ROCKET SCIENCE

Online Harms.

Evaluation of the education pilot for West Yorkshire Combined Authority Violence Reduction Partnership

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Contents

Executive summary

In October 2023 the West Yorkshire Violence Reduction Partnership (VRP) commissioned the pilot of an online harms educational and support provision within a school in Bradford. Delivered by providers (All Star and Step 2) the pilot delivered a universal in-class workshop to young people in years 5 to 10 as well as one-to-one and group based support for those who had been identified as having experienced some form of harm as a result of online activity. In November 2023 Rocket Science were commissioned to provide learning and evaluation support for the pilot.

This report provides the findings from the evaluation which has taken a mixed methodological approach combining data from surveys and young people's self-assessment as well as qualitative interviews with young people, school and delivery staff. The main findings from the evaluation include:

- The need for further education and support, and particularly the delivery of a whole school approach to this, is clearly identified. Data from the evaluation indicates that approximately 46% of young people in the pilot site have experienced some form of harm as a result of their online activity, although rates vary significantly between parents/carers and young people. Parent/carer and young people's knowledge of where to seek support in the event of harm was initially low although young people's knowledge in this area has increased over the pilot.

- Despite young people self-assessing as being very knowledgeable in this area most young people found the in-class workshops useful and reported that it consolidated their knowledge. For those receiving group or one-to-one support the areas of greatest gains in knowledge related to grooming and exploitation and identifying misinformation.

- As a result of the pilot young people report increases in understanding of the risks and potential harms that can occur and how to reduce these risks. There are some reports of behaviour change as a result of the pilot including increasing privacy settings in social media. Young people's recollection of the workshops was good 4-6 weeks after the session was delivered and the use of case studies and real life examples were identified as being particularly useful in their learning.

- All those involved recognised a need for more time within sessions and the challenges that the curriculum poses to this. The need for more thorough planning with schools ahead of the

school year and, where possible, the co-production of targeted resources with young people would be of benefit.

- Teachers who observed the workshops reported them to be of good quality and age relevant.

Based upon the evaluation a number of recommendations are made including potential adjustments to the process of delivery, the content of sessions and consideration of cross sector partnership working in the commissioning of future delivery.

1. Introduction

1.1 The online harms pilot

This report evaluates the effectiveness and delivery of a pilot programme as commissioned by The West Yorkshire Violence Reduction Partnership (VRP) to educate young people about online harms and support those who have experienced them. The pilot is being run in a school offering primary and secondary education in Bradford and is being delivered in partnership by two local organisations: Step 2 and All Star Ents. The pilot delivered two primary elements:

1. The delivery of a classroom-based educational workshops. The session delivered to young people in years 5-10 was designed and delivered by All Star Ents. Learning objectives of the sessions were to raise awareness and educate young people about the potential harms that can be encountered online, and support decision making around their use of digital platforms. The workshops were intended to be a universal offer to all students delivered through the PSHE lessons. The session was specifically adapted for years 5 and 6 to ensure the content was age appropriate.

2. The provision of one-to-one and group based support for young people who had experienced online harm. This was delivered by Step 2 and sessions were structured to increase awareness, support action to increase safety and identify opportunities to seek support across the five goal areas of online bullying, online privacy, reliability of information, staying safe online and online grooming. Young people were referred to support having been identified by either the inclusion or safeguarding team as having experienced some form of online harm.

In addition a number of activities were also undertaken including having a presence at a parents evening, development of guidance for staff and parents and the development of digital educational material.

A draft theory of change was developed for the pilot and this has informed the evaluation questions.

Evaluation research questions jointly developed with the VRP in this phase fall within three areas: pilot effectiveness, understanding delivery and future delivery, as outlined below:

1. Pilot effectiveness
    - Does the pilot increase young people's understanding of online harms, online safety and awareness of support methods?
    - Does the pilot improve school staff understanding of online harms, risks for young people and support mechanisms for those who have experienced harm?
    - Does the pilot support parent/carer understanding of online harms, their role in reducing risk and providing support should their children encounter harm?

2. Understanding delivery
    - What is effective in delivering positive outcomes for young people, staff and parents/carers?
    - What has worked less well?
    - How does the delivery of the pilot compare to the evidence base for best practice?

3. Future delivery
    - Should the pilot be implemented across more schools in West Yorkshire?
    - If so, what should this look like and what will be required to achieve this?

Importantly, within this evaluation, we have defined pilot effectiveness as increased awareness around identifying online harms, knowledge of how to stay safe online and knowledge of support mechanisms should online harm be encountered. The full evaluation framework can be accessed in the appendix of this document.

1.2 Methodology

This evaluation aims to provide both qualitative and quantitative insights in relation to both process and impact of the pilot. To do this, Rocket Science originally designed a research methodology to collect evaluative data through three cycles of reflective learning in order to support continuous improvement with the pilot process. Due to delays in the implementation of the pilot it became apparent that there would not be time or capacity for the learning cycle approach. In early 2024 the methodology adapted to primarily using 'in-session' evaluation in which data was collected pre and post session/support, and immediate feedback was gathered from PSHE teachers. In collaboration with Step 2 and All Star Ents, Rocket Science developed these in-session evaluation tools to be suitable for the content and time available within the sessions. This data has been supplemented with pre and post-session students' self-assessment scores (n=23), 4 focus groups with young people who

had received the in-class education session (n=25), 2 session observations, teacher interviews (n=1), and stakeholder and provider interviews (n=12).

Prior to the start of the pilot a survey was conducted with young people (n=591), school staff (n=25) and parent/carers (n=49). Data from the survey was used to inform content for the education sessions.

1.3 Limitations

We do not consider any of the following limitations to be significant enough to discredit our findings, but they are taken into account in the conclusions we have drawn.

Our qualitative findings draw from a small sample size, particularly with regard to teacher feedback forms (n=9), teacher interviews (n=1) and in-class observations which only occurred in 2 classrooms. Although not proportionally representative, the findings that have emerged from collected data provide areas of insight further supported by quantitative survey data and to be followed up in future evaluation.

Inherent in this evaluation is the potential for bias in the data collected directly by providers. This may lead to an overestimation of the provider's positive impact or effectiveness and should be considered when interpreting the findings.

Finally workshop sessions were delivered to year 5 and 6 pupils in June and July. In-class evaluations were not conducted for these year groups and despite repeated efforts by the evaluation team, we were unable to contact teachers of these year groups to organise focus groups with the young people. Data in relation to young people's experiences and recall of the workshops is therefore unavailable for these year groups.

2. Literature review

2.1 Context

The present digital era, intensified by the 2020 pandemic, is redefining the social and learning landscape for those in childhood and adolescence. Half of ten-year-olds in the UK own a smartphone

and 70% of 12-15-year-olds have a personal social media platform.[1] Young people are online predominately for information, entertainment and to connect with their friends.[2]

Over 75% of UK adults express concern about online content, with parental perceptions of internet benefits ever declining.[3] When it comes to young people's online access, opportunities and risks are positively linked. While the internet offers unprecedented knowledge and learning it can equally be a platform for harm to proliferate. Children and young people who are vulnerable offline are also more likely to face vulnerabilities online, widening inequalities.[2]

Increasingly, many parents do not feel the benefits outweigh the risks of their children being online: as of 2019, 55% of parents in the UK viewed the internet as more beneficial than harmful.[3] Recent legislation aiming to tackle unlawful harms includes the Digital Economy Act of 2017, the Online Harms Regulatory Framework of 2019 and the Online Safety Act (2023). However, wider intervention remains needed for legal, but still harmful content. For this reason there is a growing emphasis on monitoring and supporting against online harms within educational and home settings.

Importantly, online harm does not have one agreed-upon definition.[4] Some parents may include a child viewing nudity, engaging in online friendships or relationships and/or consuming excessive screen time as harmful.[5] More widely accepted definitions across the literature include addiction, cyberbullying, predatory behaviour, loss of privacy, stalking, etc. In 2019, the government recognised difficulty with the term's plurality and decided rather than attempting to tackle individual categories of harm, policy would instead broadly tackle systems of harm (with the exception of online sexual exploitation and terrorism, which are addressed uniquely).[6] Children themselves self-describe harmful content as that which features self-harm and suicide, pornography, sexualised and violent imagery, anonymous trolling, and images promoting diet restriction.[7]

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[1] Ofcom and ICO (2019). Internet users' concerns about and experience of potential online harms. Link.
[2] Stoilova, M., Livingstone, S., and Khazbak, R. (2021). Investigating Risks and Opportunities for Children in a Digital World: A rapid review of the evidence on children's internet use and outcomes. UNICEF. Link.
[3] Ofcom (2020). Children and parents: Media use and attitudes report 2019. Link.
[4] Jiang, J.A., Scheuerman, M.K., Fiesler, C., and Brubaker, J.R. (2021). Understanding international perceptions of the severity of harmful content online. Plos One. Link.
[5] Kloess, J. A., et. al. (2014). Online Child Sexual Exploitation: Prevalence, Process, and Offender Characteristics. Sage Publications. 126. Link.
[6] GOV UK. (2020). Online Harms White Paper: Full government response to the consultation. Link.
[7] Children's Commissioner (2022). Digital childhoods: a survey of children and parents. Link

Regardless of how or why children access harmful content, they are unlikely to report harm when it occurs, despite the adverse effects viewing creates.[8] A 2022 survey showed that 45% of children aged eight to 17 have come across inappropriate material, making them worried or upset, but only half reported it.[9] There are several possible explanations for this behaviour. One study focused on pandemic-era data, found young people were apathetic to report harm because online reporting features rarely led to satisfactory outcomes, with either a lack of response from media platforms or a failure to take action from a report (e.g. that certain harms do not break site monitoring 'community standards').[10]

In the absence of regulation or effective online reporting routes, young people may feel powerless when it comes to preventing and addressing harm.[11] Restorative justice approaches to online harm moderation aim to address the wider cultural disempowerment of the digital realm.[12] Recent critiques fault existing policies attempting to regulate companies' responsibility to content moderate, as punitive and ineffective given their design to reactively find content in violation of platform policies and whose solution is only to then remove it.[13] Meanwhile, a restorative justice approach to moderating online harm centres the learning and responsibility of community members over the restriction and removal of individual "problem users".[14] Innovative approaches are still emerging in this space; very few interventions exist that emphasise co-design with children and young people.

2.2 Mapping online harms

Research widely concludes that young people's exposure to online harms has adverse effects on their mental and emotional well-being.[15] [16] In response to experiencing harm online, young people may subsequently feel distressed and anxious, have intrusive thoughts, low self-esteem, trouble sleeping,

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[8] NSPCC (2022). *Children's experiences of legal but harmful content online*. Link.
[9] Children's Commissioner (2022). Digital childhoods: a survey of children and parents. Link.
[10] Ringrose, J., Horeck, T., Milne , B. and Mendes, K. (2022). *Online Harms and Risks During the Covid-19 Pandemic*. [online] *UCL Centre for Sociology of Education and Equity*. Link.
[11] Paat, Y. F., & Markham, C. (2020). Digital crime, trauma, and abuse: Internet safety and cyber risks for adolescents and emerging adults in the 21st century. *Social Work in Mental Health*, *19*(1), 18–40. Link.
[12] Vissenberg, J., d'Haenens, L., and Livingstone, S. (2022). Digital Literacy and Online Resilience as Facilitators of Young People's Well-Being? Link.
[13] Hasinoff, A.A., Gibson, A.D. and Salehi, N. (2020). *The promise of restorative justice in addressing online harm*. [online] Brookings. Link.
[14] Reyneke, R.P. (2019). A Restorative Approach to Address Cyber Bullying. *Rethinking Teacher Education for the 21st Century*, pp.340–354. Link.
[15] Knibbs, C. (2023). *Online Harms and Cybertrauma*. Taylor & Francis.
[16] Slavtcheva-Petkova, V., Nash, V.J. and Bulger, M. (2014). Evidence on the extent of harms experienced by children as a result of online risks: implications for policy and research. *Information, Communication & Society*, 18(1), pp.48–62. Link.

and over time, are likely to develop the urge to continue viewing extreme content.[17] There are also concerns that habitual access to any digital technology can be harmful, fostering addictive behaviour and negative cognitive impacts like diminished attention spans, though the scientific literature around these subjects is not yet mature enough to draw firm conclusions.[18]

Loss of privacy is one harm affecting young people online. Privacy is linked to one's digital footprint and data. This can occur user to user, as young people reveal personal details that can be taken advantage of by others online, or user to organisation, as sites collect data on young internet users for marketing purposes.

Young people commonly manage this risk by utilising privacy features, disguising their online identities, deleting content they create, using social network blocking tools to filter audience access, adhering to social norms of asking before posting content of friends, asking posters to take harmful content down, un-tagging themselves, and reporting fraudulent or dangerous users internally when procedure allows them to do so in an anonymous way.

Less common management methods include direct action, including appeals to authority, seeking out education, knowledge or advice from a non-online source.

Data privacy is an area undertaught in school curricula relating to online harms. One 2015 study in Canada showed that "68% of students mistakenly believe that all privacy policies guarantee that the site will not share their personal information".[19]

Other online harms include sexual exploitation, harassment and abuse. Those preying on young people online typically use the online nature of their abuse for one of the following reasons[20], linked to a complex, wider picture of offending behaviours, including:

- Locating potential victims
- Engaging in inappropriate communication (for the purpose of grooming, coercing, desensitising and normalising behaviours to lower inhibition)

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[17] NSPCC (2022). *Online harm and abuse: learning from case reviews.* Link.
[18] Wilmer, H.H., Sherman, L.E. and Chein, J.M. (2017). Smartphones and cognition: A review of research exploring the links between mobile technology habits and cognitive functioning. *Frontiers in Psychology*, [online] 8(605). Link.
[19] Johnson, M. (2015). Digital Literacy and Digital Citizenship: Approaches to Girls' Online Experiences. In: *eGirls, eCitizens: Putting technology, theory, and policy into dialogue with girls' and young women's' voices*. [online] University of Ottawa Press. Link.
[20] Hanson, E. (2019). 'Losing track of morality': understanding online forces and dynamics conducive to child sexual exploitation. *Policy Press eBooks*, pp.87–116. Link.

- Exchanging and monetizing child pornography
- Corresponding with others who share an inappropriate sexual interest in children.

Abuse online is supported by the Triple A Engine theory first proposed in 1998, which explains how harm can proliferate online as vast amounts of content (and potential victims) can be Accessed, both Affordably and Anonymously. Some further argue the capitalistic nature of the 21st-century digital realm emboldens amorality and lack of ethics which are conducive to increased criminal offences, particularly sexual offenses concerning young people.[21]

Importantly, while safeguarding against abuse, online social relationships (including romantic ones, with those of appropriate and proportional age) are not innately harmful.[22] Harm occurs online when sensitive information is weaponised in a manipulative or threatening manner or is shared/forwarded without consent. There is significant fear regarding the dangers of "the internet" which more rightfully speaks to the dangers of people. That said, the digital nature of the internet as a communication platform has serious potential for harm to occur invisibly and caution must be exerted as pseudo-intimacy or trust-building through friendship often precedes exploitation.[23]

A 2009 study[24] examined 346 anonymous posts on topics of online relationships or abuse through media (extracted from an original 35,000) made by CYP (ages 11-24 years old) to a free, 24-hour, bilingual Canadian phone counselling, referral and information service. Findings revealed that young people were drawn to interactions with others online because of the diversity of people accessible, categorising relationships (including friendships) formed online as "long term", "trusting", and "highly meaningful".[25]

Most young people were aware of potential danger with online connections though despite this awareness displayed high levels of trust in the genuine nature of their own relationships citing vetting methods employed to verify their beliefs (photos, video call, calls, a user being known to an existing friend).[26] Young people displayed caution in giving out personal information, though were

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[21] Idem.
[22] Kloess, J. A., et al. (2014). Online Child Sexual Exploitation: Prevalence, Process, and Offender Characteristics. Sage Publications. 126. Link.
[23] Hillman, H., Hooper, C. and Choo, K.-K.R. (2014). Online child exploitation: Challenges and future research directions. *Computer Law & Security Review*, [online] 30(6), pp.687–698. Link.
[24] Mishna, F., et al. (2009). Real-World Dangers in an Online Reality: A Qualitative Study Examining Online Relationships and Cyber Abuse. *Oxford University Press: Social Work Research*. Link.
[25] Idem.
[26] Idem.

inadvertently providing this information through usernames, webpages, social medias, etc.[27] Once having experienced harm, young people did not seek help from parents/others out of fear of punishment or reprisal by the source of harm (stalker, bully, etc.). This challenge around young people reporting online abuse is dependent on awareness, recognition, knowledge and availability of support mechanisms.[28]

Next, cyberbullying is a digital form of antagonism, intimidation or social exclusion that is harmful through contact, conduct or content.[29] Cyberbullying is incredibly prevalent and severe; according to UNICEF data "More than a third of young people in 30 countries report being cyberbullied, with 1 in 5 skipping school because of it".[30]

Childnet International identifies several distinctions between cyberbullying and traditional bullying including: "the profile of the person carrying out the bullying; the location of online bullying; the potential audience; the perceived anonymity of the person cyberbullying; motivation of the person cyberbullying; and the digital evidence of cyberbullying".[31] Interestingly, in various research, it's been found that young people do not commonly identify with the terms bullying or cyberbullying, and more frequently describe, "pranking" or "drama" (which are highly gendered terms).[32] Notably, while cyberbullying is not a criminal offence, criminal laws can apply to behaviours often linked to cyberbullying. These include stalking, threats, accessing computer systems without permission, and circulating sexual images.

Willard (2007)[33] classifies 7 prominent modes of cyberbullying:

1. Flaming – angry, rude or vulgar messages privately or to a group
2. Harassment – repeatedly sending a person offensive messages
3. Denigration – sending or posting harmful, untrue or cruel statements
4. Cyberstalking – threats of harm or highly intimidating
5. Masquerading – pretending to be someone else, making that person look bad
6. Outing & Trickery – tricks to solicit information, making that info public
7. Exclusion – actions to intentionally exclude (blocking, restricting)

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[27] Idem.
[28] Kloess, J. A., et al. (2014). Online Child Sexual Exploitation: Prevalence, Process, and Offender Characteristics. Sage Publications. 128. Link.
[29] Childnet International (2016). Cyberbullying: Understand, prevent, and respond. Link.
[30] UNICEF (n.d.). Protecting children online. Link.
[31] Idem.
[32] Beale, A.V. and Hall, K.R. (2007). Cyberbullying: What School Administrators (And Parents) Can Do. *The Clearing House*. Link.
[33] Willard, N.E. (2007). *Cyberbullying and cyberthreats: responding to the challenge of online social aggression, threats, and distress*. Research Press.

Studies show methods of cyberbullying presents differently in boys and girls: girls are more likely to post/share an embarrassing photo or video of their peers, while boys are more likely to make fun of someone's race, religion, ethnicity, or harass someone in an online game.[34]

Similarly, motivations for cyberbullying differ by gender: Boys say they were mean or cruel online because they were "just joking" (64% boys, 45% girls), or bored (20% boys, 8% girls).[35] Girls say they were mean to get back at someone for what they had said or done to them (52% girls, 45% boys), or to a friend (34% girls, 29% boys), or as a result of feeling angry (29% girls, 21% boys).[36]

Anti-cyberbullying programmes tend to focus on developing children's empathy, which links with common motivations for bullying among boys. Interventions focused on girls would need to emphasise emotional self-regulation. Similarly, cyberbullying bystander interventions, promoting seeking help from authority figures often encourage one's sense of ethical and moral duty to others. However, "stand up to bullying" campaigns have been shown to have young people interpret this to mean "stand up for your friends", which is ironically the third most common reason for being mean or cruel online.[37]

The role of peers and/or friends is especially relevant in regard to online harms: research shows peer support is a central component in online interactions around self-harm as young people are online with the intent to both care for oneself and for others.[38]

Further content harms include but are not limited to exposure to radicalising content, hatred, distorted body ideals and viewing age-inappropriate content (violence, nudity, of a traumatic nature, etc).[39] [40] [41]

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[34] Idem.
[35] Steeves, V. (2014). *Young Canadians in a Wired World, Phase III: Life Online*. Ottawa: MediaSmarts. Link.
[36] Idem.
[37] Johnson, M. (2015). Digital Literacy and Digital Citizenship: Approaches to Girls' Online Experiences. In: *eGirls, eCitizens: Putting technology, theory, and policy into dialogue with girls' and young women's' voices*. [online] University of Ottawa Press. 349. Link.
[38] Lavis, A. and Winter, R. (2020). #Online harms or benefits? An ethnographic analysis of the positives and negatives of peer-support around self-harm on social media. The Journal of Child Psychology and Psychiatry. Link.
[39] Cowie, H. and Myers, C.-A. (2023). Cyberbullying and Online Harms. [online] Routledge eBooks. Taylor and Francis Group. Link.
[40] Harriman N., Shortland N., Su M., Cote T., Testa MA., and Savoia E. (2020). Youth Exposure to Hate in the Online Space: An Exploratory Analysis. International Journal of Environmental Research and Public Health. Link
[41] Paat, Y. F., & Markham, C. (2020). Digital crime, trauma, and abuse: Internet safety and cyber risks for adolescents and emerging adults in the 21st century. *Social Work in Mental Health*, *19*(1), 18–40. Link.

2.3 Online harms and a healthy childhood

Recognising the internet, online gaming, apps, social media and social networking are wholly integrated into modern childhood, it's important to understand the psychology of youth development in regard to media, particularly the aforementioned harmful media.

Young people are susceptible to the influence of media as their brains make sense of the world through learning schema, a term coined by Jean Piaget in 1952, describing stored memory which assembles one's knowledge base for the world around them. Young people growing up online have unprecedented access to others, either directly through social networking and messaging, or more detached through their knowledge and thoughts as shared across the web.[42]

Additionally, the internet is not limited to what young people themselves might search or procure but with the refined development of online algorithms, many sites and apps populate new material to show users, based both on their perceived demographic information (where they are and who they are), past viewing habits, paid advertisements, and more. Theoretically, this ever-widening scope of online content means a young person's schema is typically more prone to change than it may have been pre-internet.[42]

For young brains, online interactions are not always registered in moral/ethical/empathic terms, with tone of voice, body language and facial expressions often absent, which lends to buy-in for toxic or harmful content to which a young person might typically exert more caution if presented with it face-to-face.[43] In effect, this detachment from reality can strongly influence both victims of online harm, further isolating them, and emboldening those perpetrating online harm.

Observed effects of experiencing online harm for young people can range from depression, confusion, guilt, shame, self-harm, withdrawal, denial and avoidance.[44] Young people may also fixate on the stress or trauma of harm more than adults, further inhibiting their resilience. According to one study, residual anxiety from traumatic media (classified as inducing a trauma response) viewed in childhood can be remembered with high accuracy well into adulthood. The younger an individual is

[42] Wilson, B.J. (2008). Media and Children's Aggression, Fear, and Altruism. *The Future of Children*. Link.
[43] Johnson, M. (2015). Digital Literacy and Digital Citizenship: Approaches to Girls' Online Experiences. In: *eGirls, eCitizens: Putting technology, theory, and policy into dialogue with girls' and young women's' voices*. [online] University of Ottawa Press. Link.
[44] Mishna, F., et al. (2009). Real-World Dangers in an Online Reality: A Qualitative Study Examining Online Relationships and Cyber Abuse. *Oxford University Press: Social Work Research*. Link.

when the traumatic viewing occurs, the longer the related fear lingers.[45] This goes to show how the impacts of online harm can carry well into adulthood, affirming the importance of early mitigation and awareness building of coping techniques.

Considering young people and online harms, particularly those aged 11-16, it's important to acknowledge that this population are not only consumers of the internet and potential victims to its harms, but content creators and active participants in the digital realm. Unlike in the offline world, where children and young people's perspectives and desires are viewed in proxy to their guardians, online, all ages are legitimised with the same searching and posting abilities as adults. Additionally, emerging neuroscience tells us that between the ages of 10 and 12, there is an increase in satisfaction gained from social rewards- meaning young people are more incentivised to replicate peer behaviour to fit in, receive compliments, and not miss out.[46] Given these incentives, young people can face addiction to online use where symptoms mirror that of traditional substance abuse.[47] Of course, with developing ideas, beliefs and emotional regulation, young people face greater risk than adults to the effects of harmful online content, regardless of who creates or initiates the harm. Interestingly, one study found that watching, listening or reading about traumatic events can induce similar levels of trauma and stress for children even when they are physically and emotionally separate from affected populations.[48] As a person ages, more severe responses are felt for media showing those with similar identities to them (identifiers like gender and race were studied). When harm is targeted to these characteristics, girls and ethnic minorities are more likely to feel alienation from larger society and/or a sense of helplessness or powerlessness.[49]

Harmful content is embedded in our viewing habits. In 2008, "a typical hour of television featured an average of six different violent exchanges between perpetrators and victims. The extent of violence in programmes targeted to children is higher today; 70 per cent of children's shows contained violence, with an average of fourteen violent interchanges an hour".[50] Research remains unclear if children's viewing of media violence precedes societal actions of violence, though some recent

[45] Wilson, B.J. (2008). Media and Children's Aggression, Fear, and Altruism. *The Future of Children*. Link.
[46] Abrams, Z. (2022). *Why Young Brains Are Especially Vulnerable to Social Media*. [online] American Psychological Association. Link.
[47] Kuss, D. and Griffiths, M. (2017). Social Networking Sites and Addiction: Ten Lessons Learned. *International Journal of Environmental Research and Public Health*, 14(3), p.311. Link.
[48] Jipguep, M.-C. and Sanders-Phillips, K. (2003). The Context of Violence for Children of Color: Violence in the Community and in the Media. *The Journal of Negro Education*. Link.
[49] Idem.
[50] Wilson, B.J. (2008). Media and Children's Aggression, Fear, and Altruism. *The Future of Children*. Link.

studies indicate that the viewing of violence increases likelihood of maintained or increased viewing of violent media.[51] [52]

Unsurprisingly, given the saturation of violent and potentially harmful content online, across various studies, young people display an awareness of online harms. Girls rely heavily on parents and teachers to learn digital knowledge while boys are more likely to use online sources. Despite having some awareness, young people may miscalculate risk levels and misunderstand methods of extracting personal information (through usernames, tagged photos, web searches, etc.).[53] Across multiple studies, young people articulated their awareness of harms while simultaneously saying they were not concerned by them. This may indicate the wider normalisation of online harms whereby young people view these harms as an inevitable facet of life.[54]

These points of data bring to light the unequal risks and impacts of online harm. We know that sexual and gender-based violence is experienced more by girls, trans, and gender-nonconforming youth, and these disparities increase for all genders with age, trends reflected with harms online.[55]

2.4 Theories of child development and online harms

The consequences of a young person viewing harmful media can be understood by reviewing key theories of child development.

Social Cognitive Theory tells us that young people learn by cognitively observing others in their social environment, imitating both observed rewarded behaviours/attributes/decisions and behaviours of no consequence.[56] Therefore, if young people consume media displaying rewarded violence, or even violence without consequence, they are more likely to later emulate violent behaviour.[57]

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[51] Ferguson, C.J. (2014). Does Media Violence Predict Societal Violence? It Depends on What You Look at and When. *Journal of Communication*, 65(1). Link.
[52] Ybarra, M.L., Mitchell, K.J. and Korchmaros, J.D. (2011). National Trends in Exposure to and Experiences of Violence on the Internet Among Children. *PEDIATRICS*, 128(6). Link.
[53] Johnson, M. (2015). Digital Literacy and Digital Citizenship: Approaches to Girls' Online Experiences. In: *eGirls, eCitizens: Putting technology, theory, and policy into dialogue with girls' and young women's' voices*. [online] University of Ottawa Press. Link.
[54] NSPCC (2022a). *Children's experiences of legal but harmful content online*. Link.
[55] Ringrose, J., Horeck, T., Milne , B. and Mendes, K. (2022). *Online Harms and Risks During the Covid-19 Pandemic*. [online] *UCL Centre for Sociology of Education and Equity*. Link.
[56] Linder, J.R. and Werner, N.E. (2012). Relationally Aggressive Media Exposure and Children's Normative Beliefs: Does Parental Mediation Matter? *Family Relations*. Link.
[57] Jipguep, M.-C. and Sanders-Phillips, K. (2003). The Context of Violence for Children of Color: Violence in the Community and in the Media. *The Journal of Negro Education*. Link.

Information Processing Theory further theorises that children and young people develop scripts, or mental routines for familiar events, stored in their memory. [58] Young people exposed to harmful content will promote harm as a learned script. The more often a script is viewed or retrieved, the more it is then enforced. In time, learned scripts become applicable to a wider set of circumstances than their original scope. This means repeated scripts of harmful behaviour online are not learned by children as isolated events but as a mode of perceiving and acting into their in-person, adult lives. As it pertains to the internet and online harms, information processing theory helps us understand how young people encounter and process the data they interact with and develop related viewing and behavioural habits.

General Aggression Model likewise explains mechanisms by which violent or harmful media exposure increases aggressive behaviour in viewers. [59] This includes developing scripts, beliefs and attitudes which those in middle childhood experience the most volatility.[60]

A notable limitation when discussing the impacts of online harms is the tendency to measure physical aggression over social or relational aggression, which is also a common effect of exposure to harmful or violent media.[61] Social aggression is defined as harming others' feelings through exclusion, gossip or manipulation.[62] The opposite of aggression is compassion, or pro-social behaviour, understood to encompass altruistic traits such as friendliness, sharing, cooperation, sympathy and acceptance of others.[63]

2.5 Neurodiversity and online harms

Neurodiversity is an umbrella term increasingly used in social, professional, and educational settings to refer to the diverse neural processing patterns of all people, a natural diversity in the human population, but which is often used with indirect reference to autism spectrum disorder (ASD) or

[58] Huesmann, L.R. (1998). The Role of Social Information Processing and Cognitive Schema in the Acquisition and Maintenance of Habitual Aggressive Behavior. *Human Aggression*. Link.
[59] Allen, J.J. et al. (2018). The general aggression model. *Current Opinion in Psychology*. Link.
[60] Linder, J.R. and Werner, N.E. (2012). Relationally Aggressive Media Exposure and Children's Normative Beliefs: Does Parental Mediation Matter? *Family Relations*. Link.
[61] Swit, C. S. (2019). Differential associations between relational and physical aggression: why do teachers and parents perceive these behaviors differently? Early Child Development and Care, 191(3), 321–337. Link.
[62] Idem.
[63] Miles, A., Andiappan, M., Upenieks, L., and Orfanidis, C. (2022). Using prosocial behavior to safeguard mental health and foster emotional well-being during the COVID-19 pandemic. Plos One. Link.

other developmental or learning disabilities.[64] 'Neurodiversity' was coined in the 1990s by sociologist Judy Singer as part of a broader social justice movement for neurological minorities.[65] In the context of online use, neurodiverse people, including neurodiverse children, face specific vulnerabilities and potential benefits.

In recent decades, internet access has allowed the formation of digital communities that transcend geographic areas. Many neurodiverse people find digital communities to be more welcoming and inclusive spaces than their offline interactions with people.[66] A 2021 survey found that 86% of autistic teenagers in the UK and 82% with learning difficulties said that the internet opened up lots of possibilities for them, compared with 62% of other children.[67] More structured social environments and text-based communication can make explicit the nuances of social cues and communication.

Neurodiverse people may have a specific set of reasons for seeking online interaction, for example people with Williams syndrome (WS) have a strong pro-social drive to connect with familiar and unfamiliar people but also struggle to maintain relationships.[68] However, the social vulnerabilities of neurodiverse individuals are not removed by online communication. For example, neurodiverse individuals may also be at higher risk of various forms of online harm inflicted through harassment, grooming and stalking.[69]

Social Vulnerability refers to the "disadvantages faced by an individual while he or she endeavors to survive as a productive member of society."[70] This can include forms of bullying, social exclusion, or abuse. As suggested by the name, social vulnerability is a socially produced outcome, meaning there are risk and protective factors that may be considered.[71] For example, neurodiverse people may be less able to identify signs of sexual exploitation or inappropriate advances and be more vulnerable to tactics such as social engineering.[72] There is evidence that specifically young neurodiverse people are

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[64] Sonuga-Barke, E. (2023). Championing research about, by and for neurodivergent people. UKRI. Link.
[65] Baumer, N., and Frueh, J., (2021) What is neurodiversity? Harvard health Publishing Link.
[66] Rosqvist et al (2013) Mapping the social geographies of autism – online and off-line narratives of neuro-shared and separate spaces. *Disability and Society* Link.
[67] Katz, A. and El Asam, A. (2021). *Refuge and Risk: Life Online for Vulnerable Young People*. [online] *internetmatters.org*. Internet Matters. Link.
[68] Lough et al (2014) Mapping Real-World to Online Vulnerability in Young People with Developmental Disorders. Link.
[69] Angulo (2023) Privacy and neurodiversity: Helping diverse minds navigate the digital age. *International Association of Privacy Professionals* (IAPP) Link.
[70] Jawaid, et al (2012). 'Too withdrawn' or 'too friendly': considering social vulnerability in two neuro-developmental disorders. *Journal of Intellectual Disability Research.*
[71] Lough et al (2014) Mapping Real-World to Online Vulnerability in Young People with Developmental Disorders. Link.
[72] Idem.

more likely to experience cyberbullying, and are less likely to block unwanted contact, prolonging their exposure harassment.[73] Alongside these relational risks, autistic children can also have difficulty switching off devices and engaging in other activities. Longer periods online have been linked with the likelihood of young people experiencing online harm. Thus, autistic children may be considered an 'at risk' group for this reason.[74]

Acknowledging the neurodiversity of children and the particular benefits and harms that may be present for children with neurodevelopmental differences, is an important consideration for online harms education. Following a social vulnerability approach, understanding specific potential risk and protective factors is key to effective interventions for neurodiverse children.

2.6 The role of parents in reducing online harms

When it comes to regulation, mitigation and response to online harms, the literature indicates that most parents are ill-equipped to navigate both their child's digital rights and needs.[75] However, as authority figures and often disciplinarians, parents play an influential role in young people's understanding of and reaction to online harms. To varying degrees, parents take on the role of educators in children's lives, indirectly and directly steering the way in which children perceive the world.[76]

Parental mediation of online harm can be largely understood through three categories:

1. *Restrictive Mediation* – rules about content and amount of viewing
2. *Co-Viewing* – when an adult watches television/movies with CYP
3. *Active Mediation* – having discussions about media content

Of these categories, active mediation methods are most consistently associated with positive outcomes (ranging from increased scepticism, reduced aggression and resistance to advertisements).[77] The success of active mediation is often attributed due to developing resilience

[73] CEREBRA (2022) Learning Disabilities, Autism and Internet Safety A guide for parents. Link.
[74] Macmillan, K., et al (2022) Online safety experiences of autistic young people: An Interpretative Phenomenological Analysis. *Research in Autism Spectrum Disorders* Link.
[75] Livingstone, S. and O'Neill, B. (2014). Children's Rights Online: Challenges, Dilemmas and Emerging Directions. *Information Technology and Law Series*, pp.19–38. Link.
[76] Idem.
[77] Idem.

through nurturing young people's ability to anticipate and cope with risk, rather than methods of restricted exploration which do not equip youth with critical thinking skills.[78]

Parental mediation often focuses on younger children, when parents are most concerned about their children's online behaviours and viewing habits. In 2022, the Children's Commissioner found that 74% of parents with a child aged 8-9 and 73% of those with a child aged 10-11 were concerned about the nature of content on social media, compared to just 52% of parents with children aged 16-17.[79] While attention to younger children's online use may do well to form healthy viewing habits and awareness of harm, it may also neglect the vulnerabilities older youth similarly face.

In 2012, a study was conducted over two years on 103 American children grades 3-6 (year 1), then 48 children (year 2), investigating if active parental mediation of media moderates associations of relational aggression learned through media exposure.[80] Here, relational aggression is equivalent to social aggression and includes behaviours that "inflict harm through the manipulation of relationships". This can display as spreading rumours, making threats to love and friendship, and social excluding others.

Results indicated that "children who consume high levels of relationally aggressive television and movies become increasingly approving of relationally aggressive behaviours over time,".[81] Meanwhile, children of parents who engaged in low levels of active mediation demonstrated a slower progression in the acceptance of aggressive behaviours and thus produced lessened levels of aggression. These findings indicate active parental mediation is protective to children's vulnerabilities to online harms exposure over time. The study did not explore what specific aspects of parent-child discussions were most effective.

Meanwhile, a 2019 study claims that "there is no combination of enabling and restrictive mediation that both increases opportunities and reduces risks. Reducing risks is always at the expense of opportunities".[82] Further, parents who use restrictive mediation methods also tend to have a lower

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[78] Smith, P.K. and Livingstone, S. (2017). Child Users of Online and Mobile Technologies – Risks, Harms and Intervention. *Child Psychology and Psychiatry*, pp.141–148. Link.
[79] Children's Commissioner (2022). Digital childhoods: a survey of children and parents. Link.
[80] Linder, J.R. and Werner, N.E. (2012). Relationally Aggressive Media Exposure and Children's Normative Beliefs: Does Parental Mediation Matter? *Family Relations*. Link
[81] Idem.
[82] Swit, C. S. (2019). Differential associations between relational and physical aggression: why do teachers and parents perceive these behaviors differently? Early Child Development and Care, 191(3), 321–337. Link.

level of digital skills.[83] Their restrictive mediation in turn reduces online risks mostly at the expense of young people learning digital skills and accessing online opportunities.[84]

Parents can effectively mediate their child's online experiences by engaging in open and ongoing discussions about media content, fostering a support environment where children feel comfortable sharing their online encounters and expressing concerns when they arise.[85] By actively participating with their child, parents can better understand the platforms, games or apps their child engages with, enabling them to provide applicable guidance on responsible online behaviour.[86] Active mediation should encourage critical thinking skills, such as questioning the credibility of information and recognising potential risks.[87] Parents can also help their children establish boundaries regarding content, promoting self-regulation, security and comfortability seeking help if needed.[88]

Many organisations in the UK are focused on supporting parents in online mediation. These organisations provide guidance, encouragement, networking to share information with other parents, and even trainings. Of course, for parents to engage with such services requires a degree of privilege (manifested through time and ability) that is not equal among all parents.

2.7 The role of schools in mitigating online harms

In the United Kingdom, children receive mandatory PSHE and RSE curricula (collectively exploring relationships) in both primary and secondary schools.[89] Online safety is integrated broadly into this programming, with the Department of Education and various interest groups providing support for teachers to aid in teaching these challenging themes.

[83] Idem.
[84] Idem.
[85] Beale, A.V. and Hall, K.R. (2007). Cyberbullying: What School Administrators (And Parents) Can Do. *The Clearing House*, [online] 81(1), pp.8–12. Link.
[86] The Children's Commissioner (2022). *Digital childhoods: a survey of children and parents*. [online] Children's Commissioner. Link.
[87] Idem.
[88] Linder, J.R. and Werner, N.E. (2012). Relationally Aggressive Media Exposure and Children's Normative Beliefs: Does Parental Mediation Matter? *Family Relations*, [online] 61(3), pp.488–500. Link.
[89] Department of Education (2017). Relationships education, RSE and PSHE Policy Paper. Link.

School-based online safety programmes in the UK focus on knowledge and behaviours as opposed to platform/trend-specific training.[90] ThinkuKnow recommends the following components of effective training:

- How to evaluate what CYP see online
- How to recognise techniques used for persuasion
- Understanding acceptable and unacceptable online behaviour
- How to identify online risks
- How and when to seek support, including reporting to CEOP

Childnet International similarly affirms that schools should embed a normalised understanding and talking about online harms, integrating prevention into both policy and practice, ensuring routes of reporting are both visible and accessible.[91] Further, schools ought to promote the positive use of technology and tailor their approach to the technologies relevant within their classrooms.[92]

Whole-school approaches are considered best practice for effectively mitigating online harms.[93] A whole-school approach creates a cohesive ethos of prevention and includes embedded school policy with procedural alignment, the proactive engagement of staff, students and parents in safety-promoting activities, regular reviews and updates to online safety principles.

There are few open-access studies on the effectiveness of bespoke police-led online safety programmes for secondary-aged children.

- A 2009 evaluation of ThinkuKnow in the UK revealed that although nearly 15% of all UK students were exposed to their online safety programme (a 90-minute session), a high percentage of students were unable to recall having seen it at all.[94]
- A review published recently looks at the effectiveness of a 2006 RCT intervention (also ThinkuKnow modules) delivered by police in secondary schools face-to-face in Australia.[95]

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[90] Wachs, S., et. al., (2021). Online correlates of cyberhate involvement among young people from ten European countries: An application of the Routine Activity and Problem Behaviour Theory, Computers in Human Behavior, Volume 123, 106872, ISSN 0747-5632, Link.
[91] Childnet International (2016). Cyberbullying: Understand, prevent, and respond. Link.
[92] Finkelhor, D., Walsh, K., Jones, L., Mitchell, K., & Collier, A. (2021). Youth Internet Safety Education: Aligning Programs With the Evidence Base. Trauma, Violence, & Abuse, 22(5), 1233-1247. Link.
[93] Idem.
[94] Davidson, J., et. Al (2009). Evaluation of CEOP ThinkUKnow internet safety programme and exploration of young people's internet safety knowledge. Centre for Abuse & Trauma Studies and Kingston University. Link.
[95] Alderman, T., Ariel, B. and Harinam, V. (2023). Can a police-delivered intervention improve children' online safety? A cluster randomised controlled trial on the effect of the 'ThinkUKnow' programme in primary and secondary Australian schools. *Journal of Experimental Criminology*. Link.

Findings indicated that while the programme significantly improved knowledge about cyber abuse, it marginally impacted risk perceptions, engagement with risky behaviour and likelihood of reporting abuse. The police as a delivery conduit was only more effective at legitimising the topic for younger children than older youth. Authors hypothesise that students may have been affected more by the physical presence of police officers as part of the programme than the content of the training module, highlighting the importance of who delivers interventions.

Peer-to-peer education methods can also be used to embed social norms around healthy behaviours.[96] Peer education typically involves the selection and training of 'peer educators' or 'leaders', to relay information or skills to younger or similar-aged students in their school. Several programmes have been implemented in UK schools with some success at improving awareness and behavioural norms.[97] From 2015 to 2023, the Mental Health Foundation ran a Peer Education Project (PEP) for secondary schools around safeguarding mental wellbeing. Delivered to nearly 40,000 students, the programme utilises online training videos to train youth to peer educate on risks to mental health and thematic topics such as loneliness and how to healthily cope. The programme has been heavily evaluated by two independent organisations, indicating consistent improvements in CYP self-reported knowledge around mental health though limited improvement of confidence to speak up and seek help.[98]

As it pertains to campaigns against online harms, there is little scholarship linking the use of peer education to programme evaluations showing impact.

2.8 Model of change: prevention, awareness, reduction, empowerment

[96] Dodd, S., Widnall, E., Russell, A.E., Curtin, E.L., Simmonds, R., Limmer, M. and Kidger, J. (2022). School-based peer education interventions to improve health: a global systematic review of effectiveness. *BMC Public Health*, 22(1). Link.

[97] Spencer, L.P., Flynn, D., Johnson, A., Maniatopoulos, G., Newham, J.J., Perkins, N., Wood, M., Woodley, H. and Henderson, E.J. (2022). The Implementation of Whole-School Approaches to Transform Mental Health in UK Schools: A Realist Evaluation Protocol. *International Journal of Qualitative Methods*, 21. Link.

[98] University of Bristol (2022). An independent Evaluation of the Peer Education Project 2020 – 2022. [online] Mental Health Foundation. Link.

Preventive educational interventions around wellness, including online safety, can improve academic attainment, but their outcomes vary on the quality of implementation. Elements of best practice pulled across 15 studies[99] include:

- active skills-based learning – interactive activity developing competencies
- developmental programme – appropriate to student's age and maturity
- inclusive of difference and sociocultural variance
- well-trained teachers
- theory/research-based curriculum
- positive approach, avoiding confrontational strategies/scare tactics
- clear goals/outcomes, effective monitoring and evaluation
- support from school leadership and authorities
- community and parent engagement
- adequate length and intensity

Importantly, online safety models in particular have been criticised for their focus on enforcing strict no-tolerances linked with phone use in school, or with indirect safety outcomes, which are difficult to link back to educational training, and not instead more measurable digital literacy and digital citizenship skills.

The concept of digital citizenship recognises the internet as a shared public space where individuals are responsible social participants. In an educational context, digital citizenship can be seen as a framework for defining best internet use, through citizenship concepts such as "rights and responsibilities".[100] Digital citizenship, as defined by the International Society for Technology in Education, also proports the importance of broader positive social aims and behaviours, such as empathetic communication, respecting others and advocating for human rights.[101]

The Young Canadians in a Wired World Programme defined digital literacy as young people's ability to use, understand and create the digital world, as digital expression is at the heart of citizenship and innovation.[102] This perspective advocates for young people's awareness of what they can achieve online (both positive and harmful) emphasising citizenship and responsibility. This sense of

[99] PSHE Association and CEOP (2016). Key principles of effective prevention education. [online] ICMEC. Link.
[100] International Society for Technology in Education [ISTE] (2016). Digital citizenship defined: Teach the 9 elements to enhance students' safety, creativity and empathy. Link.
[101] International Society for Technology in Education [ISTE] (2018). Citizenship in the digital age. Link.
[102] Johnson, M. (2015). Digital Literacy and Digital Citizenship: Approaches to Girls' Online Experiences. In: *eGirls, eCitizens: Putting technology, theory, and policy into dialogue with girls' and young women's' voices*. [online] University of Ottawa Press. p.343. Link.

responsibility to others replaces models that would deter unwanted behaviour through threat of punishment, arguing that a young person's use of online media should not be penalised but encouraged (in appropriate locations and in moderation) as a bridge to involvement in causes or communities offline, empathy, ethics and activism.[103]

2.8.1 Best Practice in Education-Based Interventions

Name	Location	Issues covered	Years active	Description
NSPCC's In Ctrl program	Face-to-face. UK.	Technology-assisted child sexual abuse (TA-CSA).	Pilot evaluated January 2019-February 2020. Still active.	This 9-week group-based program, aimed at 9–13-year-olds, encourages children and young people to share their thoughts and experiences in a safe environment.[101] Evaluation of the pilot indicated increased digital and emotional resistance as well as positive wellbeing outcomes. 80% of referrals came from schools, indicating the importance of maintaining a good working relationship with the referrer in-schools.[104]
Un-named case studies in Shipton's (2011) study.	In-school. Primary school in Yorkshire and the Humber area. Primary school in the South West.	E-safety	Unknown.	Developing critical thinking in children was preferred by schools, with an emphasis on ongoing messaging and recognising the differences between students. The evaluation also recommended putting in place e-safety policies and using existing available e-safety resources. From these case studies, a checklist was developed for school online safety strategies.[105]
Media Power Youth's Screenshots program	In-school. Middle schools in New England, US.	Digital Citizenship	Evaluated Oct 2019-Jan 2020. Still active.	In-school digital citizenship program run by educational non-profit Media Power Youth. The nine-lesson program educational and behavior change strategies to teach students critical thinking about social media. Gendered differences in pro-social conflict resolution emerged. Screenshots was more effective in male students. This may be linked to 'Habits of Thought Model' used to develop project, which takes a cognitive skills approach and was originally developed for males.[106]

[103] Idem.
[104] National Society for the Prevention of Harm to Children (NSPCC) Learning (2023) in Crtl. Link.
[105] Shipton (2011) Improving e-safety in primary schools: a guidance document Link.
[106] Bickham et al (2021) Evaluating a Middle-School Digital Citizenship Curriculum (Screenshots). Link.

Safety.net	In-school. Five Spanish Schools in three Spanish regions.	Multiple forms of risk	Started 2017. Evaluated May–June 2020. Still active.	One of few studies of a programme aimed at jointly preventing various risks of the Internet. These included relational harms (cyberbullying, sexting, online grooming, cyber dating abuse) and dysfunctional harms (problematic Internet use, nomophobia, Internet gaming disorder and online gambling disorder) in 11–14-year-old adolescents. The programme was delivered through 16 one-hour sessions and designed through three key frameworks: the theory of planned behaviour, the social co-construction model, and the cumulative risk model. Evaluation suggested the program was successful across several areas.[107]
ConRed Program. Knowing, Building, and Living Together on the Internet Program	In-school. Secondary schools in Cordoba, Spain	Cyberbullying	Pilot evaluated over three-month period in 2011.	Cyberbullying programme designed using traditional anti-bullying strategies. The programme focuses on internet addiction, bullying, and empathy and has been seen to be effective when reviewed alongside other cyberbullying programmes.[108] [109] This programme also yielded gendered differences in bullying results, which dropped amongst boys both in terms of aggression and victimisation. In the case of girls, affective empathy increased but this did not appear to influence girls as aggressors.[110]

3. Findings

This section details the finding from the evaluation. The first section presents findings from the survey conducted with young people, parents/carers and teachers which aimed to understand young

[107] Ortega-Barón et al (2021) Safety.Net: A Pilot Study on a Multi-Risk Internet Prevention Program. Link.
[108] Del Rey (2012) Knowing, Building and Living Together on Internet and Social Networks: The ConRed Cyberbullying Prevention Program. Link.
[109] Siddiqui and Schultze-Krumbholz (2023) Successful and Emerging Cyberbullying Prevention Programs: A Narrative Review of Seventeen Interventions Applied Worldwide Link.
[110] Casas, J.A., Del Rey, R., and Ortega-Ruiz, R. (2018). The ConRed program: Educating in cybercoexistence and cyberbullying prevention by improving coexistence projects in schools, ISBN 9780128114230, Link.

people's experiences within the pilot site and these groups priorities for information in relation to online safety.

3.1 Young people's experience of online harm

In order to understand the experience and understanding of online harm, and to inform elements of the in-class sessions, surveys were distributed to young people, parents/carers and teachers. These surveys explored young people's social media use, online experiences and existing knowledge of the topic. In total, 591 young people in years 7 to 11 completed the survey, with 49 parents/carers and 25 teachers also responding. Below is a brief summary of the findings before a more detailed analysis.

The surveys revealed a range of social media uses, with a high percentage of teachers (as opposed to young people and parents) reporting use around sharing videos, photos and watching pornography. There was also some discrepancy around attitudes towards social media. While many parents and teachers felt that that social media was overall a bad thing for young people, few young people shared this attitude.

Racism/hate speech/sexism, bullying/intimidation and misinformation were harms highlighted by multiple groups as affecting young people. Although the majority of young people reported feeling safe online and said they knew how to keep themselves safe, reports of victimisation rates to online harms were higher among parents than young people. 20% (n=116) of young people expressed that they were not comfortable seeking help or support. This reflects previous findings[111] around young people being unlikely to report experiences of online harms and demonstrate a need to ensure that young people feel that support pathways are responsive and are comfortable accessing them.

Parents were more confident in seeking help but 32% (n=12) were unsure about where to access support. In short written responses to the survey, some parents highlighted that they were not aware of the pilot and felt that there was a lack of communication about this from the school. One teacher interview affirmed this perspective, sharing there could be further opportunities to involve parents and share the work being done in the pilot.

[111] NSPCC (2022). *Children's experiences of legal but harmful content online*. Link.

Keeping safe on social media, cyberbullying/trolling, what to do if things go wrong, and spotting signs of harm (in self and others) were the learning priorities highlighted by young people around online harms. Parents and teachers felt that keeping safe online was the biggest priority for young people's learning.

Young people's online use

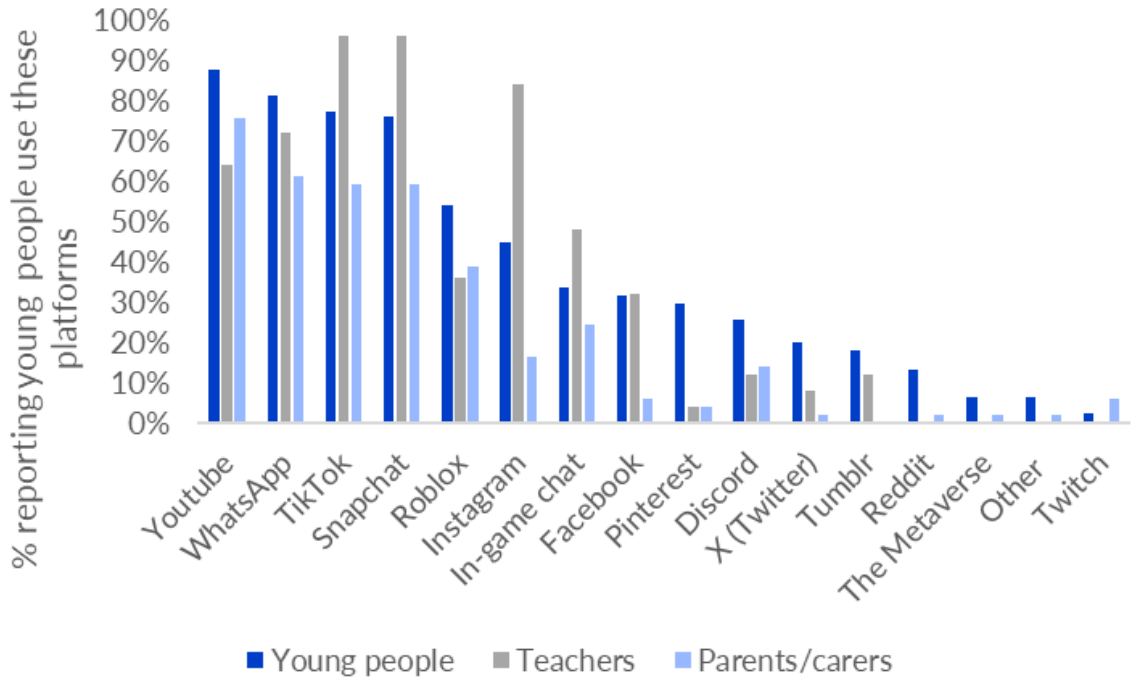

Figure 1) Platforms reportedly used by young people [Sources: Rocket Science Pupil, Teacher and Parent Surveys]

The most used platforms, according to young people, were YouTube, WhatsApp, TikTok and Snapchat, with the majority of young people reporting using these. Parents/carers and teachers' understanding of young people's use broadly coincides with what young people themselves report accessing although, with the exception of TikTok, Snapchat, Instagram and on-game chat, whereas prevalence of use of these platforms appears to be underestimated by adults.

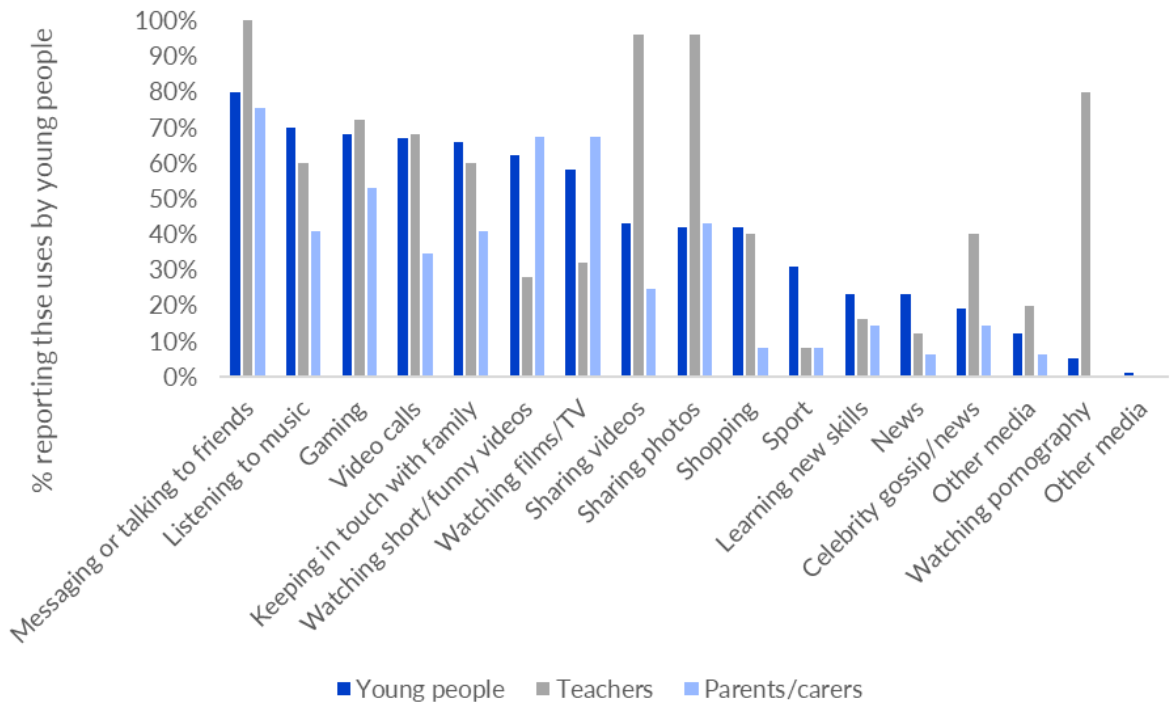

Figure 2) Reported uses for social media [Sources: Rocket Science Pupil, Teacher and Parent Surveys]

The highest percentage of young people reported using social media to contact friends, listen to music and for gaming. Notable outliers included a high number of teachers reporting that sharing photos and videos and watching pornography are popular uses. This disparity could perhaps be accounted for by the sensitivity of these topics, which may cause young people to be reticent to self-report their access/use of these.

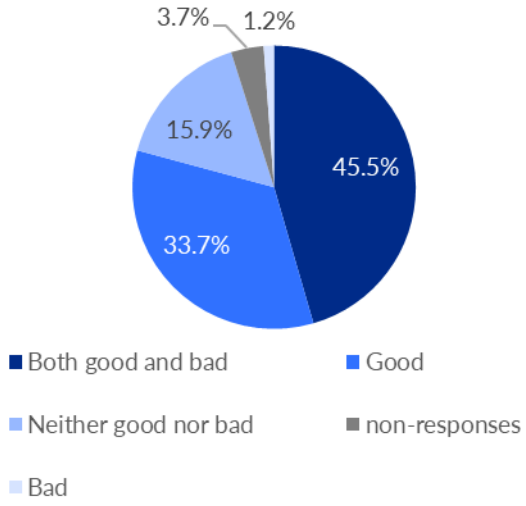

Figure 3) Young people's perceptions of social media [Source: Rocket Science Pupil Survey]

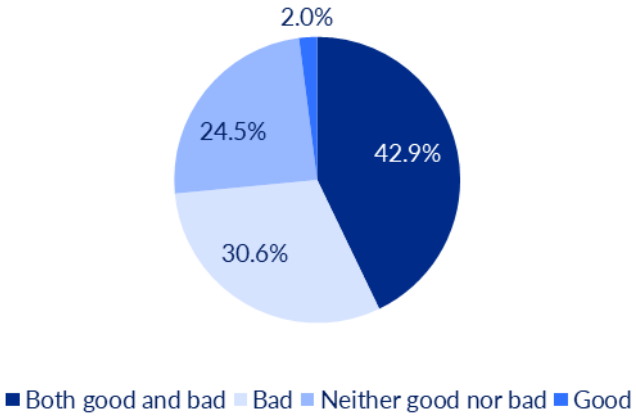

Figure 4) Parent/carer perceptions of social media [Source: Rocket Science Parent Survey]

Whilst the perceptions of social media varied somewhat between young people and their parents/carers and teachers each group held a balanced view feeling that it could be both a good and a bad thing for young people. However, many more parents/carers (30%) and teachers (20.0%) felt that social media was overall a bad thing than young people (1%). This discrepancy in attitudes may be important to note in any future communications around online harms, as much fewer young people felt that social media is exclusively a bad thing as opposed to parents/carers and teachers.

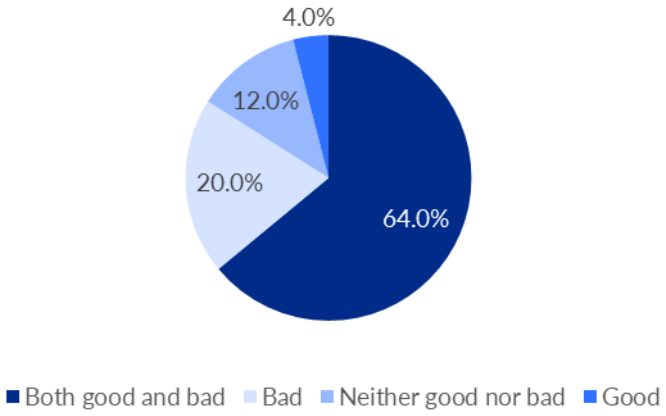

Figure 5) Teachers' perceptions of social media [Source: Rocket Science Teacher Survey]

"They are exposed to content that is not age-appropriate. It is too easy for them to share unkind comments/photos/videos about each other which then causes social issues in school." Teacher survey respondent

Through free text-based responses, parents/carers and teachers highlighted benefits for young people including socialising and keeping in touch with friends and relatives. They also raised a number of issues. Concerns around cyberbullying and the sharing of malicious content between young people were raised by both parents/careers and teachers. Some parents were concerned about the vulnerability of their children to online influence and expressed uncertainty about whether young people have the emotional maturity to deal with situations online. Teachers were also concerned about young people encountering inappropriate content and having contact with strangers online.

"I worry a lot about the people who can easily influence children. I have a son and I have told him several times that not everything he sees on YouTube is the truth and to make sure he speaks to me or his Dad if he sees something that worries him." Parent/carer survey respondent

"Children can become fixated on being part of the messaging group and not wanting to miss out. They are rarely (at this age) mature enough to be able to handle the emotional impact on unkind comments, and they can find it difficult to not type an unkind comment when they wouldn't say it fact to face." Parent/carer survey respondent

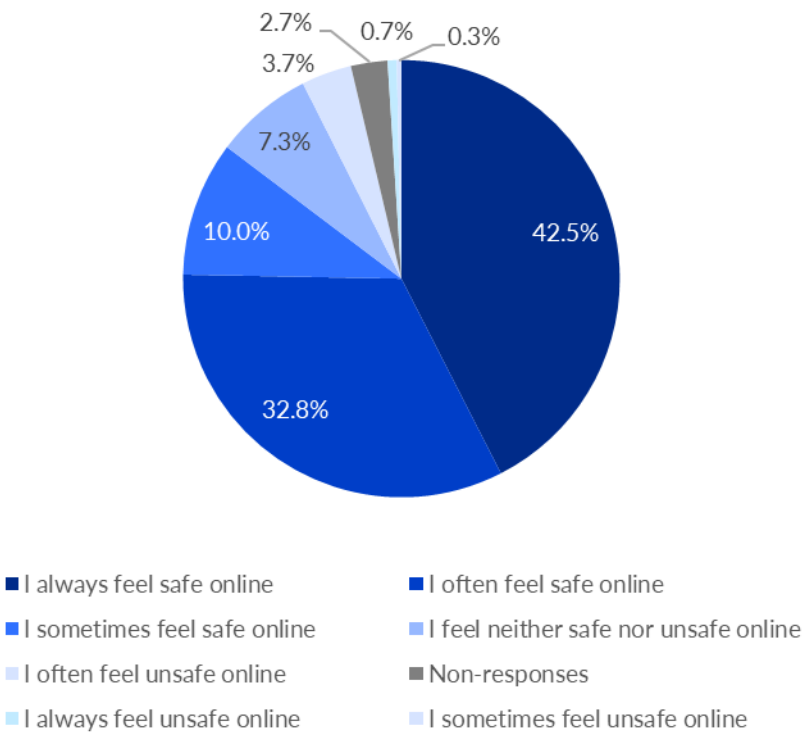

Figure 6) How safe young people report feeling online [Source: Rocket Science Pupil Survey]

As illustrated in Figure 6 above 75.3% (n=445) of students responded that they "always" or "often" feel safe online. This may be linked to the confidence of the majority of students in keeping themselves safe online, with 82% (n= 486) of students saying that they know "quite a bit" or "a lot" about how to keep themselves safe online (see Figure 12 below). Indeed, students explaining why they felt safe or unsafe online reported several online safety methods, such as avoiding contact with strangers, using a VPN, or maintaining a level of anonymity online e.g. through not posting.

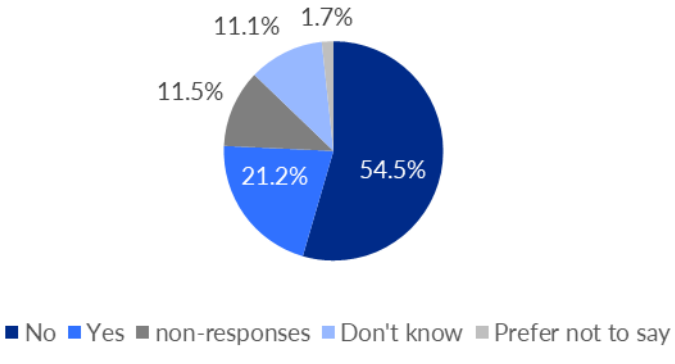

Figure 7) Self-reported rates of online harm [Source: Rocket Science Pupil Survey]

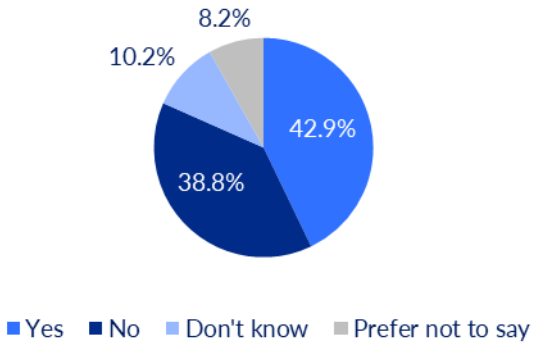

Figure 8) Rates of online harms experienced by children, reported by parents/carers [Source: Rocket Science Parent Survey]

Parents/carers reported a higher victimisation rate than pupils did, with 47% (n= 21) of parents/carers reporting that their child had experienced online harms, as opposed to 21% (n=319) of young people self-reporting harm. This may suggest differences between parents/carers and young people in willingness or ability to perceive and report online harms also indicated by the 12% non-response rate to the question by young people. This discrepancy between the responses of parent/carers and young people could be due to differences in response rates, but indicates that a significant proportion, between 21%, and 47%, of young people attending in the pilot have experienced online harms.

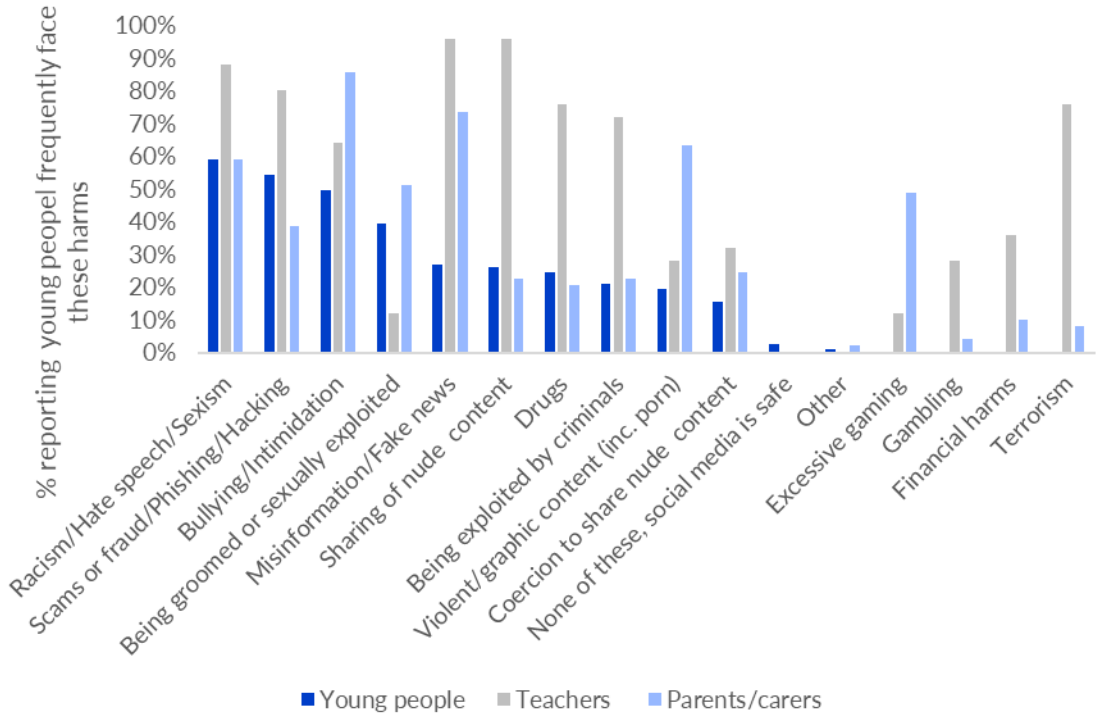

Figure 9) Harms faced by young people online [Sources: Rocket Science Pupil, Teacher and Parent Surveys]

The most significant online dangers identified by students were around racism/hate speech/sexism (59%), scams (54%) and bullying/intimidation (49%). Overall, a lower percentage of students appeared to be concerned about the various online harms listed than parents/carers and teachers. 96% (n=24) of teachers and 74% (n=36) of parents highlighted misinformation as a harm that young people frequently face. Teachers also highlighted the sharing of nude/semi-nude images/videos (96%) and racism/hate speech/sexism (88%) as concerns. Parents/carers felt that young people were most affected by bullying/intimidation (86%) and violent/graphic content (63%).

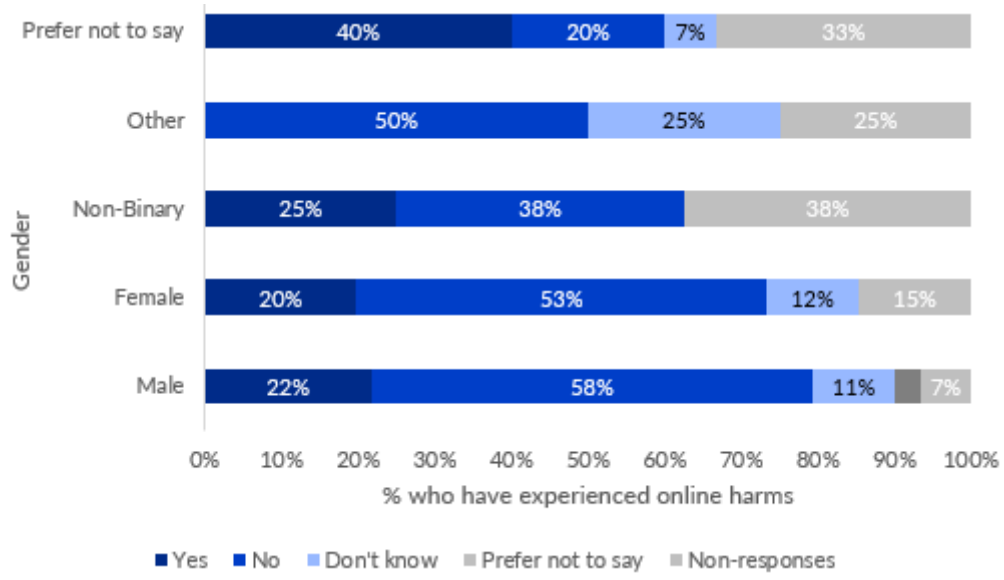

Figure 10) Self-reported rates of online harm by gender [Source: Rocket Science Pupil Survey]

A marginal majority, 58% (n=173) of male students and 54% (n=139) of female students reported that they had not experienced any online harm. It is important to note the sample sizes when comparing gender-differentiated data, with 300 male students responding to the survey and 258 female students, 15 young people did not disclose their gender, 8 identified as non-binary students and 4 as 'other' also responded. The data we do have suggests that students who put 'prefer not to say' for their gender were also the most likely to say they have experienced online harms, followed by non-binary, male, female and 'other' students.

There were a large proportion of non-binary students who chose not to disclose their gender and 'other' students who did not respond as to whether they had experienced online harms.
among non-binary students, students who chose not to disclose their gender and 'other' students. 15% (n=38) of female students did not respond, as opposed to 6.7% (n=20) of male students.

Online harms education

Parents/carers and teachers reported fairly neutral perceptions of the level and quality of education of young people receive about online harms, respectively rating the how well young people are education an average of 3.0 and 2.9, where 1 is "not well" and 5 is "very well". Text-based responses revealed a number of issues that may be affecting the efficacy of online harms education.

"Children are educated in schools and other places however still continue to do the wrong things. I believe rather than having one day per year 'internet safety day' it needs to happen more frequently" - Parent/carer survey respondent

"I think students are taught about it but do not fully understand or believe the dangers" Teacher survey respondent

Some parents/carers highlighted a lack of communication around the education being provided or being unaware of what is currently delivered. Many felt that more education would be beneficial, both in terms of frequency and in keeping up-to-date with rapidly-changing forms of online harms. Teachers reported that young people did not always understand or take seriously messages around online safety and felt that parents/carers also need to support and promote online safety.

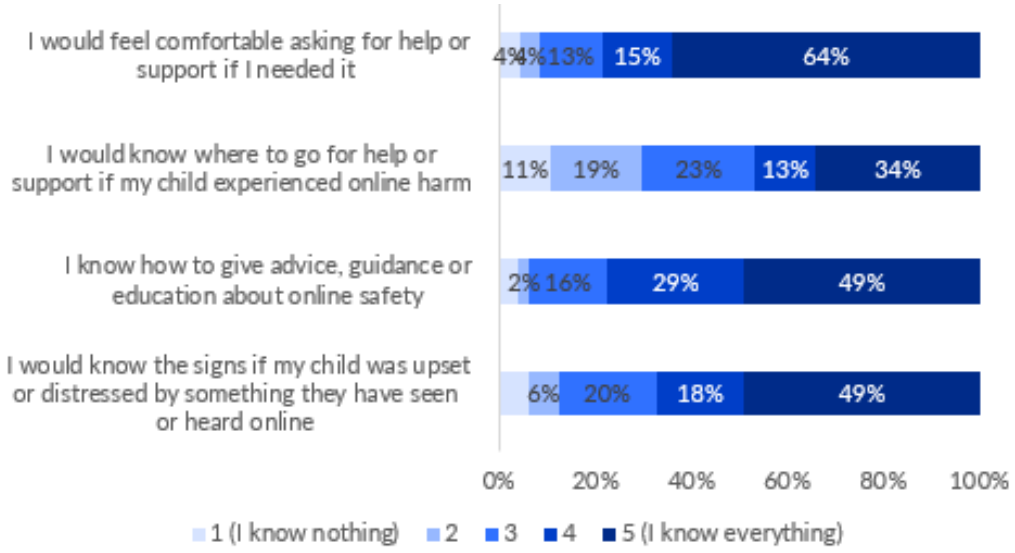

Figure 11) Self-reported competencies by parents/carers [Source: Rocket Science Parent Survey]

Figures 11, 12 and 13 show parent/carer, pupil and teacher self-reported competencies in dealing with online harms concerns. The area where parents/carers had most confidence was being comfortable to ask for help or support, yet 30% (n = 14) were unsure about where to go to get this support. Inversely, young people were much less confident in asking for help or support, although the majority felt they had some idea of where to go to seek support. Teachers were largely more confident in managing online harms concerns, with a broadly consistent level of competence across areas. Teachers were slightly less confident in spotting signs that a young person was upset or distressed by an online experience.

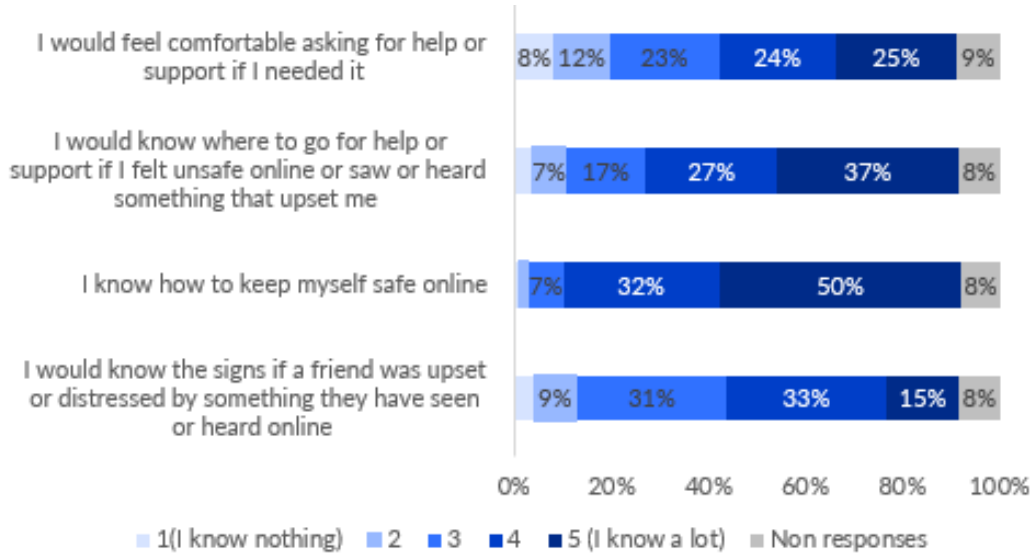

Figure 12) Young people's self-reported confidence and knowledge of online safety [Source: Rocket Science Pupil Survey]

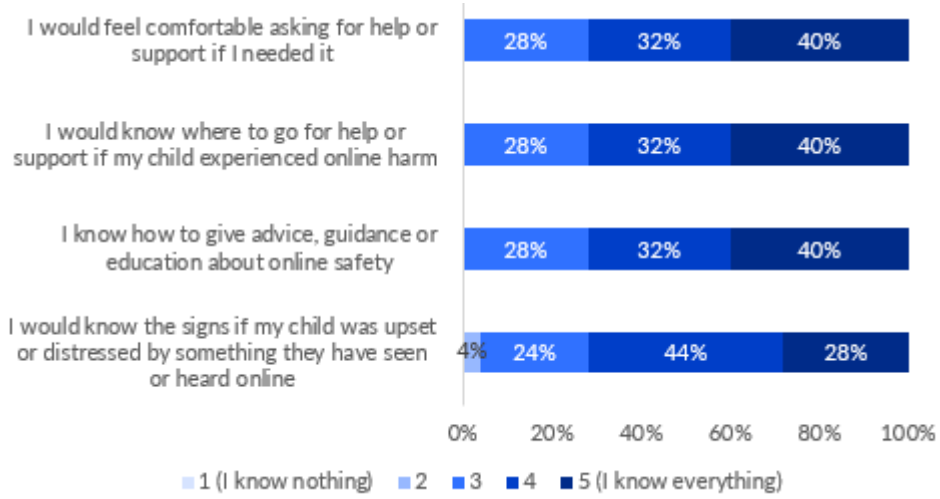

Figure 13) Self-reported competencies by teachers [Source: Rocket Science Parent Survey]

Young people, parents/carers and teachers were asked to rank their top three learning priorities for young people on the Online Harms program (see Figure 14). The top three priorities for each of these groups is set out in Table 1 below.

Learning priorities	Young people	Parents/carers	Teachers
Priority area 1	Keeping safe on social media Cyberbullying/trolling	Keeping safe online	Keeping safe online
Priority area 2	What to do if things go wrong Spotting signs of harm (in self and others)	Cyber bullying/trolling	Keeping safe on social media What to do if things go wrong How to ask for help and support
Priority area 3	Keeping safe online How to stay healthy and well	Keeping safe on social media	Spotting the signs of harm

Table 1) Learning priorities for students, teachers and parents [Sources: Rocket Science Pupil, Teacher and Parent Surveys]

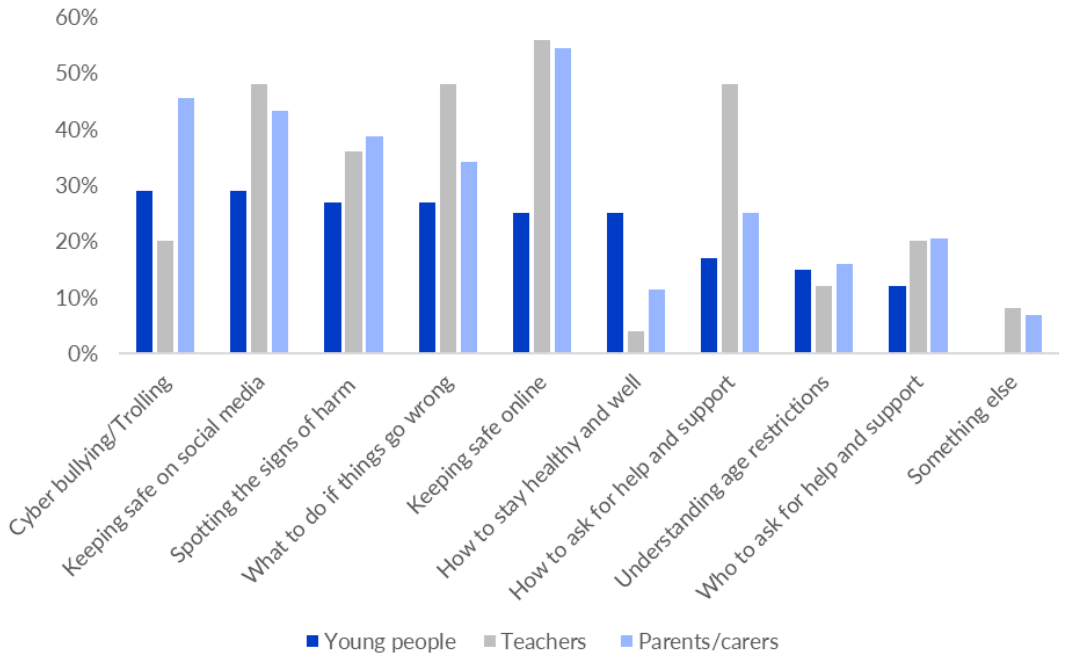

Figure 14) Learning priorities for students, teachers and parents [Sources: Rocket Science Pupil, Teacher and Parent Surveys]

These results, as well as those around competencies, indicate priority areas for the Online Harms curriculum in the school. These include building confidence around seeking support when needed,

cyberbullying and trolling which were a concern both for young people and parents/carers and keeping safe online, a concern of teachers and parents/carers.

Parents/carers may also need support in knowing where to go to seek help for their child. Parent comments about communication around online harms education indicate some more general parent engagement would be beneficial.

3.2 Impact of the pilot

The impact of the pilot sessions has been evaluated from a number of data sources. Pre and post session data was collected by both providers to determine 'distance travelled' in relation to young people's knowledge and understanding of online harms and safety as a result of the support or education they have received. This is predominately in the form of quantitative data presented in section 3.2.1 below. To supplement these a series of focus groups were held with young people who had attended classroom based sessions, this qualitative data is presented in section 3.2.2.

Finally a process evaluation to determine the barriers and enablers to the delivery of the pilot was undertaken, this is presented in section 3.3.3 of this section.

3.2.1 Session evaluation data

Of the pilot site student body, 727 pupils have received an online harms class-based session whilst 26 have received support in either a 1-1 or a group basis. Table 2 below provides a breakdown participation by year group

Year group	All Star Pupils Engaged	Step 2 Pupils Engaged
YR 5 and 6	95	0
YR 7	112	8
YR 8	163	10
YR 9	138	6
YR 10	113	1
YR 11	106	1
Total	727	26

Table 2) Breakdown of pilot engagement by year group. [Source: VRP monitoring data]

Step 2 pre and post support session data

Step 2 collected pre and post-session data from all young people who received support on either a group or a 1-1 basis. Young people were asked in a standardised questionnaire format about their knowledge of what dangers young people can face when online, how to stay safe and what to do if they don't feel safe. Each question had young people assign themselves a score from 1-5 with 1 being no knowledge or awareness to 5 indicating full understanding or knowledge on the topic. Young people were asked to complete these questionnaires during their first and final session of support. Of the 49 young people who received support 23 pre and post questionnaires were received by the evaluation team, this represents 47% of all young people who received support.

As shown in the figure 15, before attending a support session, young people rated themselves lowest overall (each with an average score of 3) in the following areas, corresponding to these statements:

- *I can recognise the signs of online grooming and exploitation;*
- *I know what online grooming and exploitation is;*
- *I understand why people sometimes post false news or social media that isn't true;*
- *I know how to identify whether a source on the internet is genuine;*
- *I know what to do if I think a source isn't real or accurate.*

Of these, the theme with the lowest pre-support session rating (3.04 average score) was "I can recognise the signs of online grooming and exploitation".

Following support, young people's average understanding in all of these thematic areas has improved. Knowing signs of online grooming and exploitation and what to do regarding grooming and exploitation notably had post-support averages of 5: the most significant change seen in average scores.

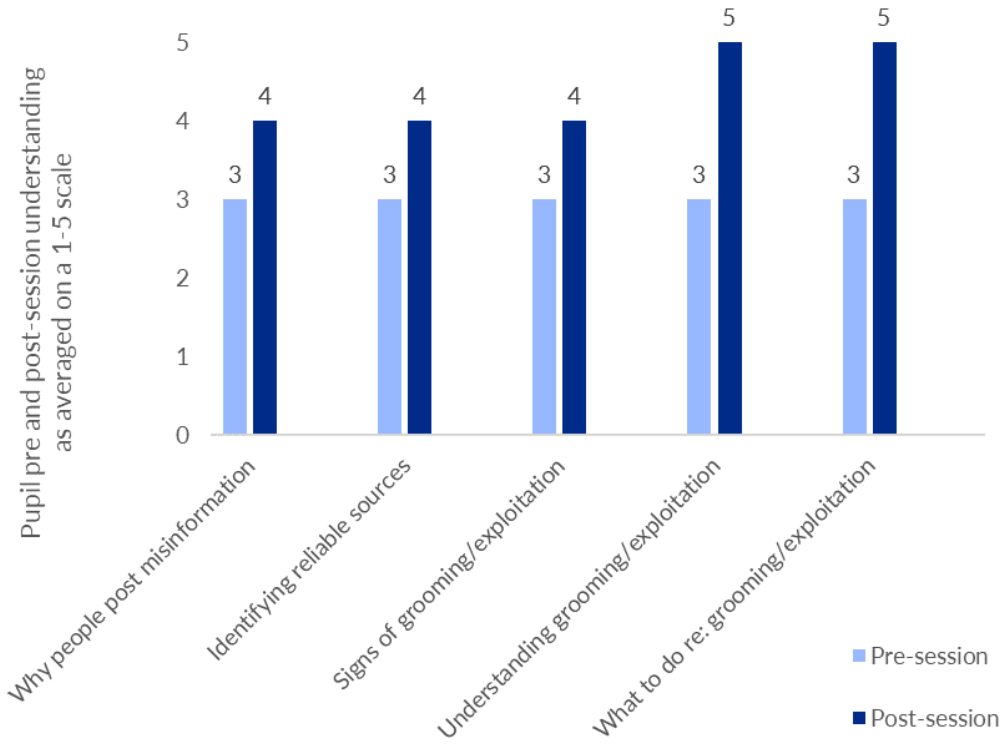

Figure 15) Pupil pre and post support understanding of potential online harms as rated on a 1-5 scale [Sources: Step 2 Pre and Post-Evaluation Pupil Surveys]

It is also helpful to consider which learning themes in the session had the most significant growth or improvement in understanding, as measured by the total points of positive change across respondents' pre and post-support session scores. Importantly, by calculating total points of change, we represent both young people whose scores improved significantly (i.e. a 4-point change through a pre-session score of 1 to a post-support session score of 5) and those categories who may have experienced marginal change individually (i.e. a 1-point change) but still had a high quantity of young people reporting improvement in their knowledge.

As previously described support sessions were designed to improve knowledge and understanding across five goal areas. In each goal area the pre and post questionnaire was designed to identify young people's knowledge of the topic, understanding of how to reduce the risks associated with this area and what to do if they experience this harm. The remainder of this section will explore the findings in relation to these five goal areas.

Learning Goal 1: Online bullying

The first learning goal of the Online Harms pilot is to improve knowledge, awareness and action relating to online bullying. Specifically, Learning Goal 1 targets the following areas:

- *I understand what online bullying is and what behaviours might be upsetting to others*
- *I am aware about what effects online bullying can have on other people*
- *I am aware of where I can go for help or support if I experience online bullying.*

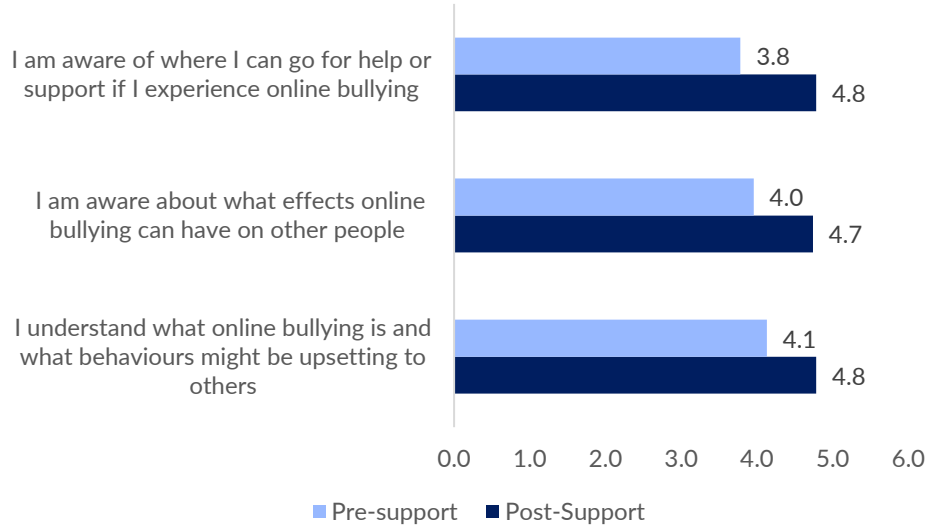

Figure 16) Pre and post questionnaire responses in relation to knowledge and understanding of online bullying [Source: Step 2 Pre and Post-Evaluation Pupil Surveys].

As can be seen from Figure 16 pre and support data indicates that young people entered support sessions with a self-reported strong understanding around what online bullying is, what behaviours might be upsetting to others and the effects of online bullying. Despite this self-reported improvements in knowledge and understanding can be seen across all three area. The most substantial increase, with an average increase of 1 is young people's awareness of source of support should they experience online bullying. 82% (n=19) of young people rated themselves as 5 out of 5 in this area following the support sessions.

Both awareness of the issue and the potential impacts for those who experience it increased by an average of 0.7 points..

Learning Goal 2: Online privacy

The second learning goal of the Online Harms pilot is to improve knowledge, awareness and action relating to online privacy. Specifically, Learning Goal 2 targets the following areas:

- *I understand how to set privacy settings on my social media accounts*
- *I understand why it is important to protect my privacy whilst using social media*
- *I understand what to do or where to go for help if my privacy is invaded online.*

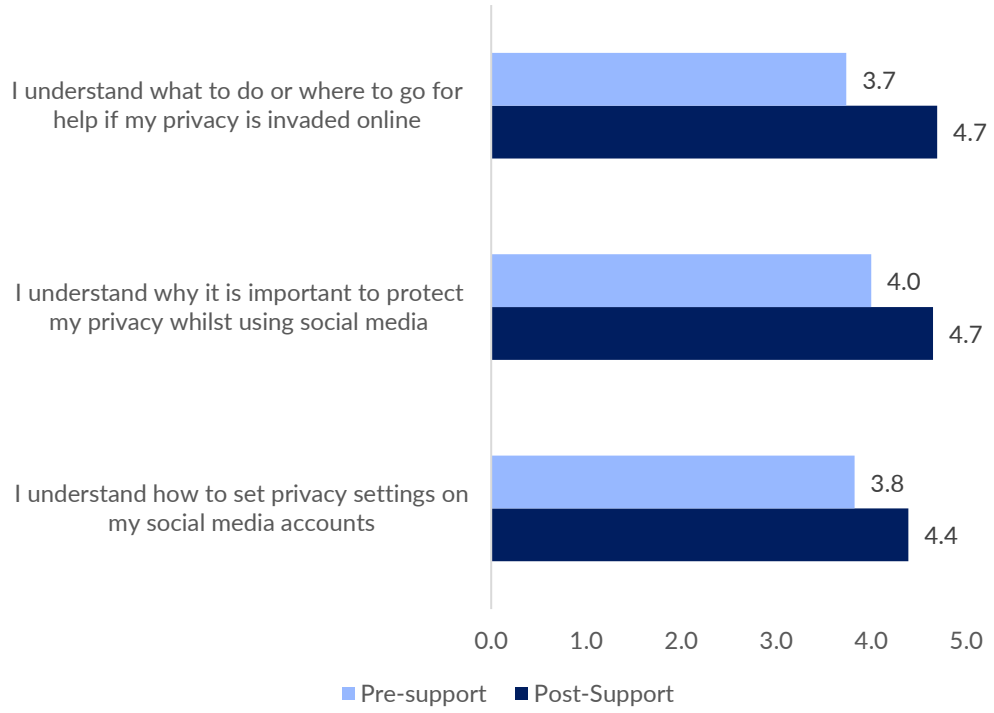

Figure 17) Pre and post questionnaire responses in relation to knowledge and understanding of online privacy [Source: Step 2 Pre and Post-Evaluation Pupil Surveys].

As can be seen in Figure 17, again self-reported understanding improved across all three areas. The pre and post data indicates that young people's understanding around how to set their privacy settings on social media accounts had the smallest amount of change of an average of 0.6. Before a support session, less than half of all surveyed pupils (n=10) scored themselves a 5 on this target. After a session, 69% scored a 5 (n=16). Two pupils scored a 1 both before and after a session and one pupil lowered their score after a support session.

Young people generally demonstrated a strong understanding of the importance of protecting their privacy on social media as well understanding where to go for help if their privacy was invaded online. Before receiving support, 52% of pupils (n=12) scored themselves a 5 on knowledge of the importance of protecting their privacy, compared with 78% (n=18) post-session. The greatest

observed change in self-reported understanding was again seen in relation to understanding what to do if their privacy was invaded. Pre-session, 48% (n=11) of pupils scored a 5 on understanding. After a support session, 70% (n=16) scored a 5. On average those supported increased their score in this area by 1 point.

Learning Goal 3: Reliability of news and social media

The third learning goal of the Online Harms pilot is to improve knowledge, awareness and action relating to the reliability of news and social media. Specifically, Learning Goal 3 targets the following areas:

- *I understand why people sometimes post false news or social media that isn't true*
- *I know how to identify whether a source on the internet is genuine*
- *I know what to do if I think a source isn't real or accurate.*

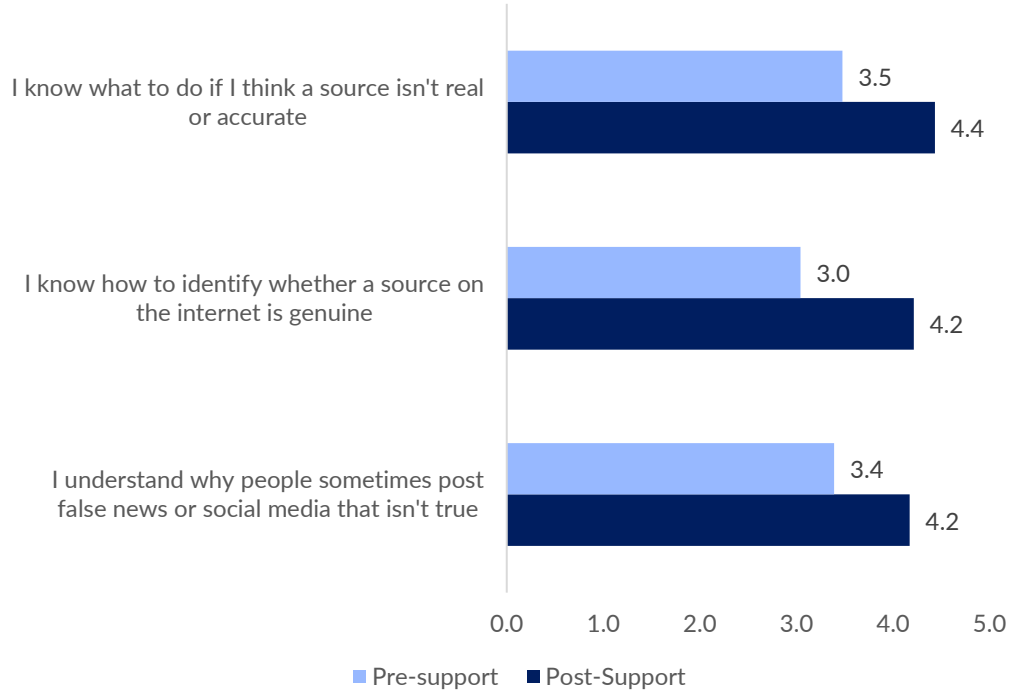

Figure 18) Pre and post questionnaire responses in relation to knowledge and understanding of reliability if news and social media [Source: Step 2 Pre and Post-Evaluation Pupil Surveys].

The data indicates that Learning Goal 3 is an area for further focus. Pre-support, many young people lacked an understanding of why others might share dishonest content online. Before a support session, 26% (n=6) of pupils scored themselves a 1 or 2 on *"I understand why people sometimes post false news or social media that isn't true"*. Support sessions proved impactful at advancing knowledge

within this subject, with an overall average change of 0.8 points. However, following a support session, just 48% of respondents (n=11) scored themselves a 5, marking one of the lowest overall post-support session totals across the learning goals. This would indicate that while the sessions do improve understanding of why misinformation and untruthful contact is posted, there is potentially further work required to ensure young people feel fully confident in their grasp of why online harms occur.

Additionally, and perhaps unsurprisingly given the complexity of the topic and that this is not identified as a priority for young people, multiple young people continued to struggle to assess the authenticity of online sources. Despite an average increase of 1.2 in self-rated knowledge across the cohort only 43% of respondents (n=10) scored themselves a 5 on "*I know how to identify whether a source on the internet is genuine*", the lowest overall scoring of 5s across all goal areas. Three pupils even felt their understanding on this statement had regressed following a session, dropping their initial score by a point.

Finally in relation to understanding appropriate responses to identifying misinformation pre-support data indicates that only 17% (n=4) of young people rated themselves a 5 indicating they are confident in how handle misinformation. On average self-assessment in this area increased by 0.9 points and 61% of pupils scoring a 5 (n=14) following support. This shows the pilot was effective in dramatically improving knowledge, though it remains an area for focus to increase overall pupil confidence.

Learning Goal 4: Keeping myself safe online

The fourth learning goal of the Online Harms pilot is to improve knowledge, awareness and action relating to keeping young people safe online. Specifically, Learning Goal 4 targets the following areas:

- *I know how to set my social media setting to not see upsetting or distressing content*
- *I am able to turn my social media off if it is upsetting me*
- *I know what to do if I see or hear something that upsets me.*

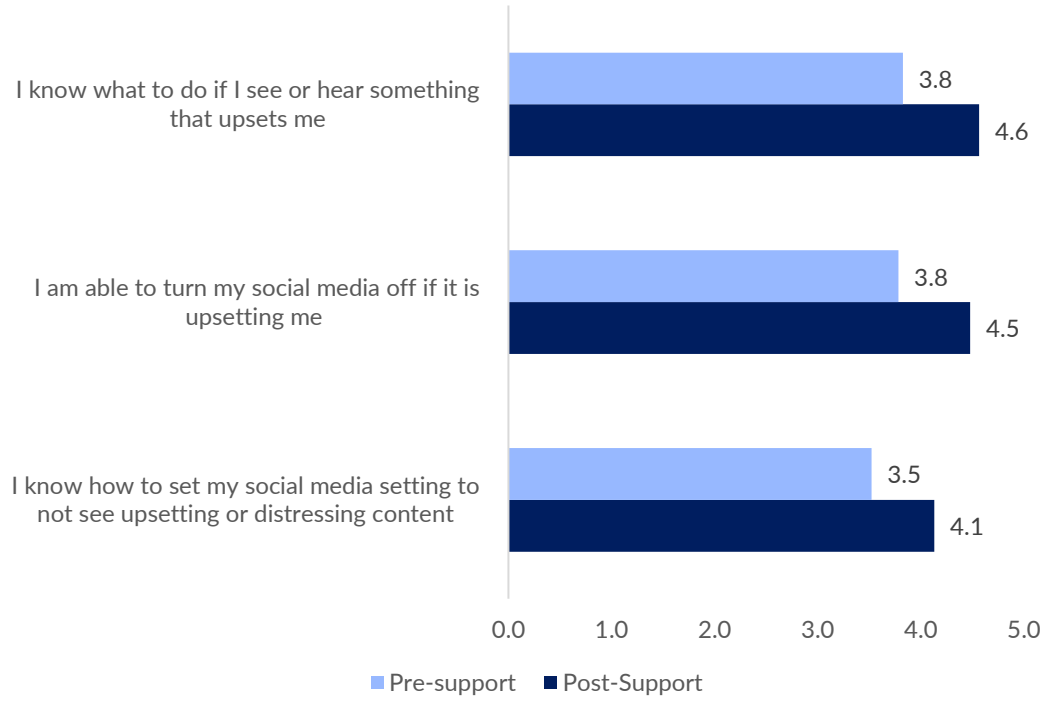

Figure 19) Pre and post questionnaire responses in relation to knowledge and understanding of staying safe online [Source: Step 2 Pre and Post-Evaluation Pupil Surveys].

Young people exhibited uncertainty on how to adjust their social media settings to not see upsetting or distressing content. Pre-support five individuals scored a 2 and one individual scored a 1. After supportive instruction, average self-reported knowledge increased by 0.6 points with 61% of respondents (n=14) scoring themselves a 5 on *"I know how to set my social media setting to not see upsetting or distressing content"*.

Following support more young people also reported feeling able to turn off social media if experiencing upset with an average increase of 0.8 points. Pre-support just 35% of pupils (n=8) scored themselves a 5 for feeling able to do this compared to 83% (n=19) post support.

Similarly, improvement was seen in knowing what to do when encountering upsetting content; pre-support session, 43% (n=10) scored a 5 compared with 78% (n=18) scoring a 5 post-support session, again average increase in this area was 0.8.

Learning Goal 5: Online grooming

The fifth and final learning goal of the support is to improve knowledge, awareness and action relating to online grooming. Specifically, Learning Goal 5 targets the following areas:

- *I know what online grooming and exploitation is*
- *I can recognise the signs of online grooming and exploitation*
- *I know what to do if I feel like I, or someone I know, is being groomed or exploited.*

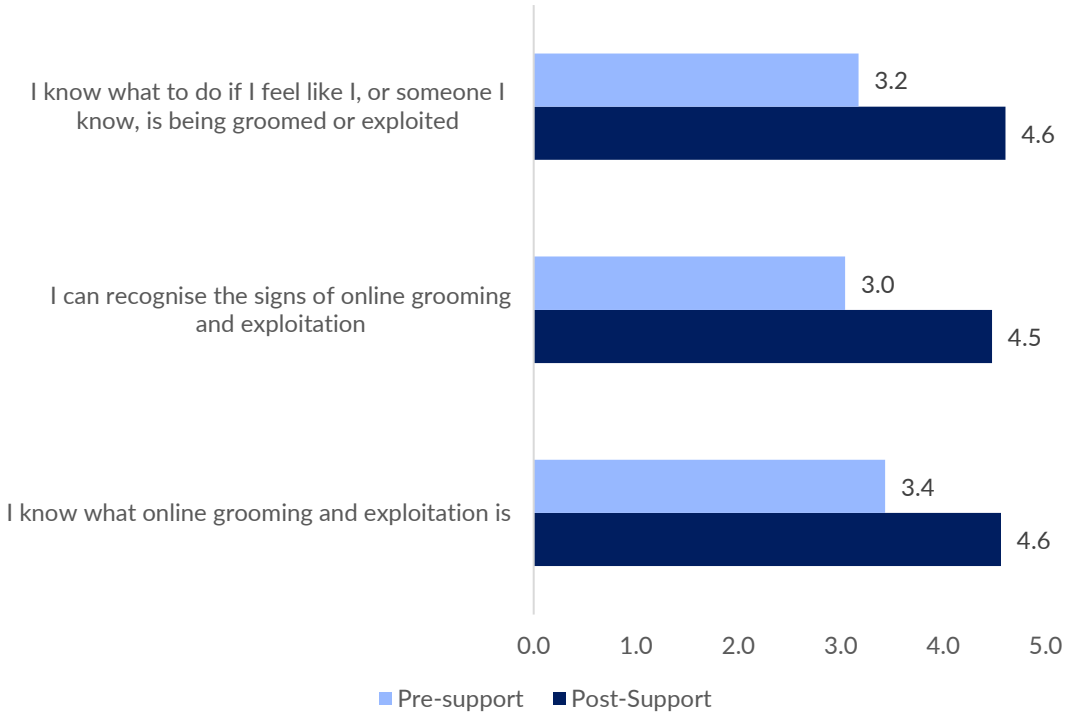

Figure 20) Pre and post questionnaire responses in relation to knowledge and understanding of online grooming [Source: Step 2 Pre and Post-Evaluation Pupil Surveys].

As can be seen in figure 20 the subject area of online grooming and exploitation was rated the lowest area of pre-support knowledge by young people and subsequently an area where self-assessed understanding has most increased.

Young people's knowledge of grooming and exploitation doubled between pre and post-support. Self-rated scores increased an average of 1.5 over the support with pre-support, just 35% young people (n=8) scoring themselves a 5 for knowing what online grooming and exploitation is compared to 70% (n=16) post support.

Support sessions were also seen to substantially influence young people's recognition around the signs of grooming and exploitation, with initially only five young people (22%) scoring themselves as a

5 on, *"I can recognise the signs of online grooming and exploitation"* compared to 20 participants (87%) post support. On average young people rated their knowledge in this area as increasing by 1.5 points.

Finally, as in other learning goals young people's knowledge of what to do if they recognise grooming or exploitative behaviour showed the most increase following support. On average young people reported a 1.4 point increase in their knowledge in this area with 30% of pupils (n=7) scoring a 5 pre-support and 78% (n=18) afterward.

All Star pre and post-session data

All Star Ents, the lead delivery partner of the pilot, conducted brief in-class evaluation to measure knowledge and usefulness of the educational sessions delivered to classes by asking a number of interactive questions at the start and end of each lesson. These educational sessions were delivered to pupils in Year 5 (n=45), Year 6 (n=50), Year 7 (n=113), Year 8 (n= 163), Year 9 (n=138) and Year 10 (n=544).

The data reveals inconclusive outcomes for young people's knowledge of online harms. Whilst more young people knew "A little" or "A lot" about online harms after delivery than before, while fewer knew "Some" or "Nothing" after delivery.

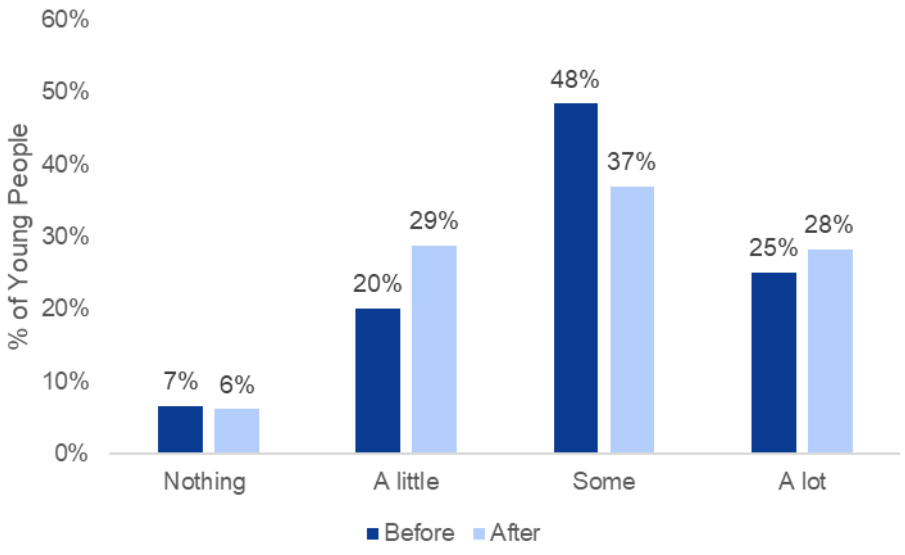

Figure 21) Young people's self-reported knowledge before and after delivery [Source: All Star in-session evaluation]

These mixed outcomes were consistent across age groups, with no clear trend in levels of knowledge. This data suggests that impacts on knowledge may be inconsistent, however the vast majority of young people (78%, n= 491) found the educational session useful with just 4% (n=22) of young

people not finding the in-class session useful. 18% (n=114) of attendees felt neutral about the usefulness of the educational session.

Knowledge	Year 7	Year 8	Year 9	Year 10	Year 5	Year 6
Nothing	-3%	4%	-4%	2%	-2%	-4%
A little	7%	5%	19%	3%	18%	2%
Some	-28%	-13%	-8%	-13%	-2%	18%
A lot	24%	4%	-7%	8%	-13%	-16%

Table 2) Difference between young people's self-reported knowledge before and after delivery (percentage after – percentage before) [Source: All Star in-session evaluation]

All Star teacher feedback

A sample of 24 teachers were asked to complete a short feedback form after observing the sessions delivered (559 pupils) from Year 5, through to Year 10 classes. Widely, teachers rated the delivery highly as age-appropriate, relevant for pupils and relevant for the PHSE curriculum.

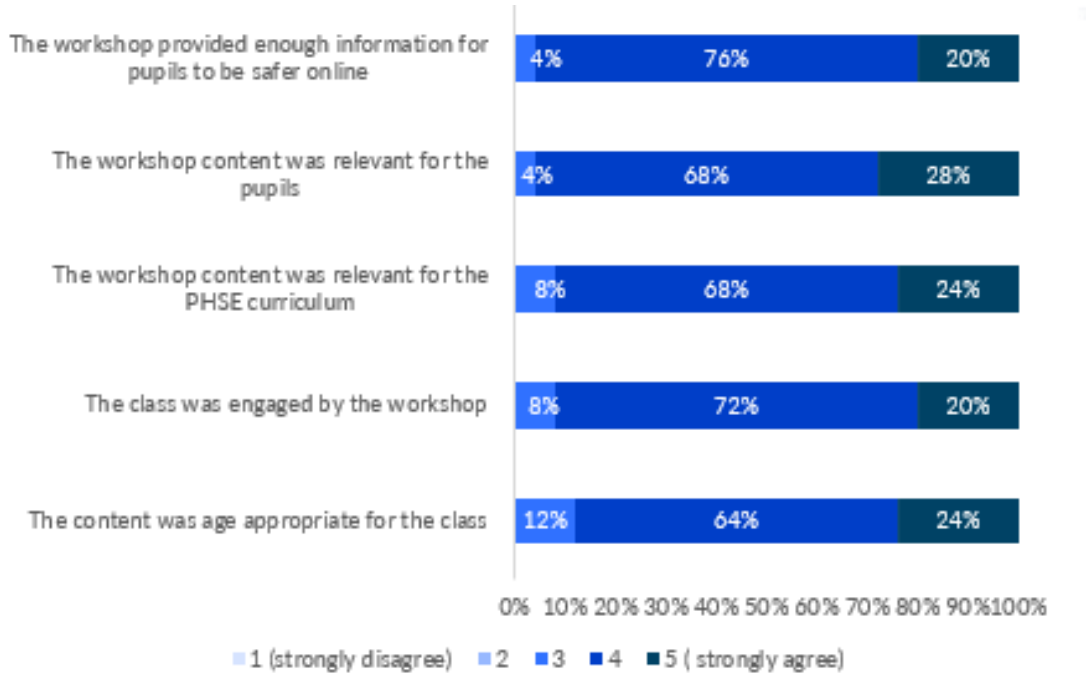

Figure 22) Percentage of teachers providing a 1-5 rating on aspects of in-class session delivery [Source: Teacher Feedback Forms]

When asked if and how their pupils might do anything differently following the educational session, teachers felt young people may "change the way they manage their online presence" and have greater "awareness", "understanding" and consciousness. Teachers were also asked to score how

likely they would be they would recommend the educational sessions to a colleague from 1 (not likely) to 10 (extremely likely). Teachers were generally likely to recommend the educational session, rating it between 6 and 10, with an average score of 7.9 out of 10.

Teachers were also asked if there was anything they would change or add to the session. Responses varied, with several saying, "nothing" while others requested additional "hard-hitting" case studies, particularly for Year 10 pupils, with a suggestion given to highlight the role of online harms around drugs or illegal activity. Other teachers voiced a critique of the delivery method itself, requesting more pupil engagement through additional activities, with attention to separating friends from each other to minimise disruptive behaviours.

3.3 Young people's experience of the pilot

To further understand the impact of the in-class sessions for young people, Rocket Science conducted 4 focus groups with year 7-10 students on 20th May. In total 25 students participated in the focus groups and the discussion centred on what the young people remembered about the session, which was delivered several weeks prior, and the impact it has had on their knowledge and behaviour since. Table 3 provides a breakdown of focus group participants by year group.

Year group	Number of young people participating in a focus group
7	8
8	5
9	4
10	8
Total	25

Table 3) Focus group participants by year group

In addition, a Rocket Science researcher observed two sessions of the Online Harms workshops delivered by the providers on the 14th June 2024 to separate classrooms of Year 9 students.

Due to the nature of the support provided by Step 2 and the potential vulnerable nature of the young people receiving this support it was agreed that interviews or focus groups for the purpose of evaluation would not be appropriate. Therefore this section is relevant only to the evaluation of the in-class sessions delivered by All Star.

3.3.1 Outcomes for young people

Experience and recall of the sessions

Each educational session involves providers engaging young people through a PowerPoint, worksheets, discussions, and videos. The in-class sessions begin by going through introductions and expectations of the session. The content then covers the Online Safety Bill, online harms, and case studies relating to online harms. Throughout the observed sessions, the presenter remained energetic and interactive with the young people, tailoring the discussion to what the young people were responding to.

The young people were visibly interested in the personal stories told by the providers of young people they worked with. For example, the presenter described a story of Year 9 girl from West Yorkshire who was the victim of revenge porn and how it affected her life years following the harmful encounter. Although the young people were initially hesitant to engage with the session and interactions, they were visibly interested and captivated by these true stories of online harms.

Similarly, the videos and case studies were also key elements which the young people were interested in and focussed on. This was reflected in the focus groups, where students remembered the plot of the video and case studies, using these to recall various online harms and the impact they have on people's lives. This was also observed in the sessions, where the case studies and real-life stories captured young people's attention the most. The providers also described how, in developing the session, these case studies were carefully chosen – they selected those case studies which were hard-hitting to have maximum impact on the young people.

> *"The story in the video was impactful."*
>
> Young person, Year 7

Even several weeks after attending an educational session, the majority of the young people had a good recall of the contents, especially after a brief reminder of the topics and format of the session. For example, when asked what they remember about the in-class session, several Year 10 students started singing the song from the music video shown. The majority of the young people also identified several of the overarching themes of the content, including the various online harms present, and how to respond to them. When asked what the first thing that came to mind when asked about the educational sessions, the young people responded:

"Not everyone is who they say they are online."

Young person, Year 7

"If someone is contacting you online, don't go to a place someone you don't know is telling you to go."

Young person, Year 7

"Don't be scared to report."

Young person, Year 10

In terms of the adults delivering the educational sessions, the young people remembered that they were *"normal people and not police"* and that they were *"nice and funny."* Another young person appreciated the providers' approach of encouraging the young people to *"be aware"* and not telling them to *"just not do it."* One young person recounted: *"They weren't shy and they weren't serious. In a more restrictive environment you don't learn. They made it fun so you wanted to listen to them."*

On the other hand, one Year 7 student felt that how they were talking about the subjects did not always make sense. Several young people felt that if the pace of the session was slower they would have understood more, and that the session was too *"fast."*

In addition, several young people across the year groups suggested the educational sessions would be improved if they were more interactive and had more tactile activities, such as worksheets, drawings, or movement-based activities. Some of the young people's suggestions on how to make it more interactive included: fun activities, more videos and stories, challenges to make your own case study story, drawing or colouring activities, making their own poster, more group work, and including more local stories.

"Could've been funner instead of us just being sat there."

Young person, Year 7

In the Year 8 focus group, several of the students also felt that there were too many worksheets to complete. For example, one of the first things they recalled when asked about the session was that they had to fill in worksheets about social media. One young person also described that because there were so many, *"people did not take the sheets seriously."*

Recognising online harms

In the focus groups, the young people recognised and described a wide variety of online harms, and many also acknowledged the positives of social media and the internet. These issues ranged from *"being careful what you download,"* recognising that not everyone is who they say they are online, and the amount of information that can be found out about an individual online. Many of the young people referenced the video shown during the session, in which a young girl on the internet was shown to actually be a man in his 40s:

"The positive is you can talk to someone online, but it could also be an old man."
Young person, Year 7

Similarly, it was observed that during the sessions, when prompted the young people identified several of the online harms explored in the videos, including catfishing, online predators, and doxing. This suggests that young people were able to correctly identify online harms in the presentation and apply these to their lives.

"If you post something it'll never be deleted. It can be on someone's phone. Someone could have saved it. You can't control what is online."
Young person, Year 10

"I already knew the stuff but learned a little extra bits."
Young person, Year 10

In addition, the young people described how they would be more confident in recognising suspicious behaviour online after the session. As one young person described after the session they felt *"better at sussing out weird questions now."* When asked what this might looked like some young people suggested that the following behaviours would make them more cautious:

"Messaging you out of the blue" Young person, Year 7

"If they ask strange questions, they want to meet up, or they know where you live." Young person, Year 7

"Having a snap score of 0." Young person, Year 10

Although many young people felt that their knowledge and awareness of online harms increased because of the sessions, some also noted that they had learned about these topics from parents, previous PHSE lessons, and from experiences online. For example, the Year 8 students reported that the session reinforced what their PHSE lessons on cyber bullying and cyber grooming. They felt like they learned additional information to what they covered in their PHSE lesson and that it *"linked up but was not repetitive."*

"It is not a bad thing to be reminded. It was a good reminder and not repetitive." Young person, Year 10

"I feel like I knew it- they've come in before. It sounded really similar to previous years. " Young person, Year 10

The young people were asked, what if any, online harm issues would be useful to cover in the sessions. There were several similarities across the year groups. Some young people thought that the session should discuss newer, and more relevant, technology including Artificial Intelligence (AI), deep fakes, and virtual reality. They highlighted that learning more about the impact of being able to create fake photos and videos with AI and deep fakes would be interesting and important for young people to be more aware about. Maintaining safety, and particularly guarding against scams whilst using in-game chat functions was also identified by some to be potentially beneficial

"Most games you can speak on, you can't see their face. Strangers can talk to you on Fortnite and they didn't cover this. They [strangers] can also use voicer changers."
Young person, Year 10

Dealing with and seeking support for online harms

Many of the young people felt like they would know what to do if they encountered an online harm or if they felt like they were in a risky situation. Although most young people said they already knew the basics of how to handle these situations, they learned about different websites to report these incidents and reinforced the idea that they should not be scared to report. In terms of responding to online harms, many of the young people said that they would either not speak to a stranger online or would simply block them.

"You can report it and then block them."
Young person, Year 10

In particular, many of the young people reported that they would discuss the incident or suspicious behaviour with a parent, teacher, or other trusted adult. Several of the young people also brought up the various resources mentioned in the sessions where they can report online harms. For example, one young person gave a thorough description of a website where people can report an inappropriate image and it will scan the internet and remove the photo from the internet for 5 years. Other young people also remembered several organisations who provide support which were included in the presentation, including the NSPCC (National Society for the Prevention of Cruelty to Children).

"I'd tell them to tell a trusted adult or teacher. Always talk to a parent or teacher." Young person, Year 9

In the Year 10 focus group, some of the students reflected that, especially for younger years, they may be scared of the consequences of reporting an incident as they might have been *"doing something they shouldn't have been,"* but that it is good to learn that the *"people talking to you are too"* and that *"it is not your fault."*

A small number of young people reported that they would either not do anything or could not remember what the session taught them to do when encountering an online harm. As one young person described, *"if it wasn't that bad it isn't my place to say anything."* One Year 7 who also noted that they did not remember much about what they were told about seeking help with online harms, did acknowledge that it was because *"the session was probably cut short because we were talking."*

Behaviour changes as a result of the session

One Year 10 student described that after the session they turned off the 'quick add' feature (which allows people to add you on Snapchat based on who they app thinks you *might* know) on their Snapchat account. Similarly, another young person described how they changed their settings to make their social media more private to make sure that *"only my friends can message."*

"I'm more aware of safer privacy settings on apps." Young person, Year 10

"I've stopped adding people on Snapchat." Young person, Year 10

Another young person described how if they were messaged by someone pretending to be someone they know, they would be careful and *"ask them about it in person,"* and if it was not them would *"block the contact and delete it."*

"If someone is asking to be friends – you just think more before you add them." Young person, Year 10

Other young people qualified their response by saying they thought they were generally cautious and do not speak to strangers online before the sessions. They said that it would not change their behaviour with friends and family but perhaps in any future interactions with strangers online. Similarly, some young people felt like they already know most of the key messages, so the session did not change their behaviours that much.

"It was alright but didn't change much because we already knew it." Young person, Year 9

3.3.2 Outcomes for staff

Staff awareness of available support and referral pathways has been strengthened by the school-wide promotion of the pilot services. One social worker at the school described how a colleague provided a direct referral route which they then used to streamline the referral process and reduce the burden of doing so on staff capacity. The same social worker explained that the referrals she has made have largely been for young people identified for their outstanding needs with professional meetings but also a response to parent concern following an incident. Similarly, a learning assistant described learning about support services through a colleague, demonstrating the influence of word-of-mouth and relational endorsement.

3.4 Process

Planning and preparation for delivery

Identifying the school for the pilot site and developing a specification for the procurement with elements of service development were reported to be early challenges in establishing the project. The involvement of Bradford SAFE Taskforce was an enabler in identifying the school and their presence within the pilot site was an asset in securing the schools involvement. However, the process of establishing the pilot was described as *"chicken and egg"* and identifying providers to develop a programme of work whilst the site was not set proved to be challenging. This was also true of the implementation within the school at a point when the content of the classroom-based sessions had not been developed. This created difficulties for the school in understanding the project, who would be involved in supporting it, and subsequently launching the pilot to both students and staff.

The process of planning and preparing for the delivery of the pilot was identified as an area for development by all stakeholders interviewed. Whilst all those involved anticipated challenges due to capacity of school staff, finding time in the school day and the rigidity of the curriculum and how these could be mitigated appear not to have been fully planned for. A number of those we spoke to were *"impressed"* by how quickly the pilot was implemented, though it was reflected that planning would better be started in the summer term of the previous academic year or even sooner given how far in advance the school curriculums are planned. Those interviewed felt that more robust forward planning would have allowed the school to plan 'drop down days', develop referral routes to the 1-1 based support and coordinate session timings with planned assemblies.

The need for a whole-school approach was also identified, through the more effective inclusion of parents, teachers and school nurses, who were unaware of the pilot. One Head of Year suggested that a specific session with parents, as well as more advertising on the school website and throughout the school site, would better raise awareness of the pilot. It was also suggested that a staff development opportunity would be beneficial for increasing teacher understanding of online harms as part of any future programming. A particular issue of poor sleep and a need for support with sleep hygiene around online use was noted by school nurses, demonstrating the potential value of a health perspective on online harms within the school.

A number of interviews also identified opportunities for increasing the co-production of both the processes and content with staff and young people to increase awareness of and engagement in the pilot. Involving young people through pupil voice sessions are an opportunity for this in the future. Given this, it may be necessary for future pilots or the development of this offer to resource a development stage for providers and schools, in which engagement, co-production and thorough implementation planning is completed ahead of delivery.

Perhaps as a result of this gap, both providers identified a greater need to raise awareness of the project. It was identified that a number of young people attending either the classroom or 1-1 support were not aware of the sessions ahead of these. Whilst it was felt that the poll conducted with young people was somewhat successful in this, a broader and whole school communications plan including assemblies, increasing the visibility of posters and other written materials was required.

Delivery and continuous improvement

Overall it was felt by the providers and the school that delivery worked well and that pupils were engaged. The classroom-based sessions were reported to generate useful discussion and it was

reflected that the case studies presented during the session were of most interest to pupils and felt to be most impactful by teachers. However, one teacher felt the case studies did not reflect the age differences of the classes they were delivered to and requested Year 10s be given "harder hitting content". The development and greater use of age-informed case studies in future sessions was identified as an area for development.

It was felt by those delivering the classroom based sessions that the sessions were very full in the 50 minutes available and, had time allowed, splitting the content over two sessions would have created more time for discussion and exploration of the topic with young people. Similarly, some teachers felt dividing pupils into smaller groups and breaking up peer friend groups might have resulted in a higher degree of active engagement.

It was identified that the school's induction process which enabled the teams to move freely around the school was particularly beneficial, as was the support from PSHE teachers who helped coordinate the classroom based sessions.

A number of challenges in the delivery of support for young people who had experienced online harm were identified over the course of the pilot, and whilst these were overcome they present learning for future iterations. It was quickly identified that it was not possible to deliver group based support session due to the implications of loss of learning and the resource requirements to support young people to catch up on what was missed. This resulted in a quick move to provide 1-1 support, reducing the teams capacity. Towards the end of the pilot, groups for young people with additional needs were delivered and it was felt that the adaptations for young people with Autism Spectrum Disorders worked particularly well.

Despite the reduced capacity referrals to the 1-1 support were initially low and there was still capacity within the team to provide more support to more young people. Initially a number of inappropriate referrals were also received by the team. One example given was inappropriate timing of internet use, although the actual content being accessed was not potentially harmful. A lack of referrals for those who had been identified as causing harm was also identified. It was felt that these challenges reflected both the launch of the pilot and a subsequent lack of understanding from staff in the pilot site of the aims and objectives of this element of the offer. Opening the referral pathway to the pastoral team, in addition to the inclusion team, increased the number of referrals to the service and it was felt that this could be further extended to direct referrals from teachers had a more thorough communications/launch plan been in place.

Not being able to predict how many support sessions a young person might need also caused logistical challenges for the school in planning. Whilst it was assumed that support was a 4-6 week block, following the initial session, it was identified that many young people needed more or fewer sessions. An initial triage process to determine the length of support required may be useful for planning.

Sustainability

All of the stakeholders interviewed reported a perceived positive value of the pilot and believed that it supported the PSHE curriculum by providing a greater depth on the subject of online harms. Those in the Bradford Safer Taskforce recognise this as a priority area as online safety is consistently high on the agenda for education providers. It was felt by some of those interviewed that any future delivery is likely to require tailoring to match the specific ethos, priorities and culture of different schools. The ability of externally commissioned providers to do this in every school is questionable however, and other models of delivery, including training teachers and other key staff and the development of teaching resources could be explored. It is acknowledged that releasing staff for this purpose is also likely to present capacity challenges.

4. Conclusions

The need for enhanced education about online harms, and support for those who have experienced these is clear. Whilst the majority of young people reported feeling safe online, parents more frequently identified harmful experiences for their children than the young people themselves. Whilst figures vary dependent upon the source, this evaluation would indicate that approximately 46% of young people in the pilot site have experienced some form of harm including racism, bullying and/or exposure to misinformation. Teachers also identified greater, potentially harmful, use including sharing of photos and videos and watching pornography. It appears that those young people who identify as non-binary or another gender are more likely to experience online harm. Due to the small sample sizes within this evaluation, this is not conclusive, but it is consistent with the gender nature of online harm as identified in the existing literature. Both parents and teachers recognised the need for increased education in relation to online harms, and particularly support for young people to apply the learning they receive.

The need for a whole school approach is underlined by differing perceptions and attitudes towards online activities between young people, teachers and parents, and that 20% of young people reported not being comfortable seeking help or support. Whilst parents were more confident in seeking support, 32% of survey respondents did not know where to go for this. The need to, as far as possible, develop shared and collaborative approach that spans generational differences and acknowledges the importance of digital use is essential to ensure buy-in to the topic and making support accessible for young people. With more time, and the commissioning structure to achieve this, a co-productive process with the school will be of benefit.

Findings from the pilot indicate that it has been successful in raising awareness of the topic. Young people entered the pilot with high levels of confidence in their knowledge and understanding of the topic. However, despite 82% of young people indicating that they know a lot about online harms prior to the pilot there is evidence that as a result of the classroom based sessions young people have an increased awareness of potential harms, and most described the sessions as useful. Case study approaches are perceived to be the most effective approach to this by both those delivering the session and young people. This approach captures young people's attention, secures the most engagement and are the most remembered elements of the session.

The commissioning of an external delivery partner also appears to have encouraged participation and their position as not one of authority, but of subject matter knowledge, was beneficial to engagement. The broad range of harms that can be experienced from online activity, not all of which are immediately within the Violence Reduction Partnerships remit, such as misinformation and fake news, suggests that a multi-agency approach to future commissioning and delivery may further enhance work in this area. Opportunities to further build upon tackling serious violence through this approach, for example linking with health relationships, domestic abuse and unhealth portrayals of masculinity within online media may further contribute to the VRPs objectives.

There is also evidence that the pilot has increased knowledge in relation to online harms and particularly where to access support when these are experienced. Data from those receiving support from Step 2 suggests that the areas where additional education is especially needed includes online grooming and exploitation and identifying misinformation/fake news. It appears that the content delivered in the classroom based workshops has complemented the PSHE curriculum and whilst a number of young people reported covering similar topics previously it was felt that this was not repetitive. However, other topics including the use of AI/deep fakes was felt to be missing from the

session and consideration of how the session can build upon previous PSHE topics could be further developed.

There is some limited evidence of young people changing their behaviour as a result of the classroom based session, including, for some enhancing privacy settings. However reported changes in the way young people use and interact online, and possibly their openness to doing so, appears to be minimised due to a self-perception that they already have high levels of knowledge and confidence in managing potentially harmful online behaviour. This is not felt to be the case by parents and teachers. This suggests a more targeted approach in which the universal offer is provided through assemblies, but then creating time to co-produce sessions with young people may be of benefit, although likely to pose challenges given the time constraints of the school curriculum. This may also present opportunities to combine topics that are also VRP priorities including potential for exploitation and county lines as a result of online grooming. Identifying those most at risk of exploitation and grooming online and providing targeted support, potentially outside of the school setting, may also be required.

These impacts are likely to be increased through addressing issues identified within the process of establishing and implementing the pilot. It was recognised by all those involved that the mobilisation of the pilot could have been better planned and ideally this should have started in the previous academic year. Delays in mobilisation, and the challenge of both resource and time within the school environment resulted in the pilot being unable to fully establish a whole school approach to launching the offer which subsequently impacted upon staffs and young people's knowledge and understanding of it. Establishing an inter-departmental working group with the providers would also be beneficial to future iterations to support implementation. This is most clearly seen in extending the referral pathway for 1-1 support to teachers and not just the inclusion team, which resulted in a rapid increase in uptake of the offer. Given the limited time and resources available to schools, the feasibility of commissioning external evaluation alongside delivery must also be considered. The original methodology for this evaluation had to be significantly altered to accommodate both the changing timescales and available support from the school to facilitate the evaluation. However, the approach taken instead of developing and embedding evaluation tools within the delivery r worked, although to provide more rigour greater time must be allocated within sessions to capture this data and electronic tools such as Mentimeter and electronic surveys should be used. Where possible data collected in sessions should also be supplemented by greater involvement from school staff of teaching staff in the evaluation as well as use of school data, such as safeguarding or incident data to determine any impacts upon the identification and response to online harms as a result of the project.

With these in mind we make the following recommendations.

4.1 Recommendations

- Young people identified a need to make the sessions longer and more interactive. This would clearly require more time within the PSHE schedule which may be difficult to achieve. Future iterations of the project should clearly establish the amount of classroom time that can be made available for workshops. Where is restricted to a single session, planning should be made for the delivery of a universal education element through assemblies/drop-down days, followed by more targeted classroom based workshops.

- There are opportunities to further develop education for young people either through the workshops or delivered within the PSHE curriculum. Young people identified additional topics that will be of benefit as including Artificial Intelligence, Virtual Reality, the use of deep fakes and misinformation. Data from this evaluation also suggests information about exploitation and grooming is also particularly beneficial, whilst the literature review and the survey suggest that opportunities to explore the gendered nature of online harms and breaking down barriers to reporting experience of harm will be beneficial. The challenges of maintaining a relevant programme of education in an area which is rapidly changing are significant however opportunities to develop a universal offer through the PSHE curriculum and/or externally delivered assemblies combined with the tailored content through a co-productive approach should be considered with education teams within the local authorities.

- Increased planning, and where possible, the co-production of sessions with pupils will increase opportunities for the delivery of a whole school approach. This may require alternative procurement processes within the VRP to enable a developmental process for pilots, potentially using break clauses within contracts to facilitate discovery, development and implementation phases ahead of service delivery. Increased planning time will also enable tighter project management of the implementation phase with clear delegation of tasks and responsibilities and a cross-departmental team within the school including pastoral, teaching and behavioural staff.

- Given the identified need for increased education of online harms any future iterations of the project should test scaling delivery across more than one site. Whilst the feasibility of

delivering training for teachers should be explored with education teams, a number of the stakeholders interviewed for the evaluation did not consider this to be achievable given the time restrictions on teaching staff. Therefore options for scaling delivery including within youth work settings or other educational environments such as alternative provision schools, as well as traditional schools should be considered.

- The development of a brief assessment/triage of young people identified for one-to-one or group based support would be useful in determining the likely needs and duration of support required. This will enable improved forward planning with the school and support releasing the young person from classes.

- Open referral pathways to support from across the school are required to enable any member of staff with concerns relating to a young person's experience of online harm to refer to support.

- In order to ensure the future sustainability of this important and much needed work opportunities for partnership working with the education and health sectors should be explored. Similarly, consideration of how education in relation to online activity can contribute to reducing serious violence, for example through more detailed input in to healthy relationships and domestic abuse, can be considered.

- Given the time and resource constraints that any future delivery will have to overcome, the feasibility of future external evaluation should be carefully considered. Developing an enhanced monitoring framework which incorporates measures of 'distance travelled' metrics, such as those used in this evaluation may be better suited to the school environment and ensure that all available resource is directed towards session delivery.

Appendix: Evaluation Framework

Research area	Stakeholder group	Research question
Pilot effectiveness	Young People	Overall how effective is the pilot in raising young people's awareness and understanding of online harms?
		Overall how effective is the pilot in increasing young people's knowledge of how to stay safe whilst online?
		Overall how effective is the pilot in increasing young people's knowledge of sources of support and intervention should they experience online harm?
		Are young people more likely to report incidents of online harm as a result of the pilot?
		Are young people more likely to talk to or seek support from a teacher or other member of school staff as a result of the pilot.
	School staff	Overall how effective is the pilot in raising school staff's awareness of online harms young people face?
		Overall how effective is the pilot in increasing school staff's knowledge of sources of support and intervention should a pupil experience online harm?
	Parents/carers	Overall how effective is the pilot in raising parent/carers awareness of online harms young people face?
		Overall how effective is the pilot in raising parent/carer awareness of their role in keeping young people safe from online harms?
		Overall how effective is the pilot in increasing parents/carers knowledge of sources of support and intervention should their child experience online harm?
Understanding delivery	All	Are different elements of the pilot more effective at achieving the above outcomes than others?
		What activities are the most effective when engaging young people? What, if any, have proven to be not effective?
		What has proven to be most effective from school staff's perspectives?
		What barriers and enablers did the delivery partners encounter in the delivery pilot and how were these resolved?
		How does the pilot reflect the evidence base for reducing online harms for young people?
Sustainability and future delivery	School	How would the school see future delivery of the intervention working?
		What resources or support would be required to implement this at scale across West Yorkshire?
		Where should responsibility be for delivery of online harms training be for school pupils?
	Delivery staff	What might future models look like for delivery of this at scale?
		What resources and support would be required to implement the pilot more widely?

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