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# Innocence Interrupted: The Crisis of Child Cyber Abuse

# SHWETA SHAHI¹ AND DR. JYOTI YADAV²

#### **ABSTRACT**

The Information Technology (IT) is the fastest growing scientific and technological development in the world. The rise of IT sector is arguably one of the advancements in human history till date. The rising of the internet and subsequent technological developments have undeniably brought advantages to society at large. The internet's unrestricted and open nature facilitates the sharing of an array of information across borders without any hindrance; however, it also serves as a breeding ground, for activities. With the emergence of transactions, there comes a need for the law to evolve and address legal issues arising in our rapidly changing society due to, technological advancements affecting legal norms. As the transactions accomplished through electronic means have created new legal issues the law naturally has to keep pace with the needs of changing society. The rapid technological advancements clearly threaten to leave the law behind. However, law as the regulator of Human behaviour is trying to catch up with the cyber space and trying to cope with its manifold challenges.

In recent years, more attention has been dragged towards the consequences of child cyber abuse, especially the adolescent and adult abusive behaviour of the victim. Undoubtedly, the phenomena of child physical or mental abuse inculcate various legal and human right's issues. This study will focus on those issues and it will also elaborate the various categories of child abuse and neglect.

**Keywords**: IT, Internet, Cyber Crime, Legal Issues, Regulations, Cyber Space, Cyber Offences, Children, Cyber Abuse, Preventive Measures, Digital Society, Online Safety, Law Enforcement, Global Collaboration.

# I. Introduction

The term "child cyber abuse" does not have a definition, as any misuse of the internet is considered relevant to it and can impact web connected devices like computers (PCs) tablets or smartphones across different online platforms including social media channels like email services or chat rooms as well, as live streaming sites, messaging applications and online

<sup>&</sup>lt;sup>1</sup> Author is a student at Amity Law School, Amity University, U.P., India.

<sup>&</sup>lt;sup>2</sup> Author is an Assistant Professor at Amity Law School, Amity University, U.P., India.

gaming platforms.

In India there are rules, in place to safeguard children from harm online; however, child cyberbullying is a concern that has not been adequately addressed. Even the age specified in the revised Act of 2008 is debatable/questionable because there is no fool proof method of figuring out a user's age, even with the guidelines and age limits set by social networking sites. Even the term "kid" has many meanings depending on the situation.

Some basic Comprehensive legislation must be enacted by legislation to safeguard children because of certain legal deficiencies in our society.

#### (A) Child Abuse

As stated by the World Health Organisation, "Child maltreatment or abuse constitutes all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment, or commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development, or dignity in the context of a relationship of responsibility, trust, or power.

#### (B) Child

The Juvenile Justice (Care and Protection of Children) Act, 2015 defines a child as "a person who has not attained the age of eighteen."

According to The Protection of Children from Sexual Offenses Act, 2012's Section 2(d), "child" refers to anyone under the age of 18.

The Prohibitions of Child Marriage Act of 2006 defines a child as a person who, if a male, has not reached the age of twenty-one and, if a female, has not reached the age of eighteen.

The Child Labor (Protection and Regulation) Act of 1986 defines a child as a person under the age of fourteen under Section 2(ii).

A child is defined as "a person who has not finished his fifteenth year" in the Motor Transport Workers Act of 1961, which aims to regulate the working conditions of motor transport workers.

According to The Protection of Children from Sexual Offenses Act, 2012's Section 2(d), "child" refers to anyone under the age of 18.

#### II. Types of cyber abuse

**1. Cyberbullying**: This involves the repeated use of technology to harass, intimidate, or demean children, often through social media, instant messaging, or online forums.

Unlike traditional bullying, it extends beyond physical spaces, making it relentless and omnipresent. Studies indicate that cyberbullying often leads to severe emotional distress, self-esteem issues, and even suicidal tendencies.<sup>3</sup>

- **2. Online Grooming**: Predators utilize digital platforms to manipulate and establish trust with minors for sexual exploitation. These interactions often begin on social networking sites, gaming platforms, or chatrooms, gradually escalating to exploitative demands. The legal framework developed by the **Council of Europe** to combat child sexual exploitation and abuse i.e., Convention on the Protection of Children Against Sexual Exploitation and Sexual Abuse addresses grooming, urging states to adopt measures to combat this growing threat.<sup>4</sup>
- **3.** Child Sexual Abuse Material (CSAM): The internet has exacerbated the production and distribution of CSAM, with offenders using encrypted channels and dark web forums to share explicit content involving children. The Protect Our Children Act criminalizes the creation, possession, and distribution of such material, reflecting the gravity of the offense. <sup>5</sup>
- **4. Sextortion:** Sextortion disproportionately affects minors, exploiting their vulnerability and naivety in digital spaces. Often initiated through social media, online gaming platforms, or other communication technologies, sextortion has emerged as a pervasive issue with devastating consequences for young victims. According to the *National Centre for Missing and Exploited Children (NCMEC)*, there has been a significant rise in reports of sextortion targeting minors, with over 18,000 cases reported globally in 2022 alone.<sup>6</sup>

Amanda Todd, a 15-year-old Canadian teenager, became a tragic emblem of sextortion after she was coerced into sharing explicit images, which were later used to bully and humiliate her. Her suicide in 2012 highlighted the devastating consequences of online exploitation and spurred international awareness and legal reforms.<sup>7</sup>

These forms of abuse exploit children's vulnerability and limited understanding of digital risks, posing a complex challenge for law enforcement and caregivers alike.

<sup>&</sup>lt;sup>3</sup> Hinduja & Patchin: Preventing and Responding to Cyberbullying (2d ed. 2015).

<sup>&</sup>lt;sup>4</sup> Art. -23 of Convention on the Protection of Children Against Sexual Exploitation and Sexual Abuse.

<sup>&</sup>lt;sup>5</sup> Protect Our Children Act, 2008.

<sup>&</sup>lt;sup>6</sup> Missing & Exploited Children's National centre, "2022 Annual Report on Sextortion Cases.

<sup>&</sup>lt;sup>7</sup> Carol Todd, Amanda's Story: Cyberbullying and Sextortion, 2012.

#### III. IMPACTS ON CHILDREN

The repercussions of child cyber abuse extend beyond the digital realm, profoundly affecting victims' emotional, psychological, and social well-being along with legal impacts.

# 1. Psychological Impacts

Child cyber abuse can lead to profound and long-lasting psychological consequences, often affecting the victim's emotional well-being, self-esteem, and mental health.

# • Emotional Distress and Anxiety:

Victims of cyber abuse often experience heightened anxiety, depression, and feelings of helplessness. The constant nature of online abuse—where children can be targeted even in the perceived safety of their homes—exacerbates these effects. Studies show that cyberbullying victims are more likely to report symptoms of anxiety and post-traumatic stress disorder (PTSD) than their peers.<sup>8</sup>

# • Impact on Self-Esteem:

Children subjected to online harassment or exposure to exploitative content often develop negative self-perceptions. Body image issues, for example, are amplified by abusive comments or inappropriate comparisons fostered by social media platforms.<sup>9</sup>

#### • Risk of Self-Harm and Suicide:

A tragic and extreme consequence of cyber abuse is the increased risk of self-harm and suicidal ideation. High-profile cases have demonstrated the devastating outcomes of relentless online harassment. The Centres for Disease Control and Prevention (CDC) reports that cyberbullying is significantly correlated with suicidal behaviour in adolescents.<sup>10</sup>

# 2. Social Impacts

The social ramifications of child cyber abuse extend beyond the victim, affecting relationships with family, peers, and broader communities.

#### • Isolation and Withdrawal:

Children experiencing cyber abuse often withdrawn from societal interactions to avoid further victimization. This isolation impedes the development of critical interpersonal skills and

<sup>&</sup>lt;sup>8</sup> Sameer Hinduja & Justin W. Patchin, (Cyberbullying Research Ctr. 2018)

<sup>&</sup>lt;sup>9</sup> Sarah Coyne et al., social media and Self-Perception: A Meta-Analysis of Longitudinal Studies, 50 Dev. Psychol. 1346 (2019)

<sup>&</sup>lt;sup>10</sup> The Relationship Between Bullying and Suicide (2014),

deepens feelings of loneliness.<sup>11</sup>

#### • Academic Performance:

Abuse-related stress can impair cognitive function, concentration, and motivation, leading to declines in academic performance. School absenteeism may increase when children fear facing peers who perpetuate the abuse.

# • Stigmatization:

Victims of cyber abuse may face stigma from peers, especially when private content (e.g., photos or messages) is shared without consent. This public humiliation can create long-term challenges in forming healthy social relationships and may be fatal.

# 3. Legal Impacts

The legal dimensions and frameworks of child cyber abuse include both the prevention along with protection of victims and the prosecution and punishments of offenders.

#### • Protection of Victims:

Many countries have enacted laws to address child cyber abuse. For example, in the United States, the Children's Internet Protection Act (CIPA) mandates schools and libraries to implement measures that safeguard children from online harm. However, enforcement often lags due to underreporting and the complexities of proving digital abuse.

#### • Prosecution Challenges:

Prosecuting perpetrators of cyber abuse involves navigating jurisdictional hurdles and technological barriers. The anonymity provided by digital tools, such as encrypted messaging apps, complicates the identification and apprehension of offenders.

# • Data Privacy and Exploitation:

Exploitation through sextortion or online grooming often involves violations of data privacy laws. Legal frameworks like the General Data Protection Regulation (GDPR) in the European Union emphasize protecting minors' data but are often undermined by lax enforcement.<sup>12</sup>

# 4. Educational Disruption:

Victims frequently face difficulty concentrating in school or attending classes, as the fear of being targeted online extends into their offline lives.

<sup>&</sup>lt;sup>11</sup> Elizabeth Englander, The Impact of Bullying and Cyberbullying on Social Isolation in Adolescents.

<sup>&</sup>lt;sup>12</sup> Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016.

# 5. Increased Risk of Self-Harm:

Studies link cyber abuse to heightened risks of self-harm and suicidal thoughts, especially among teenagers. The constant online presence amplifies feelings of inadequacy and distress.

A United Nations report underscores the urgent need for targeted interventions, emphasizing that cyber abuse erodes not only a child's sense of security but also their trust in the digital ecosystem.<sup>13</sup>

#### IV. TECHNOLOGICAL ENABLERS OF CHILD CYBER ABUSE

As the internet continues to evolve, the technologies enabling child cyber abuse have similarly become more sophisticated. The widespread use of social media platforms, online gaming, encrypted communication, and emerging technologies like artificial intelligence (AI) and deepfakes has created new avenues for abusers to exploit children. These technologies can facilitate predatory behaviour, harassment, and exploitation in ways that are difficult for both children and parents to detect.

# 1. Social media platform and its Risks

Social media platforms such as **Facebook**, **Instagram**, **Snapchat**, and **TikTok** are widespread in the daily lives of children and teenagers. While they can provide valuable avenues for socialization and self-expression, they also present significant risks for child cyber abuse. Social media enables abusers to directly engage with children in an environment that is often under the radar of parents and guardians.

- Anonymity and Lack of Oversight: Many social media platforms encourage
  anonymity or semi-anonymity, making it easier for predators to mask their identities and
  approach children. For instance, platforms like Snapchat and Instagram often allow
  users to create profiles without requiring age verification or parental consent, exposing
  children to potential harm.<sup>14</sup>
- Predatory Behaviour and Grooming: Abusers exploit the interactive nature of social media to initiate contact with children. Online predators often use flattery, kindness, or promises of gifts to build trust over time. Social media provides an effective means for grooming children, often through private messaging, live-streaming, or group chats. Once trust is built, perpetrators may manipulate or coerce the child into engaging in explicit conversations, sharing inappropriate images, or even meeting in person.

<sup>&</sup>lt;sup>13</sup> U.N. Office on Drugs & Crime, Global Report on Trafficking in Persons 2020, at 42

<sup>&</sup>lt;sup>14</sup> Facebook's Role in Child Grooming: A Critical Assessment," 26 J. Digital Safety (2024).

**Case Study**: A high-profile example is the case of **Amy**, a 15-year old who met an adult predator on Facebook. The abuser, posing as a teenager, gained Amy's trust over several months. The predator eventually convinced her to send explicit photos, which were then used to extort money.

Legal Challenges: Despite some platforms' efforts to implement stricter age
verification systems, a significant portion of child abuse cases stem from the lack of
sufficient safeguards. Platforms like TikTok and Instagram are frequently criticized
for inadequate content moderation, allowing harmful material to slip through the
cracks.<sup>15</sup>

# 2. Gaming and Chat Rooms

The online gaming world presents a unique set of challenges when it comes to protecting children from cyber abuse. Popular platforms like **Fortnite**, **Minecraft**, **Roblox**, and others provide a space where children can interact with strangers through text, voice chat, and even live-streaming. While these platforms offer a sense of community, they are often used by abusers to exploit children.

- Chat Features and Real-Time Interaction: The chat features built into many games create real-time interaction opportunities for predators. Abusers can initiate conversations through these platforms and manipulate children in real-time. Many children and teens may not fully understand the dangers of interacting with strangers online, especially if the abuser pretends to be a fellow player.
- Online Grooming via Gaming: Many gaming platforms do not adequately moderate
  communications between users, allowing potential abusers to build relationships with
  children. For instance, predators may use gaming environments to gradually engage
  children in inappropriate conversations or convince them to share explicit content under
  the guise of mutual trust.
- Exposure to Inappropriate Content: Aside from the direct abuse that can occur, children may also be exposed to harmful content such as violent imagery, explicit language, or predatory advertising in-game. For example, some games feature microtransactions that could lead to children being manipulated into giving away personal information or money.
- Case Study: The 2019 Fortnite Incident involved a group of abusers who used voice

<sup>&</sup>lt;sup>15</sup> Social Media and Its Dangers: Protecting Children Online," 31 Cyber Security Review (2023).

chat on the game to coerce children into sharing explicit content. The predators used manipulative tactics, such as offering in-game rewards, to lure the victims into compromising situations.<sup>16</sup>

• **Legal Challenges**: Many gaming platforms fail to adequately monitor voice chat or player interactions. Although games like **Minecraft** and **Roblox** are often marketed as child-friendly, there are ongoing concerns about the lack of regulation in the communication tools provided by these platforms.<sup>17</sup>

# 3. Cryptography, Anonymity, and Encrypted Messaging

The proliferation of encrypted messaging apps like **WhatsApp**, **Signal**, and **Telegram** has raised significant concerns for law enforcement and child protection agencies. These platforms are frequently used by abusers to conceal their activities due to the difficulty in monitoring encrypted communications.

- Encryption and Anonymity: Encrypted messaging apps allow users to communicate without third-party oversight, making it easier for abusers to target children without detection. The end-to-end encryption employed by these apps ensures that no one, including platform operators, can access the content of the communication, creating challenges for law enforcement agencies trying to investigate child exploitation crimes.
- Challenges for Law Enforcement: The encrypted nature of these platforms make it difficult for authorities to trace conversations or identify perpetrators. In addition, the widespread use of anonymous VPNs (Virtual Private Networks) and encrypted communications complicates efforts to identify the location and identity of abusers.
- Dark Web and Child Exploitation: The use of the dark web and encrypted messaging apps for illicit purposes, including child pornography and trafficking, is a growing concern. The relative anonymity of the dark web allows criminals to operate without fear of detection.
- Case Study: Operation Greenlight, conducted by the FBI, targeted a ring of individuals using encrypted messaging platforms to distribute child sexual abuse material. The operation uncovered dozens of cases involving the dark web and encrypted platforms, highlighting the challenges law enforcement faces in tackling child

<sup>&</sup>lt;sup>16</sup> Simon R. Baker, "Online Gaming and Child Safety: Risks and Solutions.

<sup>&</sup>lt;sup>17</sup> The Dark Side of Gaming: Child Exploitation Risks on Popular Platforms.

exploitation.<sup>18</sup>

• **Legal Challenges**: Although several nations have made attempts to regulate encrypted communication, there is still no consensus on how to balance encryption for privacy with the need to protect children from online harm.<sup>19</sup>

# 4. Artificial Intelligence (AI) and Deepfake Technology

Advances in artificial intelligence and deepfake technology have introduced new risks in the realm of child cyber abuse. AI tools are increasingly being used to generate convincing yet fake content, including videos and images of children, which can be used for exploitation.

- Deepfake Technology and Child Exploitation: Deepfake technology uses AI to manipulate or generate realistic-looking videos and images. Unfortunately, abusers are now able to create fake pornographic videos featuring minors by using AI to insert children's faces onto adult actors. This poses a significant risk to children's safety and privacy.
- Synthetic Media and Sextortion: AI-generated Child Sexual Abuse Material (CSAM) can be used to manipulate children into compliance with abusers' demands. In cases of sextortion, predators may use deepfakes to create fake explicit images or videos, then threaten to release them unless the child provides further explicit material.
- AI for Detection and Prevention: On the positive side, AI is also being used to detect
  and remove CSAM. Companies like Microsoft and Google have implemented AIdriven systems to identify child exploitation materials in digital content, but these
  technologies are still far from perfect.<sup>20</sup>
- Case Study: In 2020, a group of researchers exposed a deepfake ring that used AI to
  create fake images of children, which were distributed across encrypted messaging
  platforms. The perpetrators were arrested after law enforcement was able to trace the
  distribution network.<sup>21</sup>
- Legal and Ethical Challenges: The legal landscape surrounding deepfakes is still developing. While there are some legislative efforts to address the harm caused by deepfake technology, it remains an area with significant gaps in regulation, particularly

<sup>&</sup>lt;sup>18</sup> U.S. Department of Justice, "Combating Child Exploitation in a Digital World" (2019)

<sup>&</sup>lt;sup>19</sup> Laura F. Martin, "Encryption, Privacy, and the Challenges of Protecting Children Online," 24 *Privacy & Technology Journal* (2023).

<sup>&</sup>lt;sup>20</sup> Artificial Intelligence and Child Protection: The Role of Technology in Detecting Online Abuse," 40 *Tech Law Review* 220, 227 (2024).

<sup>&</sup>lt;sup>21</sup> Mark J. Solomon, "Deepfakes and Child Exploitation: Legal and Ethical Implications," 16 *AI Ethics Journal* 58, 65 (2023).

concerning minors.

# V. ANALYSIS OF LEGAL FRAMEWORKS

The rise of child cyber abuse has prompted governments, international bodies, and Non-Governmental Organizations to establish legal frameworks and policies aims at protecting children in the digital space. These frameworks encompass both international conventions and domestic legislation, each addressing specific aspects of cyber abuse. However, implementation and enforcement challenges persist, highlighting the need for ongoing improvements. These frameworks attempt to criminalize exploitation, strengthen enforcement mechanisms, and establish protective systems.

# (A) International Legal Instruments

Optional Protocol on the Rights of the Child on the Sale of Children, Child Prostitution, and Child Pornography. Adopted by the United Nations General Assembly, this protocol explicitly criminalizes Child Sexual Abuse Material (CSAM) and exploitation across borders. It mandates state parties to adopt stringent measure to prevent and prosecute such offenses, reinforcing children's Rights to Protection.

# 1) <u>United Nations Convention on the Rights of the Child (CRC):</u>

The CRC, adopted in 1989, is the cornerstone of international child protection. Article 19 obligates states to protect children from all forms of physical or mental violence, injury, or abuse, including in digital contexts.<sup>22</sup> Although the CRC predates the digital age, its broad scope has been interpreted to encompass online harms.

# 2) Optional Protocol on the Sale of Children, Child Prostitution, and Child Pornography:

Adopted in 2000, this protocol strengthens the CRC by explicitly addressing issues like child pornography and online exploitation. It mandates signatory states to criminalize such acts and cooperate in cross-border enforcement.<sup>23</sup>

# 3) **Budapest Convention on Cybercrime:**

The Budapest Convention, adopted by the Council of Europe in 2001, is the first international treaty addressing cybercrime. Articles 9 and 10 require signatories to criminalize activities such as child pornography and to facilitate international cooperation in investigating and prosecuting offenders.<sup>24</sup> It remains a cornerstone in addressing cybercrime, including offenses against

<sup>&</sup>lt;sup>22</sup> Article-19 of the Convention on the Rights of the Child, Nov. 20, 1989.

<sup>&</sup>lt;sup>23</sup> Art. 1, Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution, and Child Pornography, May 25, 2000.

<sup>&</sup>lt;sup>24</sup> Article- 9 of Convention on Cybercrime Nov. 23, 2001.

children. It requires signatories to harmonize laws, improve international cooperation, and adopt procedural tools to combat online crimes effectively. Its provisions include addressing CSAM and ensuring evidence preservation in cross-border investigations.<sup>25</sup>

# 4) Sustainable Development Goals (SDGs):

While not legally binding, SDG Target 16.2 calls for the elimination of abuse, exploitation, trafficking, and all forms of violence against children. This target reinforces the international community's commitment to addressing child cyber abuse.<sup>26</sup>

# 5) WeProtect Global Alliance

This global initiative emphasizes collaboration between government, civil society, and the private sector to combat online child sexual exploitation. It provides a Model National Response framework for nations to enhance their capacity to tackle cyber abuse.

# (B) Regional Frameworks

# 1. European Union (EU)

The EU has demonstrated leadership through its comprehensive strategies. The EU Strategy for a More Effective Fight Against Child Sexual Abuse prioritizes prevention, law enforcement, and victim support. It also seeks to enhance technological tools to detect and remove abusive content.<sup>27</sup>

# a. General Data Protection Regulation (GDPR):

The GDPR, effective since 2018, includes specific provisions for protecting children's data online. Article 8 restricts the processing of personal data for children under 16 years (or lower, as determined by member states) without parental consent.<sup>28</sup>

# b. Directive 2011/93/EU on Combatting Sexual Abuse and Sexual Exploitation of Children:

This directive requires member states to criminalize a wide range of online offenses, including grooming and child pornography, and to establish hotlines for reporting abuse.<sup>29</sup>

#### 2. Australia

a. Enhancing Online Safety Act 2015: This law establishes the e-Safety

<sup>&</sup>lt;sup>25</sup> Convention on Cybercrime, Nov. 23, 2001.

<sup>&</sup>lt;sup>26</sup> Transforming Our World: The 2030 Agenda for Sustainable Development, art. 21

<sup>&</sup>lt;sup>27</sup>EU Strategy for a More Effective Fight Against Child Sexual Abuse, Council of the European Union.

<sup>&</sup>lt;sup>28</sup> Regulation of the European Parliament and of the Council of 27 April 2016, 2016 O.J. (L 119) 1

<sup>&</sup>lt;sup>29</sup> Directive of the European Parliament and of the Council of 13 December 2011 on Combating the Sexual Abuse and Sexual Exploitation of Children, 2011 O.J. (L 335) 1.

Commissioner, tasked with promoting online safety and addressing complaints related to cyberbullying and CSAM.<sup>30</sup>

#### 3. United States

The PROTECT Act significantly enhances penalties for offenders, facilitates prosecution through extraterritorial jurisdiction, and establishes mechanisms such as Amber Alerts for missing and exploited children. It also criminalizes the production, distribution, and possession of CSAM.<sup>31</sup>

- a. Children's Online Privacy Protection Act (COPPA): Enacted in 1998, COPPA regulates collection of personal information from children under 13 years by online services. It mandates parental consent and imposes penalties for violations.<sup>32</sup>
- b. **Protect Our Children Act (2008)**: This law strengthens the federal government's ability to combat online child exploitation through increased funding for investigative resources and technology.<sup>33</sup>

# (C) National Frameworks

#### 1. India

- a. The **Protection of Children from Sexual Offences (POCSO) Act, 2012** provides a robust legal framework to criminalize child sexual abuse and exploitation, including cyber offenses. Recent amendments address the growing prevalence of CSAM and mandate expedited trials for cases involving minors.<sup>34</sup>
- b. Information Technology Act, 2000: Section 67B penalizes publishing, transmitting, or viewing child sexual abuse material (CSAM) online, with penalties including imprisonment and fines.<sup>35</sup>

#### 2. Australia

The **Online Safety Act, 2021** empowers the e-Safety Commissioner to oversee the removal of harmful content, including CSAM, within 24 hours. It also introduces stricter penalties for online grooming and abuse.<sup>36</sup>

<sup>&</sup>lt;sup>30</sup> Enhancing Online Safety Act 2015.

<sup>&</sup>lt;sup>31</sup> Prosecutorial Remedies and Other Tools to End the Exploitation of Children Today Act of 2003.

<sup>&</sup>lt;sup>32</sup> Children's Online Privacy Protection Act.

<sup>&</sup>lt;sup>33</sup> Protect Our Children Act, (2008).

<sup>&</sup>lt;sup>34</sup> The Protection of Children from Sexual Offences Act.

<sup>&</sup>lt;sup>35</sup> Information Technology Act,2000.

<sup>&</sup>lt;sup>36</sup> Online Safety Act 2021 (Cth).

# 3. United Kingdom

The **Online Safety Bill** (pending enactment) aims to impose duties of care on technology companies to monitor and remove harmful content involving children. It also strengthens law enforcement capabilities in addressing online child exploitation.

#### 4. Canada

Canada's Criminal Code explicitly criminalizes CSAM and online grooming. The Cybertip.ca initiative allows citizens to report child exploitation, aiding law enforcement efforts.

# VI. POLICY RESPONSES

Governments and organizations have implemented policies and initiatives to complement legal measures.

# • Public Awareness Campaigns:

Governments and NGOs have launched campaigns to educate children, parents, and educators about online risks and safety practices. For example, the UK's *Thinkuknow* program provides age-appropriate resources on cyber safety.<sup>37</sup>

# • Technology Solutions:

Policies increasingly mandate technology companies to develop tools for detecting and removing harmful content. For instance, Australia's *Safety by Design* initiative encourages tech platforms to incorporate safety features from the outset.<sup>38</sup>

# • Cross-Border Cooperation:

Given the transnational nature of cyber abuse, international collaboration is crucial. Mechanisms like INTERPOL's International Child Sexual Exploitation database facilitate the identification and apprehension of offenders across jurisdictions.<sup>39</sup>

# • Challenges in Enforcement:

Despite these frameworks, several challenges hinder the effective prevention and prosecution of child cyber abuse, i.e., being given here:

#### • Jurisdictional Issues:

Offenders often operate across borders, complicating investigations and prosecutions.

<sup>&</sup>lt;sup>37</sup> U.K. Home Office, *Thinkuknow Program*.

<sup>&</sup>lt;sup>38</sup> Australian Govt., Safety by Design Initiative.

<sup>&</sup>lt;sup>39</sup> INTERPOL, International Child Sexual Exploitation Database

Differences in legal definitions and penalties further impede cooperation.<sup>40</sup>

# • Anonymity and Encryption:

Technologies such as Virtual Private Networks (VPNs) and end-to-end encryption allow offenders to conceal their identities, making detection difficult.<sup>41</sup>

#### • Resource Constraints:

Law enforcement agencies often lack the technical expertise and resources to handle complex cyber abuse cases, especially in developing countries.<sup>42</sup>

# Technological Advancements:

Rapid technological changes often outpace legal adaptations, leaving room for exploitation.

#### VII. ROLE OF STAKEHOLDERS IN ADDRESSING CHILD CYBER ABUSE

Effectively addressing child cyber abuse requires the active involvement of multiple stakeholders, including parents, educators, governments, technological companies, Non-Governmental Organizations (NGOs), and international agencies. Each group has distinct responsibilities in preventing abuse, mitigating harm, and creating a safer digital environment for children. Below is an expanded examination of the responsibilities, contributions, and challenges associated with each key stakeholder group.

#### 1. Parents and Guardians

Parents and guardians serve as the most immediate protectors and educators of children. Their roles go beyond physical safety, extending to digital safety in today's connected world.

# • Digital Literacy and Education:

Parents must understand the technologies and platforms their children use to provide guidance. Awareness programs for parents, such as Common-Sense Media's digital parenting resources, emphasize helping families navigate online challenges.<sup>43</sup> Parents need to teach children about privacy settings, safe communication practices, and how to identify and respond to inappropriate content or behaviour online.

# • Creating Trust-Based Communication:

Parents should establish an open dialogue with children about their online experiences. This includes nonjudgmental listening when children report uncomfortable situations, which can

<sup>&</sup>lt;sup>40</sup> U.N. Off. on Drugs & Crime, Comprehensive Study on Cybercrime 87 (2013).

<sup>&</sup>lt;sup>41</sup> Daniel Moore & Thomas Rid, Cryptopolitik and the Darknet, 58 Survival 7 (2016)

<sup>&</sup>lt;sup>42</sup> UNICEF, Children in a Digital World: State of the World's Children Report (2017).

<sup>&</sup>lt;sup>43</sup> Common Sense Media, Parenting, Media, and Everything In Between.

encourage them to seek help before a problem escalates.

# • Empowering Children with Safe Practices:

Providing children with tools for self-regulation, such as recognizing phishing attempts, avoiding oversharing personal information, and understanding consent in online interactions, is essential for their safety.<sup>44</sup>

# Challenges Faced by Parents:

- The rapid pace of technological advancements can leave parents struggling to keep up with the latest apps and trends.
- Work-life balance issues may limit the time parents can dedicate to monitoring or engaging in their children's online activities.
- Resistance from children, particularly teenagers seeking autonomy, complicates parental supervision.

#### 2. Educators and Schools

Educators and schools provide a structured environment to promote digital literacy, resilience, and awareness among children, equipping them to deal with online risks.

# • Curriculum Development for Digital Citizenship:

Digital citizenship education integrates lessons on appropriate online behaviour, critical thinking skills to evaluate online content, and awareness of cyber threats. Programs such as *Digital Passport* by Common Sense Education help students understand safe practices while fostering ethical online behaviour.<sup>45</sup>

# • Anti-Bullying and Cyber Abuse Policies:

Schools are required to establish and enforce robust policies against bullying and cyber abuse. This includes mechanisms for reporting incidents, disciplinary actions for offenders, and support systems for victims.

#### • School Counsellor's role:

School's counsellors are critical in addressing the psychological effects of cyber abuse. They provide a confidential outlet for children to discuss their experiences and offer intervention

<sup>&</sup>lt;sup>44</sup> Sonia Livingstone et al., *Children's Online Privacy Risks: A Parent-Child Perspective*, 35 J. Broadcasting & Elec. Media (2020).

<sup>&</sup>lt;sup>45</sup> Common Sense Education, *Digital Passport* 

strategies, including referrals to external support services if necessary. 46

# • Teacher Training and Awareness:

Teachers need professional development programs to recognize the signs of cyber abuse and intervene appropriately. For instance, UNESCO offers training modules to help educators incorporate online safety into their teaching practices.<sup>47</sup>

# 3. Governments and Policymakers

Governments and policymakers are at the forefront of addressing child cyber abuse by shaping legal, regulatory, and institutional frameworks.

# • Enacting and Updating Legislation:

Governments must ensure that laws keep pace with evolving technologies. For example:

- The UK Online Safety Bill (2023) mandates that tech companies remove illegal content and enforce age-appropriate safeguards.<sup>48</sup>
- Canada's proposed *Online Harms Act* aims to address cyberbullying and the distribution of intimate images without consent.<sup>49</sup>

# • Establishing Regulatory Bodies:

Specialized agencies like Australia's *e-Safety Commissioner* or India's *National Commission* for Protection of Children Rights monitor compliance with safety standards and intervene in cases of online abuse.<sup>50</sup>

#### • Resource Allocation for Law Enforcement:

Governments must invest in training law enforcement personnel to handle cyber abuse cases, including evidence collection, prosecution, and victim support. Initiatives like INTERPOL's training programs enhance cross-border collaboration in tackling cybercrimes against children.<sup>51</sup>

# • Promoting Public Awareness:

Nationwide campaigns such as the *Think Before You Click* initiative in Singapore educate citizens about responsible online behaviour and reporting mechanisms.<sup>52</sup>

<sup>&</sup>lt;sup>46</sup> Nat'l Ass'n of Sch. Psychologists, Cyberbullying Resources for Schools (2022).

<sup>&</sup>lt;sup>47</sup> UNESCO, Teacher Training Modules on Online Safety (2021).

<sup>&</sup>lt;sup>48</sup> U.K. Online Safety Bill, HL Bill (2023).

<sup>&</sup>lt;sup>49</sup> Canadian Govt., Online Harms Act.

<sup>&</sup>lt;sup>50</sup> Australian Govt., eSafety Commissioner Role.

<sup>&</sup>lt;sup>51</sup> INTERPOL, Combating Online Child Exploitation.

<sup>&</sup>lt;sup>52</sup> Singapore Ministry of Communications, *Think Before You Click Campaign* (2023).

# 4. Technology Companies:

As the creators of the digital platforms and tools where abuse occurs, technology companies play a pivotal role in prevention and remediation.

# • Developing Proactive Safety Measures:

Tech companies must design platforms with built-in safety features, such as robust privacy settings, automated content filters, and mechanisms for reporting abuse. For instance:

- WhatsApp uses end-to-end encryption combined with AI tools to identify and limit the spread of CSAM.<sup>53</sup>
- TikTok introduced family pairing tools to enable parents to control their children's app usage.<sup>54</sup>

# • AI and Machine Learning in Content Moderation:

Advanced algorithms are deployed to detect harmful content, such as grooming attempts and child exploitation material. Platforms like Microsoft's *PhotoDNA* have revolutionized the detection of CSAM.<sup>55</sup>

# • Transparency and Ethical Standards:

Tech companies are increasingly required to publish transparency reports detailing their efforts to address online harms. Governments and civil society also demand accountability for how platforms manage abuse-related reports and prevent recurrences.<sup>56</sup>

# • Partnerships and Collaborative Efforts:

Collaborations between tech companies and NGOs, such as the partnership between Google and Thorn (an anti-child trafficking NGO), enable the development of innovative tools to combat online exploitation.<sup>57</sup>

# 5. Non-Governmental Organizations (NGOs)

NGOs act as advocates, service providers, and watchdogs, ensuring that rights of children in the digital world are upheld.

#### Advocacy for Policy Changes:

NGOs such as ECPAT International lobby governments to strengthen laws against child

<sup>&</sup>lt;sup>53</sup> WhatsApp Help Centre, Encryption and Safety Features.

<sup>54</sup> TikTok, Family Safety Tools.

<sup>&</sup>lt;sup>55</sup> Microsoft, *PhotoDNA Overview*.

<sup>&</sup>lt;sup>56</sup> Facebook, Transparency Reports on CSAM.

<sup>&</sup>lt;sup>57</sup> Google-Thorn Partnership, *Tools Against Child Exploitation*.

exploitation and enhance enforcement mechanisms.<sup>58</sup>

# • Support for Victims:

Organizations like the *National Centre for Missing & Exploited Children* (NCMEC) in the U.S. offer support services, including helplines, counselling, and legal assistance.<sup>59</sup>

# • Awareness and Education Programs:

NGOs develop educational materials for children, parents, and educators. For example, the Internet Watch Foundation (IWF) conducts campaigns to teach children how to navigate the internet safely.<sup>60</sup>

# 6. International Organizations

Global organizations ensure cross-border cooperation and set standards for addressing child cyber abuse.

# • Legal Frameworks and Protocols:

The United Nation's *Convention on the Rights of the Child* and its optional protocols establish children's fundamental rights and outline the obligations of states to protect them in digital contexts.<sup>61</sup>

#### • Global Databases and Intelligence Sharing:

Organizations like INTERPOL and Europol facilitate intelligence sharing and maintain databases to track offenders and victims of cross-border cyber abuse.

# • Capacity-Building Initiatives:

UNICEF's *Global Kids Online* initiative provides resources for countries to assess online risks and develop national strategies for protecting children in digital environments.<sup>62</sup>

# 7. Civil Society and Media

Civil society groups and media organizations raise awareness about child cyber abuse and advocate for systemic change. Investigative journalism often exposes gaps in enforcement and holds stakeholders accountable. Meanwhile, community organizations play a grassroots role in promoting digital literacy and resilience among vulnerable populations.

<sup>&</sup>lt;sup>58</sup> ECPAT International, Combating Child Exploitation Globally (2023)

<sup>&</sup>lt;sup>59</sup> NCMEC, CyberTipline Overview.

<sup>&</sup>lt;sup>60</sup> Internet Watch Foundation, Annual Campaigns (2023).

<sup>&</sup>lt;sup>61</sup> United Nations, Convention on the Rights of the Children (1989).

<sup>&</sup>lt;sup>62</sup> UNICEF, Global Kids Online Resources.

# VIII. ECHNOLOGICAL AND SOCIAL SOLUTIONS TO COMBAT CHILD CYBER ABUSE

The growing prevalence of child cyber abuse necessitates a combination of advanced technological tools and social strategies to create safer digital environments. These solutions work synergistically, addressing prevention, detection, intervention, and rehabilitation. Below is a detailed examination of the technological and social solutions employed to mitigate the impact of child cyber abuse.

# (A) Technological Solutions

Advancements in technology have provided innovative tools to prevent and combat child cyber abuse. These solutions target multiple dimensions, including abuse detection, content moderation, and user education.

# 1. Artificial Intelligence (AI) and Machine Learning (ML)

AI and ML plays pivotal roles in detecting and preventing harmful online behaviours.

#### • Content Moderation:

Platforms like Facebook and YouTube deploy AI algorithms to detect and remove harmful content, including Child Sexual Abuse Material (CSAM). For instance, Microsoft's *PhotoDNA* technology scans images for CSAM, generating unique digital signatures to identify and flag inappropriate content.<sup>63</sup>

# • Behaviour Analysis:

ML models analyse user behaviour patterns to identify signs of grooming or cyberbullying. Aldriven tools, such as Bark, monitor children's communications for keywords or phrases associated with abuse or exploitation.<sup>64</sup>

# • Challenges:

AI systems face challenges, including false positives, content misclassification, and evasion tactics by perpetrators. To address these, continuous refinement and human oversight are essential.

# 2. End-to-End Encryption and Privacy Tools

Encryption technologies protect users' privacy while posing challenges in identifying illegal activities.

<sup>&</sup>lt;sup>63</sup> Microsoft, *PhotoDNA Overview*.

<sup>&</sup>lt;sup>64</sup> Bark, Child Safety Monitoring Tools

# • Balancing Privacy and Safety:

Encrypted messaging apps like WhatsApp use AI to identify metadata patterns indicative of CSAM while maintaining user privacy. However, end-to-end encryption can hinder law enforcement investigations, sparking debates about achieving the right balance.<sup>65</sup>

# 3. Age Verification Technologies

Ensuring that children access age-appropriate content is critical.

# • Biometrics Authentication:

Emerging technologies like facial recognitions and fingerprints scanning help verify user age before granting access to certain platforms.

# • AI-Powered Age Estimation:

Companies like Yoti use AI algorithms to estimate users' ages based on facial analysis, enhancing compliance with child protection regulations like COPPA.<sup>66</sup>

# 4. Content Filtering and Parental Control Software

Parental control tools allow guardians to restrict access to harmful content.

# • Examples of Software:

Tools such as Net Nanny and Qustodio enable parents to monitor browsing history, block inappropriate websites, and set screen time limits.<sup>67</sup>

#### • Smart Filters:

Advanced filtering systems dynamically analyse content rather than relying solely on predefined lists, ensuring real-time protection.

#### 5. Reporting Mechanisms and Hotlines

Technology facilitates anonymous reporting and swift intervention.

# • In-App Reporting Tools:

Platforms like Instagram and Snapchat provide user-friendly options for reporting abuse, ensuring swift moderation responses.<sup>68</sup>

#### • Global Reporting Networks:

Services like the National Centre for Missing and Exploited Children's (NCMEC) Cyber

<sup>65</sup> WhatsApp, Safety Tools and Metadata Analysis,

<sup>&</sup>lt;sup>66</sup> Yoti, Age Verification Technology

<sup>&</sup>lt;sup>67</sup> Net Nanny, Parental Control Features

<sup>&</sup>lt;sup>68</sup> Instagram, Reporting Abuse.

Tipline integrate advanced technology to manage millions of reports annually.<sup>69</sup>

#### 6. Blockchain for Evidence Preservation

Blockchain technology secures evidence of abuse in tamper-proof digital ledgers, aiding law enforcement in building strong legal cases.<sup>70</sup>

#### (B) Social Solutions

While technology provides the tools, social solutions address the cultural, psychological, and communal aspects of combating child cyber abuse.

# 1. Public Awareness Campaigns

Raising awareness empowers communities to recognize and prevent abuse.

# • National Campaigns:

Initiatives like Australia's *eSafety Campaign* educate parents, children, and educators about online risks and safe practices.<sup>71</sup>

#### • Private Sector Efforts:

Companies like Google and Facebook run global initiatives, such as *Be Internet Awesome* and *We Think Digital*, to promote online literacy and safety.<sup>72</sup>

# 2. Digital Literacy Programs

Digital literacy is vital for both children and adults.

#### School-Based Education:

Curricula focused on digital citizenship teach children about safe browsing, recognizing grooming tactics, and reporting inappropriate content. Programs like *Digital Citizenship*+ help students navigate complex online challenges.<sup>73</sup>

#### • Community Workshops:

NGOs and local organizations conduct workshops for parents and teachers, bridging the digital literacy gap in underserved areas.

# 3. Peer Support Networks

Peer-led initiatives create safe spaces for children to share experiences and learn coping

<sup>&</sup>lt;sup>69</sup> NCMEC, CyberTipline Statistics,

<sup>&</sup>lt;sup>70</sup> Interpol, Blockchain for Evidence Management,

<sup>&</sup>lt;sup>71</sup> Australian Govt., eSafety Campaign Overview

<sup>&</sup>lt;sup>72</sup> Google, Be Internet Awesome

<sup>&</sup>lt;sup>73</sup> Digital Citizenship+, Safe Online Practices Curriculum,

mechanisms. Programs like UNICEF's *Voices of Youth* empower young people to advocate for digital safety and support peers facing abuse.<sup>74</sup>

# 4. Collaboration with Media and Influencers

Influencers and media campaigns amplify messages of online safety.

# • Social Media Campaigns:

Hashtags like #ENDviolence and campaigns by influencers encourage dialogue and destignatize reporting abuse.

#### Media's Role:

News outlets highlight stories of cyber abuse, increasing public awareness and pressuring stakeholders to act.

# 5. Community Engagement and Advocacy

Communities play a critical role in fostering resilience and vigilance against child cyber abuse.

# • Parent-Teacher Associations (PTAs):

PTAs can organize seminars and create local networks to monitor and address online safety issues collectively.

#### • Youth Ambassadors:

Engaging children as ambassadors fosters peer-led advocacy and accountability.

# 6. Counselling and Rehabilitation Services

Support services address the emotional and psychological aftermath of cyber abuse.

# • Online Therapy Platforms:

Platforms like Better Help offer accessible counselling for victims, while NGOs provide trauma-focused therapy services for children and families.<sup>75</sup>

#### • School-Based Interventions:

School counsellors trained in cyber abuse management provide on-site support to affected children.

# 7. Legislation-Driven Social Responsibility

Laws requiring companies to prioritize user safety encourage corporate social responsibility.

<sup>75</sup> BetterHelp, Online Counselling for Children and Families,

<sup>&</sup>lt;sup>74</sup> UNICEF, Voices of Youth Program.

For example, the EU's *Digital Services Act* mandates proactive measures against harmful content, driving social accountability.<sup>76</sup>

# (C) Combining Technology and Social Solutions

The most effective strategies integrate both technological and social approaches. For instance, AI-driven tools can monitor abuse, but public awareness campaigns are essential to ensure these tools are widely adopted. Similarly, counselling services supported by technology platforms provide both reach and accessibility for victims in need of help.

#### IX. GLOBAL EFFORTS TO COMBAT CHILD CYBER ABUSE

Child cyber abuse is an international issue that transcends borders, making it a global challenge that demands cooperation and coordinated efforts. Over the past several years, governments, law enforcement agencies, International Organizations, and tech companies have taken various steps to combat this growing problem. These efforts aim to address the risks children facing in the digital world, protect their online safety, and ensure that those who exploit children are held accountable. Below, we'll explore the major global initiatives and collaborative efforts to protect and respond to child's cyber abuse, with a focus on both the legal frameworks and technological tools being used to protect children.

# 1. International Organizations Leading the Charge

Several international organizations play a pivotal role in addressing child cyber abuse through advocacy, policy development, and law enforcement coordination.

# a) UNICEF (United Nations Children's Fund):

UNICEF is at the forefront of global efforts to protect children online. Their approach focuses on three main areas: prevention, protection, and education. They work on initiatives to raise awareness about the dangers that children face online, including cyberbullying, online grooming, and the distribution of Child Sexual Exploitation Material (CSEM).

- Awareness and Advocacy: UNICEF publishes reports and conducts studies that
  highlight the risks children face in the digital world, advocating for greater protection
  and stronger regulatory frameworks globally.
- Partnerships for Prevention: UNICEF partners with governments, tech companies, and civil society organizations to create safe online environments and prevent abuse.
   One of their initiatives is the Child Rights and Business Principles, which encourages

<sup>&</sup>lt;sup>76</sup> European Commission, *Digital Services Act Overview* 

companies to uphold rights of children and improve safety in the digital space.

- b) INTERPOL (International Criminal Police Organization): INTERPOL facilitates international cooperation among law enforcement agencies to combat child exploitation online. Through its Cybercrime Directorate, INTERPOL leads several initiatives focused on protecting children from online abuse.<sup>77</sup>
- Global Alerts and Information Sharing: INTERPOL helps share critical information and intelligence about child exploitation crimes, allowing law enforcement to act more quickly and efficiently across borders.
- **Training Law Enforcement**: They provide specialized training programs for law enforcement officers around the world on how to handle cyber abuse cases involving children, including investigating online grooming, pornography, and trafficking.

#### 2. Regional and National Legal Frameworks

Around the world, different regions have developed laws and initiatives to tackle child cyber abuse. These laws aim to protect children's safety online and hold perpetrators accountable, while also providing a framework for global cooperation.

# a. The European Union (EU)

The EU have been very proactive in setting up legal measures to protect children online, with **Regulation (EU) 2021/1232** being one of the key legal documents. This regulation focuses on fighting child sexual abuse and exploitation online, providing a legal framework for detecting and reporting abuse material on the internet.

- EU's Directive on Combating Sexual Abuse: This directive sets out measures to strengthen the protection of children from online exploitation, including the need for online platforms to report illegal content and cooperate with law enforcement.
- EU Data Protection Laws (GDPR): The General Data Protection Regulations (GDPR) also plays an important role in safeguarding children's personal information, making sure that online platforms comply with stricter data protection measures when dealing with children's data.

# b. United States Legislation:

In the U.S., laws like the Children's Online Privacy Protection Act (COPPA) and the Children's Internet Protection Act (CIPA) are essential components of the legal framework

<sup>&</sup>lt;sup>77</sup> INTERPOL, International Cooperation to Combat Child Exploitation

designed to protect children from online harm.

- **COPPA**: COPPA regulates how online platforms collect and uses personal information from children under the age of 13year. It mandates parental consent for data collection and sets strict rules for the handling of children's data by websites and apps.
- CIPA: This law requires schools and libraries to filter internet content to prevent access
  to harmful material and ensures that children are not exposed to inappropriate online
  content.

# 3. Technology and Industry Collaboration

#### a. Tech Companies' Responsibility:

Tech companies play significant role in protecting children online. Social medias giants like **Facebook**, **Instagram**, **TikTok**, **Snapchat**, and others has developed various mechanisms to combat cyber abuse.

- Content Moderation: These companies are using both AI and human moderators to
  detect and remove abusive content. AI is particularly useful for scanning vast amounts
  of content to identify harmful material such as child sexual abuse material (CSAM) or
  explicit images.
- Reporting Systems: Platforms also offer reporting tools that allow users to flag
  inappropriate content. These reports are then reviewed and removed as per platform
  guidelines.
- Parental Control Features: Many platforms are introducing features that allow parents to monitor and restrict their children's online activity. This includes setting screen time limits, blocking certain users, and restricting access to specific types of content.

# **b.** Industry Partnership:

The **WePROTECT Global Alliance** is an example of how tech companies, law enforcement, and non-governmental organizations (NGOs) are collaborating to combat child online exploitation.

- Global Standards for Protection: WePROTECT works with governments and tech
  firms to create global standards for online child protection. This includes developing
  technology to identify and report abusive content and providing support to law
  enforcement agencies across the world.
- **The Tech Coalition**: Formed by several leading tech companies, this coalition works together to share best practices and innovative solutions to keep children safe online.

One of their major initiatives includes creating technological tools to detect and report CSAM.<sup>78</sup>

# 4. Collaborative International Legal and Enforcement Frameworks

# a. The Budapest Convention on Cybercrime:

- The **Budapest Convention** is a treaty in international efforts to combat cybercrime, including child exploitation. Adopted in 2001 by the **Council of Europe**, it has been ratified by over 60 countries. The convention sets standards for international cooperation in investigating and prosecuting cybercrimes, including crimes related to child abuse.<sup>79</sup>
- **International Cooperation**: It allows countries to share evidence and information in cases involving cross-border child exploitation, which is especially important in the digital age where cybercrime often takes place across multiple jurisdictions.
- Capacity Building: The convention encourages governments to build stronger law enforcement capacities to address crimes involving children and technology.

# 5. Challenges and the Path Forward

Despite the global efforts and legal frameworks in place, significant challenges remain in the fight against child cyber abuse. One of the biggest obstacles is the constantly evolving nature of technology. As new platforms, tools, and encryption methods emerge, criminals adapt quickly, making it harder for law enforcement to stay one step ahead.

- **Rapid Technological Change**: The development of technologies like artificial intelligence and deepfakes poses a new set of challenges. These technologies can be used to create harmful content, such as fake child pornography or manipulated images, making it even harder to identify real abuse.
- **Privacy vs. Security**: Balancing privacy rights with the need to protect children online remains a contentious issue. Laws that are too strict on privacy may limit the ability of tech companies and law enforcement to monitor and prevent abuse.

Global efforts to combat child cyber abuse must evolve to address these challenges. This includes enhancing international cooperation, improving technological solutions for detecting and preventing abuse, and continually updating legal frameworks to keep pace with technological advances.

<sup>&</sup>lt;sup>78</sup> The Tech Coalition, Collaborative Efforts to End Child Exploitation Online

<sup>&</sup>lt;sup>79</sup> Council of Europe, *Convention on Cybercrime*, 2180 U.N.T.S. 221 (2001).

# X. CONCLUSION

Child cyber abuse is one of the most complex challenges of the digital age, affecting millions of children worldwide. As the internet continues to expand and evolve, so too do the risks faced by young users. This conclusion summarizes key insights, identifies ongoing challenges, and outlines a clear path forward for addressing child cyber abuse.

# 1. The Growing Threat of Child Cyber Abuse

The digital world offers immense opportunities for children, from education to social interaction. However, these benefits come with significant risks, including cyberbullying, online grooming, sextortion, and exposure to harmful content. Technology such as social media platforms, encrypted messaging apps, and the dark web has created new avenues for predators to exploit children.

The anonymity and global reach of the internet make combating child cyber abuse a daunting task. Predators can target children across borders, often hiding their identities through encryption or other technologies.<sup>80</sup> This makes traditional methods of law enforcement and regulation insufficient to tackle modern cyber threats.

# 2. Key Takeaways from Global Efforts

Efforts to combat child cyber abuse have made significant progress in recent years. Governments, international organizations, and tech companies have implemented a range of measures to protect children, such as stricter laws, content moderation, and awareness campaigns.

#### • International Cooperation:

Treaties like the **Budapest Convention on Cybercrime** and initiatives by INTERPOL have shown the importance of global collaboration.<sup>81</sup> Sharing intelligence, standardizing legal frameworks, and building enforcement capacity across borders have been effective in targeting cybercriminals.

- Advances in Technology: AI-driven tools are helping detect abusive content and identify grooming behaviours, while platforms are introducing stronger age-verification measures and parental control features.
- Educational Efforts: Programs led by organizations like UNICEF and NGOs have improved digital literacy among children and parents, empowering them to recognize

<sup>&</sup>lt;sup>80</sup> Reports on online child exploitation, National Centre for Missing & Exploited Children (NCMEC)

<sup>81</sup> INTERPOL, Child Sexual Exploitation: Addressing a Global Threat (2022)

and avoid risks online.82

Despite these advancements, gaps remain in implementation and enforcement. Many countries lack the resources or infrastructure to effectively enforce laws, leaving children vulnerable in certain regions.

# 3. Challenges that persist

While the international community has made progress, several critical challenges hinder the fight against child cyber abuse:

- Rapidly Changing Technology: New technologies like deepfakes, artificial
  intelligence, and anonymous browsing tools are evolving faster than legal frameworks
  and enforcement strategies.
- Balancing Privacy and Safety: Privacy laws like the General Data Protection Regulation (GDPR) protect user's data but can make it harder for law enforcement to track criminals.<sup>83</sup> There is an ongoing debate for balancing individual privacy with the need to protects children online.
- Cross-Border Issues: Differences in laws and enforcement capabilities between countries make international cooperation difficult. Predators often exploit these gaps to evade justice.<sup>84</sup>
- **Awareness and Education**: Many parents, educators, and children are still unaware of the full extent of online dangers, particularly in developing nations where internet access is expanding rapidly.

#### 4. The Path Forward

The fight against children cyber abuse requires a multi-faceted approach that brings together governments, law enforcement, tech companies, educators, and communities. Below are key strategies to address this issue effectively:

# a) Strengthening Laws and Enforcement:

Governments must adopt and enforce comprehensive legal frameworks that address emerging forms of child cyber abuse. This includes regulating technologies like encryption and AI, ensuring platforms are accountable for content moderation, and harmonizing laws across

<sup>82</sup> Council of Europe, Convention on Cybercrime, 2180 U.N.T.S. 221 (2001).

<sup>83</sup> General Data Protection Regulation (GDPR), 2016/679, Official Journal of the European Union

<sup>&</sup>lt;sup>84</sup> European Union Agency for Fundamental Rights (FRA), *Children and the Internet: Data Protection Challenges* (2021).

borders to enable effective international cooperation.

# b) Enhancing Technological Solutions:

Technology itself is a powerful tool in combating child cyber abuse. Future efforts should focus on:<sup>85</sup>

- **Developing robust AI systems** to detect harmful content in real-time.
- Implementing better age-verification systems on online platforms to prevent children from accessing harmful environments.
- **Using blockchain technologies** to securely track and report digital activities related to exploitation.

# c) Promoting Awareness and Education:

Educational initiatives must continue to grow, targeting both children and adults. Children should be taught digital literacy and self-protection skills, while parents and educators should learn to recognize signs of abuse and respond appropriately.

# d) Encouraging Global Collaboration:

Child cyber abuse is a global issue that requires a united response. Governments must invest in international partnerships, share resources, and create uniform standards for child protection online. Collaborative programs like the **WePROTECT Global Alliance** can serve as models for future efforts.<sup>86</sup>

#### 5. A Call to Action

The digital world is both an opportunity and a risk for children. As we move forward, the focus must remain on building a safer online environment that balances innovation with responsibility. Governments, tech companies, and communities must work together to:

- Regularly update laws to reflect technological advancements.
- Invest in tools and resources for law enforcement and educators.<sup>87</sup>
- Foster a culture of awareness, vigilance, and accountability.

While the challenges are significant, they are not easily curable. With sustained effort and collaboration, we can reduce the risks children face online and create a digital space where they can learn, connect, and grow without fear.

<sup>85</sup> Emily D. Williams, "Technology's Role in Combating Child Exploitation," 22 J. Cyber Security 203, 207 (2024).

<sup>&</sup>lt;sup>86</sup> WePROTECT Global Alliance, Global Strategy to End Child Exploitation Online

<sup>&</sup>lt;sup>87</sup> National Cyber Security Alliance, *Digital Safety Education for Children* (2024),

# **Final Thoughts**

In the digital age, protecting children online is a shared responsibility. The fight against child cyber abuse will require continued innovation, education, awareness and international solidarity. By addressing the root causes and strengthening global defences, we can ensure that every child is safe and empowered in the digital world.<sup>88</sup>

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<sup>&</sup>lt;sup>88</sup> Simon R. Baker, "Online Gaming and Child Safety: Risks and Solutions," 32 Gaming Law Review 86, 91 (2022).

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