this report do not allow for the drawing of causal conclusions regarding the relationships assessed, changes in risk factors and their potential impact on risky online behaviours should be borne in mind.

2.2 Growing up in Scotland (GUS)

GUS⁴ is a longitudinal study which follows several different nationally representative cohorts of children in Scotland at key stages of their childhood. This report uses data gathered as part of birth cohort 1 (BC1), set up in 2005/6 when children were aged 10 months. These children and their families have been periodically followed-up at annual and biennial intervals (termed 'sweeps'). The most recent data available for analysis is from sweep 9 (2017/18) when children were aged 12 years old. Fieldwork for sweep 10 was completed in 2019/20 and data will be available mid-2021.

At sweep 9, questionnaires were administered to the children themselves, their main parent/carer and their second parent / parent's partner (if applicable). Across the sweeps, some questions are repeated each time, some new questions and measures are included at different sweeps and some are dropped. GUS is a robust and rich source of data for understanding the lives of children and young people in Scotland.

2.3 What are risky online behaviours?

Online risks are multi-faceted (Staksrud & Livingston, 2009), and can include sending personal information, sending personal photos or videos, and agreeing to meet up with strangers. For children, online risks can also involve lying to parents about their online activities, or doing something online of

⁴ For more information see [Growing up in Scotland](#) study website.

which they know their parents would not approve. This report has focussed its definition for risky online behaviour around the content of the GUS sweep 9 questionnaire, centring on six key questions/ behaviours summarised in Figure 1.

2.4 How are behaviours and their associations explored?

This report presents a cross-sectional analysis, using sweep 9 data gathered as part of the GUS study. Data for this sweep were collected in 2017-18 when the children were aged around 12, with most being in their second term of their first year at school. For more information on the GUS data, see [Appendix 10.1](#).

Questions in the GUS dataset were mapped onto groups of risk factors (individual, family, peer, online safeguarding) identified from the literature review. Exact questions used for the analyses are discussed at the beginning of each section. First, frequencies were calculated for all six risky online behaviours. Second, the frequencies of risky online behaviours within each risk factor group were calculated. Finally, statistical analyses were used to analyse the associations between engaging in risky online behaviour and each factor group. For more information on analyses performed, on how each measure was constructed, and on the methodology used in analyses, see [Appendix 10.1](#).

2.5 Considerations and limitations

Only statistically significant associations are presented in the main body of this report, with supplementary data included in [Appendix 10.2](#).

While care has been taken to ensure the results here are reliable, there are several considerations that should be kept in mind when interpreting the results:

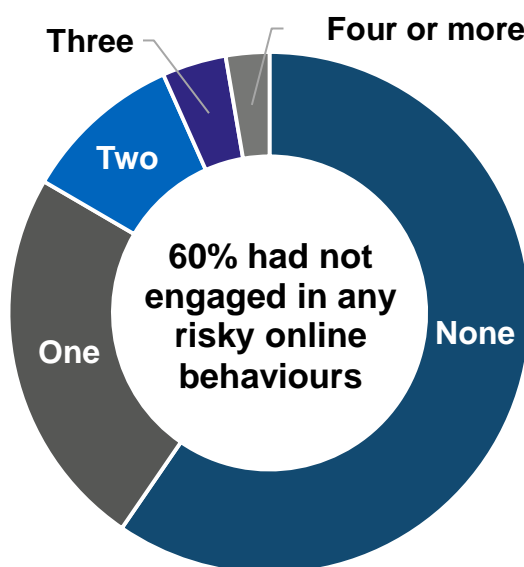
- Analyses in this report are based on data relating to one point in time (i.e. cross-sectional analysis). As such, the presence of associations between risky behaviours and potential risk factors cannot be taken to imply causation.
- Bivariate analyses were performed to examine the associations between two variables. This method does not account for other factors that may influence both variables.

- The proportion of children who engage in risky online behaviours is relatively low ([see section 3](#)). It should therefore be understood that, while factors discussed are significantly associated with risky online behaviours, these apply to a minority of children.
- The recent impact of the COVID-19 pandemic should be considered when interpreting the results of this report. Reported frequencies of risky online behaviour and their associated risk factors should be understood as being examined in a pre-pandemic context. Therefore, potential changes in these factors due to the COVID-19 pandemic should be kept in mind.

3. Prevalence of risky online behaviours

Children were asked if they had engaged in each of the six risky online behaviours over the last 12 months. More than half of the children (60%) had not engaged in any of the risky online behaviours. Around a third of children had engaged in one or two of the behaviours, while 7% had participated in three or more, see Figure 3.

Figure 3. Frequency of engaging in risky online behaviour



Base: 3,419 children from Sweep 9 of GUS study. Variables: CiRir, CiIRii, CiIRiv, CiIRim, CiIRip, CiIRil

Of those who had engaged in risky online behaviours, the most commonly engaged in behaviour was adding someone to their friends/contacts list who they had never met face-to-face (33%). Other behaviours were less common, with fewer than 10% of children reporting having participated in each of the other behaviours – see Table A. A small proportion (4%) had sent personal information to someone that they had never met face-to-face.

Engaging in one kind of risky online behaviour increases the likelihood of engaging in another, with statistically significant associations found across all six risky online behaviours. Of these associations, three were found to be moderately associated:

- Children who had lied to their parents about what they did online were also likely to have done something online that their parents would disapprove of.

- Children who had sent a photo/ video to someone that they had never met face-to-face were more likely to have sent personal information to someone that they had never met face-to-face
- Children who had sent a photo/video to someone that they had never met face-to-face were more likely to have added someone to their friends/ contacts they had never met face-to-face.

All other associations were relatively small, see [Appendix 10.2 - Table 1](#). It is important to note that these analysis do not give a measure of the direction of the relationship, and that as mentioned before only a small proportion of children had engaged in more than one of the behaviours.

Table A. Proportion of children engaging in risky online behaviours.

▼ The majority of children have not engaged in risky online behaviours.	Risky online behaviour	Proportion of children
The most common type of behaviour was adding someone to contacts/ friends list.	Added someone to their friends list/contacts who they had never met face-to-face	33%
	Done anything online that they know their parents would not want them to do	9%
	Lied to parents about what they do online	8%
	Met up with someone face-to-face who you first made contact with online	7%
	Sent a photo/video of yourself to someone who you have never met face-to-face	7%
	Sent personal information to someone who you have never met face-to-face	4%

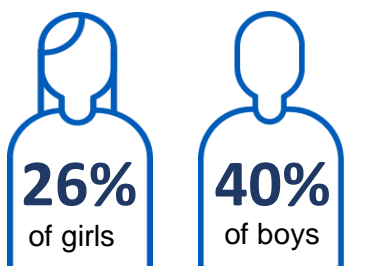
Base: 3,419 children from Sweep 9 of GUS study. Variables: CiRir, CilRii, CilRiv, CilRim, CilRip, CilRil

4. Individual Factors

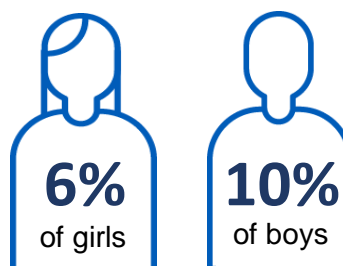
4.1 Gender

A larger proportion of boys than girls had engaged in each of the risky online behaviours – see [Appendix 10.2 - Table 2](#).

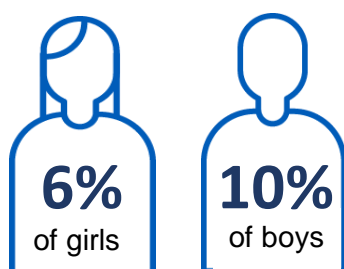
Boys were more likely than girls to have engaged in the following behaviours:



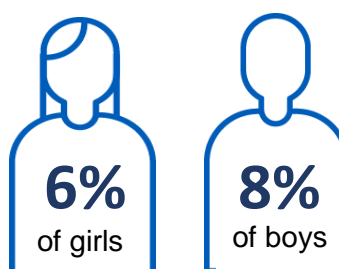
had added someone to their friends/contacts list who they had never met face to face.



had done something online that they knew their parents would not want them to do.



have lied to their parents about what they did online.

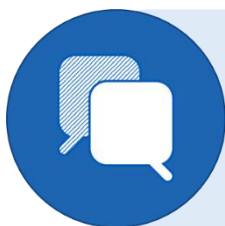


have met up with someone face to face who they first made contact with online.

However, all of these associations were weak, and there were no other statistically significant associations found across the other two behaviours (e.g. sending personal information, or sending a photo/ video of themselves to someone they had never met face-to-face).

4.2 Household qualification

The highest education level in the household was used here as an indicator of the socio-economic background of the child.



Children from households with no qualifications were **more likely to have met up with someone face-to-face** with who they first made contact online than those from households with qualifications.

Fifteen per cent of children from households with no qualification reported meeting up with someone face-to-face with who they first made contact online, compared to 6% from households with degree level qualifications, or 3% from households with lower level qualifications⁵.



Children from households with degree qualifications were **less likely to have sent personal information to someone with who they never met face-to-face** than those from other households.

Two per cent of children from households with degree level academic/vocational qualifications had sent personal information to someone that they had never met face-to-face. Those from households with intermediate level qualifications⁶ were more likely than others to have engaged in this behaviour (10% of children from intermediate qualification level households, compared to 7% of children from lower qualification level households).

However, both of these associations were very weak. Indeed, for most of the behaviours, there was no association between household educational level and participating in risky online behaviour – see [Appendix 10.2 - Table 3](#). No significant association was found between any of the behaviours and SIMD.

⁵ Lower level refers to Lower Level Standard Grades and Vocational qualifications.

⁶ Intermediate qualifications here are: Upper Level Standard Grades / Intermediate Vocational qualifications or Higher grades/Upper level vocational qualifications.

4.3 Life Satisfaction

Life satisfaction was measured using selected items from the Students' Life Satisfaction Scale (Huebner, 1991). Children were asked:

- Do you feel that your life is going well?
- Do you wish your life was different?
- Do you feel that your life is just right?
- Do you feel you have what you want in life?
- Do you feel you have a good life?

Possible responses were: never, sometimes, often, or always. Responses to each of these questions were added together to represent children's overall life satisfaction. The scale has a minimum score of 5 and a maximum of 20 with a higher number indicating higher life satisfaction. For analysis, life satisfaction scores were grouped into three equally sized categories – see [Appendix 10.1](#) for further methodological detail.

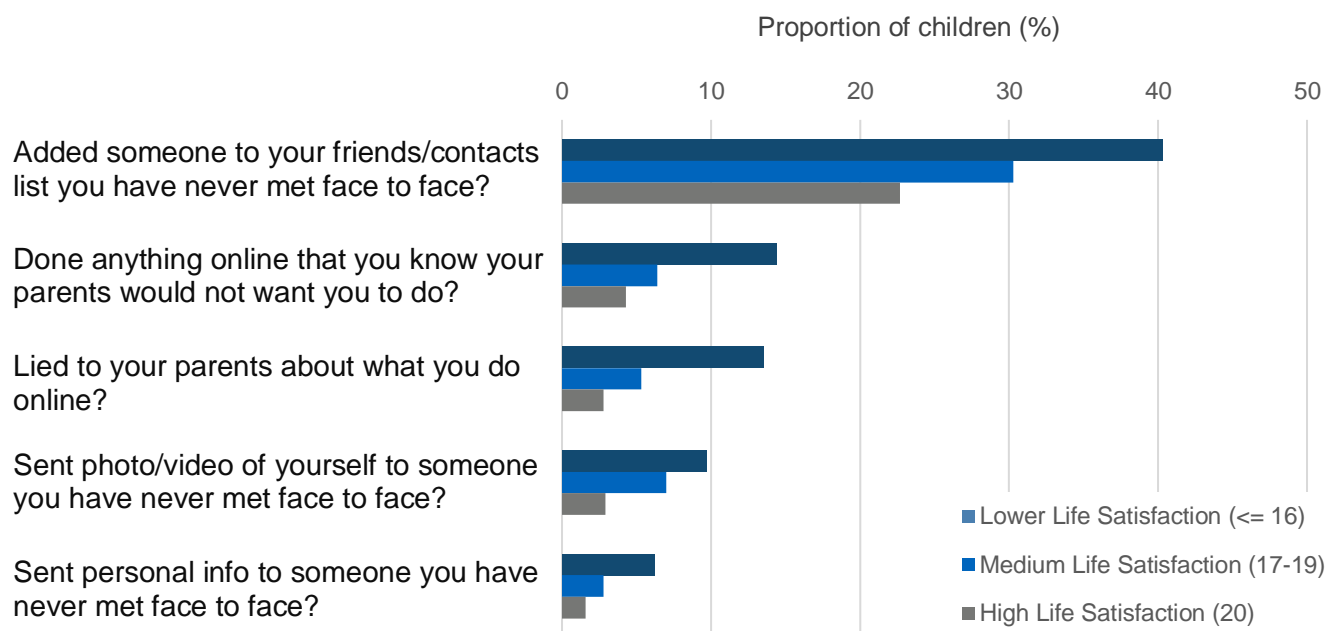
Children who reported lower life satisfaction (a score of less than or equal to 16) were more likely to have participated in five of the risky online behaviours, see Figure 4. A small association was found between a child's life satisfaction score and lying to their parents about what they had done online. A total of 14% of children with lower life satisfaction had engaged in this behaviour compared to 3% of children with higher life satisfaction. Though it is unclear from this analysis what the direction of this relationship is (e.g. if lower life satisfaction leads children to engage in this behaviour, or if engaging in this behaviour leads to a lower life satisfaction).

A higher proportion of children with lower life satisfaction had also:

- added someone to their friends/contacts list they had never met face-to-face (40% of those with low life satisfaction)
- done anything online their parents would not want them to do (14%)
- sent a photo/video of themselves to someone they had never met face-to-face (10%)
- sent personal information to someone they had never met face-to-face (6%).

However, it should be noted that the association for the final two behaviours was less strong, see [Appendix 10.2 - Table 4](#) for further details.

Figure 4. Children with a lower life satisfaction score were more likely to have engaged in almost all of the risky online behaviours.



Base: 3,419 children from Sweep 9 of GUS study.

4.4 Mental Wellbeing

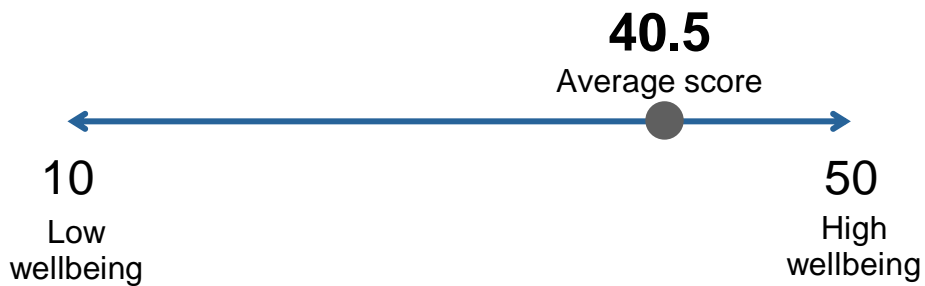
Mental wellbeing was measured using the Kidscreen Health-Related Quality of Life scale (Ravens-Sieberer et al., 2005; the Kidscreen Group, 2006).

Children were asked the following ten questions about their wellbeing:

- Have you felt fit and well?
- Have you felt full of energy?
- Have you felt sad?
- Have you felt lonely?
- Have you had enough time for yourself?
- Have you been able to do the things that you want to do in your free time?
- Have your parent(s) treated you fairly?
- Have you had fun with your friends?
- Have you got on well at school?
- Have you been able to pay attention?

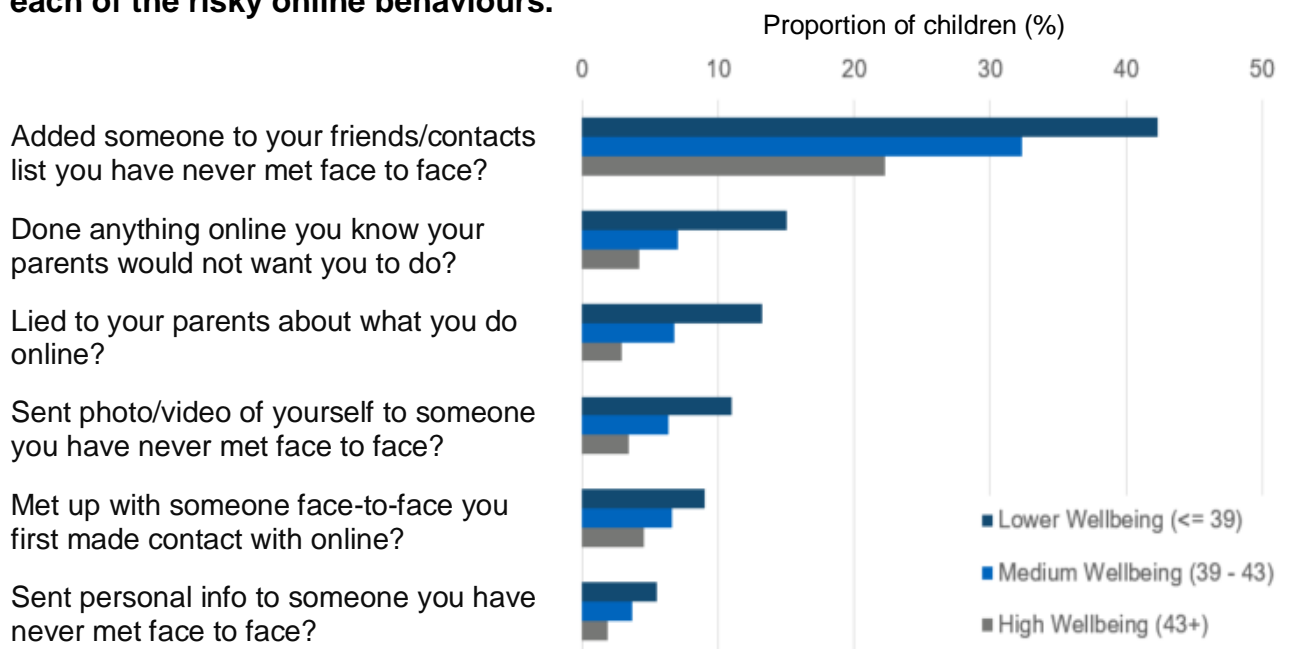
Each question had five possible responses: not at all, slightly, moderately, very, extremely. Responses to each of these questions were added together to represent children’s overall wellbeing. The scale has a minimum score of 10 and a maximum of 50 with a higher number indicating higher wellbeing. Wellbeing scores were grouped into three equally sized categories – see [Appendix 10.2 – Table 4](#).

Figure 5. The average score of wellbeing among children was high



On average, children scored 40.5 on the scale, indicating a high level of wellbeing. Children who reported lower wellbeing were more likely to have engaged in all six risky online behaviours than those with higher wellbeing, see Figure 6

Figure 6. Children with a lower wellbeing score were more likely to have engaged in each of the risky online behaviours.



Base: 3,419 children from Sweep 9 of GUS study.

In particular, children with low wellbeing scores were more likely to have:

- added someone to their friends/contacts list they had never met face-to-face (42% of children with low wellbeing compared to 22% of those with high wellbeing scores).
- done something online their parents would not want them to do (15%, compared to 4% of those with high wellbeing).
- lied to their parents about what they do online (13%, compared to 3% of children with high wellbeing scores).

Although still statistically significant, differences were less pronounced when examining children who had sent a photo/video of themselves to someone that they had never met face-to-face (10% of those with low wellbeing scores, compared to 3% of those with high wellbeing scores).

Only very weak associations were found between wellbeing and children that had sent personal information to someone they had never met face-to-face, or those that had met up with someone face-to-face with who they had first made contact online – see [Appendix 10.2 - Table 4](#). As with life satisfaction, it is unclear from this analysis what the direction of these relationship is (e.g. if lower wellbeing leads children to engage in this behaviour, or if engaging in this behaviour leads to a lower wellbeing).

4.5 Hyperactivity/ inattention

Social, emotional and behavioural development is measured by questions taken from the Strengths and Difficulties Questionnaire (Goodman, 1997). Children were asked to respond to the following statements:

- I am restless, I cannot stay still for long
- I am constantly fidgeting or squirming
- I am easily distracted, I find it difficult to concentrate
- I think before I do things
- I finish the work I am doing.
- My attention is good

Each statement had three possible responses: not true, somewhat true, certainly true. Responses to each of these questions were added together to give a measure on the hyperactivity scale. Scores could range from 0-10, with

0-5 representing average hyperactivity, 6 being borderline hyperactivity, and 7-10 classed as abnormal hyperactivity⁷.

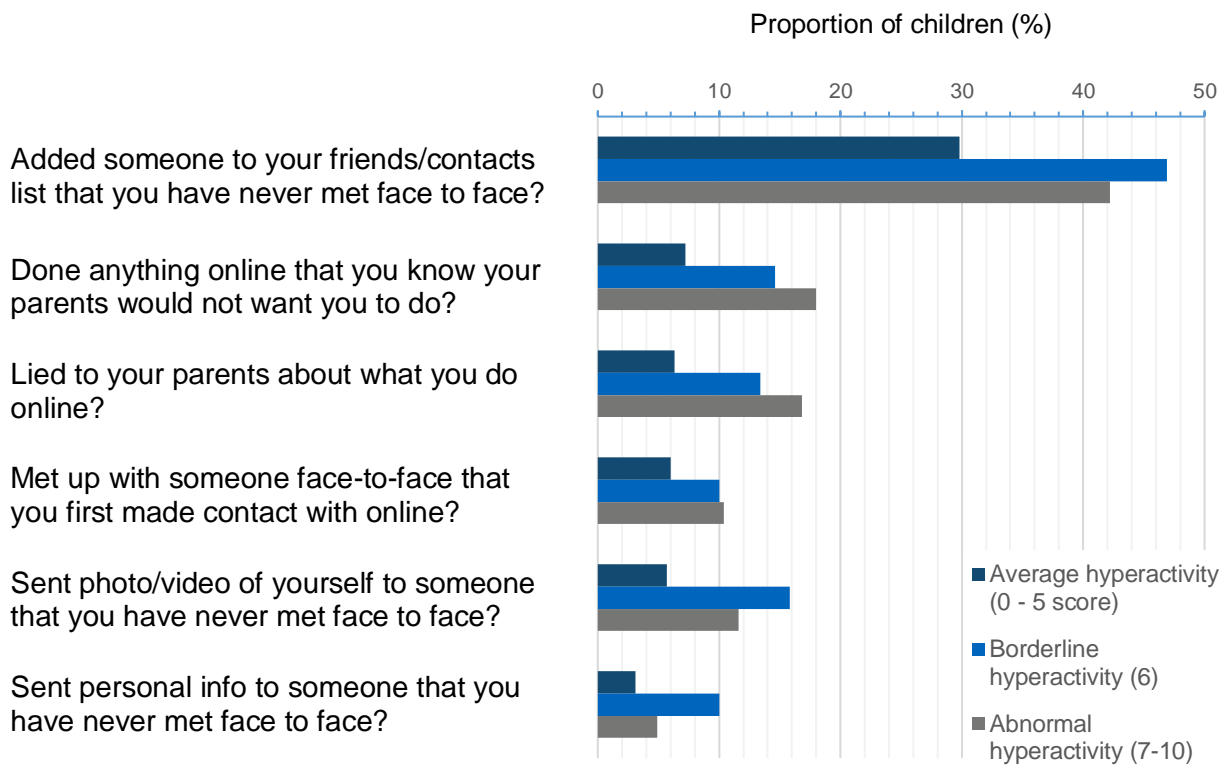
Those with borderline or abnormal levels of hyperactivity/ inattention were more likely to have engaged in all six risky online behaviours, compared to those with normal levels of hyperactivity/ inattention.

As shown in Figure 7, differences in the proportion of those with abnormal or borderline hyperactivity/ inattention engaging in risky online behaviours were small. Those with abnormal hyperactivity/ inattention were not always more likely to have engaged in the risky online behaviours than those with borderline hyperactivity. For example, just under half of children (47%) with borderline hyperactivity had added someone to their friends/ contact list they had never met face-to-face, compared to 42% of those with abnormal hyperactivity and 30% of those with average hyperactivity. In only two of the risky online behaviours (doing something online their parents would not want them to do, and lying to their parents about what they do online) did a higher proportion of those with abnormal hyperactivity engage in the behaviour.

This analysis cannot determine the direction of these associations, most of which were weak. Very weak associations were found for those meeting up with someone with who they had first made contact online, and sending personal information. See [Appendix 10.2 - Table 5](#) for further detail.

⁷ See [Goodman \(1997\)](#) for more information about this classification.

Figure 7. Children with a borderline or abnormal hyperactivity score were more likely to have engaged in each of the risky online behaviours.



Base: 3,419 children from Sweep 9 of GUS study.

4.6 Emotional Symptoms

Social, emotional and behavioural development is measured by questions taken from the Strengths and Difficulties Questionnaire (Goodman, 1997). The child’s main caregiver was asked to respond to the following statements about their child:

- Often complains of headaches, stomach-aches or sickness
- Has many worries, often seems worried
- Often unhappy, downhearted or tearful
- Nervous or clingy in new situations, easily loses confidence
- Has many fears, is easily scared

Each statement had four possible responses: not true, somewhat true, certainly true, can’t say. Responses to each of these questions were added together to give a measure on the emotional symptoms scale.

Scores ranged from 0-10, with scores from 0-3 considered normal, 4 as borderline, and 5-10 as abnormal.



Children who were identified as having abnormal emotional symptoms were more likely to have done something online they know their parents would not want them to do.

Just over one in ten (14%) children with abnormal emotional symptoms had done this, compared to 8% of those identified as having borderline symptoms, and 8% of those with average emotional symptoms.

This association however was very weak – see [Appendix 10.2 - Table 5](#) - and does not tell us about the direction of the relationship. No association was seen for any of the other five risky online behaviours.

5. Family Factors

5.1 Family structure

Children from lone parent households were more likely to have sent personal information to someone they had never met face-to-face (6%, compared to 3% of those from couple parent households). However, this association was very weak. For the remaining five risky online behaviours, there was no association found – see [Appendix 10.2 - Table 6](#).

5.2 Closeness to parents (including non-resident parents)

The survey asks about the child's relationship with their resident mother/ father, non-resident parents and other mother/ father figures. As this is an initial analysis only the relationship with their resident mother and father were explored.

Children were asked to evaluate how true the following statements are about their relationship with the resident mother/ father:

- [Resident parent] listens to what I have to say
- I can count on [resident parent] to help me when I have a problem
- I can talk to [resident parent] when I'm having a problem
- If [resident parent] knows something is bothering me, they ask me about it
- I share my thoughts and feelings with [resident parent]
- [Resident parent] pays attention to me

There were four possible responses: Never true, sometimes true, often true, always true. An average score was calculated, which ranged from 1 to 4, with a higher score indicating a closer relationship with their resident parent. For analysis, responses were grouped into three equally sized groups of those with low, medium and high closeness to resident parent.

5.2.1 Closeness to resident mother

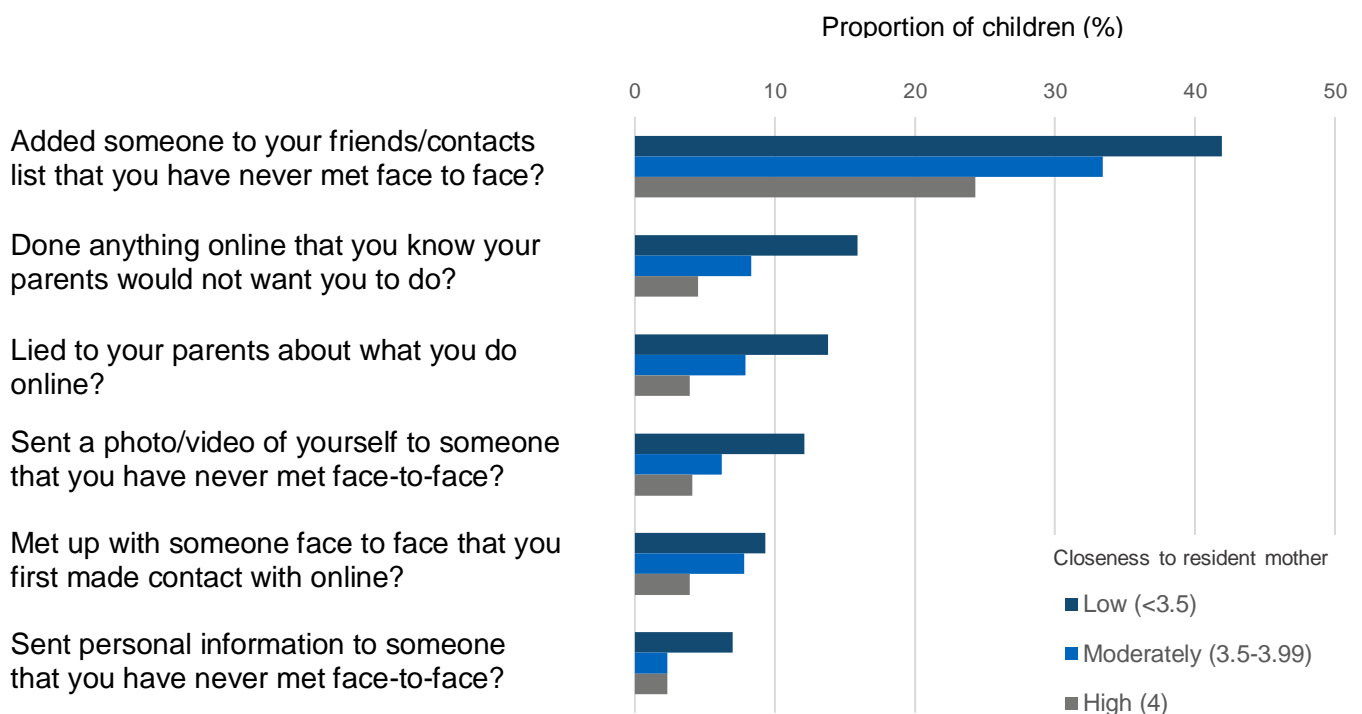
Most children had a close relationship with their resident mother, with an average score of 3.5. Those who were less close to their resident mother were more likely to have engaged in all risky online behaviours, see Figure 8.

Sixteen per cent of those less close to their resident mother had done something online they knew their parents would not want them to do,

compared to 5% of those more close to their resident mother. This association was weak. This pattern was seen across each of the other four risky online behaviours – see [Appendix 10.2 – Table 7](#).

Similar proportions of children less close or moderately close to their resident mother had met up with someone face-to-face with who they first made contact online (9% and 8% respectively). While 4% of those more close to their resident mother had engaged in this behaviour. This association was very weak.

Figure 8. Children who felt less close to their resident mother were more likely to have engaged in each of the risky online behaviours.



Base: 3,419 children from Sweep 9 of GUS study.

5.2.2 Closeness to resident father

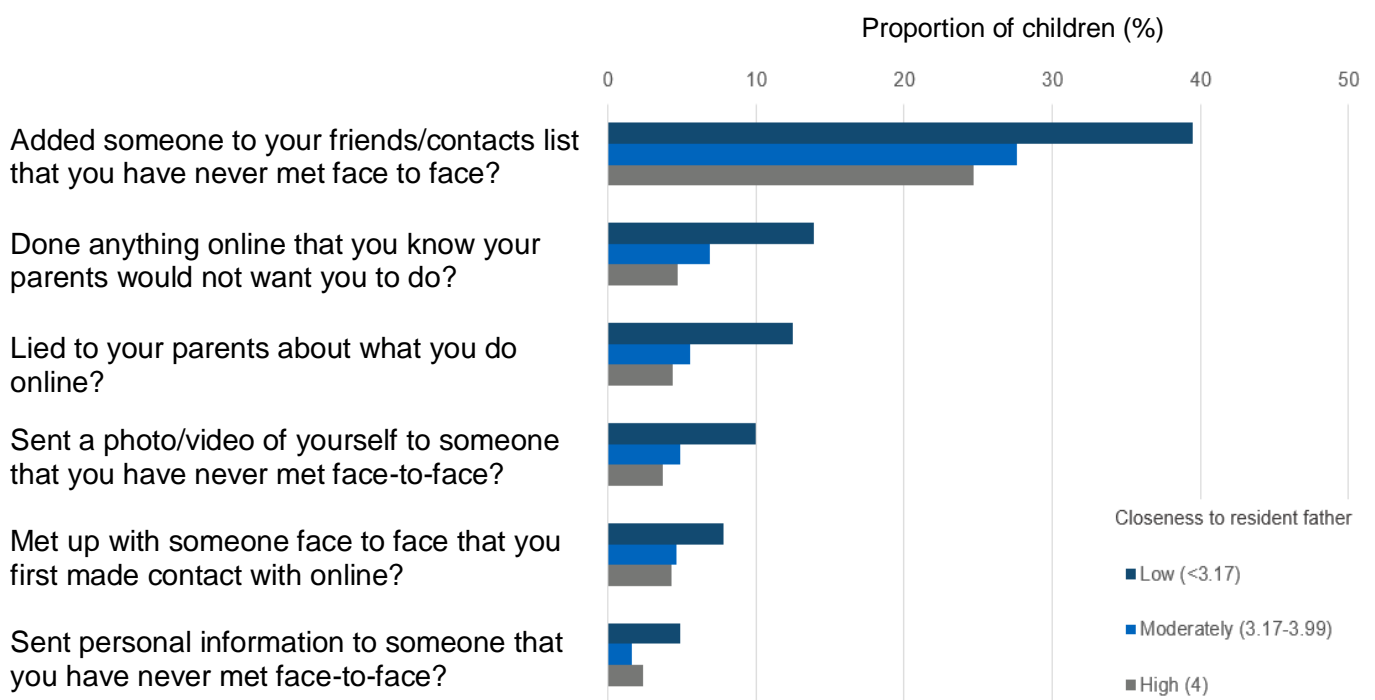
Most children had a close relationship to their resident father, with an average score of 3.4. As with resident mother, those less close to their resident father were more likely to have engaged in all risky online behaviours.

Two in five children (40%) who felt they were less close to their resident father had added someone to their friends/ contacts list they had never met face-to-face, compared to one in four (25%) of those who felt more close. Similar patterns were seen across: those that had sent a photo/ video of themselves

to someone they had never met face-to-face; done anything online their parents would not want them to do; or had lied to their parents about what they did online. All these associations were weak – see [Appendix 10.2 – Table 7](#).

For the remaining two behaviours – sent personal information and met up with someone – the association was very weak, though the pattern remains the same.

Figure 9. Children who felt less close to their resident father were more likely to have engaged in each of the risky online behaviours.



Base: 3,419 children from Sweep 9 of GUS study.

5.3 Parent-child conflict

Main carers were asked how often the following statements applied to their relationship with their child⁸:

- My child and I get on each other’s nerves
- My child and I shout at each other
- When my child and I argue we stay angry for a very long time

⁸ These questions were adapted from the Longitudinal Study of Australian Children (Australian Department of Social Services, 2018). See link for more information: <https://growingupinaustralia.gov.au/about-study>

- When my child and I disagree, child storms out of the room

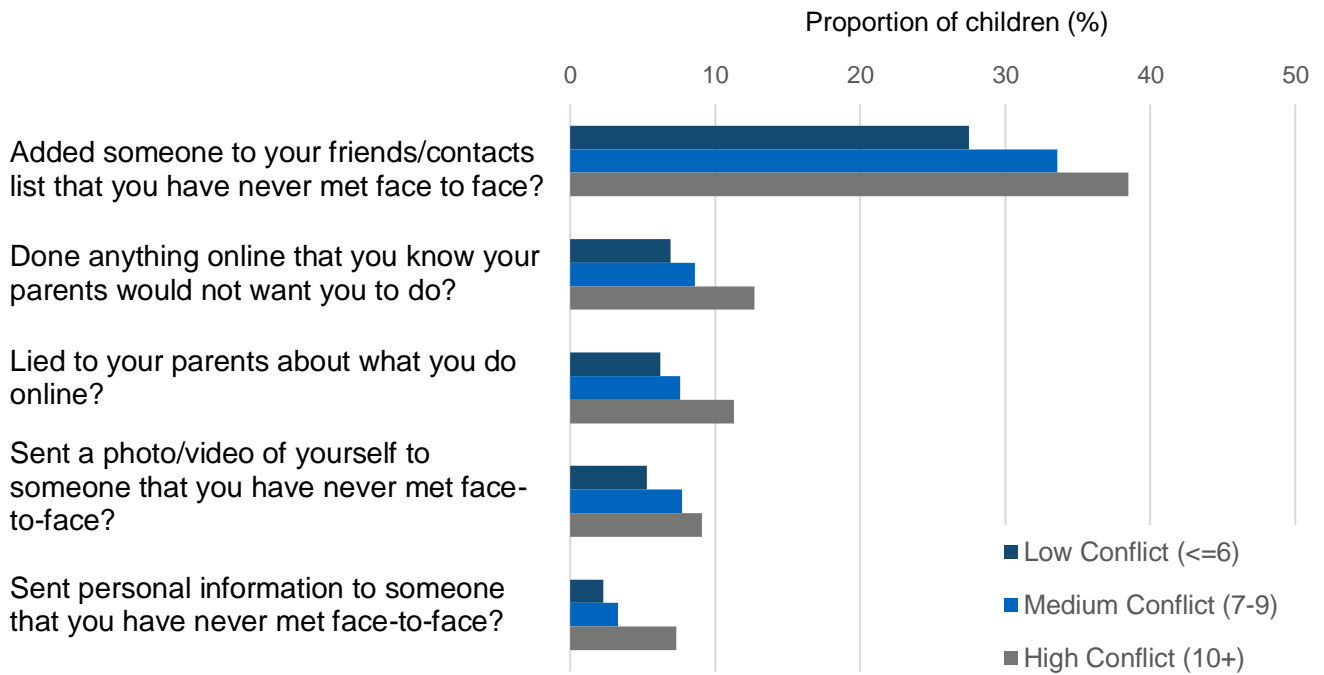
These statements had five possible responses: not at all, a little, sometimes, fairly often, and almost all or all of the time. Responses were added together to form a score ranging from 4 to 20. For analysis, responses were grouped into three equally sized groups of those with low, medium and high parent-child conflict.

On average, main carers reported low parent-child conflict, with an average score of 7.6. Children whose main caregiver reported high levels of parent-child conflict were more likely to have engaged in five specific risky online behaviours, see Figure 10 and [Appendix 10.2 – Table 8](#).

Those with high parent-child conflict were more likely to have sent personal information to someone that they had never met face-to-face (7% of those with high parent-child conflict, compared to 2% of those with low parent-child conflict). These children were also more likely to have done something online that they knew their parents would not want them to do (13%), and to have lied to their parents about what they did online (11%). However, both of these associations were very weak.

Children whose main caregiver reported low levels of parent-child conflict were less likely to have added someone to their friends/contacts list that they had never met face-to-face (28%, compared to 39% of those with high parent-child conflict). They were also less likely to have sent a photo/video of themselves to someone that they had never met face-to-face (5%, compared to 9% of those with high parent-child conflict). These associations however were very weak, and cannot tell us about the direction of the relationship (e.g. if those with high conflict were more likely to engage in risky online behaviours, or if engaging in these risky online behaviours meant children were more likely to experience parent-child conflict).

Figure 10. Children whose main caregivers reported high levels of parent-child conflict were more likely to have engaged in most of the risky online behaviours.



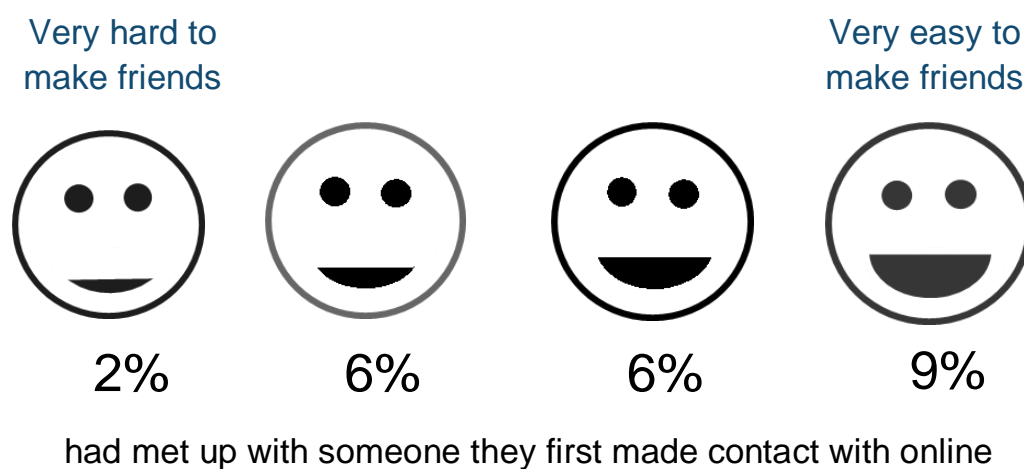
Base: 3,419 children from Sweep 9 of GUS study.

6. Peer-Relationship Factors

6.1 Making new friends

Children were asked how easy or hard they found making new friends at secondary school. There were four possible responses: very hard, hard, easy, very easy.

Figure 11. Children who found it very easy to make friends at secondary school were more likely to have met up with someone with who they first made contact with online.



Base: 3,419 children from Sweep 9 of GUS study.

Children who found it very easy to make friends were more likely to have met up with someone they had first made contact with online. Although it is unclear if these children were more likely to engage in this behaviour because they were more outgoing, or if they found it easier to make friends at secondary school because they had first met other children online.

Nonetheless, this association was very weak, and no associations were found with any of the other risky online behaviours, see [Appendix 10.2 - Table 9](#).

6.2 Peer relationships

Children were asked to evaluate how well the following statements described their friendships:

- My friends listen to what I have to say
- I can count on my friends to help me when I have a problem
- I talk to my friends when I am having a problem
- If my friends know something is bothering me, they ask me about it
- I share my thoughts and feelings with my friends
- My friends pay attention to me

Possible responses to each question were: never true, sometimes true, often true, always true. Responses were added together, to form a scale ranging from 6 to 24. For analysis, peer relationship scores were grouped into three equally sized categories – see [Appendix 10.1](#) for further methodological detail.

Figure 12. Children reported on average higher levels of peer closeness



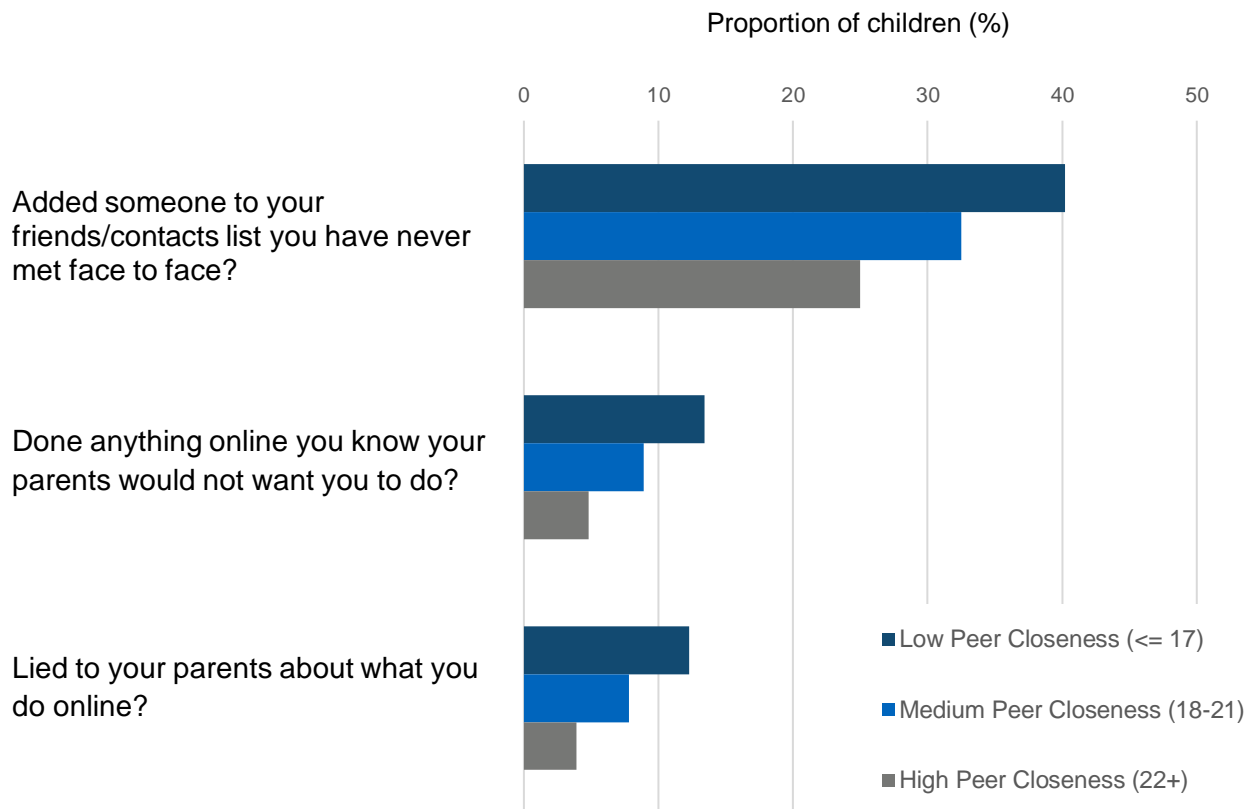
Most children had a high level of peer closeness, with an average score of 18.9. Those with high peer closeness (a score of 22 or higher) were less likely to have engaged in three of the risky online behaviours – see Figure 13.

One in four children (25%) with high peer closeness had added someone to their friends/ contacts list they had never met face-to-face, compared to 40% of those who had low peer closeness. A small proportion of those with high peer closeness had lied to their parents about what they did online (4%, compared to 12% with low peer closeness), or done anything online that their parents would not want them to do (5%, compared to 13% with low peer closeness).

Each of these relationships was weak, and no significant association was found for any of the other risky online behaviours (sending personal

information, sending a photo/video, or meeting up with someone they had first met online) – [Appendix 10.2 - Table 10](#).

Figure 13. Children who were less close to their peers were more likely to have engaged in three specific online behaviours.



Base: 3,419 children from Sweep 9 of GUS study.

6.3 Victimization

6.3.1 Face-to-face victimisation

Children were asked the following questions about being picked on or bullied:

- How often do children pick on you by calling you names or making fun of you in a way you don't like?
- How often do children pick on you by leaving you out of games and chats?
- How often do children pick on you by shoving, pushing, hitting or picking a fight with you?

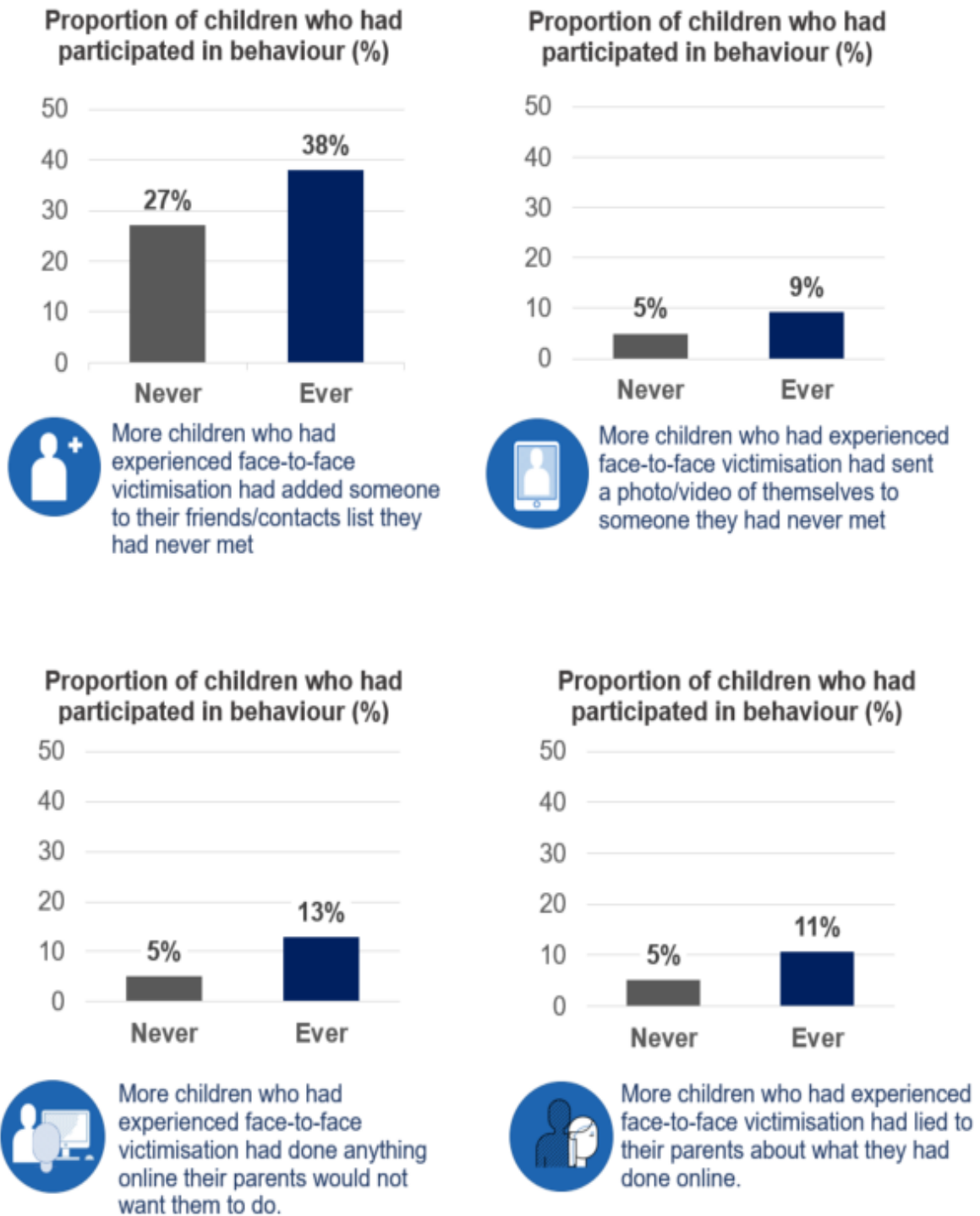
For each question, responses were: most days, at least once a week, about once a month, every few months, or never. Responses were grouped into those who ever experienced these forms of bullying and those who never experienced these forms of bullying (referred to as face-to-face victimisation).

Half of children (50%) had ever experienced any of these forms of face-to-face victimisation. Children who had ever experienced face-to-face victimisation were more likely to have engaged in four risky online behaviours, than those who had never, see Figure 14.

Just over one in ten (13%) of those who had ever experienced face-to-face victimisation had done something online their parents would not want them to do (compared to 5%). Thirty-eight per cent of children who had ever experienced face-to-face victimisation had added someone to their friends /contacts list they had never met face-to-face (compared to 27%). Eleven per cent of children who had ever experienced face-to-face victimisation were also more likely to have lied to their parents about what they do online (compared to 5%). These associations were weak, see [Appendix 10.2 - Table 11](#).

A very weak association was found for children who had sent a photo/ video of themselves. There was no statistically significant association between those that had ever experienced face-to-face victimisation and sending personal information, or meeting up with someone face-to-face they had first made contact with online.

Figure 14. Children who had ever experienced face-to-face victimisation were more likely to have engaged in four risky online behaviours.

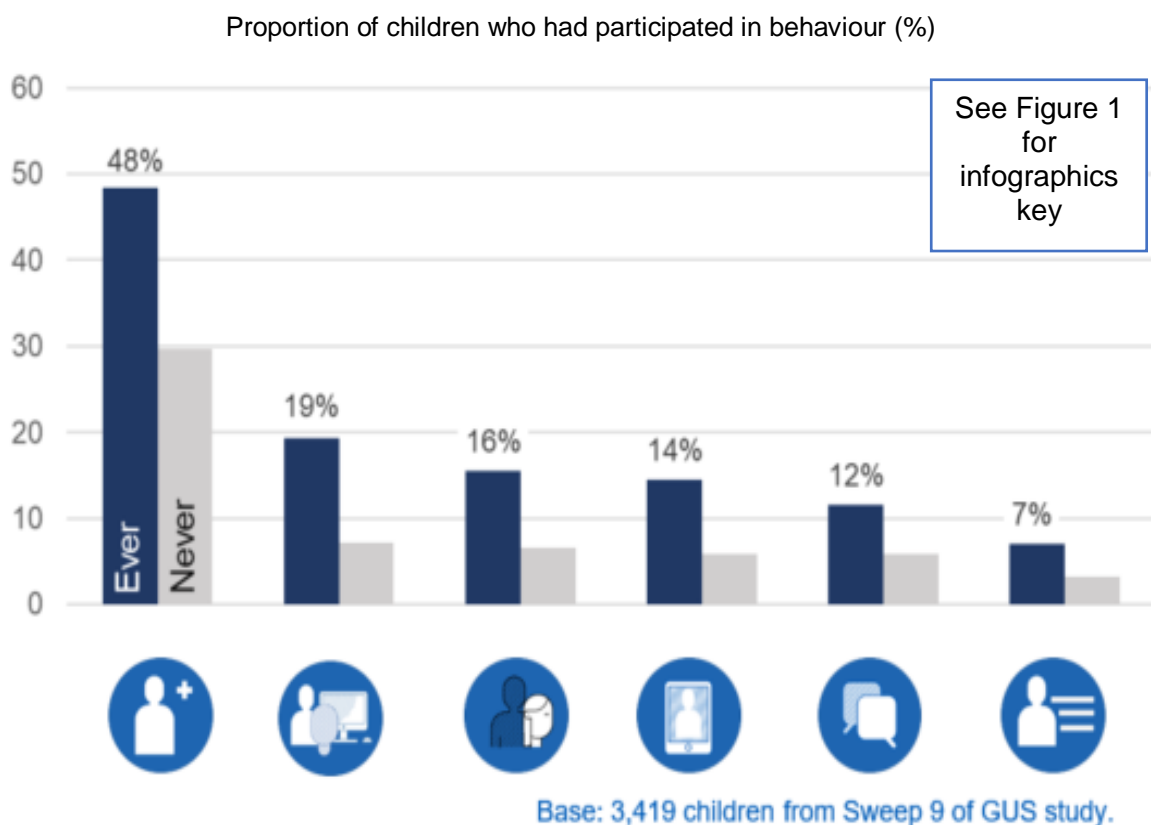


Base: 3,419 children from Sweep 9 of GUS study.

6.3.2 Online victimisation

Children were also asked how often other children picked on them by sending them messages or by posting things online (referred to as online victimisation). Possible responses were: most days, at least once a week, about once a month, every few months, or never. As above, responses were grouped according to those who had ever experienced this, and those who had never. Fifteen per cent of children had experienced online victimisation. These children were more likely to have participated in all six risky online behaviours, see Figure 15.

Figure 15. Children who had ever been picked on by being sent messages or posts online were more likely to have engaged in all risky online behaviours.



Just under half (48%) of those who had ever experienced online victimisation had added someone to their friends/ contacts list they had never met face-to-face (compared to 30%). Around one in five (19%) who had ever experienced online victimisation had done something online that they knew their parents would not want them to do (compared to 7%).

Broadly similar numbers of children who had experienced online victimisation had also lied to their parents about what they did online (16%), and/ or sent a photo/ video of themselves to someone they had never met face-to-face (14%). Whereas, only 6% of children who had never experienced online victimisation had participated in these behaviours.

These associations however were weak, and associations with the final two behaviours (met up with someone, and sent personal information) were very weak, see [Appendix 10.2 - Table 11](#). It is unclear from this analysis if one experience results in the other, e.g. if engaging in risky online behaviour results in a greater chance of experiencing online victimisation, or if experiencing online victimisation means children are more likely to participate in risky online behaviours.

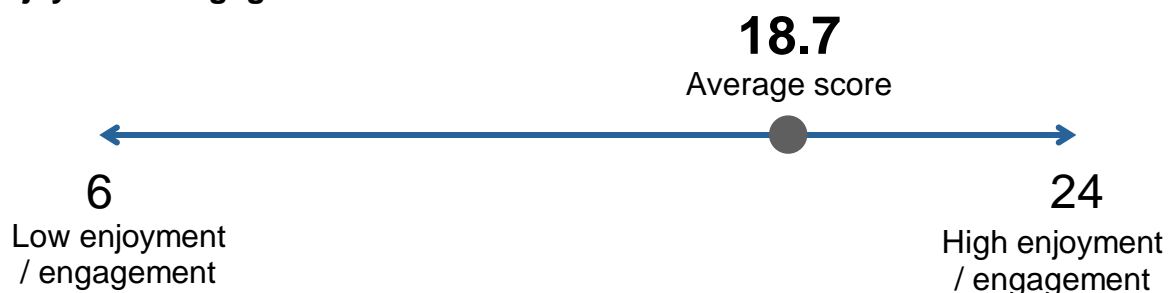
6.4 Enjoyment and engagement in school

Children were presented with the following items about their enjoyment and engagement in school:

- I enjoy learning at school
- I look forward to going to school
- I hate school
- My teacher treats me fairly
- How often do you try your best at school?
- How often do you misbehave or cause trouble in class?

For each question possible responses were: never, sometimes, often, always. Responses were added together to form a score ranging from 6 to 24, with 6 representing lower engagement and enjoyment and 24 a higher engagement and enjoyment of school. For analysis, responses were grouped into three equally sized groups of those with low, medium and high enjoyment and engagement in school.

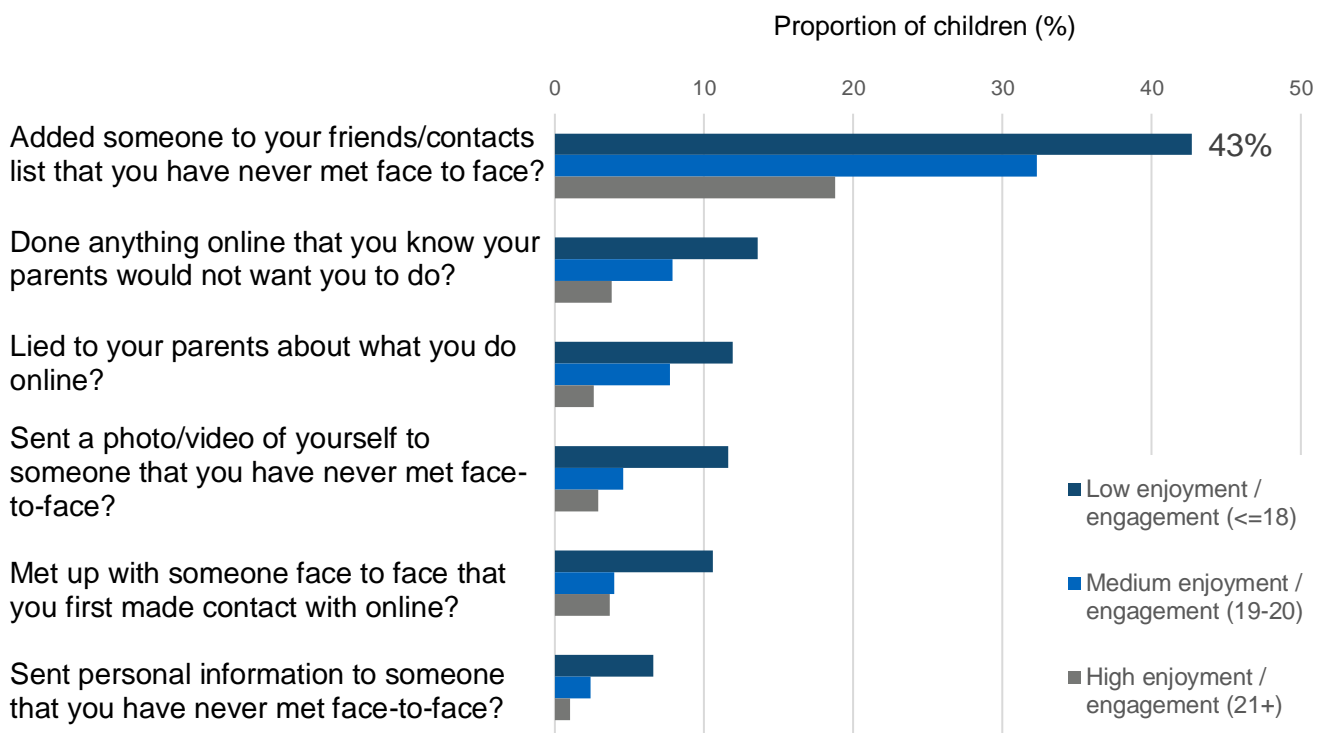
Figure 16. Children on average had higher compared to lower levels of school enjoyment / engagement



Most children had higher levels of engagement and enjoyment of school, with an average score of 18.7. Those who had lower enjoyment and engagement in school were more likely to have engaged in all the risky online behaviours, see Figure 17. This was particularly noticeable when looking at those who had: sent a photo/ video of themselves to someone they had never met face-to-face; done anything online their parents would not want them to do; met up with someone they had first made contact with online; or sent personal information to someone they had never met face-to-face, see [Appendix 10.2 - Table 12](#).

All these associations were weak, and this analysis cannot tell us about the direction of the relationship (i.e. if a lower engagement and enjoyment means children are more likely to engage in the behaviour, or if behaviour engagement means children are less likely to enjoy and engage with school).

Figure 17. Children with lower enjoyment and engagement with school were more likely to have engaged in all risky online behaviours.



Base: 3,419 children from Sweep 9 of GUS study.

7. Online Safeguarding Factors

7.1 Time spent online

Children were asked how long they usually spend on social media or messaging people on an average school day. Most children spent between one and three hours on social media, see Table B.

Table B Self-reported time spent on social media on an average school day.

Time spent on social media	Proportion of children (%)
None	10
Less than 30 minutes	15
30 minutes to less than an hour	14
1 hour to less than 2 hours	17
2 hours to less than 3 hours	17
3 hours to less than 5 hours	14
5 hours to less than 7 hours	7
7 hours or more	6

Base: 3,419 children from Sweep 9 of GUS study.

Children who spent 7 hours or more on social media on an average school day were more likely to engage in all six risky online behaviours than children who spent less time online.

For three behaviours – adding someone to their friends/contacts list, sending a photo/video, or meeting up with someone they had met online - there was an approximately linear relationship. This means that, of those who go online, more children who spent more time online had engaged in the behaviour, see [Appendix 10.2 - Table 13](#). This was particularly noticeable for those who had added someone to their friends/contacts list: 56% of those who spent 7 hours or more on social media had done this, compared to 22% of those who spent less than 30 minutes on social media on an average school day.

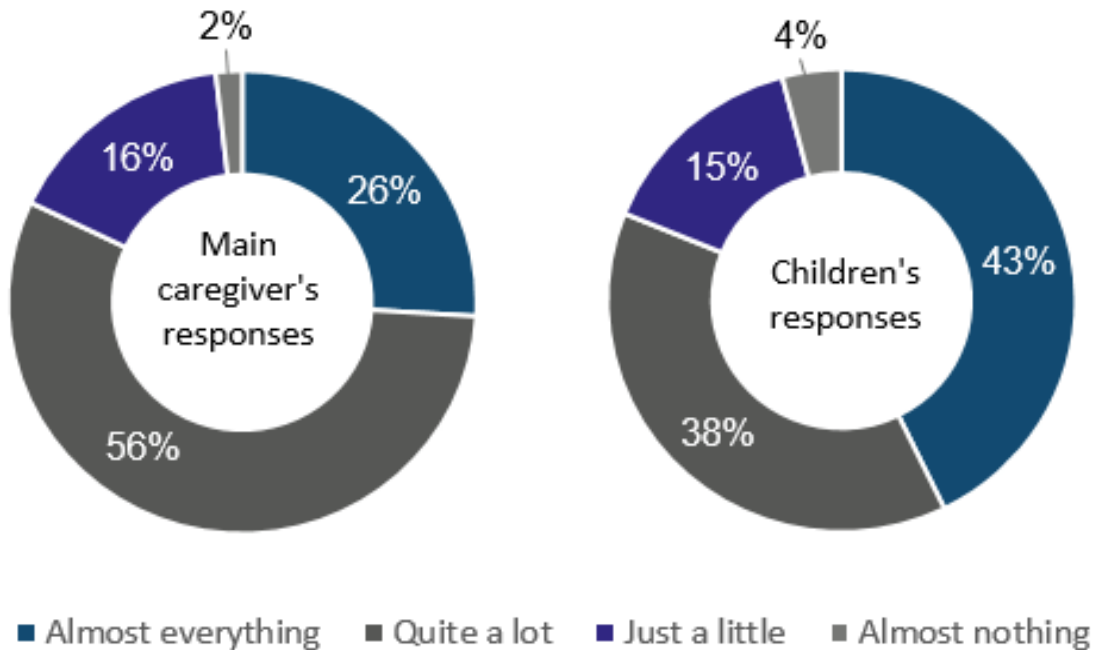
For the remaining three behaviours – sending personal information, doing anything online their parents would not want, and lying to their parents about their online activity – the pattern was less pronounced. Across these, children who spent 7 or more hours on social media on an average school day were the most likely to have engaged in these behaviours. However, there was less difference between the other groups – see [Appendix 10.2 - Table 13](#).

These associations however were weak, and are not able to tell us if one behaviour leads the other, i.e. if spending more hours on social media causes a child to engage in the behaviour, or if engaging in the behaviour means children spend longer on social media. It should also be noted that, for three of the behaviours, a larger proportion of children who said that they spent no time on social media during an average school day had done the behaviour than those who spent less than 30 minutes.

7.2 Parent’s knowledge of child’s online activities

Main caregiver’s were asked how much they felt they knew about what their child did online. Most (82%) felt that they knew almost everything or quite a lot about their child’s online activities – see Figure 18. Alongside this children were asked how much they thought their parents knew about what they do online. Similar to responses from parents, most children (81%) felt their parents knew almost everything or quite a lot about what they do online – see Figure 18.

Figure 18. Most children felt their parents knew ‘almost everything’ about what they did online, while most parents felt they knew ‘quite a lot’ about what their child does online.



Responses of parents and children were significantly associated with each other, however this was a weak association. When looking at the breakdown of responses, most parents either accurately judged how much they knew about their child’s online activity or underestimated how much they knew, see [Appendix 10.2 - Table 14](#).

Children who felt their parents knew almost everything about what they did online were less likely to have added someone to their friends/contacts list they had never met face-to-face (23%, compared to 63% of those who felt their parents knew almost nothing). They were also significantly less likely to have done anything online that their parents would not want them to do (6%, compared to 24%).

For three behaviours, those who felt their parents knew almost nothing were significantly more likely to have engaged in the behaviour. For example, one in four children (25%) who felt their parents knew almost nothing had lied to their parents about what they did online compared to 15% of those who felt their parents knew just a little. These children were also more likely to have met up with someone face-to-face they first made contact with online (16% of those who felt their parents knew almost nothing) and to have sent personal information to someone they had never met face-to-face (13%).

For the remaining behaviour (sent a photo/video), overall those who felt their parent knew less about what they did online were more likely to have engaged in this behaviour, and the association was linear. For example, more children who felt their parents knew just a little had sent a photo/ video (15% of children who felt their parents knew just a little, compared to 6% and 5% of those who felt their parents knew quite a lot or almost everything).

All of these associations were weak – see [Appendix 10.2 – Table 15](#) - and do not tell us about the direction of the relationship. For example, it is unclear if children who feel their parents know less are subsequently more likely to engage in risky online behaviour, or if those children who engage in risky online behaviour are less likely to tell their parents what they do online.

A similar pattern was seen when looking at the associations between how much parents felt they knew about their child's online activities and their child's engagement in risky online behaviours. Children whose parents felt they knew less had engaged in five risky online behaviours.

For three of the behaviours, large differences were found between parents who knew 'almost nothing' about their child's online activities and those felt they knew just a little, quite a lot or almost everything. More than double the proportion of children whose parents said they knew almost nothing about their online activity had sent a photo/video of themselves to someone they had never met face-to-face (26%) compared to those who knew just a little (9%), quite a lot (7%) or almost everything (5%).

Associations between parents knowledge and child's online risk taking were weak or very weak– see [Appendix 10.2 - Table 16](#). There was also no significant relationship between parents' knowledge and their child having had met up with someone face-to-face who they first made contact with online.

7.3 Staying safe online

7.3.1 Children's knowledge of how to protect themselves

Children were asked how much they knew about protecting themselves from strangers online, and about protecting personal information online. Possible responses were: nothing at all, not very much, quite a lot, and a great deal.

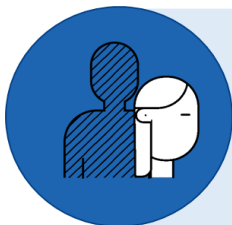
For analysis responses to these two questions were combined to produce a score ranging from 2 to 8. Most children said they knew a great deal about

protecting themselves online, with an average score of 7.3, see [Appendix 10.2 – Table 17](#) for further detail.



Children who said they knew a great deal about protecting themselves online were **less likely to have added someone to their friends/contacts list they had never met face-to-face.**

Just under a third of children (30%) who said they knew a great deal about protecting themselves online had engaged in this behaviour, compared to 37% of those who felt they knew less about protecting themselves online.



Children who said they knew a great deal about protecting themselves online were **less likely to have lied to their parents about what they do online.**

Only 7% of children who felt they knew a great deal about protecting themselves online had lied to their parents about what they did online. Whereas, one in ten children (10%) who felt they knew quite a lot, not much, or nothing at all about protecting themselves online had engaged in this behaviour.

While significant, these associations were very weak. For all other behaviours (sending personal information, sending a photo/ video, meeting up with someone, doing something online their parents would not want), there was no significant differences between those who knew a great deal about protecting themselves online and those who knew less – see [Appendix 10.2 - Table 18](#).

7.3.2 Parent’s knowledge of protecting their child online

Parents were asked how much they knew about protecting their child from strangers online, and about protecting personal information online. Possible responses were: nothing at all, not very much, quite a lot, and a great deal.

Most parents felt they knew quite a lot about protecting personal information online (53%) and protecting their child from strangers online (52%). Children

reported knowing more about both these factors than their parents – see [Appendix 10.2 - Table 17](#).

These variables were not statistically significantly associated with engagement in any of the risky online behaviours, i.e. children whose parents felt they knew less about protecting their child online were no more likely to engage in any of the risky online behaviours than those children whose parents felt they knew a great deal.

7.4 Parental mediation of online activity

Parents were asked how often they talk to their child about the following topics:

- Strangers online
- Protecting personal information online
- If bullied or harassed online
- How to behave on social networking sites
- Rules to follow when online

Possible responses were: never, rarely, sometimes, often, very often. Most parents spoke to their child very often or often about each of the above topics, see Table C.

Table C. Parents often spoke with their children about online issues

	strangers online	personal info	bullied or harassed	behaviour on socials	rules online
Never	1%	2%	3%	6%	2%
Rarely	5%	7%	8%	6%	5%
Sometimes	28%	26%	24%	19%	24%
Often	40%	38%	37%	37%	40%
Very often	26%	27%	29%	33%	29%

Base: 3,419 children from Sweep 9 of GUS study.

For analysis, responses to these questions were combined to give a total score ranging from 5 to 25. High scores represent parents who spoke to their children more frequently about the above topics. No statistically significant association was found between how much parents discussed these topics and their child’s participation in any risky online behaviours, see [Appendix 10.2 - Table 19](#).

7.5 Parent rules and restrictions of online activities

Parents were asked if they imposed any rules or restrictions on their child’s online activity. As shown in Table D, most parents reported having rules about what their child could do online (72%). The use of other restrictions and rules was also fairly common, with only 10% of parents saying that they did not use any rule or restriction regarding their child’s online activities.

Table D. Most parents had rules about what their child could do online

Rule or restriction	Proportion of parents (%)
Rules about what child can do	72
Technical restrictions on what child can see	57
Rules about child’s time spent online	56
Rules about when child can use internet	51
Other rules or restrictions	9
None of these	10

Base: 3,419 children from Sweep 9 of GUS study.

Children whose parents reported using two or more restrictions were less likely to have added someone to their friends or contacts list they had never met face to face. Just under one in three (30%) children whose parents used multiple restrictions had participated in this behaviour, compared to half (50%) of those whose parents just used technical restrictions – see [Appendix 10.2 – Table 20](#).

However, these associations were weak and this analysis cannot be used to imply causation. Statistically significant associations were not found for any of the other risky online behaviours.

8. Conclusions

This report aimed to provide a representative preliminary insight into online risk-taking behaviour among children aged 12 in Scotland. Specifically, the report examined the prevalence of risky online behaviours, and their potential associations with groups of risk factors identified from the literature. The report used a nationally representative sample of over 3,000 children who took part in the Growing up in Scotland (GUS) survey.

The risky online behaviour most engaged in was children adding someone to their friends/ contacts list who they had never met face-to-face. Around a third (33%) of children reported performing this behaviour. Less than one in ten children (4-9%) had engaged in any of the remaining five risky online behaviours.

Overall, individual factors were associated with online risk taking but as noted, these associations were weak or very weak. For example, boys were more likely to take risks online than girls. Those living in households with higher qualifications were less likely to take risks online. Those with higher levels of wellbeing and life satisfaction were less likely to take risks online. However, associations were not found for emotional symptoms, and hyperactivity / inattention.

Family factors were important when considering risky online behaviours. Those who reported being less close to their resident parents were more likely to take risks online. Furthermore, those who reported higher levels of conflict with their parents/ children took more risks online.

Peer relationships were also influential. Being victimised either online or offline was associated with higher risk taking online. Additionally, having less close peer relationships, and feeling less connected at school were associated with higher risk taking online. However, those who found it easy to make friends seemed to take some higher risks online.

Online safeguarding was sometimes associated with online risk taking. Spending more than seven hours online on a school day was associated with higher risk taking online. Generally, higher reported parental knowledge of child's online activities was associated with lower risk taking online. However, parental reporting of knowing how to keep their children safe online, and reporting of talking regularly with their children about staying safe online were

not associated with children's risk taking online. Despite this, parents having a higher number of rules and restrictions in place regarding online activity was associated with lower risk taking online.

However, readers should note that the majority of children aged 12 did not report having engaged in risky online behaviour. Therefore, subsequent analyses were based on a minority of the sample. Additionally, the analyses were cross-sectional in nature (i.e. performed at one time point), which does not allow for us to infer causality. That is, we are unable to draw conclusions regarding whether these factors caused risk taking online, or whether engaging in risky online behaviours caused these factors. Furthermore, it should be kept in mind that this report is based on evidence analysed in a pre-pandemic context, before COVID-19 impacted on Scotland. Therefore, frequencies of risky online behaviours, and their associated factors may have changed as a result of the pandemic. However, we are unable to draw any concrete conclusions on this in the current report. More evidence is needed to understand the potential ramifications of the COVID-19 pandemic on the current findings, a task that was beyond the remit of this report.

Nevertheless, this report has provided a grounding on which future analyses can build further knowledge and insight into children's online risk taking behaviours. It will be interesting to see how online risk taking evolves as these children enter into young adulthood, and whether the factors highlighted in this report can predict longevity in online risk taking.

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10. Appendix

10.1 Methodological notes

This report uses data from Birth Cohort 1 (BC1) of the Growing up in Scotland (GUS) study. Commencing in 2004, the GUS study has followed several nationally representative samples of children living in Scotland, from 10 months old⁹. The current analysis uses data from 3,419 families, and is comprised of 1,647 male and 1,641 female children.

Associations between variables were tested using chi-square tests, with a Bonferroni adjustment applied. A Yates' Correction for Continuity was applied to 2 x 2 tables.

For nominal variables, in 2 x 2 tables, Phi was used to measure the strength of the association. Cramer's V was used to measure the strength of the association for larger tables. Cohen's (1988) criteria of 0.1 for a small/weak effect, 0.3 for a moderate effect, and 0.5 for a large effect was used to classify the strength of associations.

Where possible, composite measures were constructed with responses averaged across a series of individual questions. Average scores were then grouped following established scales (e.g. hyperactivity, and emotional symptoms). Where an established scale was unavailable (e.g. closeness to resident parent, peer closeness, enjoyment / engagement in school) or unable to be accessed (e.g. life satisfaction, mental wellbeing, parent-child conflict), scores were grouped using a statistically generated cut-off point. These cut-off points have been included in the text where relevant. Cut-off points were selected to give equal sized groups, as the constructed variables were considerably skewed.

⁹ Children in the first cohort of the study, BC1, were born in 2004-5. A second birth cohort, BC2, involving children born in 2010-11, were followed until 2015-16. See growingupinScotland.org.uk for more information on the design and the methodology of the study.

10.2 Supplementary Tables

Table 1. Correlation coefficients¹ for risky online behaviours

	1	2	3	4	5	6
1. Added someone to friends/ contacts list you have never met face to face	-					
2. Sent personal information to someone you have never met face to face	0.204	-				
3. Sent a photo or video of yourself to someone you have never met face to face	0.322	0.333	-			
4. Met up with someone face to face you first made contact with online	0.202	0.191	0.262	-		
5. Done anything online that you know your parents would not want you to do	0.198	0.106	0.210	0.094	-	
6. Lied to your parents about what you do online	0.190	0.147	0.216	0.125	0.402	-

Base: 3,419 children from Sweep 9 of GUS study. Variables: CiRir, CiRii, CiRiv, CiRim, CiRip, CiRil

Table 2. Proportions of boys and girls who had engaged in risky online behaviours

Risky online behaviour	Boys	Girls	Strength of association²
Added someone to friends/contacts list that you have never met face to face	40%	26%	Weak
Sent personal information to someone that you have never met face to face	5%	3%	-
Sent a photo or video of yourself to someone that you have never met face to face	8%	7%	-
Met up with someone face to face that you first made contact with online	8%	6%	Very weak
Done anything online that you know your parents would not want you to do	12%	6%	Weak
Lied to your parents about what you do online	10%	6%	Very weak

Base: 3,419 children from Sweep 9 of GUS study. Variables: MiHGsx1

Table 3. Proportions of children in households with different qualification levels engaging in risky online behaviours.

Risky online behaviour	Highest household qualification [†]					Strength of association ²
	No qualification	Lower level qualifications	Intermediate qualifications	Upper level qualifications	Degree level qualifications	
Added someone to friends/contacts list you have never met face to face	34%	29%	36%	33%	30%	-
Sent personal information to someone you have never met face to face	4%	3%*	5%	5%	2%	Very weak
Sent a photo or video of yourself to someone you have never met face to face	7%	5%	6%	9%	7%	-
Met up with someone face to face you first made contact with online	15%	3%	8%	7%	6%	Very weak
Done anything online that you know your parents would not want you to do	11%	6%	8%	9%	10%	-
Lied to your parents about what you do online	7%	7%	6%	9%	8%	-

Base: 3,419 children from Sweep 9 of GUS study. Variables: DiMedu10

[†]Qualification level refer to: Lower level qualifications (Lower level standard grades and vocational qualifications); Intermediate qualifications (Upper level standard grades and intermediate vocational qualifications), Upper level qualifications (Higher grades and Upper level vocational qualifications), Degree level (Degree level academic and vocational qualifications).

Table 4. Proportions for associations between life satisfaction and wellbeing and risky online behaviours.

Risky online behaviour	Life satisfaction*			Strength of association²	Wellbeing**			Strength of association²
	Lower (≤ 16)	Medium (17 – 19)	High (20)		Lower (≤ 29)	Medium (30 - 32)	High (33+)	
Added someone to friends/contacts list that you have never met face to face	41%	31%	23%	Weak	41%	30%	23%	Weak
Sent personal information to someone that you have never met face to face	6%	3%	2%	Very weak	5%	2%	2%	Very weak
Sent a photo or video of yourself to someone that you have never met face to face	10%	7%	3%	Weak	10%	6%	3%	Weak
Met up with someone face to face that you first made contact with online	8%	6%	5%	-	8%	6%	5%	Very weak
Done anything online that you know your parents would not want you to do	14%	6%	5%	Weak	13%	7%	5%	Weak
Lied to your parents about what you do online	13%	5%	3%	Weak	12%	6%	3%	Weak

Base: 3,419 children from Sweep 9 of GUS study. Life satisfaction variables: CiWew, CiWed, CiWer, CiWea, CiWeg. Wellbeing variables: CiWs, CiWi, CiWt, CiWFr, CiWp, CiWf, CiWc

*Life satisfaction is measured and grouped using the Students' Life Satisfaction Scale (Huebner, 1991).

**Wellbeing is measured using selected items from the Kidscreen Health-Related Quality of Life scale (Ravens-Sieberer et al., 2005; the Kidscreen Group, 2006).

Table 5. Proportions for associations between hyperactivity and emotional symptoms and risky online behaviours.

Risky online behaviour	Hyperactivity / inattention[†]				Emotional symptoms[†]			
	Average (0 – 5)	Borderline (6)	Abnormal (7 – 10)	Strength of association²	Average (0 – 3)	Borderline (4)	Abnormal (5 – 10)	Strength of association²
Added someone to friends/contacts list that you have never met face to face	30%	47%	45%	Weak	32%	34%	35%	-
Sent personal information to someone that you have never met face to face	3%	10%	6%	Very weak	3%	5%	6%	-
Sent a photo or video of yourself to someone that you have never met face to face	6%	16%	13%	Weak	7%	10%	8%	-
Met up with someone face to face that you first made contact with online	6%	11%	10%	Very weak	7%	5%	7%	-
Done anything online that you know your parents would not want you to do	7%	14%	19%	Weak	8%	8%	12%	-
Lied to your parents about what you do online	6%	13%	18%	Weak	7%	10%	12%	Very weak

Base: 3,419 children from Sweep 9 of GUS study. Hyperactivity variables: CiSDQrt, CiSDQfi, CiSDQdi, CiSDQth, CiSDQwk. Emotional symptoms variables: MiSDQ05, MiSDQ08, MiSDQ13, MiSDQ16, MiSDQ24. [†]Hyperactivity and emotional symptoms scores were measured and grouped using the Strengths and Difficulties Questionnaire (SDQ). Hyperactivity was measured in the child questionnaire. Emotional symptoms was measured from the main carer questionnaire.

Table 6. Proportions for associations between family structure and risky online behaviours.

Risky online behaviour	Family Structure		Strength of association²
	Lone parent	Couple family	
Added someone to friends/contacts list that you have never met face to face	36%	31%	-
Sent personal information to someone that you have never met face to face	6%	3%	Very weak
Sent a photo or video of yourself to someone that you have never met face to face	8%	7%	-
Met up with someone face to face that you first made contact with online	9%	6%	-
Done anything online that you know your parents would not want you to do	11%	8%	-
Lied to your parents about what you do online	9%	8%	-

Base: 3,419 children from Sweep 9 of GUS study. Peer closeness variables: CiCrFrI CiCrFrc CiCrFrt CiCrFrb CiCrFrs CiCrFra.. Family structure variable: DiHGrsp04

Table 7. Proportions for associations between closeness to resident mother or father and risky online behaviours.

Risky online behaviour	Closeness to resident mother				Closeness to resident father			
	Low (<3.5)	Medium (3.5-3.99)	High (4)	Strength of association²	Low (<3.17)	Medium (3.17-3.99)	High (4)	Strength of association²
Added someone to friends/contacts list that you have never met face to face	42%	33%	24%	Weak	40%	28%	25%	Weak
Sent personal information to someone that you have never met face to face	7%	2%	2%	Weak	5%	2%	2%	Very weak
Sent a photo or video of yourself to someone that you have never met face to face	12%	6%	4%	Weak	10%	5%	4%	Weak
Met up with someone face to face that you first made contact with online	9%	8%	4%	Very weak	8%	5%	4%	Very weak
Done anything online that you know your parents would not want you to do	16%	8%	5%	Weak	14%	7%	5%	Weak
Lied to your parents about what you do online	14%	8%	4%	Weak	13%	6%	4%	Weak

Base: 3,419 children from Sweep 9 of GUS study. Closeness to resident mother variables: CiNRMum1 CiNRMum3 CiNRMum5 CiNRMum6 CiNRMum7 CiNRMum8. Closeness to resident father variables: CiNRDad1 CiNRDad3 CiNRDad5 CiNRDad6 CiNRDad7 CiNRDad8.

Table 8. Proportions for associations between parent-child conflict and risky online behaviours.

Risky online behaviour	Parent-Child Conflict			Strength of association²
	Low (<=6)	Medium (7-9)	High (10+)	
Added someone to friends/contacts list that you have never met face to face	28%	34%	39%	Very Weak
Sent personal information to someone that you have never met face to face	2%	3%	7%	Weak
Sent a photo or video of yourself to someone that you have never met face to face	5%	8%	9%	Very Weak
Met up with someone face to face that you first made contact with online	5%	8%	8%	-
Done anything online that you know your parents would not want you to do	7%	9%	13%	Very Weak
Lied to your parents about what you do online	6%	8%	11%	Very Weak

Base: 3,419 children from Sweep 9 of GUS study. Parent-child conflict variables: MiPDis1 MiPDis2 MiPDis3 MiPDis5.

Table 9. Proportions for associations between ease of making new friends at secondary school and risky online behaviours.

Risky online behaviour	Ease of making new friends at secondary school				Strength of association²
	Very easy	Quite easy	Quite hard	Very hard	
Added someone to friends/contacts list that you have never met face to face	32%	34%	35%	30%	-
Sent personal information to someone that you have never met face to face	4%	3%*	5%	6%	-
Sent a photo or video of yourself to someone that you have never met face to face	8%	7%	9%	6%	-
Met up with someone face to face that you first made contact with online	9%	6%	6%	-	Very weak
Done anything online that you know your parents would not want you to do	9%	8%	11%	10%	-
Lied to your parents about what you do online	8%	7%	10%	10%	-

Base: 3,419 children from Sweep 9 of GUS study. Ease of making new friends variable: DiDsdem.

Table 10. Proportions for associations between closeness to friends and risky online behaviours.

Risky online behaviour	Closeness to friends			Strength of association²
	Lower peer closeness (<=17)	Medium peer closeness (18-21)	High peer closeness (21+)	
Added someone to friends/contacts list that you have never met face to face	40%	33%	25%	Weak
Sent personal information to someone that you have never met face to face	5%	4%	3%	-
Sent a photo or video of yourself to someone that you have never met face to face	9%	8%	5%	-
Met up with someone face to face that you first made contact with online	7%	7%	7%	-
Done anything online that you know your parents would not want you to do	13%	9%	5%	Weak
Lied to your parents about what you do online	12%	8%	4%	Weak

Base: 3,419 children from Sweep 9 of GUS study. Peer closeness variables: CiCrFrl CiCrFrc CiCrFrt CiCrFrb CiCrFrs CiCrFra..

Table 11. Proportions for associations between face-to-face victimisation and online victimisation and risky online behaviours.

Risky online behaviour	Face-to-face victimisation			Online victimisation		
	Ever experienced	Never experienced	Strength of association²	Ever experienced	Never experienced	Strength of association²
Added someone to friends/contacts list that you have never met face to face	38%	27%	Weak	51%	30%	Weak
Sent personal information to someone that you have never met face to face	4%	3%	-	7%	3%	Very weak
Sent a photo or video of yourself to someone that you have never met face to face	9%	5%	Very weak	15%	6%	Weak
Met up with someone face to face that you first made contact with online	7%	6%	-	12%	6%	Very weak
Done anything online that you know your parents would not want you to do	13%	5%	Weak	19%	7%	Weak
Lied to your parents about what you do online	10%	5%	Very weak	16%	6%	Weak

Base: 3,419 children from Sweep 9 of GUS study. Face-to-face victimisation variables: CiPick1, CiPick2, CiPick3. Online victimisation variable: CiPickT

Table 12. Proportions for associations between time enjoyment and engagement in school and risky online behaviours.

Risky online behaviour	enjoyment / engagement in school			Strength of association²
	Low (<=18)	Medium (19 – 20)	High (21+)	
Added someone to friends/contacts list that you have never met face to face	43%	32%	19%	Weak
Sent personal information to someone that you have never met face to face	7%	3%	1%	Weak
Sent a photo or video of yourself to someone that you have never met face to face	12%	5%	3%	Weak
Met up with someone face to face that you first made contact with online	11%	4%	4%	Weak
Done anything online that you know your parents would not want you to do	14%	8%	4%	Weak
Lied to your parents about what you do online	12%	8%	3%	Weak

Base: 3,419 children from Sweep 9 of GUS study. School enjoyment / engagement variables: CiSch3 CiSch2 CiSch1 CiSch18 CiSch14 CiSch22.

Table 13. Proportions for associations between time on social media and risky online behaviours.

Risky online behaviour	Time on social media								Strength of association²
	None	< 30 mins	30 mins to 1 hour	1 hour to < 2 hours	2 hours to < 3 hours	3 hours to < 5 hours	5 hours to < 7 hours	7 hours +	
Added someone to friends/contacts list that you have never met face to face	26%	22%	28%	28%	35%	39%	46%	56%	Weak
Sent personal information to someone that you have never met face to face	-	2%	1%	3%	6%	5%	7%	10%	Weak
Sent a photo or video of yourself to someone that you have never met face to face	-	4%	3%	6%	10%	10%	13%	17%	Weak
Met up with someone face to face that you first made contact with online	7%	3%	4%	5%	6%	11%	13%	15%	Weak
Done anything online that you know your parents would not want you to do	11%	7%	7%	9%	7%	9%	12%	20%	Weak
Lied to your parents about what you do online	4%	5%	8%	9%	6%	9%	13%	16%	Weak

Base: 3,419 children from Sweep 9 of GUS study. Time on social media variable: CiTiN.

Table 14. Proportions for associations between how much parents felt they knew about what their child does online and what children felt their parents knew about what they did online.

Main caregiver: How much do you know about what your child does online?				
Child: How much do you think your parents know about what you do online?	Almost everything	Quite a lot	Just a little	Almost nothing
Almost everything	58%	42%	25%	20%
Quite a lot	29%	42%	40%	39%
Just a little	10%	13%	27%	30%
Almost nothing	4%	3%	8%	11%
Total	800	1729	496	56

Base: 3,419 children from Sweep 9 of GUS study. Knowledge of child's online activities – Main caregiver variable: MiPIpkn. Child's variable: Ciilpkn.

Table 15. Proportions for associations between how much child felt their parents knew about what they did online and engagement in risky online behaviours.

Risky online behaviour	How much do you think your parents know about what you do online?				Strength of association²
	Almost everything	Quite a lot	Just a little	Almost nothing	
Added someone to friends/contacts list that you have never met face to face	23%	34%	48%	63%	Weak
Sent personal information to someone that you have never met face to face	3%	3%	6%	13%	Weak
Sent a photo or video of yourself to someone that you have never met face to face	5%	6%	15%	17%	Weak
Met up with someone face to face that you first made contact with online	5%	6%	11%	16%	Weak
Done anything online that you know your parents would not want you to do	6%	9%	16%	24%	Weak
Lied to your parents about what you do online	4%	8%	15%	25%	Weak

Base: 3,419 children from Sweep 9 of GUS study. Knowledge of child's online activities child's variable: CiilPkn.

Table 16. Proportions for associations between how much parents felt they knew about what their child did online and their child's engagement in risky online behaviours.

Risky online behaviour	How much do you know about what your child does when they are online?				Strength of association²
	Almost everything	Quite a lot	Just a little	Almost nothing	
Added someone to friends/contacts list that you have never met face to face	27%	32%	42%	46%	Weak
Sent personal information to someone that you have never met face to face	4%	3%	5%	15%	Very weak
Sent a photo or video of yourself to someone that you have never met face to face	5%	7%	9%	26%	Weak
Met up with someone face to face that you first made contact with online	6%	6%	8%	16%	-
Done anything online that you know your parents would not want you to do	8%	8%	12%	24%	Very weak
Lied to your parents about what you do online	5%	8%	11%	11%	Very weak

Base: 3,419 children from Sweep 9 of GUS study. Knowledge of child's online activities main caregiver variable: MiPIpkn.

Table 17. Proportions for how much parents and children felt they knew about protecting themselves (/their children) online.

	How much do you know about protecting personal information online?		How much do you know about protecting yourself/your child from strangers online?	
	Child	Parent	Child	Parent
A great deal	72%	30%	70%	30%
Quite a lot	26%	53%	27%	52%
Not very much	2%	16%	2%	16%
Nothing at all	1%	2%	1%	2%
Total	3288	3288	3288	3288

Base: 3,419 children from Sweep 9 of GUS study. Main caregiver variables: MiPknoP, MiPknoS. Child's variable: CilKnos, CilKnop

Table 18. Proportions for associations between child knowledge about protecting themselves online and engagement in risky online behaviours.

Risky online behaviour	Knowledge of protecting themselves online		Strength of association²
	Less than a great deal [†] (< 8)	A great deal (8)	
Added someone to friends/contacts list that you have never met face to face	37%	30%	Very weak
Sent personal information to someone that you have never met face to face	5%	3%	-
Sent a photo or video of yourself to someone that you have never met face to face	9%	6%	-
Met up with someone face to face that you first made contact with online	8%	6%	-
Done anything online that you know your parents would not want you to do	10%	8%	-
Lied to your parents about what you do online	10%	7%	Very weak

Base: 3,419 children from Sweep 9 of GUS study. Time on social media variable: CiTiN

[†]This category includes children who said they knew quite a lot, not very much and nothing at all.

Table 19. Proportions for associations between how often parents talk to child about online actions and risky online behaviours.

Risky online behaviour	How often parents talk to child about: strangers online, protecting personal info, if bullied or harassed online, how to behave online, rules to follow when online			Strength of association²
	Never/Rarely (≤9)	Sometimes (10-12)	Often/A great deal (13+)	
Added someone to friends/contacts list that you have never met face to face	30%	33%	36%	-
Sent personal information to someone that you have never met face to face	4%	5%	3%	-
Sent a photo or video of yourself to someone that you have never met face to face	7%	7%	7%	-
Met up with someone face to face that you first made contact with online	8%	5%	7%	-
Done anything online that you know your parents would not want you to do	8%	9%	10%	-
Lied to your parents about what you do online	7%	9%	8%	-

Base: 3,419 children from Sweep 9 of GUS study. Parent talking about online themes variables: MiPMeds MiPMedi MiPMedb MiPMedh MiPMedr.

Table 20. Proportions for associations between parent rules/restrictions used and participation in risky online behaviours.

Risky online behaviour	Multiple rules / restrictions used	One rule / restriction used					None of these	Strength of association ²
		Technical restrictions	Rules about what the child can do online	Rules about how much time child can spend online	Rules about when child can use the internet	Other rules / restrictions		
Added someone to friends/contacts list that you have never met face to face	30%	50%	37%	34%	47%	39%	40%	Weak
Sent personal information to someone that you have never met face to face	4%	9%	3%	-	-	-	5%	NA
Sent a photo or video of yourself to someone that you have never met face to face	7%	11%	10%	-	-	-	9%	-
Met up with someone face to face that you first made contact with online	6%	10%	11%	7%	-	-	11%	NA
Done anything online that you know your parents would not want you to do	8%	16%	11%	-	-	-	12%	-
Lied to your parents about what you do online	8%	10%	8%	-	-	-	11%	-

Base: 3,419 children from Sweep 9 of GUS study. Parent rules/restrictions variables: MiPIntRes1, MiPIntRes2, MiPIntRes3, MiPIntRes4, MiPIntRes5, MiPIntRes6.

Table Notes:

¹ Associations were first tested using chi-square tests, all were significant at the 95% level. All phi coefficients displayed above are also significant at the 95% level.

² Differences were tested using chi-square tests. Column totals are not shown as tests were run on each behaviour, not across all behaviours, so columns will not add up. Where significant, the strength of association was measured using either Phi for 2x2 tables, or Cramer's V for larger tables. Strength of association is described as:

Description	Phi / Cramer's V value
Very weak / Very small	< 0.1
Weak / Small	0.1 – 0.3
Moderate	0.3 – 0.5
Strong / Large	> 0.5



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