Cyberbullying and Digital Safety: Applying Global Research to Youth in India

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DRISHTI SHARMA; KRISTA MEHARI; JENNIFER DOTY; NANDINI SHARMA; AND PAMELA WISNIEWSKI

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Foreword

AMOD K. KANTH

Foreword by Amod K Kanth, Social Development Expert, General Secretary, Prayas JAC Society, a Voluntary Organization, Former DGP & Chairperson-DCPCR & DWSSC

This work is a result of a unique Indo-US cross-cultural, multidisciplinary collaborative research. The researchers and practicing stakeholders collaborated to understand cyberbullying and digital safety among youth in the Indian context. This book promises to be one of the significant documents on cyberbullying, an area in which very few comprehensive studies and action-based researches have been carried out in India.

An attempt has been made to define and understand the phenomenon of cyberbullying from different perspectives in the cross-civilizational context of the two largest democracies of the world, India and the USA. An analysis of the on-ground situation taking into consideration each country's respective policy and legislative framework was carried out.

International best practices to prevent and reduce cyberbullying, and promote online safety for the youth have been reviewed and summarized in the document. The best practices are illustrated with examples and easy-to-follow practical tips.

India is the home to the largest number of youth in the world, comprising nearly 50% of its 1.35 billion population. When compared to the USA, the proportion of the youth in India having internet access is bound to be much lesser, but in absolute numbers, it is much higher. The sheer numbers highlight the scale of the potential crisis that the youth might face at the cost of unaddressed digital safety issues.

The World Bank classifies India as a 'low-middle income economy' country, with perpetual socio-economic and political distress. Amidst other challenges, its fast-expanding digital revolution provides the most unique background for such research. The majority of Indian youth have skipped the computer-laptop phase and access the internet via mobile devices. 25% of the youth live below the poverty line, however they have access to internet. As on 2019, one in three individuals above 12 years could access the internet on some device.

In urban India, nearly 323 million were recorded to be such users in 2020. However, in response to remote educational requirements during COVID-19, Indian youth lagged behind due to inadequate digital access. As per official statistics, nearly 90% of the schoolgoing children and youth remained mostly outside the purview of the educational programs.

The 2019-20 National Family Health Survey (NFHS-5) brings out huge gender disparity. In Andhra Pradesh, only 21% of women have access to internet as against 48.8% of men. Ironically, this partly explains why lesser number of girls are victims and perpetrators of cyberbullying.

The findings of the research, especially during the COVID-19 pandemic, are revealing. The pandemic brought into play the best and worst of the digital world, especially for the youth. The youth with restricted access to digital technologies earlier had to keep up the pace with the emerging digital technologies as it made life easier during the pandemic that forced the world to shut down. They had no other option but to chart through possibilities and pitfalls of the medium and learn to be on their feet. Across the globe, the children, adolescent and youth in the age-group of 10-25 years found endless opportunities to hone their digital skills and the unprecedented access offered greater exposure to the digital risks as well. There is no denying that the virtual world is a poor substitute to the real world, especially for the youth.

This book is an attempt to understand cyberbullying and digital safety for the Indian youth, it's potential risks and measures to mitigate the risks. The authors illustrate the preventive strategies through four concentric circles – with the key stakeholders as the individual, society at large, family and the community in the midst. The focus is on the resilience-based approach of empowering children to become active, aware, and ethical digital citizens with the capacity to navigate the digital world responsibly. Further, the framework identifies the respective contributions of peers and schools as part of the community and the influence of parents and caregivers. Since 70% of cyberbullying, like most sexual crimes, occurs within the family situations, the parent-child relationship is imperative to understand the issues and to find solutions.

This book also provides a holistic picture of the existing policies and programs within India and outside. This would provide a framework for the policy makers and will also guide the research fraternity on the need for the longitudinal action-based studies. Further, the online risks cannot be limited to cyberbullying, therefore the preventive strategies must include risks related to sexual solicitations, exposure to explicit content, information breaches, and privacy violations, etc.

By way of an internationally acceptable strategy which may be applicable to the Indian Youth as well, the INSPIRE (Implementation of laws, norms & values, safe environments, parent & caregiver support, Income & economic strengthening, response & support services, education & life skills) framework developed by the WHO along with the UNICEF as 'Global Partnership to End violence against Children', gives a clear direction alongside the global parameters set within the Sustainable Development Goals (SDGs). India has progressed a great deal with the formulation of policy and legislative reforms to provide clear direction towards creating a strong Child Protection System, and ensuring digital safety to combat cyberbullying and related risks. Now is the time to implement these preventive strategies on ground and invest in research to assess the impact on ground.

Preface

DRISHTI SHARMA

This book is a product of a bilateral, cross-cultural, north-south collaboration, and a multidisciplinary collaboration between India and the US. The core research team of six members- three each from India and the US, represents varied backgrounds such as family studies, psychology, community medicine, public health and computer science. Establishing meaningful interdisciplinary collaboration is core to impactful research. This partnership has been an enriching one with its share of challenges enabling learning and a successful collaboration. The Ministry of Human Resource Development (HRD) of India, under the Scheme for Promotion of Academic and Research Collaboration (SPARC), commissioned this action-based research on cyberbullying in 2018. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the research sponsors. The two-year project that was supposed to culminate in April 2020 was extended by another year due to the pandemic.

This joint research initiative aimed at understanding crosscultural similarities, risks and solutions of cyberbullying in India and the U.S. Research and practice on cyberbullying in the U.S is much more informed as compared to India. While the research discipline is still at a nascent stage in India, it is important to engage with key stakeholders to understand the gaps, key challenges and generate evidence to guide relevant policy decisions.

This book intends to inform stakeholders in India on cyberbullying, research gaps in India and ways to promote online safety. The existing evidence has been synthesized and supplemented with preliminary findings of the survey data and focus-group discussions with various stakeholders such as civil society, academia, parents, and youth, etc. During the early stages of research work, empirical research on cyberbullying was conducted simultaneously in India and the US. As part of the capacity-building effort, three workshops and two training programs were conducted in India during 2020 and early 2021 to orient researchers and the youth, parents, school teachers, school principals, along with other critical stakeholders such as lawyers, law enforcement officers, civil society members, health care providers, and media personnel on cyberbullying. This enabled broader understanding of cyberbullying and its expression in India and provided guidance for future work.

The pandemic posed challenges owing to the restrictions which is why most of the ground research, capacity-building efforts, stakeholder consultation, and collaborative report writing work had to be done virtually. The HRD Ministry permitted online training and workshops for all the projects funded under the SPARC scheme. The team was able to respond to this change well without any impact on the work. The growing importance of digital communication during these times further underscored the importance of the work done on this study.

The University of Florida and the University of South Alabama provided the Canvas platform to host the course and study material. The instructors designed the learner-centered modules which were supported through online platform- Zoom, enabling shared learning, exchange of ideas and collaboration. The training sessions designed to meet the need of building research capacity in India focused on- Cyberbullying- what we know where we go from here prepared and delivered by Krista Mehari, PhD, University of South Alabama; and Best practices in planning and Evaluation offered by Jennifer Doty PhD, University of Florida.

Each course offered 12 hours of self-paced online interactive learning in the form of recorded videos, reading material, discussion boards and exercises, and two live sessions of 2-hours each spaced across two weeks. The courses remained active for three months from October till December, 2020, for learners to engage with the content at their pace and gain the most out of it. More than 100 participants from varied disciplines such as psychology, community medicine, psychiatry, nursing, computer science, social work and sociology registered to access our course materials.

The next two workshops focused on co-learning about cyberbullying in the Indian context. School-based Cyberbullying Prevention, meant to improve teachers' knowledge on various forms of cyberbullying and its impact on adolescents and identify steps to be taken at the school level to prevent its effects; and Parent-based cyberbullying Prevention to guide parents with practical tips for children & digital safety. The third stakeholders workshop intended to create a contextual understanding of the cyberbullying prevention ecosystem in India. The modules were tailored specifically for the Indian researchers addressing their needs, knowledge gaps and the scope for future research. The registration surveys helped in collating the learning objectives of the participants that were mainly to discover various methods to measure cyberbullying behavior. The existing measurement scales to quantify cyberbullying behavior are not yet tested in the India. This book offers a list of existing scales and presents vital implications for future research. Another topic of great interest is the interventions or preventive strategies that have been tested and are known to work in India. The literature on these intervention studies in the context of India is limited.

This book attempts to lay the grounds for future research by providing a summary of what is known to work elsewhere. The key topics of the book have been prioritized to address the key stakeholder needs. The review of the literature and the empirical research conducted across the two countries allowed analysis and identify similarities across borders. The similarities enable us to translate research into tangible action items to tackle the growing problem of cyberbullying. Constructive suggestions regarding country-specific based on the experiences and learning in the India, US and elsewhere are provided. Emerging areas for collaborative research in cyberbullying, which has received scant attention in India have been identified. I acknowledge the immense contribution of the international cyberbullying prevention collaborative group members, Megan Mareno, Christopher P Barlett, Joy Gabrielli, Tracy Evian Waasdorp, Jackie Yourell, Yi-Wen Su and Stacey Steinberg for providing scientific guidance throughout the process. We also received tremendous support from students and colleagues at Maulana Azad Medical College, IIIT Delhi and PGIMER Chandigarh, especially Minakshi Sharma, Aradhita Gupta, Aarushi Arya, Neha Singh, and Anamika Dhiman. The work of Dr. Wisniewski is partially supported by the U.S. National Science Foundation under grant IIS-1844881 and by the William T. Grant Foundation grant #187941.

It is a known fact that the resources, especially those for research, are inequitably distributed across the world. These could include, access to information, grants, skills, time, incentives, career prospects etc. When it comes to research collaboration, the inequity often triggers frustration in researchers from both sides in north-south partnerships.

I am a researcher from the developing world. And I have lived through the challenges that come along the road of successful international research collaboration. Yet, I firmly believe that if these inequities are addressed, the whole mankind will benefit. It will help address conditions in the global south, which are often high in magnitude regionally and yet remain under-studied cyberbullying among youth being one among many.

I would like to further acknowledge the funding support by the Government of India and the data-gathering support by the US universities, that has enabled this international collaboration for knowledge exchange and learning possible.

This will certainly have a far-reaching impact on the country & it's research ecosystem in the long term. This has been an enriching journey where we overcame the challenge vis-a-vis culture and geographical distance. I would share an anecdote on East to West cultural exchange. On 2nd October 2020, the graduate students of Maulana Azad Medical College created and shared a video exploring the Relevance of Gandhi in Modern Youth and Family with their

U.S. counterparts, to commemorate the 150th birth anniversary of Mohandas Karamchand Gandhi. Twenty-two undergraduate students From the University of Florida, watched this video clip followed by a structured discussion with their course instructor on cultural similarities and differences across the two time periods and geographies. This helped them gain perspective on India, Gandhi ji's ideology of truth and non-violence. Where on one hand, Gandhi exemplifies India and its people's life. On the other hand, in the context of the international collaboration, I am reminded of a Nobel Laureate of Indian origin— Rabindranath Tagore. His was the ideology of looking at the world as a global village with free exchange. Actually, we need a bit of both— Gandhi and Tagore, we need to think global and act local to solve the challenges that society faces today.

I end by quoting a famous poem by Tagore. It was originally written in Bangla, later translated in English. The poem impresses upon the importance of global exchange for any country's development.

"Where the mind is without fear and the head is held high;

Where knowledge is free;

Where the world has not been broken up into fragments by narrow domestic walls;

Where words come out from the depth of truth;

Where tireless striving stretches its arms toward perfection;

Where the clear stream of reason has not lost its way into the dreary desert sand of dead habit;

Where the mind is led forward by thee into ever-widening thought $% \left(\frac{1}{2} \right) = 0$ and action –

Into that heaven of freedom, my Father, let my country awake."

Chapter 1: Introduction

DRISHTI SHARMA; NANDINI SHARMA; AND RITIKA BAKSHI



ABSTRACT

As access to digital technologies increases rapidly worldwide, it brings risks alongside enormous benefits, especially for the children and adolescents. The magnitude of online risks like cyberbullying is growing across the world, and India is no exception. Studies across the globe suggest that use of electronic communication technologies has a significant impact on the mental, physical and social health of adolescents. Therefore, understanding and mitigating online risks is crucial. This requires a shared understanding of online risks amongst the key stakeholders to work collaboratively to promote well-being of youth in an increasingly digital world. The socio-ecological model provides a framework that can organize important protective and risk factors for preventing cyberbullying and other online threats. These factors are located within multiple systems that constantly interact, broadly involving the youth, their families, peers and schools, communities, and society.

In this chapter, we introduce cyberbullying and other online risks faced by adolescents as well as the overall opportunities offered by digital media, particularly in the developing world. By mitigating the threats, we can avoid the increasing digital divide and ensure continued healthy youth development. We explore what cyberbullying is, the magnitude of the problem, and its harmful impacts. We will also briefly introduce the landscape we intend to cover through this book using the framework of the socioecological model. Our goal is to make this information accessible for the use of Indian stakeholders who are invested in preventing cyberbullying and promoting adolescents' digital citizenship. Throughout the book, we draw insights from scientific work across the globe and apply them to India's current policy ecosystem.

INDIAN CONTEXT

India is home to 1.3 billion people.¹ It has the largest adolescent population globally.² According to the 2011 census, 83% of India's population lives in rural areas. Despite the record economic growth, literacy remains low. In the 2011 census, 73% of the population was literate. Literacy for girls and women is much lower (64.6%) as compared to boys and men (80.9%).

The World Bank classifies India as a low-middle income economy. Its health system is constrained, with a reported 0.53 hospital beds per 1000 people in 2017.³ Further, it falls in the low density of healthcare workers, with 0.3 psychiatrists and 0.05 psychologists per 100,000 people.⁴

As with many other low-income countries, in India, the digital revolution skipped the phase of computers and laptops. This means that many households owned mobile devices as their first digital device. In India, in 2019, one in three individuals of age 12 years and above had access to internet. Of these users, 32% were within the age group of 12-19 years.⁵ This suggests that adolescents are disproportionately more likely to have access to the Internet compared to adults and older adults. Also, our focus groups with stakeholders revealed that the sharing of electronic communication devices is prevalent within Indian families. The latest IAMAI report stated, "While internet users grew by 4% in urban India reaching 323 million users in 2020, digital adoption continues to be propelled by rural India – registering a 13% growth in internet users over the past year.⁶

Digital technology has already changed the world. As more and more children have access to the technology, it is increasingly changing the dynamics of the childhood as well. If leveraged strategically and made universally accessible, digital technology can be a game changer for children who are left behind.

In this book we make a case for faster action, focused investment and greater cooperation to protect children from the harms of a more connected world. Along with this, we also focus on harnessing the opportunities of the digital age to benefit every child.⁷ Strategic planning is critically relevant for India. If action is not taken soon enough, digital divide will continue to magnify the prevailing economic gaps. This will in turn amplify the advantages of children from wealthier backgrounds and fail to deliver opportunities to the poorest and the underprivileged children.

OPPORTUNITIES OFFERED BY DIGITAL MEDIA

Internet connectivity has ushered in knowledge transfer at a scale

which was earlier unknown and unimaginable. Bill Gates once said, "The internet is becoming the town square for the global village of tomorrow."

Children and adolescents around the world have embraced technology with ease. They have created new spaces for social interactions. Indeed, the advances have been so rapid that parents and caregivers often struggle to keep up.⁸ Digitalization offers seemingly limitless opportunities. It allows children to connect with friends and make decisions for themselves. It gives access to education, which is especially important for those living in remote or marginalized areas. Countless stories and examples illustrate how children worldwide have utilized the digital technologies to learn, socialize, and shape their paths into adulthood. For instance, in Brazil, the Amazon state government's educational initiative has provided educational content since 2007 to children and youth living remotely. Classes are taught by teachers in rural communities using satellite television. In addition to printed resources, they also have access to digital textbooks and other educational resources through the internet.9

Skills and vocational training programs are yet another domain where digital connectivity is opening opportunities to learn. This is particularly true for children hailing from very low- income families. Such children often leave formal schooling to earn livelihood. In Kampala, Uganda, the 'Women in Technology' organization offers digital vocational training for young women in under-served communities. The organization teaches young women digital, leadership and life skills. Girls attending the program have reported learning entrepreneurship skills and the use of the internet to identify their business opportunities.¹⁰ Such initiatives of providing access to technology strategically has fostered better educational and economic opportunities to the vulnerable communities.

In addition, digital access is vital during emergencies such as the COVID-19 pandemic. Online web-based learning or e-learning played a major role in making the teaching-learning process more student-centered, innovative, and flexible, when the schools and colleges were shut down across the world. $^{11}\,$

DIGITAL ACCESS DIVIDE

Greater online connectivity has opened new avenues for civic engagement, social inclusion and other opportunities, with the potential to break cycles of poverty and disadvantage. However, disparities in access to internet services vary between groups depending upon income, family education and literacy, and urbanicity/rurality. To be specific, 81 percent of people in developed countries use the internet, while only 40 percent of the people use internet in developing countries. In least developing countries the number is even lower at 15 percent.¹² GSM Association (GSMA) survey in 2015 found that in low- and middle-income countries, various socio-economic and cultural barriers tend to keep girls and women from using mobile phones.¹³ Such barriers include social norms, education levels, lack of technical literacy and decisionmaking, employment and income, etc. The National Family Health Survey-5 (NFHS5) reports suggest that gender disparities in usage of internet in India are greater across the rural areas than urban regions. These findings highlight that the gender disparities in the offline world are significantly reflected in the online world as well.¹⁴

But unless we reduce the disparities, digital technology may create new divides that prevent children from fulfilling their potential. If we don't act now to keep pace with rapid change, online risks may make vulnerable children more susceptible to exploitation, abuse and even trafficking. It may also result in more subtle threats to their well-being.¹⁵

DIGITAL RISKS AND SAFETY

Online risks among adolescents are of four kinds¹⁶-

- 1. Cyberbullying or online harassment
- 2. Sexual solicitation and risky sexual behaviors
- 3. Exposure to explicit content
- 4. Information breaches and privacy violations

We elaborate on cyberbullying prevention and response in Chapter 1, 2, 3 and 4. Further, in Chapter 5, we place cyberbullying in the broader context of online digital safety. In Chapter 6, we identify the possible platforms in the Indian policy landscape that can be leveraged to address the situation.

Throughout the book, we make a case for using a common approach of resilience-based frameworks to address all kinds of digital risks. Digital resilience means empowering children to become active, aware, and ethical digital citizens. It requires building capacity to safely navigate the digital world.¹⁷ This approach strikes a balance between teen's privacy and online safety through active communication and fostering trust between parents and children. It stands in contrast to the current "risk-averse" approach to online safety. This approach emphasizes on protecting adolescents from being exposed to online risks. The underlying fear often culminates in actions that restrict access to electronic communication technologies for youth. It often includes privacyinvasive monitoring. We suggest that this response is ineffective because no matter how much restrictions we place, just as in everyday life, a zero-risk digital environment is unattainable. We have already elaborated on how online interactions can provide social support, belonging, education, entertainment, and other positive conditions for healthy youth development. Online safety therefore, should maximize the benefits of the internet while mitigating some of its unintended consequences.¹⁸

WHAT IS CYBERBULLYING?

Bullying is a type of aggressive behavior that is traditionally defined as "intentional, repeated negative (unpleasant or hurtful) behavior by one or more persons directed against a person who has difficulty defending himself or herself."¹⁹ Bullying can be perpetrated inperson or via electronic means. Cyber bullying or online bullying is a form of bullying or harassment using <u>electronic</u> communication technologies means. It includes direct messaging particularly through <u>social media websites</u>, and a range of electronic applications and other websites.

Cyberbullying is often understood as an extension of in-person bullying that occurs in schools. The definition of cyberbullying has been debated, but most definitions specify that cyberbullying is some type of aggression (e.g., harassment, bullying) that occurs through electronic communication technologies.²⁰

Aggression among youth includes the following forms of aggression- physical, verbal and relational (or social). Physical aggression causes or threatens to cause physical harm. It may include behaviors such as hitting, kicking, tripping, pinching, pushing or damaging property. Verbal aggression, in contrast, targets a person's sense of self, agency, or dignity. It includes namecalling, insults, teasing, intimidation, racist remarks, or verbal abuse. Relational or social aggression targets a person's social relationships, status, image, or reputation. It includes lying, spreading rumors or embarrassing information, making rude or disrespectful negative facial or physical gestures, cracking jokes to embarrass and humiliate someone, mimicking unkindly. It also includes causing social isolation or exclusion, encouraging others to socially exclude someone and damaging someone's social reputation or social acceptance.²¹

Unfortunately, increased access to the internet through the unmediated use of smartphones exposes children and adolescents to many online risks. Bullying has become a part of our routine interactions on platforms such as WhatsApp, SnapChat, Twitter, Facebook, TikTok, etc. Body-shaming goes unabated; false rumors spread unchecked; and morphed pictures or videos are shared with a limitless audience. Cyberbullying also offers anonymity to the perpetrators allowing them to continue bullying without any fear of the real-world consequences. These factors, combined with the lack of monitoring and regulation in cyberspace, makes the issue more intricate and challenging to address.

Although children are aware of the damage and profound harm that cyberbullying causes, they are not always immediately conscious of the long-term consequences of their actions. Further, though they have superior technological skills, they lack awareness about the need of appropriate protective measures when it comes to sharing personal information. They may not be able to distinguish between online and offline "friends". Adults struggle to provide support to youth too. Cyberbullying does not require the physical presence of the victim. It is, by its very nature, a hidden kind of behavior. Often adults fail to detect and address cyberbullying, particularly when they take place in spaces beyond adult supervision.²²

Despite the growing concern, the research on cyberbullying in India is at a nascent stage. A systematic review done by Thakkar et al. in 2020 reported there were very few scientific articles on the topic for a meaningful inference.²³ As with research, the practice of cyberbullying prevention faces challenges too. The point is driven home by a report commissioned by UNICEF to understand online child safety in India in 2016. The report reveals that despite provisions in legislation and policies in India, there is a general lack of understanding of professionals, policymakers, and society of the risks and threats posed to children by information and communication technology (ICT) and social media.²⁴ Despite the limitation, the urgency of equipping stakeholders with information is clear. Therefore, throughout the book, we attempt to synthesize the available literature to draw actionable inferences for the Indian context.

BURDEN

With the rising internet usage, the rate of cyberbullying incidents is likely to increase in the years to come. Globally, current prevalence estimates for cyberbullying victimization range between approximately 10 and 40 percent. The wide range suggests that estimates of the burden of cyberbullying victimization varies across studies. The variation is attributed to several factors- the manner in which cyberbullying is defined (for a more detailed discussion of this issue, see Chapter 2), differences in the ages and locations of the individuals sampled, the reporting time frame being assessed (e.g., lifetime, 2 months, 6 months), and the frequency rate by which a person is classified as a perpetrator or victim (e.g., at least once, several times a week).²⁵ Despite the varying estimates, data consistently indicate that a considerable number of youngsters are being cyberbullied across the globe.²⁶

Majority of the incidents of cyberbullying are subtle (less harmful).²⁷ Some, however, cross the line into unlawful or criminal behavior. For instance, cases of cyber stalking or bullying of children rose from 40 in 2018 to 140 in 2020, as reported by the National Crime Records Bureau (NCRB) of India.^{28,29} These criminal cases essentially represent the tip of the iceberg and reports indicate an increasing trend of such episodes. Also, for every serious case reported, many relatively low-risk incidents of risk exposure go unreported. Clearly, we can respond well to these low-risk exposures by empowering teens with necessary technical and socio-emotional coping skills to avoid catastrophic consequences.³⁰

The research also suggests that parents and teachers are often in the dark, unaware of bullying experiences of youth.³¹ Youth who face cyberbullying, hesitate to confide in their elders or caregivers due to the perception of the lack of technical know-how amongst elders and fear of losing access to their devices.³² Hence, surveys that measure children's self-reports of such incidents are a valuable source of measuring the burden.

As per an Indian survey conducted in 2012, eight percent of 174 youth in Delhi ever perpetrated cyberbullying, and 17 percent reported being victimized. The percentage of boys who were victimized exceeded the percentage of girls. The rate of cyberbullying perpetration was comparable across gender. When the exposure to such events is compared with global figures, we find comparable rates across gender. We suspect that India's cultural factors and gender roles contribute to limited access to mobile devices for girls thus resulting in lower exposure to such events. That is, limited access may explain the anomaly of higher incidence of victimization among boys.³³ However, a systematic enquiry linking gender and digital access with cyberbullying behavior is required to verify this hypothesis. Also, it is worth reiterating that lower access may drive other socio-economic disadvantages. In this case, limited access due to the risk of exposure to cyberbullying or other digital risks may result in the child losing many opportunities for growth and development.

In Ahmedabad, Gujarat, in 2017, a study was conducted on 240 respondents (120 boys and 120 girls) aged 12-17 years, from standard VII to XII. The findings indicate that nearly 14 percent of respondents reported cyberbullying in their lifetime and seven percent reported cyberbullying involvement in the last thirty days.

Likewise, Microsoft Corporation conducted the 'Global Youth Online Behavior Survey', in 2012 on the phenomenon of online bullying. Survey was conducted with 7,644 youth aged eight to seventeen years in twenty-five countries (approximately 300 respondents per country), including six Asian nations. Of the 25 countries surveyed, the three countries in which participants reported the highest rates of online bullying victimization were China (70%), Singapore (58%), and India (53%). Other Asian countries in the study reported the following percentages of online bullying: Malaysia, 33%; Pakistan, 26%; and Japan, 17%. The same three countries with the highest rates of online bullying victimization also reported the highest rates of having bullied someone online- China (58%), India (50%), and Singapore (46%).³⁴ Further, in 2020, Child Rights and You (CRY), a Non-Governmental Organization (NGO), reported around 9.2% of 630 adolescents surveyed in Delhi-National Capital Region (NCR) had experienced cyberbullying. Half of them had not reported it to teachers or guardians of the social media companies concerned.³⁵

Notably, these surveys were not representative of national-level estimates. Further information on rates disaggregated across subgroups, e.g., gender, developmental age-groups, socio-economic class, caste, color, rural or urban residence, ethnicities or region of origin, language, disability, sexual orientation, school-going or outof-school is yet to be studied.

IMPACT

Some victims of cyberbullying are not upset or disturbed. However, cyberbullying is often associated with many emotional and psychological conditions, including stress, lower self-esteem, and life satisfaction,³⁶ with far-reaching effects during adolescence and adulthood. Most of the scientific literature reporting the impact of cyberbullying is cross-sectional (i.e., the behavior and its impact is reported at the same instance among individuals), and to establish temporal relationships and potential causal inferences, more longitudinal studies (where subjects are followed over time to study the outcome of a certain behavior) are required. Like the burden estimates, evidence from representative surveys measuring the impact of cyberbullying among adolescents is nearly absent in the Indian context. Therefore, we would try to draw from global literature and as much as possible from comparable regions.

In 2014, Kowalski et al. published a meta-analysis of cyberbullying research among youth, including 131 studies mainly from the developed world. These studies have linked cyberbullying involvement as a victim or perpetrator to substance use; mental health symptoms, e.g., anxiety and depression; decreased selfesteem and self-worth; low self-control; suicidal ideation; poor physical health (difficulty sleeping, recurrent abdominal pain and frequent headaches); increased likelihood of self-injury; and loneliness. Furthermore, victims of cyberbullying are much more likely to be bullied in person when compared to non-victims.³⁷

Additionally, both youth who experience cyberbullying victimization and perpetration are more likely to experience poor performance at school and in the workplace as compared to youth who are not involved in cyberbullying. They reported absenteeism, lower grades and poor concentration. Victims are also more likely to face detentions and suspensions, incidences of truancy, and carrying weapons.³⁸

Ruangnapakul et al., in 2019, conducted a systematic review of studies from South Asian countries, i.e. Thailand, Malaysia, Singapore, Indonesia, and the Philippines. The review revealed that cyberbullying behavior (perpetration or victimization) is common among adolescents in these countries. One of the studies from Philippines noted the association of cyberbullying with unpleasant and uncomfortable feelings. Another study from Malaysia reported that cyberbullying was associated with negative academic and emotional outcomes. The review revealed that there were few (not many) studies on cyberbullying in the Southeast Asian region. The issue needs further systematic enquiry. Since most of the studies were cross-sectional, they mainly report associations and not temporality (e.g., which came first- poor adjustment and functioning, or cyberbullying?) which would require longitudinal studies.³⁹

Bullying among youth is costly not just for individuals and families but also for countries. Understanding the economic cost and impacts associated with bullying is critical for any country. Such data informs the design of appropriate evidence-informed programs and prevention measures to reduce its occurrence. To move in this direction, India needs to conduct surveys and ensure availability of administrative data with trends to allow estimates of bullying prevalence and consequences.⁴⁰ Reports from elsewhere suggest alarming costs. For instance, youth violence in Brazil alone is estimated to cost nearly \$19 billion per year, of which \$943 million can be linked to violence in schools. A report commissioned by Australia's Alannah and Madeline Foundation suggests the costs of bullying victims and perpetrators into adulthood is \$1.8 billion over a 20 years period. This includes the costs of bullying for all school students during school as well as long-term impacts after school.⁴¹

Cyberbullying is a global problem that affects youth's mental, socio-economic, psychological, and physical health. This requires a multi-disciplinary, cross-cultural and holistic approach to address the issue through programs focused on students and school personnel, parents, health professionals and the wider community. The more extensive ecological system comprising parents, teachers, various stakeholders like media, law enforcement, health professionals, policymakers, and youth themselves all need to work in active collaboration to deal with the problem of cyberbullying. In this context, the social-ecological model proposed by the Centre for Disease Control and Prevention (CDC) for violence prevention is useful and merits discussion.

A FRAMEWORK FOR PREVENTION

Through this book, we aim to empower stakeholders who perform an essential role in the dynamic play of factors that lead to cyberbullying. Knowing the range of actors and factors is critical to prevent and respond to the risk. We use a four-level socialecological model proposed by CDC (Refer Figure 1) to understand violence and the effectiveness of potential prevention strategies. This model considers the complex interplay between individual, relationship, community, and societal levels leading to interpersonal-violence. It allows us to understand the determinants at each level that put individuals at risk for violence or protect them from experiencing the violence.





The model also explains how the factors at one level influence factors at another level, which requires action across multiple levels of the model at the same time to achieve population-level impact.^{42,43} Throughout the book, we utilize the socio-ecological framework to understand cyberbullying among youth.

The model is understood through four concentric circles. The innermost circle is the one closest to the individual and the outermost circle is the most distant, yet influential at the societal level. The individual level identifies biological, individual characteristics and personal history factors. These factors often increase the probability of becoming a victim or perpetrator of violence. Some of these factors include age, education, family income, impulsivity, or history of adversity such as abuse.

The next level moves out of the individual and examines close relationships. Some close relationships may increase the risk of experiencing cyberbullying as a victim or perpetrator of cyberbullying. For instance, an individual's family members influence their behavior and contribute to their risk of or protection against cyberbullying. Also, peers play a critical role in influencing children's behavior, attitude, thinking and judgment.

This model at third level, the community level, explores settings, such as schools, workplaces, and neighborhoods. In some settings in which social relationships develop may contribute towards factors that are associated with victimization or perpetration of cyberbullying.

The fourth level looks at the broad societal factors that help create an environment in which violence is either encouraged or discouraged. These factors include political, social and cultural norms of the society in which we live. They also include various factors that help to maintain economic or social inequalities among different groups of the society.

In the following chapters, we have elaborated upon risk and protective factors of cyberbullying using the socio-ecological framework described above. The framework also helps understand the preventive strategies with a systems lens. We use insights gained from review of scientific and grey literature, policy documents and discussions held with youth, teachers, parents, health care providers and policy actors during workshops.

Chapter two emphasizes the importance of a solid understanding of how best to measure cyberbullying within and across cultural contexts. We review the existing measures of cyberbullying in South Asia and provide guidance on measure development for researchers to generate ecologically valid measures of cyberbullying.

KEY TAKEAWAYS

- Increasing digital access enables education, socialization and entertainment among youth thus offering the most marginalized an opportunity to come out of poverty.
- · Though digital access has improved worldwide, there remains

inequality in access, particularly for children, especially girls from low-income families in the rural areas.

- Children all around the world are adapting these technologies at earlier ages and are far more adept than their parents in using them.
- Online risks are a reality of current connected work. Children, specifically, are exposed to the risk of cyberbullying, online harassment, sexual solicitation and risky sexual behaviors, exposure to explicit content, information breaches and privacy violations.
- According to existing literature, cyberbullying rates reported among youth in India range from 5% to 53% based on different studies. This is similar to rates reported elsewhere in developing settings and worldwide.
- The cyberbullying studies undertaken in India have methodological weaknesses such as unavailability of data pertaining to sub-groups. More information at the national level is required to inform policies and action on response.
- Cyberbullying and cyber victimization are both associated with a range of poor outcomes, including depressive symptoms, low self-esteem, anxiety, loneliness, drug and alcohol use, low academic achievement, and low overall well-being. In addition, cyber victimization has been linked to somatic complaints, perceived stress, and suicide ideation. However, most of this research is cross-sectional, and longitudinal studies are recommended to identify the direction of relationship of these effects.
- Nevertheless, the evidence of negative impacts of cyberbullying is sufficient to catalyze the policy ecosystem in India to prioritize digital safety and to strengthen systems to monitor, respond and prevent digital risks.
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Chapter 2: Cross-Cultural Measurement of Cyberbullying

KRISTA MEHARI AND NATASHA BASU

ABSTRACT

The field of cyberbullying research lacks a comprehensive understanding of its prevalence across the world. Its culturallyspecific and universal predictors and outcomes, as well as effective methods to prevent or reduce its perpetration across the globe, are poorly understood.

This chapter covers the following:

- Current issues in cross-cultural measurement of cyberbullying
- Use of different terms to describe the phenomenon, and different definitions
- Difficulties that arise from using a single-item, definitionbased measure (i.e., surveys that define cyberbullying and then ask youth how frequently they cyberbully)
- Existing measures of cyberbullying in Asia, and gaps in measurement

To address the issue of cyberbullying, it is critical to develop culturally relevant measures using rigorous measurement development and testing strategies.

A solid understanding of how best to measure cyberbullying within

cultural contexts is vital for conducting cyberbullying research. Accurate cyberbullying measurement will make it possible to identify outcomes associated with cyberbullying and explore malleable risks and protective factors. Conducting longitudinal research on cyberbullying outcomes, while controlling for other cooccurring adverse experiences (such as in-person victimization) is needed. This approach is key to identifying the need for public health cyberbullying prevention research. Research on malleable risk and protective factors on cyberbullying will inform the development of effective cyberbullying prevention strategies. For all the stages of cyberbullying research, accurate cyberbullying measurement is the cornerstone.



Problems related to cyberbullying measurement in western studies have been highlighted by multiple researchers. Researchers have some disagreement about the nature of the problem and subsequent solutions.^{1,2,3,4} Some researchers have identified the poorly defined "bullying" component of cyberbullying as a major problem,^{5,6} whereas other researchers have discussed the dependence on single-item, definition-based measures rather than multiple-item, behavior-based measures as the problem.^{7,8,9} Researchers who emphasize the difference between bullying and

aggression have debated about what constitutes cyberbullying compared to aggressive cyber behaviors. As discussed in the previous chapter, bullying is traditionally defined as a form of aggression. It is a behavior that threatens to harm or intends to cause harm. Unique features include repetition and chronicityoccurring over time, rather than a single isolated incident. It is highly likely to recur. Other features include an imbalance of powerthe perpetrator(s) have some capacity, strength, or power not held by the victim, and the victimized person feels unable to defend themselves.^{10,11} Regardless of how well researchers try to define bullying in measures, two very important points are often neglected: (1) the odds of youth reading a definition very carefully prior to answering questions are most likely to be low. This makes a careful definition potentially meaningless from a practical standpoint; and (2) even if youth are reading a definition, the researchers' definition may be in opposition to the youth's existing definition of bullying. Bullying is a household term (at least in English) that may have connotations different from what the researchers intend.¹²

The issues related to terms for and measurement of cyberbullying must be considered in light of the expanding global research on cyberbullying. In general, the English-language literature uses the term cyberbullying, and we have chosen to use the term cyberbullying for our work as well. However, a range of terms have been used, with the desire to most accurately portray the phenomenon of interest (e.g., online harassment, online bullying, internet aggression, cyber aggression, electronic aggression, etc.).^{13,14} Researchers in each language group may need to select the terms and definitions they use to describe similar phenomena based on the cultural context. For example, in Hindi, there is no comparable word for bullying. Dhauns (धौंस) is the closest approximation (a term, used mostly in North India, meaning to use strength or power against someone). People in other language groups may adopt a version of the English "bullying" or adapt other terms to describe this phenomenon.¹⁵ In-depth qualitative research across countries and language groups is necessary to identify the most appropriate, accurate terms to use, and to come to a general agreement about what those terms entail. This work is vital to conduct cross-cultural research and to build a body of research within cultures. For example, if we were to define cyberbullying in a definitional measure in India the same way that we do it in the United States, we may falsely identify a lower rate of occurrence in India. It is possible and maybe likely that there are lower rates of cyberbullying in India than in the U.S. given lower rates of technological adoption. But it is also possible that we simply defined and measured it in a culturally irrelevant manner, making it impossible to accurately estimate its occurrence.

Using a behavior-based measure, rather than a definition-based measure, may be the most effective way to conduct cross-cultural research. Prior research on using the word "bullying" has suggested that the word itself can cause cross-cultural differences in patterns of responding.¹⁶ This problem likely extends to the study of cyberbullying. In addition, using the word "bullying" in a measure (with or without defining it) may reduce the likelihood that children will endorse items in the measure compared to a behavioral checklist without the word "bullying," This may be due to stigma, socially desirable responding, or an unwillingness to admit vulnerability related to being bullied.^{17,18,19} Using a behavior-based measure solves multiple problems. For example, asking youth, "How often do you post an embarrassing picture of someone to make fun of them?" provides a much more precise response, without invoking stigma or relying on a cultural conception of cyberbullying, than asking the question, "Have you ever cyberbullied someone?" Similarly, it is possible to compare the rates of response to that question across countries with a relatively low likelihood that different definitions across contexts will evoke a differential response style. That is, it is likely that youth's responses to that question is indicative of true occurrence of that behavior.



Figure 2: Steps for creating a culturally grounded, theoretically sound measure of cyberbullying

Rich qualitative information is needed to develop behavior-based measures of cyberbullying that allow for cross-national and contextually relevant research. The development of cyberbullying measures across cultures should begin with qualitative research with youth and adult stakeholders. They can provide much-needed insight into the phenomenon of cyberbullying. They can give specific examples of cyberbullying, and the cultural context in which cyberbullying occurs.^{20,21} Key informants should include vouth as well as parents, teachers, and other adult stakeholders who have knowledge of cyberbullying incidents. Qualitative data collection can include data collection over time, such as using an ecological momentary assessment approach or a diary reporting method online.²² Qualitative research should also include in-depth interviews or focus groups. For example, the authors recently conducted an informal focus group as part of a workshop for health professionals in the Delhi area.²³ As part of that workshop, health professionals identified several cultural factors that may shape cyberbullying in India. One of the findings was that youth often use cyber cafes to access the Internet, rather than having personal devices, which can result in true anonymity of perpetration. Similarly, shared devices in a family may be more common in India than in more highly developed countries. In addition, different gender expectations for girls compared to boys, with more restrictions for girls, may result in both more cyberbullying involvement for boys, and more victim-blaming of girls. This is just an example of factors that may influence the phenomenon of cyberbullying and may be important to keep in mind when measuring cyberbullying or identifying its risk factors.

Similarly, the actual behaviors that constitute cyberbullying may occur at different rates across cultures. For example, based on the focus group of health providers in Delhi, some cyberbullying behaviors may be relatively more common in India (e.g., posting anonymous, degrading or insulting comments about fellow students on pages associated with a school; sexual harassment and shaming of girls). On the other hand, some behaviors are almost non-existent in India (e.g., airdropping naked photos of a classmate while in a school cafeteria; threats over online multiplayer gaming systems). Commonly occurring behaviors are likely to significantly vary across cultures, due to a range of factors. Such factors may include access to specific types of electronic communication technologies and devices. Further, poverty, the digital divide and literacy may play a role in what devices are used and how aggression is enacted. Other factors may include informal and formal social control around electronic communications and cultural norms around communication, aggression, rejection, and shaming. Perceptions of what qualities or characteristics of a person "deserve" humiliation or targeted aggression may also play a role in cyberbullying content. For example, characteristics such as weight, gender, caste or socialeconomic status, region, and language of origin/mother tongue, or behaviors such as sexual behaviors, may be more or less likely to be targets of bullying, depending on cultural context.

To accurately estimate the prevalence of cyberbullying, it is necessary to first gain an understanding of what aggressive behaviors are occurring among youth online. The next step would be to develop a measure that captures those behaviors. This may result in measures that have items that vary in frequency across contexts. When used together, these measures effectively estimate the underlying construct of cyberbullying. Perhaps counterintuitively, simply using the same measures (even translated) that were developed in the Western countries, without doing this measure development groundwork, may result in a measure that assesses *different* constructs across different contexts.

CYBERBULLYING MEASUREMENT IN ASIA

	Construct Validity	Associated with physical bullying.	Associated with in-person bullying perpetration and cybervictimization.	Associated with in-person bullying perpetration.
in Asia	Internal Consistency	None reported.	None reported.	α = .9
betration Originally Developed	Item Content	Spread false information; insulted or cursed	Perpetration through various media; social exclusion; disclosure of personal information, and coercive behavior	Overt and relational aggression (e.g., spread rumors, used photos to humiliate)
asures of Cyberbullying Perp	Measure & Development	Cyberbullying Perpetration; 2 items; no information on development	8 items developed based on prior studies	9 items; theoretically derived
Me	Location	South Korea	South Korea	Hong Kong
	Authors	Cho & Rustu, 2020; Cho & Galehan, 2017; Kim et al., 2017; Jang et al., 2014	Lee & Shin, 2017	Chan & Wong, 2019; Wong et al., 2014

	Measur	ces of Cyberbullying Perpetra	ation Adapted for Use in Asian (Countries	
Authors	Location	Measure & Development	Item Content	Internal Consistency	Construct Validity
n & Skoric, 2013	Singapore	18 items; based on Cassidy et al. (2009) and Hinduja & Patchin (2012)	Perpetration on Facebook, including social exclusion, direct messages, sexually coercive behaviors, hacking, posting embarrassing photos	α = .86	Associated with in-person bullying, in-person victimization, and cybervictimization
g & Liu, 2020a,b	China	11 items; based on the European Cyberbullying Intervention Project Questionnaire	Examples: Said nasty things, threatened someone through texts or online messages	α = .79	Associated with pro-cyberbullying attitudes.

SINGLE-ITEM MEASURES

Single-item measures are measures that try to assess something through just one question or statement. For example, a single item might ask, "Have you ever cyberbullied someone?" Multiple-item measures, in contrast, try to assess something with more than one statement or question (usually at least three). A multiple-item measure for cyberbullying, for example, might have separate questions about how often someone shared embarrassing photos of someone online, sent mean text messages, or threatened someone with messages over a mobile phone or the internet. Single-item measures are fairly common in assessing cyberbullying perpetration in Asia. They have significant limitations, though. With regards to cyberbullying, single-item measures can take multiple forms. For instance, some studies provided a definition of the construct of cyberbullying, followed by a question about the frequency of cyberbullying (e.g., in Bangladesh:²⁴). Others simply asked whether an adolescent had harassed or bullied others online without a definition (in South Korea: 25).

There are multiple problems with using a single-item measure, particularly in assessing variations across cultures or regions. The word "bullied" is not specific. It has different connotations across cultures, with variations in the degree of stigmatization or unacceptability. It is open to subjective interpretation. By using clear-cut, specific, and observable items, researchers can increase the likelihood of an open and honest response by the participating adolescent. This, in turn, will provide a better understanding of the prevalence and the causes of cyberbullying. Through the use of more than one item, the range of behaviors that fall within the realm of cyberbullying could be better assessed. This approach further increases the likelihood of effectively measuring the underlying construct of cyberbullying.

MULTIPLE-ITEM MEASURES

Per classic measurement theory, a multiple-item measure ideally represents a random selection of all possible items in the "universe" of the construct.²⁶ For example, physical aggression encompasses a universe of behaviors, including kicking, pushing, shoving, slapping, scratching, punching, choking, stabbing, and shooting. It would be nearly impossible to create a measure that includes *all* physically aggressive behaviors. However, it is possible to identify a random selection of physically aggressive behaviors that can be used to approximate a person's overall level of physical aggression. In contrast, a single item (e.g., "How often did you punch someone in the last 30 days?") may be insufficient to effectively estimate a person's overall level of physical aggression. Using multiple items typically increases reliability (the extent to which items in a measure co-vary) as well as construct validity (the extent to which a measure accurately estimates the construct of interest).²⁷

NEED TO ASSESS FACTOR STRUCTURE OF MULTI-ITEM MEASURES

Construct validity is basically how well something measures what it is supposed to measure. For example, there are many ways to measure length. You can use objective measures such as miles, inches, centimeters, or kilometers, or you can use more rough estimates like arms-length or car lengths. Although they all have different names and approaches to measuring distance, they all measure distance. However, if I am using a measure of kilometers but am trying to measure weight, my measure has no construct validity – my goal is to measure weight, but I am actually measuring distance. Similarly, it is possible to *think* that we are measuring cyberbullying, even when we are not. Because of that, we have to find ways to make sure that when we think that we are measuring cyberbullying, we are actually measuring cyberbullying – and not, for example, in-person bullying, risky online behavior, or even flirting.

Factor analysis is a statistical approach to understanding the construct validity of a measure. In other words, it is a way to use numbers to understand the likelihood that a survey that is supposed to measure cyberbullying is actually measuring cyberbullying and not some other thing. In technical language, factor analysis is based on the premise that the relations among observed or manifest variables (the items on a survey, such as "I posted an embarrassing photo of someone") can be explained by their membership in a smaller number of unobserved or latent variables (e.g., cyberbullying perpetration). Cronbach and Meehl (1955) described factor analysis as "a most important type of validation" for test development;²⁸ (p. 286). Factor analysis can not only identify structures within a construct such as cyberbullying (e.g., are there different forms of cyberbullying?) but can also identify the patterns of relations with other factors (e.g., relational aggression, in-person bullying) and factors. or larger categories possible superordinate that cyberbullying fits into (e.g., bullying, aggression).²⁹ However, most of the existing research on cyberbullying in Asian countries have not explored factor structure.

CYBERBULLYING MEASURES USED IN ASIAN COUNTRIES

In Asia, particularly in India, very little research has followed a rigorous process to develop a measure of cyberbullying. In the emerging research on cyberbullying in Asia, researchers often create their own measures for the purpose of the study. They usually fail to incorporate an appropriate discussion of content and discriminant validity, the process of item creation, the factor analytic structure, and the internal consistency. In other situations, researchers adapt measures developed in other languages for use. The following sections describe cyberbullying measures that have been developed in or adapted for countries in Asia. It also provides a review of the evidence supporting the use of those measures.

The majority of measures developed in Asia for Asian youth have been in use in East Asian countries, including South Korea, Taiwan, and Hong Kong. The measures identified in this literature review are good first steps in extending a cross-cultural understanding of cyberbullying. Right now, it is unclear whether these measures developed in East Asia would be effective in assessing cyberbullying across countries in Asia. Given the heterogeneity of cultures and languages in such a large continent, research should explore the extent to which these measures are effective in other countries and contexts. This is also known as cross-cultural equivalence. As an example, throwing paper balls at someone may be flirting in one culture but a severe insult in another. Measures that have established validity in developed countries such as South Korea and Singapore may not be effective in resource-poor environments. Language and cultural differences may also make it unlikely that measures have cross-cultural equivalence across countries and regions.

MEASURES DEVELOPED IN ASIA

In a study conducted in South Korea, cyberbullying perpetration was measured using Yes or No type questions. The questions were-"Have you ever intentionally circulated false information on the internet message boards about others during the last year?" and "Have you ever cursed/insulted other people through chats/ message boards during the last year?" The two questions were summed to create a dichotomous measure that assessed cyberbullying perpetration.³⁰ This measure was additionally used in three other studies conducted using the Korean Children Youth Panel Survey (KCYPS).^{31,32,33} There was no description of how the items were developed and selected. There was no explanation of the omission of other potentially common cyberbullying behaviors. There was also minimal assessment of the validity of the measure, such as the extent to which the items were tapping into the same construct (internal consistency). However, some construct validity was established, such that cyberbullying was positively associated with physical bullying.³⁴

Similarly, Lee and Shin (2017) created a measure of cyberbullying in South Korea with eight items assessing both perpetration and victimization on a frequency scale. This measure was developed based on previous studies of cyberbullying. Students in this study were also provided with an explanation of cyberbullying. The authors used the term "wangtta," which is equivalent to bullying, to explain cyberbullying.³⁵ No indicators of internal consistency were discussed in the study. Youth who reported more cyberbullying perpetration also reported more cyberbullying victimization and more in-person bullying perpetration, suggesting that their measure was effective.³⁶

A more comprehensive, theoretically driven measure of cyberbullying has been used to assess cyberbullying in Hong Kong.^{37,38} Their nine-item measure was based on the idea that cyberbullying could be overt (e.g. "maliciously spread fictitious rumors about another person on the internet") or relational (e.g. "edit and post another person's photographs on the internet for the purpose of humiliating them"). The internal consistency of the measure was strong (Cronbach's alpha value of .9). Cyberbullying perpetration was positively related to in-person bullying perpetration. However, future measure validation is necessary to determine whether this measure is associated with other constructs in expected ways, and, ideally, whether it works equally well across countries in the region.

Finally, a study conducted by Jain and colleagues (2020) in India created a new measure for assessing cyberbullying victimization.

Perpetration was not included in this study.³⁹ The researchers in the study identified four activities as acts of cyberbullying- sexual harassment, derogatory comments, stalking, and sharing personal information without consent.⁴⁰ However, example items were not included. There was no discussion of internal reliability or other psychometric properties of the measure.

ADAPTED OR TRANSLATED MEASURES

Some researchers developed their own measures to examine cyberbullying in Asia. Most often, researchers adapted other established measures through translation, modification, or adoption of partial items. These studies are varied to the extent in which they assessed for cross-cultural invariance. Cross-cultural invariance is the idea that the measure is just as effective in assessing cyberbullying in different countries, regions, language or ethnic groups.

ADAPTED MEASURES WITH LIMITED RESEARCH ON FACTOR STRUCTURE

In Singapore, Kwan and Skoric (2013) created a measure of cyberbullying based on existing scales.^{41,42,43} It consisted of 18 items assessing a range of behaviors, such as "I have said things about someone to cause the person to be disliked by his/her friends;" "I have deliberately excluded someone from a Facebook group to make him/her feel left out;" and "I have posted embarrassing photos or videos of someone else on Facebook." Internal consistency was strong (Cronbach's α = .86).⁴⁴ Youth who perpetrated cyberbullying had higher rates of in-person bullying, in-person victimization, and

cybervictimization.⁴⁵ This suggests that their measure of cyberbullying was effective.

In China, the European Cyberbullying Intervention Project Questionnaire⁴⁶ was translated into Chinese. It consisted of 11 items assessing cyberbullying (for example, one item was, "I threatened someone through texts or online messages").⁴⁷ Within this study, the measure demonstrated good internal reliability (Cronbach's α = .79). No other discussion of the psychometric properties of the adapted measure was provided. Cyberbullying was associated with pro-cyberbullying personal and social attitudes,^{48,49} demonstrating preliminary construct validity.

In Taiwan, Huang and Chou⁵⁰ developed a measure assessing cyberbullying perpetration experiences (Cronbach's α = .96) based on Kowalski and Limber's⁵¹ study. The questions were substantially revised to better fit the Taiwanese context following discussion with junior high school students and teachers. The authors discussed issues with translation of the word "bullying," as the direct Chinese translation (ba-lin) is considerably more negative.⁵² Therefore, a longer explanation of cyberbullying with examples was provided to the participants. Additionally, the researchers added some original questions. The number of items and examples of items specifically assessing cyberbullying perpetration were not clear. Cyberbullying perpetration was strongly positively associated with cyberbullying victimization.⁵³

Also in Taiwan, Chang and colleagues⁵⁴ developed questionnaires based on the U.S. Youth Risk Behavior Surveillance System and the Youth Internet Safety Survey. These items were then assessed and refined by a group of ten experts from fields such as school bullying, information science technology, digital literacy, health education, and computer education. Cyberbullying perpetration was assessed using six items on a frequency rating scale.⁵⁵ Items included "How often have you ever made rude comments to anyone online;" "How often have you ever sent or posted others' embarrassing photos online;" and "How often have you ever spread rumors about someone online?" A pilot study was conducted to examine responses to the survey and establish reliability.⁵⁶ The internal consistency of the newly developed measure was not provided. There was evidence of construct validity; cyberbullying was associated with internet risk behaviors, in-person bullying and depressive symptoms.

In India, a cross-sectional study assessing the prevalence of cyberbullying⁵⁷ used the 15-item Cyber Harassment Student Survey.⁵⁸ This measure examined an individual's experience with cyberbullying as the perpetrator. It also examined the victim as well as the emotional and behavioral impact of being cyber-victimized. The original items were developed by Beran and Li⁵⁹ based on the researchers' experiences of working with youth in schools. The survey included a definition of harassment. One item assessed cyberbullying perpetration: "Do you use technology to harass others?" measured on a 5-point rating scale. There was no discussion of the psychometric properties of the measure in India.⁶⁰ However, cyberbullying perpetration, which suggests that this was an effective measure.⁶¹

An 18-item cyberbullying measure originally developed in Turkey⁶² was adapted by the National Youth Policy Institute. It was translated into Korean from Turkish to assess South Korean adolescents' cyberbullying.⁶³ The resulting measure had six items. An example item provided was "I send threatening or hurtful comments through e-mail." The internal consistency was strong (Cronbach's $\alpha = .89$).⁶⁴ Construct validity was supported by positive relations with daily Internet use, previous offline bullying and victim experiences, lack of self-control, and aggression. The same Cyberbullying and Cyber Victimization measure⁶⁵ was translated to Chinese. It was used by Zhou and colleagues⁶⁶ to investigate the risk factors of cyberbullying in adolescents in China. The 18-item, Chinese version had strong internal consistency (Cronbach's $\alpha = .88$). Example behaviors included sending hurtful emails or making threats. Construct validity was supported by positive associations

with time spent online, having internet access in one's bedroom, and in-person bullying perpetration. 67

ADAPTED MEASURES WITH CROSS-CULTURAL RESEARCH

A cross-cultural study, conducted across China, India, and Japan, studied differences in cyber aggression perpetration and victimization across cultures.⁶⁸ Cyber aggression perpetration was assessed using nine items indicating frequency (e.g. "How often do you spread bad rumors about another peer online or through text messages?"). This scale was adapted from a measure assessing in-person relational aggression,⁶⁹ previously used in other studies examining cyberbullying perpetration.^{70,71} The measure was translated into the primary language and then back-translated into English. Internal consistency was good across countries (Cronbach's alphas were .90 for China, .83 for India, and .86 for Japan).72 Cyberbullying perpetration was associated with in-person victimization, cybervictimization and in-person bullying across China, Japan, and India,⁷³ providing some evidence of construct validity. They did not report on the factor structure. In addition, cross-cultural equivalence was not described.

A cross-cultural study conducted with samples from the United States and Japan assessed cyberbullying frequency. This study adapted Ybarra and colleagues'⁷⁴ Cyber Behavioral Questionnaire.⁷⁵ The scale consisted of 3 items ("send threatening or aggressive comments to anyone online", "send rude or nasty comments to anyone online", "target someone with rumors spread online, whether they were true or not"), with higher scores indicating greater frequencies of cyberbullying.⁷⁶ The measure, originally developed in the U.S., was translated from English to Japanese, and back-translated to ensure consistency.⁷⁷ Item equivalence testing was conducted where each individual item was investigated for

cultural differences. One item demonstrated minor differences indicating that people may have responded differently to the item based on country of origin.⁷⁸ The internal consistency was stated to be similar between Japanese and U.S. samples, but numbers were not provided. Cyberbullying perpetration was found to be associated with positive attitudes toward cyberbullying. It was also found to be associated with positive reinforcement of cyberbullying.⁷⁹

A study conducted in U.S. and Singaporean samples $^{\rm 80}$ used a nine-item cyberbullying questionnaire (e.g. "I made fun of someone by sending/posting stories, jokes, or pictures about him/her").81 The nine-item measure used in this study, developed by Ang and Goh,⁸² was based on the concept that cyberbullying consists of deception (pretending to be someone), broadcasting (spreading jokes, rumors, or stories about a person), and targets online action (sending mean or threatening messages). The measure had good internal consistency in the U.S. sample ($\alpha = .91$) and Singapore sample (α = .84). Both exploratory (open-ended) and confirmatory factor analysis (theory-based analysis) were used for validation.⁸³ Multigroup confirmatory factor analysis found that the measure worked equally well across genders.⁸⁴ Cyberbullying was negatively related to empathy⁸⁵, and positively related to reactive and proactive aggression⁸⁶, providing preliminary support for construct validity.

We translated the cyberbullying perpetration and victimization scales of the Problem Behaviors Frequency Scales – Adolescent Revised (PBFS-AR)⁸⁷ to Hindi. Some item-level adaptations were made to be appropriate to the Indian context. It consisted of 22 items and measured both cyberbullying perpetration and cybervictimization (see the Appendix for the full scales in English and Hindi). We then implemented a survey with participants from U.S. (10-14 years old) and India (ages 9-15). Of note, estimates of cyberbullying and cybervictimization were high in India. More than one-third of youth (35%) reported engaging in at least one cyberbullying behavior in the past 30 days, and 34% reported

experiencing at least one instance of cybervictimization in the past 30 days. We found strong cross-cultural internal validity as measured by Cronbach's α (cyberbullying α = .96 [India]; .94 [U.S.]; cybervictimization α =.93 [India]; .94 [U.S]). We also found evidence of measurement invariance across cultures. Concurrent validity was demonstrated by the association of cyberbullying with physical and relational aggression and the association of cybervictimization with physical and relational victimization. Overall, the adapted PBFS-AR is likely to effectively measure cyberbullying and cybervictimization in India. The extent to which this may generalize to other countries in Asia is unknown.

In the following chapters, we elaborate on cyberbullying prevention and response. Chapter three covers individual level determinants, relationships with peers and their effect on cyberbullying behavior. This chapter also conveys the role of school as a community level organization in preventing cyberbullying. Understanding school- and peer-level factors is important in preventing cyberbullying events and mitigating its potentially harmful impacts. By far these are the most studied factors addressed in interventions to prevent cyberbullying.

CONCLUSION

Cyberbullying is an emerging area of research in Asia. Gold standard measures of cyberbullying, with evidence of cross-cultural validity, is vital to effective measurement of cyberbullying. These measures, when established, can be used to understand the prevalence of cyberbullying. They can also be used to identify outcomes associated with cyberbullying and to explore malleable risk and protective factors. As of now, there is limited information about the measures of cyberbullying that are currently being used in Asia. The measures with the most evidence include Ang and Goh's (2010) measure, which appears to work well in both the U.S. and

Singapore;^{88,89} Ybarra and colleagues' (2007) measure, which appears to work well in the U.S. and Japan;^{90,91} and Wong, Chan, and colleagues' measure, which has been studied in Hong Kong.^{92,93} The research on cyberbullying in Asia has heavily occurred in East Asia, but research in South Asia, Southeast Asia, and Central Asia is insufficient to draw concrete conclusions.

To establish strong measures, future research can: (1) work to establish the effectiveness of existing measures; or (2) work to develop new measures or adapt existing measures using a groundup approach. Using a mixed methods approach is very useful both in initial measure development and in adaptations of measures.^{94,95} For example, using qualitative research, such as through interviews or focus groups, makes it possible to explore a range of cyberbullying behaviors that occur in adolescents' contexts. This approach ensures that commonly occurring cyberbullying behaviors are identified. For example, focus groups in India suggest that one commonly occurring behavior is posting insults or slander about someone else on school-specific anonymous boards.⁹⁶ Given this finding, it may be important to add an item assessing this to any cyberbullying measure that is being used in India. Overall, using qualitative research to bring to light local or regional manifestations of cyberbullying will make it possible to develop measures of cyberbullying that capture the range of behaviors that occur in that specific context. Once the items on a measure are finalized, it is important to examine the validity of the measure by determining how well the items go together, the extent to which the measure works equally well across ethnic or linguistic groups, and the extent to which the measure is associated with other related variables.

KEY TAKE-AWAYS

• Overall, cyberbullying is a moving target, with rapid changes in

electronic communication technologies enabling new forms of aggression.

- Cultural factors may play a strong role in what cyberbullying behaviors occur and are common.
- Effective measurement development and testing strategies are needed to enable accurate cyberbullying research.
- Scales with multiple behavior-based items and without explicit use of the word "cyberbullying" are more likely to be effective cross-culturally.

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Chapter 3: Cyberbullying Within the Context of Peers and School

KRISTA MEHARI AND NATASHA BASU

ABSTRACT

Effective cyberbullying prevention is based on an accurate understanding of risk and protective factors of cyberbullying across systems. Cyberbullying prevention should include individual, relationship, community, and societal factors. Cyberbullying is closely related to in-person bullying and aggression, but it has some unique risk and protective factors also. This chapter conceptualizes cyberbullying as broadly within the umbrella of peer interactions. In this chapter, we describe how other peer interactions and peer relationships can predict the occurrence of cyberbullying and cybervictimization. Similarly, given that youth spend the majority of their time at school, school plays a fundamental role in adolescents' lives. In this chapter, we also discuss school-level factors that predict or reduce cyberbullying. These factors can be leveraged for school-based prevention. The chapter concludes with the current understanding of effective school-based prevention and school practices in responding to cyberbullying.

As discussed in previous chapters, cyberbullying is perpetrated through electronic communication technologies. Individual, peer, and school factors play an important role in the development of cyberbullying behaviors. Cyberbullying involvement has significant implications for adolescents' peer and school interactions. Within the context of the socio-ecological model introduced in Chapter 1, peer interactions fall within "relationship" factors, and school factors fall within the "community" level. Cyberbullying happens among peers, so it is important to understand how other peer interactions and peer relationships can predict the occurrence of cyberbullying and cybervictimization. Similarly, understanding school-level factors that predict or reduce cyberbullying is vital for effective intervention.

ASSOCIATIONS BETWEEN CYBERBULLYING INVOLVEMENT AND BULLYING INVOLVEMENT



Figure 3: Peer predictors of cyberbullying victimization and perpetration supported by research in Asian countries.

Cyberbullying and cybervictimization are closely related to inperson bullying and in-person victimization. Many studies have demonstrated strong concurrent relations between cyberbullying and in-person bullying. According to a meta-analysis, in-person bullying is one of the best predictors of cyberbullying. The only stronger correlate of cyberbullying identified in the meta-analysis was cybervictimization.¹ Most of the research on what predicts cyberbullying has been conducted in Western countries.²

Research across Asian countries is limited. The available research demonstrates a positive association between in-person bullying and cyberbullying. In a study conducted among adolescents in New Delhi, India, cyberbullying was correlated with indirect or relational bullying but not with physical bullying.³ In a study conducted with Chinese high school students, in-person bullying was found to be a significant and strong predictor of cyberbullying.⁴ Research conducted among South Korean adolescents found a significant positive association between in-person bullying and cyberbullying.⁵ Additionally, Kwan and Skoric⁶ found strong associations between school bullying and cyberbullying (r = .56) in adolescents from Singapore. In Hong Kong, a study conducted with 1917 adolescents found a positive correlation between in-person bullying was positively associated with cyberbullying in Cyprus (r = .61).⁸

Based on the existing research in both Western and Asian countries, it is likely that both cyberbullying and in person bullying are types of bullying that manifest through different media. Almost all youth who perpetrate cyberbullying also perpetrate in-person bullying. It is highly uncommon for youth to perpetrate cyberbullying without also having perpetrated in-person bullying. However, it is likely that a smaller percentage of youth who perpetrate in-person bullying also perpetrate cyberbullying.^{9,10,11} These findings suggest that interventions to reduce in-person bullying may be effective in reducing cyberbullying. However, given that cyberbullying is different from bullying, those interventions may need to be adapted slightly to address the unique aspects of cyberbullying.

Similarly, cybervictimization and in-person victimization are also closely correlated. In the meta-analysis conducted by Kowalski and colleagues,¹² cybervictimization and in-person victimization were correlated at r = .4 indicating a small-to-medium relationship. Again, the only stronger correlate of cybervictimization was
cyberbullying.¹³ More recent research using behavior-based measures has identified correlations between cybervictimization and in-person victimization as large as .85, indicating a large relationship. Again, most research has been conducted in Western countries.

Emerging research in Asia provides emerging support for the relation between cybervictimization and in-person victimization. For example, a study conducted in Hong Kong found in-person victimization was positively associated with cyberbullying victimization.¹⁴ This relationship was also significant in South Korean adolescents.¹⁵ A positive relationship was demonstrated between in-person victimization and cybervictimization in China (r (r = .18),¹⁶ Cyprus (r = .48),¹⁷ Japan (r = .32),¹⁸ India (r = .13),¹⁹ Indonesia (r = .73),²⁰ and Singapore (r = .48).²¹ However, one study conducted among middle school students in New Delhi, India did not find a relation between cybervictimization and in-person victimization.²² However, the majority of the research suggests that cybervictimization and in-person victimization are correlated in Asia. Together, there appears to be a significant association between in-person bullying and cyberbullying across different cultures and countries in Asia.

Based on emerging longitudinal research, it appears that youth are first victimized in person. Youth who are victimized in-person are more likely to experience increases in cybervictimization. For example, it is possible that rumors that are started about an adolescent in person are then spread via text messages or social media. It is also possible that adolescents who victimize a particular adolescent in person begin victimizing that adolescent online in other ways (e.g., making fun of photos, posting rude comments, sending threats). In contrast, youth who are cyber-victimized are not more likely to experience increases in in-person victimization.^{23,24} That is, there is no evidence that victimization.



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ASSOCIATIONS BETWEEN CYBERBULLYING INVOLVEMENT AND INDIVIDUAL FACTORS

A range of individual-level characteristics, such as demographics (e.g., gender, age) and psycho-social factors (such as attitudes and impulsivity) have been explored as possible factors of cyberbullying. These factors can predict why some youth are more likely to be involved in cyberbullying than others.

GENDER DIFFERENCES IN CYBERBULLYING

There is varying evidence about the rates of cyberbullying across gender. Multiple studies have identified higher prevalence of self-reported cyberbullying among male adolescents. This includes a sample adolescents in Australia, Canada, Finland, Taiwan, Turkey, Singapore, and Switzerland.^{25,26,27,28,29,30} However, several of these

studies used the word "bullied" in their measure, which male adolescents may be more willing to endorse because it is less socially undesirable for a boy to admit to bullying than for a girl. Ybarra and Mitchell (2007), who avoided the word "bullied" in their measure, found no gender differences in prevalence of cyberbullying. Still, male adolescents were more likely to be *frequent* aggressors.³¹ On the other hand, Calvete and colleagues (2010) found that there were no gender differences in frequency of perpetration overall, but that male adolescents were more likely to send sexual messages and to post videos of assaults.³²

No gender differences in perpetration of cyberbullying were found in a number of studies in Canada. These studies included ethnically diverse samples of adolescents in Europe, the United States, and online.^{33,34,35,36,37,38,39,40,41,42} Overall, findings indicate that there are no gender differences. If gender differences exist, male adolescents are slightly more likely to self-report perpetration of cyberbullying. Despite these findings, researchers continue to argue that female adolescents prefer indirect and relational forms of aggression that are easily perpetrated through electronic means.⁴³ This is not supported, and in fact often contradicted, by research.

Gender differences in cyberbullying in Asian countries and specifically in India have yet to be fully explored. One study of 11-15-year-old students in the Delhi area found that male adolescents reported higher prevalence of cybervictimization. There were no gender differences in cyberbullying perpetration.⁴⁴ In general, existing surveillance data suggest that male adolescents have greater access to electronic communication devices than female adolescents in India, especially in rural areas.⁴⁵ It is possible that male adolescents may be more likely to have cyberbullying involvement simply due to access. More research is needed to explore whether there are gender differences in cyberbullying involvement in India.

AGE DIFFERENCES IN CYBERBULLYING

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ACROSS ADOLESCENCE

In addition to gender differences, several studies have explored age differences in cyberbullying across adolescence. There is some evidence that cyberbullying peaks in early adolescence (11-14 years old) and decreases in later adolescence (15 years old and older). This finding is comparable to the trajectory observed in in-person bullying. This broad pattern has been found in the U.S. and Canada.^{46,47,48} It is possible that as adolescents enter secondary schools (e.g., middle school, junior high, high school) where they are first exposed to cyberbullying. Then they begin to perpetrate cyberbullying due to observational learning and perhaps reactive aggression. It is unclear whether this pattern is comparable in other countries, especially in lower or middle-income countries, where private access to electronic communication devices might be less common in early adolescence.

PSYCHO-SOCIAL RISK FACTORS FOR CYBERBULLYING INVOLVEMENT

Most research on individual-level factors associated with cyberbullying involvement has been cross-sectional. That is, the hypothesized "risk" factors are assessed at the same time point as the outcome (cyberbullying involvement). Therefore, it is impossible to determine whether these factors cause cyberbullying, whether cyberbullying causes those other factors, or whether something else (something that was not assessed) causes both cyberbullying involvement and the other factors. Because of this, at most, we can assume that these factors co-occur with cyberbullying involvement.

Psycho-social characteristics that may place adolescents at risk for cyberbullying perpetration include low levels of empathy, moral disengagement, beliefs supporting aggression, impulsivity, other delinquent behavior, and substance use.^{49,50,51,52,53,54} In addition, adolescents who use the Internet more frequently and engage in more risky online behaviors (e.g., sharing personal information, agreeing to meet in person with someone they met online) are more likely to perpetrate cyberbullying.⁵⁵ Patterns of Internet usage also predict other digital risks such as online sexual solicitations and sexual risk behaviors, exposure to a variety of explicit content, and information breaches and privacy violations. This is explained in further detail in Chapter 5 of this book.

Similar to cyberbullying perpetration, psycho-social characteristics that place adolescents at risk for cybervictimization include low levels of empathy, beliefs supporting aggression, lower social intelligence and social anxiety, lower academic achievement, substance use, and loneliness.⁵⁶ As with cyberbullying perpetration, adolescents who spend more time on the Internet and engage in more risky online behaviors are more likely to be victimized.^{57,58} It is important to note that most of the research on psycho-social predictors of cyberbullying involvement was conducted in Western and high-income countries. It is unclear whether risks for cyberbullying perpetration would be the same or different in Asian countries and lower- to middle-income countries. Because of this, more research is needed to understand what individual-level factors may explain individual differences in cyberbullying involvement among youth in Asian countries.

ASSOCIATIONS BETWEEN CYBERBULLYING INVOLVEMENT AND PEER FACTORS

Peer factors fall within the "relationship" domain of the socioecological model. Like individual-level factors, they explain a significant percentage of differences in youths' levels of cyberbullying involvement. Broadly, peer attitudes supporting

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bullying or cyberbullying predict individual youths' levels of bullying and cyberbullying perpetration.⁵⁹ This may be due to social mimicry. Specifically, peers who support cyberbullying may be more likely to model cyberbullying behaviors. This may cause increased cyberbullying due to increased exposure to aggressive peer models.⁶⁰ In addition, when adolescents do try out aggressive behaviors, they are likely to be reinforced by their peers if their peers have attitudes justifying cyberbullying perpetration. For example, when adolescents believe their peers support and approve of cyberbullying, they are more likely to take online risks like cyberbullying.⁶¹ Adolescents who have pro-social peers have lower levels of cyberbullying.

In a peer group that supports aggression, using aggression may provide adolescents with power, status, and privilege among their peers. This finding is consistent with a research study conducted with adolescents from Singapore and Malaysia, whose ethnic identification included Chinese, Malay, and Indian. It found a positive association between cyberbullying and normative beliefs about aggression.⁶² Reinforcement by friends was found to be positively associated with cyberbullying in Japan.⁶³ This finding is supported by a qualitative study in Indonesia which demonstrated that group conformity facilitated an increase in the prevalence of cyberbullying among adolescents.⁶⁴ Finally, a study in China found that pro-cyberbullying class norms predicted the occurrence of cyberbullying in high school.⁶⁵ Interestingly, this was only true when students perceived their class to be highly cohesive. In contrast, when a high school student perceived their class to have low cohesion, there was not a significant relationship between procyberbullying class norms and incidents of cyberbullying.⁶⁶ This study demonstrated one possible mechanism for why these normative beliefs might vary across groups.

Popularity and social acceptance may play an interesting role in cyberbullying. One study of adolescents in the western United States found that both cyberbullying and cybervictimization were positively associated with popularity and social acceptance cross-

sectionally. In addition, popularity predicted increases in cyberbullying, whereas cyberbullying predicted increases in popularity for girls but decreases in popularity for boys. Social acceptance predicted increased cyberbullying for boys but not for girls.⁶⁷ In a sample of students in secondary schools in Germany, cybervictimization during chat sessions was negatively associated with self-reported perceived popularity with other chatters.⁶⁸ In a sample of elementary school children in a predominantly white, upper SES school in the United States, cyberbullying perpetration was concurrently associated with lower popularity and social acceptance. Both popularity and social acceptance were measured by peer report. Similarly, cyberbullying was associated with fewer mutual friendships.⁶⁹ Currently, the majority of the research on popularity, social acceptance, and cyberbullying is conducted in Europe and North America. As such, there is no research on the generalizability of these relationships in Asian countries.

The relation between peer rejection and cyberbullying is complex. In a study of middle school students in the midwestern United States, peer rejection was concurrently correlated with relational and verbal cyberbullying. It also predicted increases in cyberbullying.⁷⁰ Cyberbullying was also linked to loneliness in a sample of elementary school children in the United States.⁷¹ Research conducted in Asia also suggests that cyberbullying involvement is associated with poor peer relationships. For example, a study of Chinese middle school students found a positive association between cyberbullying and loneliness.⁷² Similarly, another cross-sectional study of Chinese middle school students reported better peer relationships were negatively associated with engagement in cyberbullying.⁷³ Cross-national research conducted with adolescents living in China, India, and Japan found that peer negatively associated with cyberbullying attachment was perpetration in China and India, but not in Japan. Additionally, within China, India, and Japan, adolescents who were not involved in cyberbullying had greater peer attachment compared to youth with any involvement in cyberbullying (victimization, perpetration, or some combination of those). 74

It is possible that peer rejection and aggression are part of a vicious cycle. In this cycle, children who are aggressive in a nonsocially skilled way are more likely to be rejected. Children may react to rejection with increased aggression. It is also possible that adolescents engage in cyberbullying as a way to establish their social position and to attempt to maintain their social status. However, it is possible that the skill level of adolescents varies widely. This means that cyberbullying may promote the social status of socially skilled youth, but that it may harm the social status of socially awkward youth. It is also possible that cyberbullying is less reinforced than in-person bullying. Thus, is less likely to promote social dominance, than in-person bullying⁷⁵ because of the asynchronicity of interactions during online communications. That is, an adolescent could post a mocking picture of a peer, but not know or notice when it was shared, laughed at, or commented on. It is also possible that fewer peers in the same social circles would know about the post than if it happened in person at school, where youth spend the majority of their time together.

ASSOCIATIONS BETWEEN CYBERBULLYING INVOLVEMENT AND SCHOOL FACTORS

School factors fall within the "community" level of the socioecological model. Like individual and relationship level factors, school factors explain a small but significant amount of individual differences in cyberbullying. Although schools are often on the front lines of confronting cyberbullying behaviors (Pelfrey et al., 2015), little is known about the associations between school factors and cyberbullying involvement. It is important to note that cyberbullying appears to have higher rates of perpetration during out-of-school time compared to during school hours (e.g., Smith et al., 2008). Therefore, although supervision and restriction may reduce cyberbullying during the school day, it may not help in prevention of all acts of cyberbullying. Other factors related to school climate, including fostering a positive climate and promoting healthy relationships, may be more important. In a meta-analysis of research mostly conducted in Western countries, school climate and school safety had small but significant correlations with lower rates of cyberbullying perpetration and victimization (Kowalski et al., 2014). That is, adolescents in schools that they perceived to be safe, with positive student-student and student-teacher relationships, were less likely both to perpetrate cyberbullying and experience cybervictimization. In school environments, close relationships with teachers are associated with reduced likelihood cyberbullying.⁷⁶ Teachers' awareness bullying and of of cyberbullying and intervention has also been related to lower rates cyberbullying.⁷⁷ At an individual level, youth who are involved in cyberbullying may have more problems at school than youth who are not involved in cyberbullying, such as getting in trouble and not feeling safe at school.^{78,79}

School risk factors for cyberbullying involvement is an emerging body of research in Asian countries. Wang and colleagues (2019) found in a study conducted in China that adolescents who perceived a more positive school climate were less likely to perpetrate cyberbullying.⁸⁰ Further, in a study of Hong Kong youth, a sense of belonging at school was associated with lower levels of cyberbullying perpetration.⁸¹ A more recent study in Hong Kong found different relations between school factors and cyberbullying for male and female students.⁸² For male adolescents, positive school experiences and school involvement were negatively associated with cyberbullying perpetration. For female adolescents, a sense of belonging in school was negatively associated with cyberbullying perpetration.⁸³ Together, these studies underscore the importance of considering school influences to understand developmental processes that lead to cyberbullying.



Figure 4: School predictors of cyberbullying victimization and perpetration supported by research in Asian countries.

SCHOOL-BASED PREVENTION PROGRAMS

Schools can be an ideal setting for prevention efforts due to their reach. The heavy majority of youth attend school. Because of this, schools have a golden opportunity to promote the safety, health, well-being, and citizenship of the majority of youth in a country. School-based prevention strategies include primary prevention (strategies to prevent cyberbullying before it begins) and secondary prevention (strategies to reduce the frequency of cyberbullying or mitigate the impact of cyberbullying). A combination of the two strategies is important for a holistic prevention approach. In addition to specific prevention programs, schools can create policies that may serve as primary and secondary prevention strategies: a punitive, fear-based approach, or a resilience-based approach. A fear-based approach includes heavy restrictions of digital media, zero-tolerance policies, and punishment for undesired behavior without training, modeling, scaffolding of, and reinforcement of desired behavior. In contrast, a resilience-based approach focuses on creating a positive school climate; training, modeling, and reinforcing desired behaviors. It also focuses on building capacity in adult stakeholders to prevent and intervene in cyberbullying. Further it focuses on providing remedial skillbuilding for youth who engage in cyberbullying.

PRIMARY PREVENTION

Existing reviews of cyberbullying prevention programs suggest that most cyberbullying prevention programs are school-based and show promise of effectiveness.^{84,85,86} However, in general, individual programs have only been supported by a single research study conducted by the program developers.⁸⁷ More research is needed to identify the active ingredients for effective school-based cyberbullying prevention programs. Due to the high degree of overlap between cyberbullying and in-person bullying, many of the skills taught in school-based violence or bullying prevention programs are likely to be relevant to the reduction of cyberbullying. Such programs may include anger management, empathy, and problem-solving.

However, because of the differences in circumstances surrounding in-person and electronic communication, those programs may need to be adapted or include cyberbullying-specific modules. For example, teaching adolescents to read facial expressions or other physical cues will not improve empathy in situations where the other person's facial expressions are not visible. In that case, teaching perspective-taking based on identifying the situation and thinking about how people might feel when they were in that situation may help to improve empathy in electronic communications. Beliefs about aggression are also particularly relevant to aggressive behaviors and may be different for cyberbullying. There is some emerging evidence to support this.⁸⁸ Intervention programs may need to target cyberbullyingspecific beliefs. It is possible that adolescents perceive the social context for electronic aggression to be less disapproving than for in-person aggression. Initial focus group data also suggests that adults in India may be more tolerant of cyberbullying than of physical bullying. This may cause youth to believe that they may not have effective advocates in the adults close to them.⁸⁹ Because of this, school-based efforts may need to include education for parents and guardians on cyberbullying, its impact, and its prevention. In addition, for both youth and adults, digital safety behaviors, including protection of private information, should be taught as part of intervention programs.^{90,91} A more comprehensive description of digital safety is provided in Chapter 5.

Promoting a positive school climate and positive peer relationships may also help to reduce cyberbullying. Adolescents are unlikely to tell their parents about victimization experiences, and even more unlikely to tell teachers.^{92,93,94,95} On the other hand, as much as 75% of victimized adolescents will tell their friends.⁹⁶ Friendship is a strong resource for adolescents. It has been shown to mitigate the effects of victimization as well as to reduce the likelihood of victimization occurring in the future.⁹⁷ Because of this, interventions could also teach adolescents how they can best help their friends when they know that their friends are perpetrating cyberbullying, being cyber-victimized, or both.

PRIMARY PREVENTION: SCHOOL-LEVEL POLICY

Currently, many schools do not have policies and procedures around appropriate and safe behavior online. There is an urgent

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need for schools to establish and promulgate expectations for digital behavior and to identify procedures for when those expectations are not met.⁹⁸ Clear expectation-setting prior to problematic behavior can often reduce the occurrence of problematic behaviors. These policies should include identification and reinforcement of pro-social behavior both online and inperson. An example of an intervention based on clear expectation-setting and reinforcement of desired behaviors is School-Wide Positive Behavior Support (SWPBS). SWPBS is a widely-used, whole-school behavior support program that focuses on establishing clear behavior expectations for students. It also focuses on consistently reinforcing desired behavior across school settings, and identifying and implementing a range of consequences for problem behaviors.⁹⁹ Such school-level strategies can be helpful in preventing cyberbullying before it becomes a problem.

SECONDARY PREVENTION: SCHOOL RESPONSES TO CYBERBULLYING INCIDENTS

Even if the most effective primary prevention strategies are implemented, it is likely that some cyberbullying will occur. This creates a need to establish procedures to respond to cyberbullying. Cyberbullying is unusual in that it does not occur in a physical space. This raises the question of whose responsibility it is to monitor electronic interactions and enforce consequences for adolescents who are perpetrating cyberbullying. Most researchers have pointed to the schools as the primary responsible authority. Despite most cyberbullying occurring outside of school property, schools have an ethical and legal responsibility to intervene when cyberbullying creates an unsafe environment that impedes students' ability to learn.¹⁰⁰ Schools are placed in a difficult position. On one hand, they may not violate students' freedom of speech in countries that protect freedom of speech, particularly when that speech is occurring off school grounds. On the other hand, the school is required to provide a safe learning environment with equal access to education. A school is liable in the United States if it has "effectively caused, encouraged, accepted, tolerated, or failed to correct" a hostile environment that impairs a student's ability to learn (p. S65).¹⁰¹ Because of schools' somewhat vague position as monitor and enforcer, it is also important for parents and guardians to be involved. Schools are only responsible to intervene when they are aware of the situation and can demonstrate that the situation is interfering in the learning process in some way. Parents and guardians can advocate for changes in school policy and government regulations, as well as draw media attention to areas of concern.¹⁰² Parents and guardians can also monitor their children's digital behavior, teach and model respectful interactions, and intervene if their child is aggressive or victimized.

As schools craft policies related to cyberbullying and digital behavior, there are important issues to keep in mind:

1. Youth who are victimized should not be responsible for investigating or proving the incident. Before the aggressor is identified and the wrongful nature of the act is established, it is important that the person who reported the aggression (bystander, victim, or parent) does not bear the burden of proving what happened and who did it. It is an unfortunate effect of "innocent until proven guilty" that the victims or reporters are wrong until they prove themselves right. This approach decreases the likelihood that adolescents will put themselves through that painful process. One way to circumvent this unintentional punishment is to establish a school staff member to receive complaints, anonymously if desired, and to investigate the incident. Then, if aggression is established, the steps outlined in school policy must be followed. This will remove the burden of proof from reporters, thus teaching reporters that they will not be punished for

seeking help. It will also teach adolescents who are perpetrating aggression that their behavior will be detected and addressed. The process of implementing clear, just school policies and procedures may change the dynamics from a conflict between the aggressor and the reporter (likely the victim) into an established procedure in which school officials take action against a violation of school policy.

- 2. Restriction of victimized youths' access to electronic media may be punitive and unhelpful. Encouraging adolescents who have been victimized to simply reduce their electronic interactions (e.g., taking down personal pages on social networking sites, or not going online at all) may be the first intervention response that comes to mind for adults. However, fear of online restriction is one of the primary reasons that adolescents do not tell adults about their victimization experiences. It is important to understand that adolescents consider reduced access to communication technologies to be a punishment.^{103,104} It may be productive to encourage communication between adolescents and their teachers. But before this is done, adolescents must first know that reporting will both resolve the problem and not result in negative outcomes for themselves.
- 3. Abusing youth who perpetrate cyberbullying is not effective in changing behavior. It is important not to place all the blame on adolescents who cyberbully. As shown by the high correlation between cyberbullying and cybervictimization, there are often no purely provocative adolescents or blameless victims. Adolescents learn negative patterns of interactions through modeling and reinforcement. They are often impulsive and misinterpret cues. Sometimes they may simply have difficulty taking the other person's perspective into account or understanding the damage caused by their actions. In addition, there are currently few clear rules or expectations regarding electronic behavior, which may feed into a perception that aggressive behavior is not a problem and will not be punished.

Anticipation of blame also reduces adolescents' likelihood to report their experiences when victimized, because they believe that the only negative consequences will be for themselves (Mishna et al., 2009). The consequences for aggressive adolescents should be aversive but should also help them to identify pro-social strategies for reaching goals, managing anger, controlling impulsivity, and resolving conflict. Doing this will avoid abusing adolescents who likely have been victimized themselves while promoting a healthy and respectful electronic culture. Specific ways to accomplish these goals may include anger management or perspectivetaking training.

4. **Most policy changes have not been empirically tested.** Currently, the best-practice recommendations for school policy are based on descriptive research and anecdotal evidence. To address these issues, creating, implementing, and evaluating policies and procedures for cyberbullying involvement is vital (Hertz & David-Ferdon, 2008).

The following chapters discuss how to avoid cyberbullying and to some extent how to effectively deal with cyberbullying. Chapter four addresses parents' and caregivers' needs for guidance and reassurance on how best maintain their children's safety online and protect against cyberbullying. We emphasize the importance of parent-child communication, warm parent-child relationships, and parental monitoring that supports adolescents' search for autonomy. In short, this chapter details the role of family, especially parental relationships and media parenting with respect to cyberbullying behavior among youth.

CONCLUSION

Cyberbullying and cybervictimization are closely related to in-

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person bullying and victimization. Because we know that a range of individual psychosocial factors, relationship factors, and community factors predict cyberbullying, intervention strategies should not just target individual youth, but should also target peer groups and schools. Schools have the potential to play an important role in cyberbullying prevention. It is important to use the existing research on cyberbullying prevention and bullying prevention so that we can make sure that we are investing our resources in prevention strategies that keep youth safe online.

KEY TAKEAWAYS

- Peer and school factors predict perpetration of cyberbullying.
- Best practice cyberbullying prevention strategies should promote healthy relationship, emotion regulation, and problem-solving skills, as well as digital safety and citizenship.
- Effective prevention and intervention must include schoollevel policies and procedures that promote a positive school climate, create clear expectations for appropriate behavior, and identify resilience-based strategies to respond to cyberbullying incidents.
- Both school policy and prevention programs must be evaluated and modified to be maximally effective.

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Chapter 4: Parenting in the Digital Age: Best Practices to Prevent and Reduce Cyberbullying

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ABSTRACT

Parents often feel overwhelmed when their children skillfully navigate technology and online environments that they are inexperienced with. As such, parents are heavily in need of guidance and reassurance on how to best maintain their children's safety

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online and prevent cyberbullying. However, some differences in parenting across Western and Eastern cultures may influence approaches to media parenting. Further, given the novel nature of this research area and the fast-paced evolution of technology, longitudinal research on parenting and cyberbullying is lacking. Extensive research on effective interventions and media parenting strategies across diverse contexts are much needed.

This chapter examines the available literature on the importance of parents to protect their children against cyberbullying. This includes parent-child relationships, parent-child communication, and parental monitoring that supports adolescents' search for autonomy. We conclude this chapter with several models, strategies, and resources for parents in their attempts to navigate the world of technology and prevent cyberbullying.

A substantial body of evidence has established the protective power of a supportive parent-child relationships to strengthen pro-social behaviors and reduce adolescent risk behaviors. Across Western and Eastern cultures, parent supportiveness and communication are associated with academic success, empathy, and pro-social behaviors.^{1,2,3,4} Parental monitoring reduces youth substance use, delinquent behaviors, sexual risk behaviors, and bullying in all its forms.^{5,6} However, parents report feeling overwhelmed by technology when it comes to online risks. Unsure of how to successfully monitor online behavior,⁷ many parents worry about the effects of cyberbullying on their children. Parents are a critical protective factor for reducing cyberbullying risk at the relational level of the ecological system.

Supportive parent-child relationships protect against cyberbullying and enhance resilience of children who encounter high-risk environments. In a review of the literature, Elsaesser and colleagues found that most studies of parenting and cyberbullying suggested that parent-child relationships were negatively related to cyberbullying perpetration and victimization.⁸ Parental monitoring may be less salient than warmth and connectedness.⁹ Other research has found mixed results regarding parental monitoring in online contexts, suggesting that restrictive monitoring may not be the most effective.^{10,11} This hypothesis needs further examination, particularly in Eastern cultures. Notably, the majority of these studies were cross-sectional, which underscores the emerging nature of this research.

Because 70% of cyberbullying occurs at home and parents have expressed a need for digital safety information,¹² clear guidance and preventative programming is needed for parents. We know from research across several countries that cyberbullying prevention programs are effective.^{13,14,15} A large majority of these programs have been implemented in schools and few have included parent support in their programming. Additionally, the majority of cyberbullying preventative interventions have been in European countries, with only a few scattered studies in the US, Middle East, and Australia.¹⁶ In this chapter, we present the current knowledge of parenting strategies that are associated with low cyberbullying, highlighting available longitudinal research. We also emphasize the ways that online contexts may be similar and different to parenting in face-to-face contexts.

PARENT-CHILD CONNECTEDNESS AND FIRMNESS AS PROTECTION AGAINST CYBERBULLYING

Warm and caring relationships between parents and children balanced with rules and monitoring directly protect against cyberbullying victimization and perpetration. It may buffer against the negative outcomes of cyberbullying, promoting resilience.¹⁷ Based on these characteristics, four parenting styles have been identified: 1. authoritative parenting characterized by warm and

Chapter 4: Parenting in the Digital Age: Best Practices to Prevent and Reduce Cyberbullying | 79 supportive yet firm parenting (e.g., listening to children's perspectives while being consistent with rules); 2. authoritarian parenting characterized by controlling parenting (e.g., being rule and punishment focused); 3. permissive parenting characterized by warmth and support with little support for rules; 4. neglectful parenting characterized by low warmth and low control. Authoritative parenting has repeatedly been shown to have the best outcomes for youth.

With respect to cyberbullying, youth entering secondary school in the Netherlands who reported having authoritarian parents had the lowest levels of cyberbullying victimization and perpetration.¹⁸ Their parents were both warm and set firm rules. However, few longitudinal studies have examined cyberbullying and parenting. In a notable exception of 488 youth in the northwest of the U.S., researchers examined parenting styles, including authoritative parenting and authoritarian parenting.¹⁹ They found that warm and supportive aspects of parenting at age 12 were related to cyberbullying perpetration at age 19. Authoritarian parenting, though, was related to increased risk of cyberbullying perpetration. Similarly, a larger Cyprus study examining the longitudinal effects of parenting on cyberbullying and victimization found that parenting predicted face-to-face and cyber bullying and victimization. Authoritarian parenting had a positive effect on aggression.²⁰

Other studies have noted that youth who reported parental warmth had reduced exposure to cyberbullying and were less likely to experience the negative effects of cyberbullying when it did occur. Accordino & Accordino noted that students with closer parental relationships experienced less bullying.²¹ Further, in a national U.S. sample, parental support (e.g., helping and comforting) was linked to lower risk of cyberbullying victimization and perpetration.²² Another study found that cyberbullying and depression were more likely in adolescents with perceptions of low parental attachment compared to adolescents with more restrictive parents.²³

THE IMPORTANCE OF PARENT-ADOLESCENT COMMUNICATION

Communication between parents and adolescents also has been identified as a protective factor against cyberbullying. In a study of high school students in Valencia, Spain, open communication with mother and father was more prevalent among students who had not been cyberbullied. Avoidant communication was more likely among students who had experienced cyberbullying either occasionally or severely.²⁴ Similarly, parent-child connectedness, as measured by open communication, was negatively related to cyberbullying victimization and perpetration above and beyond the effects of parents' online monitoring.²⁵ This suggests that a strong relationship featuring open communication may be more important than monitoring youth behaviors online.

The importance of communication to prevent cyberbullying and protect against its negative outcomes was reinforced in qualitative interviews with parents. For example, in the south of the U.S., parents were intentional about teaching their children to take a different perspective when cyberbullying occurred. An example of one such conversation was, "[I'll ask,] 'Why do you think someone else would do that? They must be sad.' Like, [I'll] talk about these people when they're bullying, 'They have an issue. If they don't like you, it's an issue in them, not in you. It's not something you did²⁶ They also wanted their children to understand the potential reasons why someone might cyberbully (e.g., poor home life; low self-esteem). Parents also employed communication strategies to empower their children. They taught their children to stand up to bullies to protect others who were vulnerable. They also worked to instill a sense of self-confidence in their own abilities. One parent said, "[My daughter] had an innate talent for music, so we signed her up for piano classes and enrolled her in the school orchestra. She got chosen to represent and sit in the front row and that was a big deal. Beyond that, her grades went up, and she was focusing on her studies, so then we would remind her of that. [We would say,] 'These other kids may be bigger than you ..., but you can make music like they cannot".²⁷ These parents took a preventative stance against cyberbullying. Given the focus on collective interdependence in India and other Eastern cultures,²⁸ qualitative research is needed to understand how parents' strategies may differ from parents in Western cultures.

Other research has found that when students did experience cyberbullying, talking to parents was a helpful coping strategy.²⁹ However, in a mixed methods study of parents and children (6th -9th grade) in England, Cassidy et al. reported a discrepancy in youth report of cyberbullying (32% victimization; 36% perpetration) and parent knowledge of cyberbullying (11% were aware of cyberbullying incidents).³⁰ These findings indicate that youth do not always communicate experiences of online harassment with their parents. This is similar to findings in Barlett and Fennel,³¹ where parents believed their enforcement of rules to be greater, and their child's cyberbullying behaviors to be lower, than the youth actually reported. In a second study, the researchers also found that cyberbullying behaviors were positively associated with, and predicted by, the extent to which parents were unaware of their children's internet use (see also Chapter 5 on online safety). It may be that youth do not seek adult support because they don't believe that adults will be able to successfully intervene, or they fear losing access to their devices. However, without adult help youth are more likely to engage in maladaptive coping such as avoidance, becoming cyberbullying perpetrators themselves, or physical retaliation against the perpetrator(s). All of these may allow an increase in cyberbullying.32

WHY AUTONOMY SUPPORTIVE PARENTING IS IMPORTANT

Experts advocate a mix of parenting strategies to curb cyberbullying and increase online safety. A strong emphasis on active media monitoring and autonomy may be the most effective parenting approach.³³ Media parenting refers to "goal-directed parent behaviors or interactions with their child about media for the purpose of influencing some aspect of the youth's screen media use behaviors."34 Parents and youth naturally negotiate boundaries-including limits for online activities-over the course of adolescence as young people strive to become more independent and parents strive to keep them safe.35 Parents and vouth demonstrate a range of patterns in these negotiations, but families where parents exert high control and youth push for high autonomy are likely to have the most conflict.³⁶

One study found that when youth reported high parental control, they also were likely to report high levels of cyberbullying.³⁷ In contrast, Ghosh and colleagues found that parents who were involved and autonomy granting, who strictly supervised adolescents online had adolescents who were likely to report low cyberbullying victimization.³⁸ In other words, a balanced approach may be the best. Similarly, in a study of adolescents, Padilla-Walker et al. found that autonomy supportive media parenting (whether active or restrictive) was associated with high media disclosure.³⁹ The study also found that when children voluntarily tell their parents about their online activities, they tend to engage in more pro-social activities and less relational aggression.

HOW CAN PARENTS INFLUENCE ADOLESCENTS TO REDUCE CYBERBULLYING?

Why do adolescents cyberbully? What can parents do to curb cyberbullying perpetration? The Model for Cyberbullying Motivation and Regulation (MCMR) addresses these questions (see Figure 5 and 6).⁴⁰



MCMR is grounded in an ecological perspective and focuses on the core processes that lead to cyberbullying perpetration by applying concepts from Self-Determination Theory.⁴¹ While other theories focus on individual reasons for cyberbullying (e.g., anonymity, strain),⁴² this theory focuses on the social influence on individuals. Large scale influences are known as the social level of the ecological system, for example government regulation of media. Local influences like schools and community policies are community level influences. Small scale influences, like individuals who have daily contact with a child, are known as the relational level of influence (when those individuals interact with each other,

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it is considered the interactional level). Specifically, parenting and peers are key influences in adolescents' daily lives, which influence important psychological processes: autonomy, competence, and relatedness. These psychological processes influence adolescents' motivation and self-regulation when it comes to cyberbullying.



RESTRICTIVE AND ACTIVE MEDIA PARENTING

Studies targeting cyberbullying outcomes have further identified possible protective effects for media parenting behaviors, such as parental monitoring of online behavior.^{43,44} Restrictive parenting practices include placing limits on media, whether through house rules or technology controls. The Pew institute found that the majority of parents monitor their adolescents on social media (up to 61%), and many review their texts or calls (48%).⁴⁵ Active mediation refers to parent-child discussions of media use and the active use of media together, known as co-use.⁴⁶ Compared to restrictive media

Chapter 4: Parenting in the Digital Age: Best Practices to Prevent and Reduce Cyberbullying | 85 parenting, parents are less likely to actively educate or discuss online behavior with their adolescents (40%).

Restrictive media monitoring has mixed results in the literature with respect to cyberbullying outcomes. For example, in one cross-sectional study, parents' restriction of technology and discussion of online safety was associated with more cyberbullying perpetration.⁴⁷ This may be because when parents are aware of cyberbullying they may increase limits. In a longitudinal study, restrictive media monitoring was less effective than parent-child discussion and connective co-use (e.g., active use of media together). It may be that monitoring in face-to-face contexts requires open communication (e.g., "Where are you going tonight? Who will you be with?) while online monitoring may be achieved without communication (e.g., Watching TikTok videos or following Instagram without commenting). Indeed, some adolescents have expressed resentment when their father followed them or their friends on social media.⁴⁸

The key to restrictive parenting practices may be to simultaneously support autonomy, a key construct in the Model for Cyberbullying Motivation and Regulation. Active discussion and negotiation around media, especially as children get older, would allow them to grow and learn.⁴⁹ Active media parenting has been shown to promote sympathy and self-regulation, which in turn was related to lower aggression and externalizing behavior and higher pro-social behavior.⁵⁰ Overall, warm parent-child relationships, communication and active media parenting are critical to combine with some practical restrictions, such as parental controls on phones for early adolescents. However, too much emphasis on control and restriction can backfire.

NEED FOR BUILDING YOUTH SOCIAL COMPETENCE ONLINE

Parents report being overwhelmed with technology. Many feel that they cannot keep up with adolescents' abilities to navigate the digital world.⁵¹ Dyadic research, with both parents and children, confirms that youth are often exposed to much more than their parents realize.^{52,53} Access to technology may have encouraged youth to hold a greater sense of autonomy that adolescents had in the past. Many parents express a sense of losing control.⁵⁴ However, despite youth competence online, and parents' lack of confidence, parents' role in educating youth about online risks remains critical.⁵⁵

Despite technology skills, youth frequently lack the social experience to healthfully navigate the online world on their own. Past research on media parenting has demonstrated the importance of explaining the negative consequences of risky behavior to youth.^{56,57} Furthermore, while parents tend toward restriction as a solution,7 complete control is not a realistic choice in a media saturated environment. As children age they need to learn to navigate the online environment.⁵⁸ Wisniewski et al found that when youth were given opportunities to engage with others online, they were more likely to correct their own mistakes.⁵⁹ Further, parents themselves have emphasized the importance of teaching kindness and perspective taking in online settings.^{60,61} In one study of digital parenting in Indonesia, mothers reported basic competence in digital parenting and guiding children online, but they felt inadequate in the area of encouraging their children's creativity and empowerment online.⁶² Another important consideration is that parents may restrict girls more than boys in online spaces.^{63,64} This can negatively impact their technology skill development. Regardless of gender, parenting practices that allow appropriate learning as per age and maturity of the child, while educating them about online risks are likely to support both social competence and growth. This may be more challenging for parents who have a low digital literacy themselves, which is more common among low socio-economic status families. 65

INVESTMENT IN STRONG PARENT-CHILD RELATIONSHIPS

One of the key take-aways of the literature on parenting and cyberbullying is that warm and loving parent-child relationships are foundational protective factors for youth. Ultimately, they are stronger deterrents of cyberbullying perpetration and victimization than restriction across cultures.^{66,67,68} One tactic that parents may consider is leveraging technology to strengthen parent-child relationships. Vaterlaus et al. found that synchronous use of computer mediated communication was related to quality time for parents and their adolescents or young adults.⁶⁹ Evidence also suggests that active mediation may not only improve relationships, but potentially protect adolescents from the negative effects of cyberbullying. One study found that parents' active mediation was associated with greater likelihood of talking to parents when cyberbullying occurred, particularly when there was a perception of harm.⁷⁰

Time-tested strategies for improving parent-adolescent relationships are also recommended. Focusing on positive parenting builds a foundation for a strong parent-adolescent relationship.⁷¹ This includes actively recognizing the positive behaviors of adolescents. Many times, parents tune into the behaviors that they want their children to change. They often forget to acknowledge the things their child is doing well. Additionally, spending quality time with adolescents is critical. In keeping with autonomy supportive parenting, letting an adolescent choose the activity may help improve their engagement in time spent together. Research has found that parental quality time is related to both parent and

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adolescent reports of happiness, meaning, decreases in stress.⁷² Even small amounts of parental time have been found to improve child well-being.^{73,74} Given reports that technology may interfere with parent-child time together, being intentional about spending time together has gained importance.

MEDIA PARENTING

A critical theme in the literature is the importance of matching technology to what is developmentally appropriate for adolescents. In interviews with early adolescents, the teens themselves noted that maturity should be a factor in deciding when they should get smart phones.⁷⁵ They also noted that, at least for early adolescents, parents should have the final say on technology decisions. Experts in media parenting have suggested some basic guidelines for parents using the T.E.C.H. Parenting guidelines (see Table 2). First, they recommend being aware of what is appropriate for each age developmentally.⁷⁶ For example, most social media companies do not officially allow children under the age of 13 to have their own account. Kindness Wins is a resource for parents to teach their children appropriate and kind interactions as they begin to use technology.⁷⁷ Additionally, it is important to teach children the consequences of risk behavior that are rarely portrayed in the media⁷⁸

TECH Parenting	Examples:
Talk about media use with children and monitor online activities	Ask what they are doing online in a non-judgmental way. (i.e., What are some of your favorite memes right now? How do you spend your time online?)
Educate children about the risks of media use	Explain inaccuracies in marketing and media depictions of risky behaviors, along with the relevant safe and normative practices (i.e., The characters in this show are smoking, but none of them are shown to have health consequences)
Actively co-use and co-watch media with children	Watch appropriate shows together and learn about their preferred sources of media (i.e., Can we watch your favorite shows together? This show has too much sexual content, we need to turn it off now)
Establish house rules for media use that are both clear and effective	Set boundaries around media platforms and levels of usage allowed (i.e., No HBO shows allowed; No iPad use in the bedroom after 6PM)

Regarding co-use, experts recommend spending time together online. Parents may consider watching their child's favorite streaming service together or playing with Snapchat filters together. Using technology together gives parents a chance to model healthy behaviors and self-restriction when something inappropriate comes up.⁷⁹ Co-use may also include learning about the media children and adolescents are using.⁸⁰ For example, parents can screen media content and apps on sites like CommonSenseMedia.org, which gives caregivers advice on what is appropriate by age.⁸¹

Finally, establishing clear house rules is crucial. Often parents report that they have rules, but the youth are less clear about those rules.⁸² Rules that set boundaries for when, where, and how long a youth can be online are shown to reduce online risk taking.^{83,84} The American Academy of Pediatrics has set up a website to help families establish family rules about screen time that are realistic for each family's situation and appropriate by age of child. The Family Media Plan can be found at https://www.healthychildren.org/ 90 | Chapter 4: Parenting in the Digital Age: Best Practices to Prevent and Reduce Cyberbullying

English/media/Pages/default.aspx. Once they are set, keeping the rules posted in a spot where parents and youth can see them for reference is a recommended practice.⁸⁵ Parents may also consider tracking how often youth follow the rules and providing small rewards or acknowledgements of good behavior.⁸⁶ Although technology can be employed to help keep the house rules, transparency and communication about the rules is likely to be more important in the long run.

Another model provides guidelines specifically for families with adolescents. The TOSS for teens guidelines are specifically geared toward balancing media parenting with teens' growing independence, with an eye toward encouraging teen responsibility and growth (See Chapter 5). Teen Online Safety Strategies is a conceptual framework with two main strategies for maintaining online safety, focusing attention on parents and their teens' actions. TOSS emphasizes the importance of parental control through the use of monitoring, restriction, and active mediation. It also emphasizes the importance of teens' self-regulation through their self-awareness, impulse control, and risk-coping.⁸⁷ These parentchild strategies are also meant to be analogous, where either can execute their corresponding strategies with the other's help. A review of interventions for face-to-face bullying highlights the need to include parents in prevention efforts. Parent involvement was among the most effective components of such programs.⁸⁸

APPLICATION TO INDIA

Western parents may emphasize independence in their approach to parenting, which may encourage online exploration. Parents in Eastern cultures, including India, tend to take a more collective approach focused on interdependence and protection.⁸⁹ Research on the relationship between parenting and cyberbullying in India is still in emerging phase. Recent studies in other Eastern countries suggest that authoritative parenting, which combines both warmth and firm limit setting, may also be a good strategy to apply in India. For example, in Korea, hours of technology use (specifically smartphone usage during weekdays and computer usage during weekends), and negative parenting such as coercive practices, rejection, and chaotic home management increased risk of cyberbullying perpetration for middle school students.⁹⁰ In another study, among girls, mother-daughter closeness and maternal monitoring predicted lower bullying and cyberbullying directly, and indirectly through self-control. However, paternal closeness predicted higher bullying. Father approval of peers predicted lower bullying and cyberbullying.⁹¹

Although parental autonomy support in India is increasing,⁹² the effectiveness of autonomy support in media parenting is yet unknown. One study in Hong Kong found that inconsistency in autonomy support between parents was related to cyberbullying victimization.⁹³ When the father figure followed autonomy-supportive parenting while the mother figure had high levels of control, adolescents had greater victimization. Patterns of warm yet firm parenting may reduce cyberbullying but further research is needed to understand cultural nuances.

GAPS IN THE LITERATURE

The literature clearly points to the importance of strong parentchild relationships and the potential of media parenting to reduce cyberbullying and online aggression. However, longitudinal research is needed to understand the processes by which parents make a difference. For example, in a cross-sectional research, being cyberbullied was associated with greater parental monitoring.⁹⁴ Do parents react when a child is cyberbullied and then follow up with new rules to protect their child? We still do not know the answer to that question.

Further, a recent systematic review and meta-analysis of cyberbullying interventions found that to-date, no parenting intervention has been developed and tested to reduce cyberbullying.⁹⁵ A recent randomized clinical trial inviting parents and adolescents to engage in the American Academy of Pediatrics Family Media Plan found no substantial change in media rule engagement among adolescents (e.g., talking with parents about rules, following rules).⁹⁶ The authors and commentators suggested that the educational delivery of media parenting be enhanced by youth engagement and integration of behavior change strategies to promote ongoing reinforcement of family media rules. These suggestions, however, need further investigation.

In the next chapter, we discuss the risks associated with cyberbullying. Chapter five focuses on the broader research areas of digital risks and online safety. We discuss the three primary types of risks that adolescents navigate in digitally mediated environments that extend beyond cyberbullying – online sexual solicitations and risk behaviors, exposure to explicit content, and information breaches, and privacy violations. We advocate for a resilience-based, rather than an abstinence-only approach to online safety. Once again, this chapter focuses on the first two levels of the socio-ecological model: individual and relationship levels.

CONCLUSION

This chapter provides an overview of ways that parents can contribute to the prevention of cyberbullying at the relational level of the ecological system. Overall, the prevailing literature reinforces the comment one parent made in a qualitative study: "It all starts at home. If children do not see kindness and respect from siblings, friends, and parents—the war is nearly lost. Music videos, Hollywood names, commercial T.V., magazines all contribute to a blitz of disrespect and an unreal sense of power. Power to do things and believe that you can get away with it, which in fact you do get away with it."⁹⁷ The current research reinforces a number of practical ways parents can reduce cyberbullying risk, including support for adolescents' autonomy, active media parenting that includes co-use of technology, and nurturing strong parent-child relationships. However, much of the research has been conducted in Europe and the U.S., and the need for understanding cultural differences remains.

KEY TAKE-AWAYS

- Restrictive monitoring of adolescents' online activities does not deter cyberbullying perpetration and victimization to the same extent as creating warm and loving parent-child relationships or autonomy-supportive restriction.
- Although youth may not always be willing to share information with their parents, establishing effective communication channels between parents and children is important for preventing cyberbullying and its associated outcomes, as well as serving as a coping strategy for cyberbullied youth.
- Parents should discuss the consequences of risky online behavior, balance their children's technology use with other activities, and ensure age-appropriate use of technology in order to develop youths' social competence in the online world.

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Chapter 5: Going Beyond Cyberbullying: Adolescent Online Safety and Digital Risks

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ABSTRACT

In this chapter, we cover the broader research area of digital risks and online safety. We discuss three primary types of risks that adolescents frequently navigate in digitally mediated environments that extend beyond cyberbullying – 1) Sexual Solicitations and Risky Sexual Behavior, 2) Exposure to Explicit Content, and 3) Information Breaches and Privacy Violations. We discuss the competing perspectives around how to approach adolescent online risks. We also discuss how those perspectives tend to lead to abstinenceonly versus resilience-based frameworks of addressing adolescent online safety. We close by highlighting the Western-centric nature of existing work and the need for more work addressing Eastern cultures. This includes Indian contexts to better understand how the existing work applies to and may differ to Indian-based researchers, educators, and policymakers.

Adolescent internet use has substantially grown across the world, particularly in developing nations. In Western contexts, approximately 95% of teenagers in the United States (U.S.) have access to a smartphone. 45% of them are online 'almost constantly.'¹ Adolescent internet access and use in Eastern contexts, and particularly in India, has also grown significantly in recent years. A 2020 CRY study² surveyed adolescents in Delhi-NCR and found that 93% of Indian adolescents had internet access at home, and 54% owned mobile devices. Half of the survey respondents had at least two internet-enabled devices. Social media usage is also prevalent among teens in the U.S. with some differences related to gender and/or ethnicity.

With the increased accessibility of the internet during the midto-late 2000s, researchers turned their attention to adolescents. They focused on understanding how adolescents were using the internet and the challenges that youth encounter online. While online harassment and cyberbullying have been at the forefront of adolescent online safety research, this chapter highlights and synthesizes research related to the three additional online risk types relevant to teens: 1) Sexual Solicitations and Risky Sexual Behavior, 2) Exposure to Explicit Content, and 3) Information Breaches and Privacy Violations. Accordingly, we offer an overview of work centered on these risks to better contextualize cyberbullying as a subject of study. The study should be such that it is important but does not stand alone within the field of adolescent online safety. We introduce four risk types and summarize relevant research on each topic.

Further, we highlight a trend towards a heavy prevalence of work focused on "abstinence-based" approaches of increasing parental control. We also discuss relational processes focused on the parentteen relationship, to shield youth from experiencing online risks,³ rather than more individualistic or resilience-based approaches. Resilience-based approaches emphasize youth self-regulation as an alternative strength-based approach that helps youth overcome the negative effects of online risk exposure and benefit from the opportunities the internet has to offer.^{4,5,6,7,8,9,10,11,12} We compare and contrast these two different perspectives within the adolescent online safety literature. We also acknowledge that the individualistic and autonomy-based approach to adolescent online safety promoted in Westernized contexts may or may not be generalizable to Eastern cultures. In Eastern culture collectivism and authoritarian parenting styles are more common.¹³ We close this chapter with a discussion of work related to digital safety in Western vs. Eastern contexts to highlight the overabundance of research being conducted in Western contexts and the need for more work that focuses on the lived experiences of Indian youth.

ADOLESCENT ONLINE SAFETY: RISKS AND PROTECTIVE FACTORS

A common theme in online safety literature has been to identify the factors that put adolescents at risk versus the protective factors that either mitigate exposure to online risks or the negative outcome associated with risk exposure. Therefore, we provide a

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ONLINE SEXUAL SOLICITATIONS AND SEXUAL RISK BEHAVIOR

Online sexual predation of youth is defined as unwanted sexual solicitations from others (regardless of age) or any solicitations of a sexual nature made by adults through internet-enabled technologies.¹⁴ Meanwhile, risky online sexual behaviors involve youth engaging in technology-mediated sexual exchanges, such as sex talk, sharing sexual imagery, and meeting online contacts for offline sexual encounters.^{15,16} Over half of youth in the U.S. (ages 10 to 17) have received at least one online sexual solicitation in the past vear.¹⁷ Meanwhile, 15% of teens reported receiving pornographic images via text message ("sexting"). 4% admitted sending such messages to others via their mobile devices.¹⁸ Many news outlets have reported the increasing trend of sexting among Indian youth although no formal research studies have been conducted.¹⁹ In one survey study, researchers found more than half of young adult respondents sent sexually explicit text messages to their friends.²⁰ Researchers have identified several factors that contribute to an adolescent's likelihood of experiencing sexual solicitation or related risk exposures. The two largest risk factors were - (1) gender (with girls beina more likely to experience online sexual solicitations)^{21,22,23,24,25} and frequently (2) using the internet,^{26,27,28,29,30} especially to access pornographic material.³¹ Meanwhile, the line between offline and online sexual predation and abuse is blurred as many sex offenders who know their victims in person, also communicate with them online.³²

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Teens between the ages of 12 and 15, racial minorities, and girls are the most "at-risk" of being solicited and engaging in risky sexual behaviors online.^{33,34,35,36} This also includes people who have histories of neglect, abuse, family instability, lack of parental involvement, emotional, behavioral, or cognitive problems. This risk exposure may lead to an increased likelihood of offline sexual encounters.^{37,38} These can result in physical harm, teen pregnancy, sexual transmitted diseases, and in extreme cases, sexual abuse^{39,40,41} or sex trafficking.^{42,43} Both offline and online sexual abuse can negatively impact youths' academic, cognitive, emotional, and psychological development. It has been associated with cyber-victimization, increased drug abuse. suicide, and death.44,45,46

Whittle et al.'s⁴⁷ comprehensive review of the online sexual grooming literature synthesized risk factors (*e.g.*, gender, age, poor family relationships, etc.) that make some youth more vulnerable to sexual predation risks than others. This work identified *parental involvement* as the primary protective factor against online sexual risks. This focus on parental mediation as a means of protecting teens from online risks is consistent with the broader literature on adolescent online safety.^{48,49,50,51} In other words, researchers have found that teens who are most protected from online sexual solicitations had parents who actively mediated their internet use.^{52,53} Teens were also protected through caution, including the fear of being punished or getting in trouble was often enough to significantly reduce the likelihood of being exposed to online sexual risks.⁵⁴

To date, most interventions for preventing online sexual predation of at-risk youth have targeted understanding, identifying, and comprehending online sex predators^{55,56,57,58,59}, rather than preventing youth from becoming victims. These prevention initiatives often occur at the societal or community level involving child protection and law enforcement organizations. As such, research in this domain focuses on victimized youth or individuals who have already suffered the consequences of sexual abuse.^{60,61,62}

However, Razi et al.⁶³ recently conducted an analysis of 4,180 posts made by teens (ages 12-17) on an online peer support mental health forum to understand what and how adolescents talk about their online sexual interactions. The researchers found that youth used the platform to seek support (83%), connect with others (15%), and give advice (5%) about sexting, their sexual orientation, sexual abuse, and explicit content. Thus, peer support, even from strangers, may also be an important protective factor. At the relational level of the ecological framework, this support can help teens navigate how to handle unwanted sexual solicitations and risky situations online.

EXPOSURE TO INAPPROPRIATE AND EXPLICIT CONTENT

The term "explicit content" covers a wide range of inappropriate online materials. This includes but is not limited to pornographic, violent, gruesome, or hateful content, as well as content that promotes harmful behaviors such as self-harm or eating disorders.^{64,65,66,67} Work focused on explicit content exposure has identified two types of exposure: willful and accidental exposures. This means adolescents may intentionally seek out inappropriate content online, but some may be accidentally exposed.⁶⁸ According to the Youth Internet Safety Survey,⁶⁹ about a quarter of youth in the U.S. had been exposed to unwanted pornography. A multinational study of youth in the U.S., Finland, and Germany found that 17% of the youth had been exposed to online content involving eating disorders, 11% to self-injury content, and 8% to suicide.⁷⁰ A 2020 IGPP survey⁷¹ found nearly 50% of the Indian youth respondents accepted to have watched online pornographic content. 40% recognized to know people who have watched pornographic content on the internet. Yet, a U.S. diary study of adolescents (ages 13-17)⁷² found that teens reported being exposed

to explicit content four times more often than they experienced cyberbullying, sexual solicitations, or information breaches online. The majority of the time exposure was accidental.

Even though exposure may be accidental, researchers have found a negative correlation between adolescents' repeated viewing of explicit content and several negative outcomes. These negative outcomes include a link between pornography and committing dating violence^{73,74}, acts of digital self-harm with increased nonsuicidal self-harm and suicidal ideation,⁷⁵ and violent content embedded within video games linked to aggressive behavior.⁷⁶ However, some media scholars^{77,78,79} argue that the negative effects of explicit content exposure on youth are largely over-claimed or biased, and therefore, should not be generalized.

The risk factors that make some youth more susceptible to explicit content exposure vary based on the type of content. For instance, male teens are more likely to seek out online pornography than females. The majority of teens who seek out sexual images online are 14 years of age or older.⁸⁰ This research suggests that concerns about younger children's exposure to online pornography may be overstated. It also suggests that adolescence is a developmentally appropriate time to become curious about sex. Therefore, some researchers have encouraged making a distinction between problematic (e.g., compulsive or addictive use) and nonproblematic pornography use. This distinction is especially needed among vulnerable youth populations, such as lesbian, gay, bisexual, transgender, and queer (LGBTQ) adolescents. Such communities may use such materials to learn about sexuality and develop their sexual identities.⁸¹ Other studies found that female youth are more likely to see online content regarding eating disorders, while males are more likely to view violent, pro-self-harm, and pro-suicide content.⁸²

While exposure to explicit content is quite prevalent among adolescent youth, the protective factors against such exposure are few. For instance, reducing the frequency of internet use is detrimental due to hindering the positive opportunities for online engagement.^{83,84} Some researchers have found that filtering and blocking software can be effective.⁸⁵ For instance, Ybarra, et al. found that pop-up or spam blockers reduced the chances of teens being exposed to unwanted sexual material by 59%. They also found that filtering and monitoring software further reduced the chance of this risk exposure occurring by 65%.⁸⁶ Yet, others have found that such parental control software may be more appropriate for younger children⁸⁷ as adolescents resent restrictive parenting practices that hinder their desire for autonomy.⁸⁸ Parental control software has been shown to be ineffective, and even damaging, to the trust relationship between parents and teens.^{89,90,91,92} Additionally, there is little evidence that these technologies actually keep teens safe online or teach them to effectively manage online risks.⁹³ Active mediation and instructive co-viewing is situation where a parent is aware of the online activities of their children and openly discusses inappropriate content in a non-judgmental way. It may be the best approach to support adolescents when exposed to explicit content online.⁹⁴ This protective strategy would occur at the relational and individual levels of the socio-ecological framework with parents directly supporting their children's online experiences.

INFORMATION BREACHES AND PRIVACY VIOLATIONS

Information breaches or privacy violations involve the inappropriate sharing of sensitive information (*e.g.*, account credentials or location information) online by the youth themselves or by others without the teen's permission.^{95,96,97,98} The online world creates a wide variety of options for collecting, processing, and distributing users' personal information. Therefore, information privacy has been the target of considerable controversy⁹⁹ and research.¹⁰⁰ Yet, beyond the Child Online Privacy Protection Act, no existing law in the U.S.

protects the online information privacy of teenagers. making them more vulnerable to information breaches and privacy violations.¹⁰¹ The rapid emergence of social networking sites, such as Facebook, Instagram, and Snapchat are rife with opportunities for teens to reveal personal information.^{102,103} As a result, teens share more personal information and still report relatively low levels of privacy concern.¹⁰⁴ In contrast, 81% of their parents are "somewhat" to "very" concerned about their teens' online privacy.¹⁰⁵

In examining factors that lead to information breaches and privacy violations, several predictive factors have been identified: frequency of internet use^{106,107}, internet skill^{108,109,110}, and privacy concern.^{111,112} In other words, teens who use the internet more often, do more things online. But they lack the skills to protect themselves and are less concerned about their online privacy, encounter more information breaches. Other factors have been noted to either increase or decrease the likelihood of exposure to this risk type. From a socio-economic standpoint, adolescents who come from more affluent backgrounds are more likely to experience higher rates of privacy violations.¹¹³ Perhaps connected with the frequency of use, adolescents from wealthier backgrounds may have more readily available Internet access in their homes. Perhaps they have internet access even in spaces that are more private from parents (i.e., spaces that are harder for parents to actively monitor, like adolescents' bedrooms). However, other aspects of adolescents' lives offer forms of protection from this type of risk exposure. For example, adolescents who are in a romantic relationship are less likely to experience information breaches.¹¹⁴ Given that information privacy often co-occurs with or results from exposure to other risk types - particularly sexual solicitations. Being in a relationship may preclude teens from seeking out the types of content or connections online that result in information and privacy breaches.

Meanwhile, there have been mixed findings regarding how parents can mitigate these online risks. One study found that parental restrictions against giving out personal information online are associated with a higher likelihood that teens disclose such personal information.¹¹⁵ Another study¹¹⁶ confirmed that parental mediation was not significantly related to tweens' (ages 9 – 12) willingness to disclose personal information online. The larger the discrepancy between parental and tween perceptions of online restrictive mediation, the more willing tweens were to make online disclosures. A study by Wisniewski et al.¹¹⁷ found that direct intervention by parents was associated with teens making fewer online disclosures. However, active mediation through talking with teens, searching teens' information, and responding directly to teens' online posts was more effective in helping teach teens how to take appropriate risk-coping measures. The relationships between parenting practices and teen social media privacy behaviors are illustrated in Figure 7.



Figure 7: Preventative versus Reactive Parental Mediation

This research suggests that preventative and restrictive parenting practices may reduce teens' overall information disclosures. But this can also limit their opportunities for engaging with others online in beneficial and meaningful ways. Therefore, taking a dual approach of some direct intervention combined with active mediation may be the best approach to help teens navigate information privacy risks. At the societal level, legislation, such as the Children's Online

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Privacy Protection Act (COPPA) in the United States, and the General Data Protection Regulation (GDPR) in the European Union provide additional privacy protection for young internet users. However, most protective factors identified in the literature remain at the relational (*i.e.*, parent-teen) and individual levels of the ecological framework.

Now that we have summarized some of the risk and protective factors that are associated with these three types of online risks, we now discuss two different approaches to promoting adolescent online safety.

ABSTINENCE-ONLY VERSUS RESILIENCE-BASED APPROACHES

Research has identified the risk and protective factors associated with the three risk types previously discussed. But less attention has been given to designing effective interventions to prevent exposure or mitigate the consequences of exposure,¹¹⁸ or helping teens to be resilient in spite of encountering online risks.¹¹⁹ Pinter et al.¹²⁰ conducted a comprehensive review of the adolescent online safety literature and concluded that research has traditionally advanced an "abstinence-based" framework of adolescent online safety and risk exposure. 69% of the studies reviewed focused on minimizing or eradicating online risk exposure, rather than teaching youth to effectively cope with these risks once they occur.¹²¹ Researchers from EU Kids Online were among the first to argue that adolescent exposure to online risks does not necessarily equate to harm.^{122,123} They found that youth who reported having more psychological problems and/or lower self-efficacy tended to become more bothered when experiencing these online risks while other teens remained unbothered.124

Wisniewski et al.¹²⁵ were one of the first to apply the adolescent resilience framework, at the individual-level, to teen risky behaviors

Chapter 5: Going Beyond Cyberbullying: Adolescent Online Safety and Digital Risks | 113 that are linked to internet use. Resilience-based approaches differ from risk-averse approaches by "focusing on the assets and resources that enable adolescents to overcome the negative effects of risk exposure",¹²⁶ rather than trying to limit exposure to risk. Another way of understanding the contrast is that the resilience perspective leads to a focus on teen strengths rather than their deficits. Wisniewski et al.'s¹²⁷ work showed evidence that resilience is a key factor in protecting teens from experiencing online risks, even when teens exhibit high levels of internet addiction. Resilience also neutralizes the negative psychological effects associated with internet addiction and online risk exposure. In Wisniewski et al.'s subsequent work,¹²⁸ they found that teens can potentially benefit from experiencing lower-risk online situations. This allows them to develop crucial interpersonal skills, such as boundary setting, conflict resolution, and empathy. Developmental psychology reminds us that some level of risk-taking and experiential learning is necessary for normal aspects of adolescent developmental growth.¹²⁹ Thus, we need to strike a healthy balance between allowing teens to learn how to safely engage online through experiencing some risk and protecting them from high-risk situations.

We emphasize the importance of designing solutions that foster teen resilience and strength building at the individual level, as opposed to solutions targeted toward parents (*i.e.*, at the relational level) that often focus on restriction and risk prevention. Similarly, Hartikainen et al.¹³⁰ found that building parent-teen trust led to better communication. It in turn created more opportunities for positive outcomes when compared to more restrictive, controlbased approaches.¹³¹ boyd agreed, arguing that abstinence or control-based approaches prevent adolescents from learning selfprotection or coping skills.¹³² For instance, teen resilience can be promoted directly through web-based educational or counseling programs that help build resilience.¹³³ We can also promote this through interface designs that empower teens to take protective measures upon encountering online risks. For example, Facebook provides a "Family Safety Center" that offers tips for teens to develop better online safety practices.¹³⁴ Several researchers have called for new online safety solutions that move away from parental control toward promoting positive parent-teen relationships and teen self-regulation of their online behaviors (*e.g.*, ^{135,136,137,138}). Yet, few, if any, technological interventions for adolescent online safety have been developed to help teens self-regulate and manage online risks in a meaningful way.¹³⁹

In the next section, we present a framework of Teen Online Safety Strategies (TOSS) that illustrates the tensions between promoting online safety from the perspectives of parental control versus teen self-regulation.

PARENTAL CONTROL VERSUS TEEN SELF-REGULATION STRATEGIES



Figure 8: Teen Online Safety Strategies (TOSS) Framework

The Teen Online Safety Strategies (TOSS) framework,¹⁴⁰ shown in Figure 8, is built upon the rationale that adolescent online safety can be framed as an outcome of effective parenting. It assumes that parents directly influence or control teens' exposure to online

Chapter 5: Going Beyond Cyberbullying: Adolescent Online Safety and Digital Risks | 115 risks.^{141,142,143,144} This explains tensions between parental control and teen self-regulation when it comes to teens' online behaviors, their desire for privacy, and online safety.^{145,146,147,148} In the TOSS framework, parental control strategies include *monitoring* (passive surveillance of a teen's online activities), **restriction** (placing rules and limits on a teen's online activities), and active mediation (discussion between parents and teens regarding online activities). These strategies were based primarily on Valkenburg et al.'s149 foundational work, which created scales assessing three styles of parental television mediation. They have since widely been adapted for use in the context of online parental mediation.^{150,151,152,153} The framework also positions teen self-regulation strategies that work as resiliency factors and protect teens from online risks. Such resilience-based factors align with the individual-level processes of the ecological model of cyberbullying and online risks. Specifically, three of its key components - self-awareness (awareness of one's own motivations and actions through self-observation), impulse control (inhibiting one's short-term desires in favor of long-term consequences), and risk-coping (managing a negative event once it has occurred) - acknowledge the importance of and encourage teen self-regulation.

Wisniewski, Ghosh, and their co-authors¹⁵⁴ applied the TOSS framework to better understand the commercially available technical offerings that support adolescent online safety, and what teens thought about these applications. They found that an overwhelming majority of mobile app features (89%) supported parental control through monitoring (44%) and restriction (43%). Not much support was seen in these apps to facilitate parents' active mediation or support any form of teen self-regulation. Further, many of the apps were extremely privacy invasive. They provided parents granular access to monitor and restrict teens' intimate online interactions with others. This includes their browsing history, the apps installed on their phones, and the text messages teens sent and received. Teen risk coping was minimally

supported by an "SOS feature" that teens could use to get help from an adult.

In a follow-up study, Ghosh, Wisniewski, and their co-authors¹⁵⁵ analyzed 736 reviews of these parental control apps that were publicly posted by teens and younger children on Google Play. They found that the majority (79%) of children overwhelmingly disliked the apps, while a small minority (21%) of reviews saw benefits to the apps. Children rated the apps significantly lower than parents. Teens, and even younger children, strongly disliked these apps because they felt that they were overly restrictive and invasive of their personal privacy. They negatively impacted their relationships with their parents. A takeaway from this research was that, as researchers and designers, we should consider listening to what teens have to say about the technologies designed to keep them safe online. We should conceptualize new solutions that engage parents and respect the challenges teens face growing up in a networked world.

Next, we discuss whether the resilience-based approaches aimed at promoting teen self-regulation are relevant and applicable to Indian youth and other Eastern contexts.

CROSS-CULTURAL COMPARISONS OF ADOLESCENT ONLINE SAFETY AND RISKS BETWEEN THE U.S. AND INDIA

According to Pinter et al.'s review of the adolescent online safety literature,¹⁵⁶ the majority (44%) of the studies originated from the U.S.^{157,158,159,160} The second and third most prevalent countries of origin were the Netherlands and Great Britain., representing 9% and 8% of the articles, respectively. Canada had the fourth-highest representation in the sample with 5% of the articles, followed by Spain (3%) and Korea (3%). Only 5% of the studies in their sample studied adolescent online safety and risks multi-nationally. Of

these, one compared adolescents in Canada and China,¹⁶¹ another U.S. and Finland,¹⁶² and the rest studied adolescents from multiple European countries.^{163,164,165} A number of the multi-national studies across Europe were in conjunction with the initiative launched by EU Kids Online, a multinational research network.^{166,167,168} Meanwhile, there is a dearth of research related to adolescent online safety and risks specifically from India.

With differing cultural norms, the Western-centric research on adolescent online safety may not be as applicable in other contexts, such as sub-Asian locales like India. Different cultures are likely to approach risk exposure, prevention, and coping differently, and a disparate focus on one nation limits research's ability to understand adolescents' risk experiences. It is not the most effective way for parents to intervene. For instance, parenting styles vary drastically across different cultures. Indian mothers in America are more likely to use authoritative parenting styles (an approach to child-rearing that combines warmth, sensitivity, and the setting of limits). Parents residing in India are more inclined to use authoritarian parenting styles (characterized by high demands and low responsiveness).¹⁶⁹ While authoritative parenting styles have been shown to have youth outcomes within Indian families.¹⁷⁰ more positive authoritarian parenting styles may be more effective within different cultures and ethnicities (e.g., ^{171,172}). Therefore, families from Eastern cultures need to be better represented in research. For instance, Asian adolescents have recently come into the public eye as particularly susceptible to internet addiction.^{173,174} Further. countries that are more collective than individualistic in culture may rely more heavily on relational, interactional, community, and societal level approaches when taking an ecological approach to risk prevention. They may focus less on individualistic approaches, such as fostering teen resilience and self-regulation. To date, this trend has been supported in the literature.

Recently, research on adolescent technology use has emerged from Eastern contexts. Garg and Sengupta¹⁷⁵ conducted a comparative study between U.S. and Asian Indian youth. They found

both differences and similarities in parents' attitudes about digital technology use. For example, Asian Indian families took more authoritarian approaches than White families when it came to deciding whether children below the age of 13 could have their own mobile phones. Parents across demographics allowed children above the age of 13 to have their own devices or permitted them to use the common family device or their parents' devices. Both White and Indian children between ages 14-17 had at least one social media account. A few Indian parents created online profiles of their young children so that they could co-use and help maintain the bonds between grandparents (staying in India) and grandchildren. Working parents, irrespective of their race, did have concerns about the content children accessed online. White middle-class parents tried to enforce restrictions on children's smartphone usage based on context and in a way that supports child self-regulation and autonomy. Their Indian counterparts were more rules dependent. As there are both differences and similarities in U.S. and Indian parents' attitudes about digital technology use, it may be possible to apply some of the western approaches to Indian contexts. But it is not possible to be so sure without conducting more research work that focuses on the lived experiences of Indian youth. Additionally, more research needs to be done that extends beyond the parentteen relationship to study interactional, community, and societal level factors that could promote the online safety of Indian youth more collectively.

With the growing concern in other contexts such as Indian adolescents, incorporating more resilience-based approaches may be beneficial to researchers, practitioners, and policymakers in protecting adolescents. But this should be done without impeding healthy growth and self-regulation behaviors.

In the next chapter we discuss the research and policy implications in India. Chapter Six addresses the more distal societal level factors identified by the model. We summarize how the current knowledge can be applied in India across multiple stakeholder groups, including public policy, law enforcement, school administration, health care providers, community-based organizations, tech industry, and research institutes. Also, we highlight the key gaps in knowledge to guide future research.

CONCLUSION

In this chapter, we introduce the broader field of adolescent online safety research beyond that of cyberbullying. We characterize four types of risks that online safety researchers have identified. We further discuss the prevalent framing of adolescent online safety as resulting from abstinence or preventative approaches instead of approaches encouraging resilience. We contrast that approach with more nascent framings of safety as being resilient in nature encouraging teens to evaluate and make decisions for themselves and then designing and implementing approaches meant to encourage coping. Regardless of the approach taken, cultural norms and expectations undoubtedly play a role in how these framings are researched and put into action. However, the state of research in Indian and other Eastern contexts is severely lacking in comparison to Western contexts. The disparity in existing available work between Eastern and Western contexts provides ample opportunities for researchers to address. It is an issue that is timely as Indian adolescents access the Internet as much as (if not more than) their American counterparts. We argue that while cyberbullying is prevalent, there are other risks to be considered when mobilizing to address the lack of work on digital safety in Indian contexts. So more holistic examinations of adolescents' experiences online in India will benefit not only Indian contexts but the state of the research as a whole.

KEY TAKEAWAYS

- Digital risk and online safety encompass more than just cyberbullying and online harassment. Each risk type has unique factors that contribute to an adolescent's likelihood of experiencing that risk. However, common factors across all four risk types include age, gender, level of Internet efficacy, and frequency of Internet use.
- There are two principal approaches to understanding adolescent risk and safety online – abstinence-based and resilience-based approaches. Abstinence-based approaches dominate existing research, focusing on preventing risk exposure entirely via control and regulation.
- Resilience-based approaches focus on encouraging coping and growth in the aftermath of risk exposure and encouraging adolescent self-regulation.
- Much of the existing work focuses on Western contexts, particularly the United States. With the growing concern in other contexts such as Indian adolescents, incorporating more resilience-based approaches may be beneficial to researchers, practitioners, and policymakers in protecting adolescents while not impeding healthy growth and self-regulation behaviors.

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Chapter 6: Evidence to Action: Research and Policy Implications in India

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ABSTRACT

A comprehensive multi-sectoral strategy is needed to mitigate the threats against youth caused by cyberbullying and online risks. In principle, the Indian policy landscape is equipped to protect youth. It has prioritized children's well-being, autonomy, and protection against online risks through various policies, programs, and

136 | Chapter 6: Evidence to Action: Research and Policy Implications in institutions. Nevertheless, the dominant narrative currently is riskaverse and restrictive. It is also limited in scope as it focuses on school-based strategies with limited guidance or support for parents and regulations for businesses. Therefore, it would be ideal to align stakeholders for an effective collaborative response.

We call for systematic efforts to empower children and families to advocate for their rights and enable them to navigate the digital world safely. This requires resilience-focused planning instead of stigma and punitive action. In turn, this means we need to incorporate practical, safe and confidential reporting processes and provide accessible counselling and rehabilitation services. Further, the programmatic action must be based on contextually informed empirical evidence generated within the country. Clear targets and regular monitoring of indicators should be instituted to scope the problem and track progress. Lastly, a response that focuses on institutions rather than society at large is incomplete. Society could hold the businesses accountable for monitoring safety in the digital spaces they create. It could also change the social norms within the digital world where children would feel safe to explore and expand their capabilities.

This chapter begins by making a case for more significant political and financial commitments to promote youth digital safety based on the burden and impact identified in the previous chapters. Next, we present the critical appraisal of India's existing policies, legislation, and program landscape in light of the insights gained through reviewing the scientific literature to identify the strengths and gaps. We intend to link current scientific knowledge and apply it in India using the existing platforms across multiple stakeholder groups. This includes policymakers, law enforcement agencies, school administration, health care providers, civil society, and research institutes. We will also summarize the research gaps identified throughout the book, especially in the Indian context. Before going forward, we present choices we have made in defining the scope of relevant terms used across this chapter. In principle, we consider *cyberbullying* behaviour, as mentioned in Chapter 1, within the broader action area of *Violence Against Children* identified by WHO.¹ In addition, as mentioned in Chapter 5, ideally, countries should develop preventive interventions that are broad and cover all the *online risks* including but not limited to cyberbullying. These include other risks like online sexual solicitations, exposure to explicit content, information breaches, and privacy violations that are relatively more frequent. Further, UNICEF – The State of World's Children 2017 report recommends that children's digital harm be prevented holistically because their offline and online vulnerabilities are often linked.² The report identifies INSPIRE violence prevention framework suitable for preventing digital risks including cyberbullying.³

Although we use the terms: children, teens, adolescents, youth interchangeably in this book, however, we identify age-group of 10-19 years as the focus group. The age-based definition of *child*, adopted by the Convention on the Rights of the Child as well as the Commissions for Protection of Child Rights Act 2005, is a person under the age of 18 years.^{4,5} It includes the World Health Organization (WHO) definition for *adolescents* as those people between 10 and 19 years of age. Other overlapping terms used in this book are *youth* (defined by the United Nations as 15–24 years) and *young people* (10–24 years), a term used by WHO and others to combine adolescents and youth.⁶ As this chapter mainly deals with policy and program documents, we will make a distinction between the terms based on which age-group the policy envisions to cover.

We have learned in the previous chapters that digital risks affect a high proportion of young people worldwide. Digital risk exposure is associated with depression, loneliness, anxiety, low self-esteem, frustration, and anger. Further, digital risks are associated with long-lasting consequences for children's development, health, and education. The current responses to the digital risks that children and youth face online range from directly intervening with youth to devising technological solutions. Globally, nations have taken significant steps in the form of policies and legislation that protect children. These include the development and implementation of school-level policies to address digital safety. Because children's offline and online vulnerabilities are so linked, the risks they face online need to be approached within the context of the child's total circumstances, including the offline dangers. Therefore, need for a broad vision is critical.⁷

In 1989, the United Nations Convention on Rights of the Child (CRC) created such a vision. It provided strong guidance to participating states on national measures required for children's protection from violence. Recently, the global development agenda prioritized violence against children as a cross-cutting concern, including concrete commitments under several goals and targets. In particular, the 2030 Sustainable Development Goals identify a specific target "to end abuse, exploitation, trafficking, and all forms of violence against children" (target 16.2). Under the sustainable goal 16, the target is to promote peaceful and inclusive societies.⁸ Further, specific target 4.7, under goal 4 on inclusive and equitable education, highlights the importance of acquiring knowledge and skills on human rights, gender equality, promoting a culture of peace, non-violence, and global citizenship.⁹

WHO, in collaboration with UNICEF and the Global Partnership to End Violence Against Children, developed the INSPIRE framework for preventing and responding to violence against children. It identifies seven strategies for addressing violence, abuse, and exploitation: 1) Implementation and enforcement of laws; 2) Norms and values; 3) Safe environments; 4) Parent and caregiver support; 5) Income and economic strengthening; 6) Response and support services; 7) Education and life skills. These strategies are delivered through two cross-cutting activities, i.e., multisectoral actions and coordination and effective monitoring and evaluation. The seven strategies under the INSPIRE framework are based on a strong convergence in the research-based guidance. They address risk and protective factors for violence against children at all four interrelated levels of risk (individual, relationship, community, society as discussed in Chapter 1). Most of these have been shown to have preventive effects across several different types of violence, as well as benefits in areas such as mental health, education, and crime reduction.

In the current chapter, we briefly describe the policies and programs under the heads of 1) policy and legal instruments; 2) awareness generation activities; 3) education and life skills; 4) response or redressal activities. Throughout the chapter, we anchor our review of India's policy or program provisions on the INSPIRE strategies.¹⁰ We also compare the guidelines against what are the most recent research findings globally. The objective is to identify strengths within the existing response and also to identify gaps to suggest areas for improvement.

EXISTING POLICY AND PROGRAM PROVISIONS IN INDIA POLICY AND LEGAL FRAMEWORK

To begin with, India ratified the Convention on Rights of the Child adopted by the UN General Assembly in 1989. Consequently, Article 39(f) of the Indian Constitution was amended to state that the State shall, in particular, direct its policies to ensure that "children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment."11 The child protection system in India is made across several government ministries, such as the Ministry of Women and Child Development(MoWCD), Ministry of Education (earlier known as Ministry of Human Resource Development), Ministry of Home Affairs, Ministry of Legal Affairs, Ministry of Social Justice and Empowerment, Ministry of Electronics and Information Technology(MEITY), Ministry of Health Family and and

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Welfare(MoHFW).¹² We summarised the timeline of policy instruments introduced in India mapped across implementing ministries in Table 3. In India, a focused response against digital risks among children and adolescents began in the year 2000 with the enactment of the Information Technology Act. But, the issue became popular in India only in the last 5-6 years after incidents like the *Blue Whale Challenge* (a game where the participants commit to a series of self-harming assignments leading to the final task of committing suicide) gained public and media attention.¹³ Nevertheless, there appears to be movement in all spheres with multiple policy instruments launched by multiple departments/ institutions. Some were as recent as 2021 especially following the impact of COVID leading to education moving online.

2020-Present	The Indian Cyber Crime Coordination Centre (I4C); Launched a helpline to lodge complaints		
2015-2019	Cyber Safety Manual for Adolescents/ Students (October 2018), Online Child Sexual Abuse and Exploitation (OCSAE) Prevention/ Investigation Unit (2019), & The National Cyber Crime Reporting Portal (2019)		
2010-2014	National Advisory on Preventing and Combating Cyber Crime Against Children (2012)		
2005-2009	Information Technology Act Amendment (2008)		
2000-2004	Information Technology (IT) Act (2000) & Commissions for Protection of Act (2005)		
Before 2000	IPC Act (1860)		
Mapped Departments/ Ministries	Ministry of Home Affairs & Ministry of Legal Affairs		
Justice			

2020-Present	National Education Policy (2020)
2015-2019	National Plan of Action for Children (2016), Scheme for Adolescent Girls (2017), & CBSE Guidelines for Schools on Online Safety (2018)
2010-2014	SABLA (2010) & National Youth Policy (2014)
2005-2009	Adolescent Education Program (2005), National Curriculum Framework (2005), Right to Education Act (2009), & UGC Regulations on Curbing the Menace of Ragging in Higher Education Institutions (2009)
2000-2004	
Before 2000	
Mapped Departments/ Ministries	Ministry of Education, Ministry of Women and Child Development, & Ministry of Youth Affairs and Sports
	Education

	Mapped Departments/ Ministries	Before 2000	2000-2004	2005-2009	2010-2014	2015-2	019
Social Welfare	Ministry of Women and Child Development			National Commission for Protection of Child Rights (NCPCR) (2007)	National Policy for Children (2013)	Nation Action Pl for Childr (2016)	en
Health	Ministry of Health and Family Welfare				National Mental Health Policy (2014) & Rashtriya Kishor Swasthya Karyakram (2014)	Nationa Health Pol (2017) & School Health Programn (2018)	l icy
Information Technology	Ministry of Electronics and Information and Technology		National Information Board (NIB) [YEAR]		National Cybersecurtiy Policy (2013)	ISEA, CDA (2018)	Ŋ

Name of the policy	Key Provisions
National policy for children 2013	 -Prioritises survival, health, nutrition, development, education, protection and participation as undeniable child rights. Commits to take necessary measures to secure child rights. -Guided by the holistic child-centric principles and reaffirms the importance of families in children's overall growth and development -Holds the State responsible to create a caring, protective, safe environment for children, and to reduce their vulnerability at all 'public places'. It currently doesn't identify the risks of cyber-space explicitly. -Recognises that a long term, sustainable, multi-sectoral, integrated and inclusive approach is necessary for harmonious development and protection of children. -Emphasises on hearing children's voices in all matters affecting them -Stresses child-centric research and documentation both quantitative and qualitative, as well as an indicator-based child impact assessment
National cybersecurity policy 2013	 -Its vision is to build a secure and resilient cyberspace for citizens, businesses and Government -Focuses on enabling effective prevention, investigation and prosecution of cyber crime and strengthen regulatory framework -Aims to create a culture of cyber security and privacy enabling responsible user behaviour & actions through an effective communication and promotion strategy. -Stresses on research and development in the area
National youth policy 2014	Aims to: -Develop a strong and healthy generation equipped to take on future challenges via increased awareness and access to health care services and through increased involvement in sports. -Support youth at risk and create equitable opportunity for all disadvantaged & marginalised youth -Create a productive workforce by prioritising education especially via skill development and lifelong learning - Sensitize youth(boys) against the restrive gender and social norms that normalise violence against women
National Mental Health policy, 2014	-Calls for holistic and integrated action including intersectoral collaboration, governance and accountability to ensure that mental health promotion across the developmental stages. -Aims for universal access to mental health facilities especially, the vulnerable like children (both in schools and out of school).

Name of the policy	Key Provisions
National health policy, 2017	 -Identifies developmental approach to well-being and thus prioritises child and adolescent health -The policy envisages school health programmes as a major focus area as also health and hygiene being made a part of the school curriculum. -The policy gives special emphasis to the health challenges of adolescents and the long term potential of investing in their health care. -Envisages strengthening the human resource gaps in mental health and intends to leverage digital technology to connect users to specialists
National education Policy 2020	-Lays down Fundamental Guiding Principles, like: -A multi-disciplinary and a holistic education -Focus on ethics and human & Constitutional values like empathy, respect for others, courtesy, liberty, responsibility, pluralism, equality, and justice -Focus on life skills such as communication, cooperation, teamwork, and resilience; -It recognizes the importance of leveraging the advantages of technology while acknowledging its potential risks and dangers. Also prioritises addressing digital divide. -Counsellors or well-trained social workers connected to schools/school complexes and teachers will continuously work with students and their parents and will travel through and engage with communities to ensure that all school-age children are attending and learning in schoo

PUBLIC POLICY

Table 4 outlines the key policy documents in India that lay down the core principles that inform strategies identified for violence (in this case, cyberbullying and other online risks) prevention for young people. In Table 5, we present the findings of the review of the policy documents using the **INSPIRE** framework. Following are the key insights.^{14,15,16,17,18,19}

• **Implementation and Enforcement of laws**: The Indian policy landscape is strongly supported by stringent legislative instruments that ban corporal punishment, criminalize sexual

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abuse and exploitation of children. It ensures universal elementary education, and protects children from bullying, harassment, or privacy violations through digital means.

- Norms and Values: The principles of equity, peace, and non-violence have been enshrined in almost all the guidelines. Consequently, the multiple policies guide specific action against restrictive gender and social norms. The National Youth Policy (NYP), 2014 identifies schemes for changing prevalent social norms that normalize violence against women.²⁰ One such scheme, identified by NYP, is the Saksham Scheme (for adolescent boys in the age-group 11-18 years). It aims to build their respect for women, among other things. Similarly, the Ahimsa Messenger programme of the MoWCD seeks to promote respect for women and eliminating violence against women.
- **Safe Environments**: As these incidents do not happen in a physical space, there have been efforts to make cyberspace safer through policies like the **National Cyber Security Policy** (NCSP) 2013.²¹ Further, the guidelines have been issued to schools to draft their school-level policies for prevention and safety.
- **Parent and Caregiver Support:** The **National Policy for Children** (NPC) **2013** (14) and **National Education Policy (**NEP) 2020²² both distinctly underline the role of families and strengthen the case for building their capacity for ensuring effective response and providing a strong social safety net in caring for and nurturing their children.
- **Income and Economic Strengthening:** These are especially important given the unequal socio-economic circumstances attributed to many social, political and economic causes. Such causes give rise to the violent acts. Income and economic strengthening activities come under the purview of policies and departments beyond the scope of this book. However, the NYP and NEP emphasise child-centric learning, improvements in quality of education reflected through improved basic

Chapter 6: Evidence to Action: Research and Policy Implications in India | 147 literacy, arithmetic skills, digital literacy, and employability and entrepreneurial skills.

- Response and Support Services: Provision of counselling services for children and parents, treatment programs for juvenile offenders, and foster care interventions have been prioritized in the NPC. The National Health Policy 2017²³ and National Mental Health Policy²⁴ envision the provision of more mental health specialists to provide better access to services for children. Also, NEP emphasises the presence of specialists like the counsellors and social-workers for effective response.
- Education and Life-skills: The NEP 2020 identifies holistic multi-dimensional development of children. It emphasizes the enrolment and retention of children by providing quality education and by empowering them and teaching vital life skills. Similarly, the NPC 2013 and NHP 2017 identify the importance of school health programs for making children aware of the risks and their rights.

INSPIRE Framework Component	NPoC, 2013	NCSP, 2013	NYP, 2014	NMHP, 2014	NHP,2017	NEP,2020
Implementation & Enforcement of Laws	Yes	Yes	No	No	No	Yes
Norms and Values	Yes	Yes	Yes	Yes	Yes	Yes
Safe Environments	Yes	Yes	No	No	Yes	Yes
Parent and care-giver support	Yes	No	No	Yes	Yes	Yes
Income and Economic Strengthening	Yes	No	Yes	No	No	Yes
Response and Support Services	Yes	No	No	Yes	Yes	Yes
Education and Life Skills	Yes	No	yes	Yes	Yes	Yes

Name of the law Key provisions

Indian Penal Code 1860

292 A	Printing, selling, advertising grossly indecent or scurrilous matter or matter intended for blackmail
354 A	Showing pornography against the will of a woman
354 D	Monitoring the use by a woman of the internet, email or any other form of electronic communication, amounting to the offence of stalking
416	Cheating by personation
499	Sending defamatory messages by e-mail
503, 506	Criminal intimidation with or without the use of electronic media,
504	Intentional insult with intent to provoke breach of the peace- via electronic media
507	Criminal intimidation by way of an anonymous communication.
509	Word, gesture or act intended to insult the modesty of a woman-via electronic media
Information Te	echnology Act 2000 with amendments enforced in 2008
Sec 66 A	Punishment for sending offensive messages through communication service, etc. (Introduced vide ITAA 2008)
Sec 66 C	Whoever, fraudulently or dishonestly make use of the electronic signature, password or any other unique identification feature of any other person.
Sec 66 D	Punishment for cheating by personation by using computer resource
Sec 66 E	Punishment for violation of privacy-via electronic media. The section states that any person who intentionally violates the privacy by transmitting, capturing or publishing private pictures of others shall be punished with up to three years imprisonment or fine up to three lakhs.
Sec 67	Punishment for publishing or transmitting obscene material in electronic form. This punishment may extend to 5 years of imprisonment with or without a fine that can go up to 10 lakh rupees.
Sec 67 A	Punishment for publishing or transmitting material containing sexually explicit acts,etc. in electronic form

Name of the law	Key provisions
Sec 67 B	Punishment for publishing or transmitting material depicting children in sexually explicit acts, etc. in electronic form.
Commissions for Protection of Child Rights (CPCR) Act, 2005,	An Act to provide for the constitution of a National Commission and State Commissions for Protection of Child Rights (NCPCR) and Children's Courts for providing speedy trial of offences against children or of violation of child rights and for matters connected therewith or incidental thereto. NCPR is responsible for continuous monitoring and implementation of policies and legislation related to child rights like the IPC Act, IT Act, POSCO Act, RTE Act and the JJ Act.
Right to Education Act 2009	An act to provide free and compulsory education to all children of the age of six to fourteen years. Prohibits physical punishment and mental harassment to child Mandates all schools to form School Management Committees (SMCs) with participation from parents, teachers and community members for effective governance. The SMCs are given responsibility to draft School Development Plans.
POSCO Act 2012	It provides the protection of children (less than 18 years) from the offences of sexual assault, sexual harassment and pornography, while safeguarding the interests of the child at every stage of the judicial process by incorporating child-friendly mechanisms for reporting, recording of evidence, investigation and speedy trial of offences through designated Special Courts.
Juvenile Justice Act 2015	It replaced the Indian juvenile delinquency law, Juvenile Justice (Care and Protection of Children) Act, 2000, and allows for juveniles in conflict with Law in the age group of 16–18, involved in Heinous Offences (including those related to cyberbullying), to be tried as adults.

Notably, only the NCSP and the NEP identify cyberbullying or digital risks explicitly. Other policies do recognize the importance of protecting children from all forms of violence or abuse and reducing their vulnerabilities in public space. But none of these specifically identify digital risks among the main concerns affecting them. We recommend that the future updates of these policies identify the digital risk more explicitly. We believe commitment from the top takes the form of dedicated strategies which maximizes the impact.

LEGAL FRAMEWORK

Laws criminalizing all forms of sexual abuse and exploitation of children are an essential part of a strong national child protection system. It conveys a clear message to civil society about how to ensure the protection of children. It provides the foundation for a culture of respect for children's rights. This in turn triggers the process of social change in attitudes and behaviour that condones aggression.

India does not have specific anti-bullying legislation. However, a range of legislations are relevant to digital risks (see Table 3). One example is the **Indian Penal Code (IPC)**, **1860**, which criminalizes acts such as cheating by personation, sending defamatory messages, criminal intimidation with or without anonymous communication, and intentional insult. Further, sections 354A and 354D of IPC provide punishment for cyber stalking against women.²⁵

Similarly, the Information Technology Act of 2000,²⁶ later amended in 2008,²⁷ details out various offenses and associated punishments sending offensive for messages through communication services. It includes dishonestly using electronic signatures, cheating by impersonation, intentionally violating a person's privacy, and transmitting, capturing, or publishing private pictures, obscene material, sexually explicit acts. In continuation, section 67B of the Act specifically provides stringent punishment for publishing, browsing, or transmitting child pornography in electronic form. Further, the legal provisions in the area of child protection especially against sexual abuse were strengthened through the Protection of Children from Sexual Offences (POCSO) Act. 2012.²⁸ A comprehensive law, POSCO provides for the protection of children from the offences of sexual assault, sexual harassment, and pornography. In addition, it safeguards the interests of the child at every stage of the judicial process by incorporating child-friendly mechanisms for reporting, recording

of evidence, investigation, and speedy trial of offences through designated Special Courts.

Multiple actions have been taken to ensure the implementation of the legislations. For instance, the Ministry of Home Affairs issued a **National Advisory on Preventing and Combating Cyber Crime against Children, in 2012.**²⁹ The advisory provides a set of guidelines to help state agencies minimize cybercrime cases against young internet users. The advisory defines digital risks such as cyberstalking, cyberbullying, child pornography, hacking of accounts, identity theft, unwanted exposure to sexually explicit material. It defines cyberbullying as acts of harassment, embarrassment, taunting, insulting or threatening behaviour towards a victim by using the internet, email or other electronic communication devices.

Likewise, in November 2019, the Central Bureau of Investigation (CBI) set up an **Online Child Sexual Abuse and Exploitation (OCSAE) prevention/investigation unit**, headquartered in New Delhi, India. The OCSAE collects, collates, and disseminates information regarding publication, transmission, creation, collection, seeking, browsing, downloading, advertising, promoting, exchanging, and distributing information related to online child sexual abuse and exploitation.³⁰ The unit also investigates the offenses covered under the Indian Penal Code (IPC) 1860, the POCSO Act 2012, and the Information Technology Act 2000.³¹

Ministry of Home Affairs has approved a scheme, namely **Cyber Crime Prevention against Women and Children (CCPWC).** Under this scheme, an online Cyber Crime reporting portal has been launched to enable the public to report complaints about child pornography or child sexual abuse material, rape/gang rape imageries or sexually explicit content. This portal facilitates the public to lodge complaints anonymously or through its *Report and Track* option.³² Steps have also been taken to spread awareness, facilitate issue of alerts/advisories, train law enforcement agencies, improve cyber forensic facilities, etc.

Implementation and enforcement of legislation are heavily

dependent on the institutions that enable it. Therefore, in December 2005, the Commissions for Protection of Child Rights (CPCR) Act mandated a National Commission and State Commissions for Protection of Child Rights (NCPCR) and Children's Courts to provide speedy trial of offences against children or of violation of child rights and address related matters.³³

Further, to conform with values enshrined in the Constitution and ensure the child's all-round development, the **Right to Education** Act was enacted in 2009.³⁴ The Act describes the importance of free and compulsory education for children aged between 6-14 years in India. It maps out roles and responsibilities for the national, state, and all local governments to rectify gaps in their education system to enhance the quality of education in the country.³⁵ As cyberbullying can create an unsafe environment that impedes learning, it is the ethical and legal responsibility of the schools to intervene. Currently, many schools do not have policies and procedures to ensure appropriate and safe behaviour online. We find the School Management Committees (SMCs) could be an effective platform for prioritizing children's online safety. Through these committees, parents could voice their concerns regarding the digital safety of the children and ensure that schools create effective policies.

Across the Indian policy documents reviewed for this chapter, childhood, adolescence. and youth were identified as priority age groups for intervention either in one or the other form except the NCSP 2014 which is incognizant to the age of users. However, most of the legal provisions strongly support children less than 18 years. The state may identify mechanisms for protecting vulnerable youth older than 18 years too.

Undoubtedly India has a strong child protection system when it comes to legislation; however, legislation is but one element of a comprehensive response. The impact and success of legislation are dependent on the many factors. These include establishment of strong institutions overseeing implementation, the adoption of supportive policies, promotion of capacity building of relevant professionals, as well as awareness-raising activities. (1) India has the institutional mechanism in the form of the **National Commission for Protection of Child Rights** (NCPCR), however, coordination across departments is challenging.³⁶ We emphasize the role of coordination between agencies to ensure that childcentred values and strategies are consistent across stakeholder agencies and institutions. Additional effective monitoring of digital risks would help to identify the prevalence and public health impact of digital risks. This will allow for proportionate prevention and response strategies. In practice, the effectiveness of the strategies and approaches also depends on the quality and characteristics of their implementation. More specifically, the key stakeholders of the responsible departments have to collaborate with one another and work alongside families and youth to have the desired outcome.

AWARENESS GENERATION ACTIVITIES

NCPCR works under the aegis of the Ministry of Women and Child Development, Government of India (GoI). The CPCR Act mandates the commission to spread child rights literacy among various sections of society. It also mandates the commission to promote awareness of the safeguards available for protection of these rights through publications, the media, seminars, and other available means.³⁷ The commission released a handbook on "Being Safe Online - Guideline and standard content for raising awareness among children, parents, educators and the general public" in 2017.³⁸ The guidelines are based on the principles of balancing children's rights to learn, access information and privacy with their right to protection through appropriate safety measures. The safety measures are such that they do not restrict opportunities to ensure optimal online learning with minimal risks. Further, it also ensures active role of children based on their evolving capacities and resourcefulness. It brings forth the importance of inter-generation open conversation between parents and children in case of exposure to digital risks and cyberbullying. It puts special focus on the role of parents and caregivers in establishing communication on setting boundaries and active mediation via discussions with children regarding online activities.³⁹

Later, in 2018, the commission compiled the statutes concerning violence against children along with a suggested Standard Operating Procedure for each stakeholder in a series of handbooks titled "Ending Violence Against Children." In the overall purview of violence, the document covers the laws and procedures in place for "cybercrime". The SOPs in their way of defining cybercrime consider more serious/heinous acts thus covering only the extreme end of the spectrum and missing out on the less extreme yet frequent exposures. The previous chapters in this book provide evidence that prevention programming may reduce risk before it rises to the level of serious crime.

Informational materials could form the basis of programming or supplement such efforts. In 2018, Ministry of Home Affairs released a handbook on adolescents/students that provides broader guidance to adolescents regarding online risks including cyberbullying, online gaming, cyber grooming, email fraud, and online transaction fraud.⁴⁰ MHA also disseminates information on cyber awareness and hygiene for children, parents, teachers, and women on its web portal.⁴¹

The National Council of Education Research and Training (NCERT), published a set of guidance material targeting students, teachers, and school administration separately. It informed the key players about cyberbullying and how to prevent it. In 2018, the guidelines issued by the Central Board of Secondary Education (CBSE), clearly identified awareness among students, teachers, and parents as an important component of digital safety. The guidelines recommend that schools use the information available under the Information Security Education and Awareness (ISEA) initiative of the Centre for Development of Advanced Computing (C-DAC), a premier research and development organization of MEITY.⁴²

Similar to the Ministry of Home Affairs and NCERT websites, the ISEA portal has curated material for children, students, teachers, families, women, police, government employees, and System/ Network administrators all in one place. These materials have been made accessible by translating them into eight local languages.⁴³ The initiative also holds training and workshops to create educational material and cartoon strips for educating the personnel responsible for child protection including police, teachers, and children themselves.

Recently, the NCERT released a short booklet for students on the "Do's and Don'ts to Prevent Cyberbullying for Safe Online Learning in Times of COVID-19". The resource book has been jointly developed by NCERT and UNESCO India. It also suggests how to prevent and counter cyberbullying, and gives relevant information regarding the existing legislative tools and helpline numbers.⁴⁴

Initiatives led by civil society, private sector players, and international and local organizations have also produced positive results. For instance, UNICEF launched the #staysafeonline campaign on Twitter and other social media in 2016-17.45 It was aimed to raise awareness among children on how to safely navigate the online world and how to help each other to stay safe online. It aimed to disseminate three core messages among children: be there for a friend in need, treat others with respect, and advise others to be real friends. Schools also play an important part in making the community aware via informing children and parents of cyber risks. Our discussions with teachers revealed that awareness has been imparted in school via extra-curricular activities like group discussions, role-plays, and group projects. Further, the schools engage other stakeholders like parents, teachers, and counsellors into discussions on these issues via School Management Committees and in partnership with NGOs.

Despite the efforts made in awareness generation activities, we identified a few gaps. The current messages instil a predominantly risk-averse solution leaning heavily on restrictions. In contrast, a resilience-based, child-centric approach would go a long way in preventing such incidents. It will also help in building capacity in children to effectively cope with and respond to incidents. Further, the "National Report on Safe and Secure School Environment" by NCPCR in 2019-2020, reported partial progress on improving cybersafety through education and awareness.⁴⁶

Despite the initiatives by the national government, local authorities, schools, civil society, and private sector, a significant number of young people are still not using the available avenues to reach out and ask for help.⁴⁷ This is indicated by the gross mismatch of the self-reported prevalence in research studies with the actual number of cases reported by the law enforcement agencies. Evidence suggests that informational websites do not do enough to protect children.⁴⁸ The mere presence of such venues is not enough to ensure safety, particularly when children don't find these reporting mechanisms safe, practical and confidential.

EDUCATION AND LIFE SKILLS

Empowering youth also includes teaching them strategies to respond to risk once exposed. Many of the social and emotional skills taught in school-based violence or bullying prevention programs globallyare likely to be relevant to the reduction of cyberbullying when supplemented with lessons on online safety. Suck skills include anger management, empathy, problem-solving, etc., In India, bullying prevention programs in schools are not yet a norm. However, social and emotional skills or Life Skills education has evolved through various stages in India. To start with, the Adolescent Education Programme (AEP) was launched in 2005. It primarily targeted secondary and higher secondary (15-18 years old) students. It was a collaborative initiative of the Ministry of Education and National Aids Control Organization (NACO).⁴⁹ It focused on preventing HIV and incorporated self-awareness and self-esteem, values and beliefs, relationships, and effective

communication within the curriculum.⁵⁰ Later with release of the National Curriculum Framework in the same year, the focus on life-skills shifted from being more disease-focused to broadly development-focused. Also, the framework emphasized a child-centric holistic development and gave substantial emphasis on quality improvement.⁵¹ These ideals were also mandated by RTE Act 2009.⁵² Consequently, the Continuous and Comprehensive Evaluation (CCE) system was developed and implemented across the country. Taking a holistic approach, CCE is aimed at the physical, social-emotional, and cognitive development of a child. The lessons on life skills thus reached a broad age group of students 10-18 years.⁵³ Recently, in 2020, CBSE integrated the prevention of cyber risk with a life-skills concept based on Partnership for 21st Century Skills (P21).⁵⁴ The age group of children who are eligible for these lessons now ranges from 3 years to 18 years.

These are some steps in the right direction. Combined with appropriate identification and monitoring of specific measurable targets these program frameworks could translate into effective implementation. This in turn could ensure empowered youth who can navigate the ever-changing networked world.

REDRESS AND SUPPORT MECHANISMS FOR CHILDREN AFFECTED BY CYBERBULLYING

In 2020, the gross enrolment ratio at elementary level education in India was 97.8% and at secondary level 77.9%.⁵⁵ Schools have thus become an ideal setting for promoting safety, health, and wellbeing of students. Appropriate detection, response, and follow-up to incidents of exposure to other digital risks (including cyberbullying) are required within the school community. Cyberbullying prevention or digital safety programs at the school level that include codes of conduct, school policies, or procedures to address digital risks have been brought into practice elsewhere in the world. These may be adapted for the Indian setting as well.⁵⁶ On these lines, the Central Board for School Education issued 'Guidelines for Safe and Effective Use of the Internet and Digital Technologies in Schools and School Buses', in 2017. It advised schools to draft school policies on the safe use of electronic devices and implement them.⁵⁷ According to the "National Report on Safe and Secure School Environment" by NCPCR in 2019-2020, only 38% of schools handled cyber-crimes and cyberbullying with care. 40% of these issues were dealt with confidentiality.⁵⁸ The low coverage prompts for greater action on improving the reach and quality of intervention.

Schools are an inherent part of the communities in which they are located. Initiatives to provide digital safety in schools need to take this co-dependency into account. Ideally school administrators should work together with parents and youth and convey a clear message that online safety is being taken seriously. Chapter 3, provides best practices for setting up effective school-level policies.

We reviewed the CBSE guidelines and found that the advice is predominantly restrictive. It is centred around the installation of firewalls, monitoring software, and instituting strict disciplinary action against children who attempt to bypass these procedures. However, the guidelines mention sensitizing parents and teachers. Nowhere do the guidelines discuss establishing a positive school climate and strong communication strategies or instituting childsensitive counselling and reporting mechanisms. In light of the above limitations, it is worth reiterating the choice that stakeholders have in deciding the approach between one that is resilience-based against one that is chiefly restrictive and abstinence-based.

Our discussions with teachers found that they are not seeing cyberbullying incidents in their students just yet. As expected, children are unlikely to report events of cyber victimization to parents or teachers. Often the victimized children tell their friends about such incidents. This calls for building the teacher-student
relationship such that students feel comfortable in reaching out to their teachers when they experience victimization. It also calls for an approach that provides students with enough guidance and assistance, so that they can effectively help their friends when their friends disclose victimization. This can be done through reporting the incident to the appropriate parties and accessing resources like counselling. A safe, easily accessible, child-sensitive, confidential and independent reporting mechanism to address cyberbullying is critical to enable students to report events. Employing specialist staff such as psychologists and social workers has been found helpful to deal with students involved, both victims and perpetrators.⁵⁹

Also, based on the review of program documents, the need for restorative processes within school policies can't be emphasized enough. These processes provide the children who have been bullied enough support to cope effectively and build positive peer relationships. They also provide for the children who have bullied others. In reality, both bullies and victims are children who are often equally in distress and need higher levels of care, attention, and skill-building. For both, the cycle of violence and intimidation results in greater interpersonal difficulties and poor performance in school. Thus, schools should avoid using punitive approaches that simply advance punishment for bullies or restrict internet use for those who report inappropriate events.

Ideally, the processes could include: 1) a set of principles or values that define the role that such processes will serve within the community; 2) training of key personnel in a restorative approach; 3) strong communication strategies; 4) group discussions that provide a forum for building trust and commitment to act; 4) voluntary attendance at meetings in order to bring all parties together, emphasizing a whole-school and whole-community approach, in order to obtain a consensus outcome.⁶⁰

National Education Policy, 2020 identified the role of the counsellors and social workers to make the schools accessible for all without the fear of bullying or violence. The policy envisions social workers'visits with the children and families at homes to guide them and reintegrate these into school systems.⁶¹ Bullying and cyberbullying are associated with absenteeism, detentions and suspensions. Training social workers to detect incidents and respond timely and effectively to such events would enable better integration of the marginalized children and families from low socio-economic status who especially lack skills and knowledge to deal with digital risks.

In addition to educational policies, recognizing schools as the useful platforms, in 2018 Government of India has launched School Health Program to strengthen the existing programs. Rashtriya Kishor Swasthya Karyakram (RKSK) (translated as National Adolescent Health Program) was launched in 2014. Initially, it lacked the mental health component. It's main focus was on screening for nutritional deficiencies, common diseases, and disorders.⁶² This program was strengthened by adding the preventive and promotive aspects of health in school environment. It is in line with the overall approach of Ayushman Bharat (translated as Longeval India, it is Government of India's flagship program to achieve Universal Health Coverage).⁶³ The program envisages the training of two teachers from each school as Health and Wellness Ambassadors who will impart health and wellness education to the students. The program entails a detailed training plan cascading from national, state, district, and block down to school level. Age-appropriate health promotion topics have been identified. Notably, Internet safety and media literacy along with bullying prevention have been identified as focus areas among other issues for health education among middleschool children. The School Health Program also ensures monitoring of the activities; however, no specific digital safetyrelated indicator was identified in the guidelines. Further, monitoring on outcome or impact indicators rather than just process-level indicators could further advance accountability to concerned parties and thus provide impetus for such activities.

Similarly, for the out-of-school adolescents (11-14 years), the Government of India launched the Scheme for Adolescent Girls (SAG),

earlier known as Kishori Shakti Yojna or SABLA. This scheme aims at breaking the intergenerational life-cycle of nutritional and gender disadvantage and providing a supportive environment for selfdevelopment.⁶⁴ The scheme provides cooked meals or an equivalent take-home ration daily for adolescent girls; nutrition and health education; counselling on sexual reproductive health. It also provides life skills education; information on their rights and available public services; and supports for adolescent girls to transition back to formal schooling or vocational learning opportunities.⁶⁵ Such platforms can also be used to inform adolescents about the digital risks and guide them to appropriate response mechanisms.

Lastly, as a part of the robust national child protection system, the MoWCD also runs a child helpline-1098.⁶⁶ Child helplines form an important resource as they can be called anonymously and provide advice and support. The existing child helpline 1098 network needs to be empowered to handle complaints and counsel children for addressing their problems and effectively connect with school counsellors as well as a network of specialized technical, legal, psycho-social and welfare services.

PERSISTING AND EMERGING CHALLENGES VISION AND LEADERSHIP

The broad vision of preventing harm to children should prioritize empowering the voices of the youth in designing solutions. These would also use evidence-based strategies as have been described in the previous chapters. There is a need for comprehensive interventions that would implement these practices with efficient use of our limited resources.

Policies exist to protect the rights of children. But it will require significant education, training, and administrative support within specific institutions and agencies to ensure that these policies are

implemented as intended in the real world. It would also entail a whole of government approach with a coordinated multi-sectoral response that converges to protect the most vulnerable children. Government ministries should share the vision of achieving child and adolescent well-being and development through child-centric program planning. Common platforms where all authorities share the same knowledge and values and provide the same message on youth online safety will be highly efficient, compared to the current practice of having piecemeal information from different sources. Further, the impact of current policies and strategies needs to be evaluated regularly. Thus, measurable targets on child and adolescent well-being need to be included within program planning and evaluation across departments. Efforts should be made to measure the impact of the policies on reducing risk and promoting protective skills reported across stakeholders. Further, departmentspecific process indicators should be tracked, such as whether there are school policies on cyberbullying and online safety, whether parents have been provided with education on online safety, and whether schools have mental health providers available in proportion to the student population. All this would ensure stronger implementation of child-centred policies.

RESEARCH GAPS

Cyberbullying is an evolving, dynamic issue accentuated by fastpaced changes in technology. It is imperative that research work in this field is prioritized and keeps up with the changing technology landscape. Our extensive literature search indicates that there is minimal research on this topic within the Indian context. Based on the information gathered so far, there is a need for more groundwork to understand the effects of cyberbullying, especially in the Indian culture.

Firstly, qualitative research in particular would illuminate youth's

lived experiences of the digital world. Secondly, nationally representative surveys are needed to study the problem of digital risks (including cyberbullying) across various ages and social subgroups. This would further highlight the burden of the problem in India and help us understand the contextual nuances relevant to India. These need to be kept in mind while planning preventive interventions. Thirdly, longitudinal surveys need to be conducted to study the short-term and long-term impact digital risk on adolescents' health and development. Lastly, there is a need to develop or adapt contextually suited interventions using participatory research. The resultant programs need to be pilot tested before being rolled out at scale.

Contextually informed and theoretically sound interventions need to be developed at the multiple level. This includes interventions focused on youth, parents, teachers, and the school environment. When it comes to adapting preventive interventions developed elsewhere, it is important to consider not just the cultural dynamics but also the access to resources (or lack thereof). For instance, in the case of India, restrictive monitoring may further harm the already deep digital divide by cutting off opportunities to learn digital skills.

Financial commitments for building research capacity in developing countries by governments, multilateral institutions, and private organizations is important in fostering international research collaborations. Research which is contextually rooted and local is most useful for guiding evidence-based decision making.

CONCLUSION

The socio-ecological framework explains cyberbullying as a complex interplay of factors between individual, relationship, community, and societal levels. Therefore, any positive and longlasting population-level impact requires action across multiple levels at the same time. Collaboration among the policy makers, law enforcement agencies, educators, health professionals, civil society, businesses, families, researchers, and youth themselves is critical in preparing and implementing effective prevention and intervention strategies. Any normalization of aggression, but especially genderbased aggression, needs to be countered at a societal level. Thus, the role of civil society will be critical to address the existing harmful social and gender norms.⁶⁷

Adolescents tend to dislike current technical offerings, such as the parental control apps.⁶⁸ The reason for a strong dislike is because they felt that they were overly restrictive and invasive of their personal privacy.⁶⁹ Thus, we should consider listening to adolescents' opinions about technologies designed to keep them safe online, conceptualize new solutions that engage parents. We should respect the challenges teens face growing up in a networked world. Solutions by the businesses which offer social networking platforms may be particularly useful. They have the capacity to design coping and response strategies that have effective interfacing and that are acceptable to adolescents.⁷⁰

In conclusion, the current policy ecosystem of India has the necessary groundwork to address the problem of digital safety among youth. Building on the core principles, the next urgent steps are effective implementation and technical support for implementation. Further, there is a need of coordinated action across stakeholders toward the shared goal of providing children with a safer cyberspace.

KEY TAKEAWAYS

• A comprehensive approach including multiple stakeholders such as government policymakers, law enforcement agencies, educators, health professionals, civil society, families, and youth themselves is required to mitigate digital risks.

- Youth need to be empowered to navigate the digital world safely, to know their rights, and to be provided with appropriate mechanisms to report problems safely and confidentially.
- Child's autonomy and privacy need to be protected when designing solutions. Evidence suggests that excessively restrictive and controlling measures recommended by government guidelines and supported by families may increase the digital divide and may not be effective in reducing cyberbullying.
- The policy ecosystem of India is based on sound principles and sets forth the right set of strategies to take necessary action and prioritize a child-centric response against any risks faced by children.
- Although no anti-bullying laws exist in India, existing laws cover digital risks, including cyberbullying, in various ways. Strengthening the implementation and enforcement of laws would be essential to promote online safety.
- Specific policy directives around digital risks for children are lacking. These need to be updated to incorporate current evidence given the constantly changing networked world.
- Education institutions need to implement whole school policies to tackle school bullying and cyberbullying. Positive school climate, setting clear expectations around appropriate behavior, empowering teachers to prevent and respond to such events, and enabling psychologists and social workers to support families and youth in responding to such exposures is critical. The planning and constitution of school policies and programs should be collaborative, including school administration, youth, and their families (parents and caregivers).
- Counseling and therapeutic approaches are poorly addressed by current programs. Instruments to address support for parents and caregivers in response to untoward events need to be strengthened using existing platforms across education,

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PROBLEM BEHAVIOR FREQUENCY SCALES – ADOLESCENT REVISED | ENGLISH

INTENDED RESPONDENTS: Youth ages 10-18.

DESCRIPTION: The Problem Behavior Frequency Scales – Adolescent Revised includes subscales that assess the frequency of problem behaviors (e.g., aggression, drug use, delinquency) and victimization. Students report how frequently specific behaviors occurred in the past 30 days using a 6-point anchored scale (1= Never, 2 = 1-2 times, 3 = 3-5 times, 4 = 6-9 times, 5 = 10-19 times, 6 = 20 or more times), with higher scores representing higher levels of the behaviors.

Cyberbullying Perpetration Subscale

In the LAST 30 DAYS, how many times have you...

- 1. Used cell phone pictures to make fun of someone
- 2. Used text-messaging to threaten to hurt someone physically
- 3. Used a chat room or Internet website to make fun of someone
- 4. Used cell phone pictures to threaten to hurt someone physically
- 5. Used text-messaging to make fun of someone
- 6. Pretended to be someone else online or through texting
- 7. Left someone out of an online group or unfriended them on Facebook
- 8. Sent or posted embarrassing pictures of someone without their permission
- 9. Posted rude comments about someone you know online
- 10. Spread rumors about someone you know online or through texting

Cybervictimization Subscale

In the LAST 30 DAYS, how many times has this happened to you?

- 1. Someone used cell phone pictures to make fun of you
- 2. Someone used text-messaging to threaten to hurt you physically
- 3. Someone used cell phone pictures to threaten to hurt you physically
- 4. Someone used text-messaging to make fun of you
- 5. Someone used a chat room or Internet website to make fun of you
- 6. Someone pretended to be someone else online or used a cell phone to trick you.
- 7. Someone left you out of an online group or unfriended you on Facebook.
- 8. Someone posted rude comments about you online.
- 9. Someone spread rumors about you online or by texting.

CITATION: Farrell, A. D., Thompson, E. L., Mehari, K. R., Sullivan, T. N., & Goncy, E. A. (2020). Assessment of in-person and cyber aggression and victimization, substance use, and delinquent behavior during early adolescence. Assessment, 27, 1213-1229. doi: 10.1177/1073191118792089

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Appendix B: Problem Behavior Frequency Scale -Adolescent Revised (Hindi)

PROBLEM BEHAVIOR FREQUENCY SCALES – ADOLESCENT REVISED | HINDI

INTENDED RESPONDENTS: Youth ages 10-18. Cyberbullying Perpetration Subscale

पछिल 30 दनों में आपन कतिनी बार ये कयाि है?

- 1. कसीि का मज़ाक उड़ान के लिए सेले फोन चति्रों का उपयोग कयिा
- 2. टेक्स्ट मसैजेगि का प्रयोग करक ेकसीि को चोट पहुँचान ेकी धमकी दी
- 3. कसीि का मज़ाक उड़ान के लिए चटै-रूम या वबेसाइट का इस्तमाल कयाि
- सले फोन चति्रों का प्रयोग करके कसीि को चोट पहुँचान की धमकी दी
- 5. कसीि का मज़ाक उड़ाने के लिए टेक्स्ट मैसेजेगि का उपयोग कयाि
- ऑनलाइन या टक्स्ट मसैजेगि क जरिए कोईऔर व्यक्त होन का बहाना कयिा
- 7. कसीि को ऑनलाइन ग्रुप से बाहर कयाि / फेसबुक पर उन्हें अनफ्रेंड कयाि
- 8. बनिा इजाज़त क कसीि का आपत्तजिनक चति्र भेजा या पोस्ट कयाि
- 9. ऑनलाइन अपन कसी जानन वाल के बार में भद्दी टप्पिणया की
- 10. कसीि व्यकि्त क`बार`मेंऑनलाइन या टेक्सटगि क`ज़रयि अफवाह फैलाई

Cybervictimization Subscale

पछिल 30 दनिां मंकतिनी बार आपक साथ ऐसा हुआ है?

- 1. कसीि ने आपका मज़ाक बनाने के लिए सेले फोन चति्रों का उपयोग कया
- कर्सी न आपको टक्स्ट मैसेजेगि क इस्तमाल स शारीरकि नुकसान पहुँचान की धमकी दी

Appendix B: Problem Behavior Frequency Scale - Adolescent Revised

- कर्सी न`आपको सले फ़ोन चति्रों के इस्तमाल स`शारीरकि नकुसान पहुँचाने की धमकी दी
- 4. कसीि न टेक्स्ट मसैजेगि से आपका मज़ाक उड़ाया
- कर्सी न आपका मज़ाक बनान के लिए चैट-रम या इंटरनटे वेबेसाइट का उपयोग कयिा
- आपको बवेकफू बनान के लिए कसीि ने ऑनलाइन या सेल फोन के ज़रयि कोई अन्य व्यक्त होने का बहाना कयिा
- कर्सी न`आपको ऑनलाइन ग्रुप स`बाहर कयाि या आपको फेसबुक म`अनफ्रेंड कयाि
- 8. कसीि ने आपके बारे में ऑनलाइन भद्दी टप्पिणयाां की
- 9. कसीि ने ऑनलाइन या टेक्सटगि के ज़रयि आपके बार में अफवाह उड़ाई

CITATION: Mehari K and Basu N. (2021). Cross-cultural measurement of cyberbullying. In Sharma D, Mehari K, Doty J, Sharma N, Wisniewski P. Cyberbullying and digital safety: applying global research to youth in India (Appendix B). LibraryPress@UF, https://ufl.pb.unizin.org/cyberindia/back-matter/appendix-b/

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Glossary

Abstinence-based approaches to online safety – approaches to online safety that emphasizes preventing risk exposure from happening.

Adolescence – is the phase of life between childhood and adulthood, from ages 10 to 19.

Adolescent risk behaviors – Behaviors associated with high U.S. mortality and morbidity rates for teenagers and that may have significant negative consequences, such as substance use, unprotected sex, driving under the influence, physical violence, among others.

Aggression - Behavior that is intended to cause harm.

Autonomy – in <u>self-determination theory</u> more specifically, the experience of acting from choice, rather than feeling pressured to act. This form of autonomy is considered a fundamental psychological need that predicts well-being.

Bullying – Aggressive behavior perpetrated among peers, in which the aggression takes place in the context of a power imbalance (e.g., one person or group of people has more power, such as physical strength, numbers, verbal ability, or social status) than the victim; the aggression is repeated over time; and the victim feels unable to defend themselves.

Child or Children – According to the United Nations Convention on the Rights of the Child (CRC) every human being below the age of eighteen years, unless under the law applicable to the child, majority is attained earlier.

Causal inference – refers to the process of drawing a conclusion that a specific treatment (i.e., intervention) was the "cause" of the effect (or outcome) that was observed. A simple example is concluding that taking an aspirin caused your headache to go away. Inference for causal effects in education might include, for instance, aiming to select programs that improve educational outcomes or identifying events in childhood that explain developments in later life.

Correlate - A variable that co-occurs with another variable.

Cross-cultural research – The study of human functioning across cultural contexts, including research that compares and contrasts psychological findings across cultures.

Cross-sectional research – A cross sectional study measures the prevalence of health outcomes or determinants of health, or both, in a population at a point in time or over a short period.

Cyberbullying – Peer-targeted aggression that is perpetrated using electronic communication technologies.

Cyberbullying Victimization – the degree to which an individual has been cyberbullied.

Cyberbullying Perpetration – is the degree to which an individual has been involved in cyberbullying others.

Digital Access – is the ability to fully participate in digital society. This includes access to tools and technologies, such as the Internet and computers, that allow for full participation. Unfortunately, not everyone has complete digital access and therefore, are not able to fully participate in digital society. The separation between those who have complete access and those who do not is referred to as the Digital Divide.

Digital Divide - see "Digital Access"

Digital Literacy – is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.

Digital Media- means any media that are encoded in machinereadable formats. Digital media can be created, viewed, distributed, modified, Listened, and preserved on a digital electronics device.

Digital risks among adolescents – Digital or online risks among adolescents are of four kinds: cyberbullying or online harassment, sexual solicitation and risky sexual behavior, exposure to explicit content and information breaches and privacy violations.

Dyadic research - Research conducted following groups of two

people. Each pair may share a significant social relationship (e.g., parent and child, spouses, dating partners).

Ecological perspective – Refers to a theoretical perspective derived from Urie Bronfenbrenner's Ecological Systems Theory. This theory identifies a series of systems (i.e., microsystem, mesosystem, exosystem, macrosystem), each of which spans a progressively wider sociological context than the last. These systems interact with one another and can be used to examine an individual's relationship with themselves and their environment.

Effect size – A number that estimates the strength of the relation between two variables. One research (Cohen) suggested that a small effect size is .3; a median effect size is .5; and a large effect size is .8 (when the effect size is measured by *d*).

E-learning- A learning system based on formalised teaching but with the help of electronic resources is known as E-learning. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning.

Electronic communication technologies (ECTs) – Technologies or devices that are designed to facilitate communication across distances. This can refer to broad technology such as the Internet; devices such as mobile or cellular telephones, computers, tablets, or gaming systems; platforms such as social media; and applications that use text-, voice-, visual-, or video-based messaging.

Ethnicity – Membership in a social group that has a shared cultural identity, often rooted in a shared place or nation of origin; may include a shared language and religious heritage.

Explicit content – a wide range of inappropriate online materials, including pornographic, violent, gruesome, or hateful content, as well as content that promotes harmful behaviors such as self-harm or eating disorders.

Factor analysis – a statistical approach to understanding the construct validity of a measure that is based on the premise that the relations among observed or manifest variable can be explained

by their membership in a smaller number of unobserved or latent variables.

Gender equality – The concept that women and men, girls and boys have equal conditions, treatment and opportunities for realizing their full potential, human rights and dignity, and for contributing to (and benefitting from) economic, social, cultural and political development. Gender equality is, therefore, the equal valuing by society of the similarities and the differences of men and women, and the roles they play.

Information breaches – the inappropriate sharing of sensitive information (e.g., account credentials or location information) online.

Life-skills – the abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life. UNICEF, UNESCO, and WHO list the ten core life skill strategies and techniques as: problem solving, critical thinking, effective communication skills, decision-making, creative thinking, interpersonal relationship skills, self awareness building skills, empathy, and coping with stress and emotions. Also see "Social and Emotional Skills."

Longitudinal Studies – In a longitudinal study subjects are followed over time with continuous or repeated monitoring of risk factors or health outcomes, or both. Most longitudinal studies examine associations between exposure to known or suspected causes of disease and subsequent morbidity or mortality.

Marginalized population – Marginalized communities are those excluded from mainstream social, economic, educational, and/or cultural life. Examples of marginalized populations include, but are not limited to, groups excluded due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status.

Measurement – How a variable is defined, operationally defined, and assessed in research

Media Parenting – the specific methods parents employ to guide the media use of their children

Meta-analysis – Analyzing data across multiple scientific studies in order to create a fuller understanding of trends

Mixed-Methods Research – an emergent methodology of research that advances the systematic integration, or "mixing," of quantitative and qualitative data within a single investigation or sustained program of inquiry

Multi-sectoral strategy – Multi-sectoral approaches refer to the collaboration between organisations in different areas of policy (e.g. health, social, environment) and different sectors (e.g. public, private, third), as well as communities and people, working together to achieve policy outcomes.

National Crime Records Bureau – The National Crime Records Bureau, abbreviated to NCRB, is an Indian government agency responsible for collecting and analysing crime data as defined by the Indian Penal Code and Special and Local Laws. NCRB is headquartered in New Delhi and is part of the Ministry of Home Affairs (MHA), Government of India.

Norms – a standard or range of values that represents the typical performance of a group or of an individual (of a certain age, for example) against which comparisons can be made.

Online risks - see "Digital risks among adolescents"

Online sexual predation of youth – unwanted sexual solicitations (regardless of age) or any solicitations of a sexual nature made through internet-enabled technologies.

Parental Mediation – any strategy parents use to control, supervise, or interpret content for children and adolescents. **Active mediation** refers to parent-child discussions of media use and the active use of media together whereas **restrictive mediation** includes placing limits on media, whether through house rules or technology controls. Compared to restrictive media parenting, parents are less likely to actively educate or discuss online behavior with their adolescents

Policy – Policy is a law, regulation, procedure, administrative action, incentive, or voluntary practice of governments and other

institutions. Policy decisions are frequently reflected in resource allocations.

Predictor – A variable that is associated with the subsequent occurrence of another variable

Prevention – An action or approach taken with the intention of stopping something from occurring; reducing its intensity, frequency, or severity; or mitigating its impact.

Prevention – Primary prevention: An action or approach taken to stop something before it begins

Prevention – Secondary prevention: An action or approach taken to reduce the intensity, frequency, or severity of something after it begins

Privacy violations - see "Information breaches"

Promotive factor – A variable that is associated with an increased likelihood of a desirable outcome or a decreased likelihood of an undesirable outcome

Protective factor – A variable that weakens the relation between a risk factor and an undesirable outcome

Qualitative research – A structured, systemic process to gaining knowledge that focuses on understanding phenomena from the perspective of the informant. This research is often conducted when phenomena are difficult to understand quantitatively (using numbers and statistical analysis) or when a phenomena is newly explored or discovered

Quantitative research – a systematic investigation of phenomena by gathering quantifiable data and performing statistical, mathematical, or computational techniques. Quantitative research collects information from existing and potential customers using sampling methods and sending out <u>online surveys</u>, <u>online polls</u>, <u>questionnaires</u>, etc., the results of which can be depicted in the form of numerical.

Resilience – The continuous process whereby an individual continues to develop healthily after overcoming difficult or traumatic experiences. Support from an individual's internal or external resources may help with this process.

Resilience based approaches to online safety – approaches to online safety that emphasizes youth self-regulation to overcome the negative effects of online risk exposure.

Rights-based perspective – is a conceptual framework that is normatively based on international human rights standards and operationally directed to promoting and protecting human rights. It seeks to analyse obligations, inequalities and vulnerabilities, and to tackle discriminatory practices and unjust distributions of power that impede and undercut human rights.

Risk factor – A variable that is associated with an increased likelihood of an undesirable outcome

Risky online sexual behaviors – technology mediated sexual exchanges, such as sex talk, sharing sexual imagery, and meeting online contacts of offline sexual encounters.

Sex-ratio – is the <u>ratio</u> of <u>males</u> to <u>females</u> in a <u>population</u>.

Sexual solicitation- Sexual solicitation is defined as requests to engage in sexual activities or sexual talk or to give personal sexual information that were unwanted or, whether wanted or not, were made by an adult.

Social and emotional Skills – refer to the abilities to regulate one's thoughts, emotions and behaviour. These skills differ from cognitive abilities such as literacy or numeracy because they mainly concern how people manage their emotions, perceive themselves and engage with others, rather than indicating their raw ability to process information. OECD describe it under big five domains of; task performance, emotional regulation, collaboration, openmindedness, engaging with others,

Social-ecological model - see "Ecological Perspective"

Socioeconomic status (SES) – Social standing or social class; typically assessed by a combination of an individual's or family's income, education, and occupational status; may include accumulated wealth and assets. Higher SES refers to higher income or education or a higher-status occupation.

Somatic complaints – Somatic symptom disorder is diagnosed when a person has a significant focus on physical symptoms, such as

pain, weakness or shortness of breath, to a level that results in major distress and/or problems functioning. The individual has excessive thoughts, feelings and behaviors relating to the physical symptoms.

Stakeholders – A stakeholder is a party that has an interest in an issue and can either affect or be affected by an issue.

Substance-use disorder- the recurrent use of alcohol, tobacco and/or drugs causes clinically significant impairment, including health problems, disability, and failure to meet major responsibilities at work, school, or home

Systematic Review – A systematic review attempts to identify, appraise and synthesize all the empirical evidence that meets prespecified eligibility criteria to answer a specific research question. Researchers conducting systematic reviews use explicit, systematic methods that are selected with a view aimed at minimizing bias, to produce more reliable findings to inform decision making.

Trafficking- the act of buying or selling people, or of making money from work they are forced to do, such as sex work: human/ people trafficking.

Vocational training– Vocational education or Vocational Education and Training (VET), also called Career and Technical Education (CTE), prepares learners for jobs that are based in manual or practical activities, traditionally non-academic and totally related to a specific trade, occupation or vocation, hence the term, in which the learner participates. It is sometimes referred to as technical education, as the learner directly develops expertise in a particular group of techniques or technology.

Violence – the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation

Young People – persons between ages of 10 and 24 years (UNICEF/WHO)

Youth – The United Nations, for statistical purposes, defines 'youth', as those persons between the ages of 15 and 24 years

List of Abbreviations

- AEP Adolescent Education Programme
- AFHC Adolescent Friendly Health Centres
- CBI Central Bureau of Investigation
- CBSE Central Board of Secondary Education
- C-DAC Centre for Development of Advanced Computing
- CCE Continuous and Comprehensive Evaluation
- CCPWC Cyber Crime Prevention against Women and Children
- CDC Centre for Disease Control
- CHCs Community Health Centers
- CPCR Commissions for Protection of Child Rights
- CRY Child Rights and You
- COVID-19 Coronavirus Disease
- CRY Child Rights and You
- EU European Union
- GSMA Global System for Mobile Communications Association
- GoI Government of India
- IAMAI Internet and Mobile Association of India
- ICT Information and Communication Technology
- IIIT-D Indraprastha Institute of Information Technology, Delhi

IGPP - Institute of Governance, Policies & Politics

IPC - Indian Penal Code

INSPIRE – Implementation and Enforcement of LAW; Norms and Values; Safe Environments; Parent and Caregiver Support; Income and Economic Strengthening; Response and Support Services; and Education and Life Skills.

ISEA - Information Security Education and Awareness

LGBTQ - Lesbian, gay, bisexual, trans, queer

- MEITY Ministry of Electronics and Information Technology
- MoHFW Ministry of Health and Family Welfare
- MoHRD Ministry of Human Resource Development
- MoWCD Ministry of Women and Child Development
- NACO National Aids Control Organization
- NCERT National Council of Education Research and Training
- NCPCR National Commission for Protection of Child Rights
- NCRB National Crime Records Bureau
- NCSP National Cybersecurity Policy
- NEP National Education Policy
- NFHS National Family Health Survey
- NGO Non-governmental Organization
- NHP- National Health Policy
- NPC National Policy for Children
- NYP National Youth Policy
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OCSAE - Online Child Sexual Abuse and Exploitation

P21 - Partnership for 21st Century Skills

PGIMER – Post Graduate Institute of Medical Education and Research, Chandigarh

PHC - Primary Health Centre

POCSO - Protection of Children from Sexual Offences Act, 2012

RKSK – Rashtriya Kishor Swasthya Karyakram

RTE - Right of Children to Free and Compulsory Education Act

SABLA-Rajiv Gandhi Scheme for Empowerment of Adolescent Girls

SAG - Scheme for Adolescent Girls

SES - Socioeconomic status

SPARC – Scheme for Promotion of Academic and Research Collaboration

SMCs - School Management Committees

TOSS - Teen Online Safety Strategies

UN - United Nations

UNESCO – United Nations Educational, Scientific and Cultural Organization

UNICEF - United Nations Children's Fund

U.S. - United States

WHO - World Health Organization

Contributor Biographies

Drishti Sharma, MD, is a Senior Manager in Health Systems and Policy Research, in IAVI-New Delhi (International AIDS Vaccine Initiative). Her primary interest lies in the social and behavioral aspect of health, especially of children and adolescents. She has developed and tested a culturally adapted life skills intervention to prevent in-person bullying among middle-school children in India. Her work in bullying prevention in India was selected for the American Psychosomatic Society's Cousins Center's Global Outreach Award.

Krista Mehari, PhD is an Assistant Professor in the Department of Psychology at University of South Alabama and a licensed clinical psychologist. She has expertise in cyberbullying and violence prevention, and has received funding from the Centers for Disease Control and Prevention for her work. She has published over 30 peer-reviewed articles and chapters on these topics, including a chapter in a book published by Cambridge UP (*Cambridge Handbook* of Violent Behavior and Aggression, 2nd Ed).

Jennifer L. Doty, PhD, is an Assistant Professor of Youth Development and Prevention Science in the Department of Family, Youth, and Community Sciences at the University of Florida. She received her doctorate from the University of Minnesota in Family Social Science with an emphasis on prevention. With over 30 scholarly publications, her research interests are built around the idea that parent-child relationships and technology are key leverage points for improving adolescent health and well-being. She also leads the Cyberbullying Prevention Collaborative.

Pamela Wisniewski, PhD, is an Associate Professor in Human-Computer Interaction in the Department of Computer Science at the University of Central Florida. Her work lies at the intersection of Social Computing and Privacy. She is an expert in the interplay between social media, privacy, and online safety for adolescents. She has authored over 80 peer-reviewed publications and has won multiple best papers (top 1%) and best paper honorable mentions (top 5%) at ACM SIGCHI (Association for Computing Machinery Special Interest Group on Computer–Human Interaction) conferences. She has been awarded \$3 million in external grant funding, and her research has been featured by popular news media outlets, including ABC News, NPR, Psychology Today, and U.S. News and World Report. She was an inaugural member of the ACM Future Computing Academy, is an ACM Senior Member, and the first and only computer scientist to ever be selected as a William T. Grant Scholar.

Nandini Sharma, MD, is Director Professor of Community Medicine at Maulana Azad Medical College, Delhi, India. She has previously served as the Dean of Maulana Azad Medical College and Head of Department of Community Medicine at Maulana Azad Medical College. She is on multiple Federal government advisory committees in India, including the Chairperson of the Delhi task force for Revised National Tuberculosis Control Program, Chairperson of the Data Safety Monitoring Board constituted for the studies conducted on prevention of Corona by Directorate of AYUSH (Homoeopathic Wing), and chairperson of two institutional ethics committees. She has over 125 publications in peer-reviewed journals, with topics heavily focused on health promotion and disease management and containment.

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Karla Girón, M.S., (she/her) is a Research Coordinator for the Precision Medicine Program at the University of Florida. She received a master's degree in Family, Youth and Community Sciences from the University of Florida. Her research interests involve equity in public health, improvement of mental health services and their accessibility, and positive youth development. Her ultimate goal is to help bridge the gap in communication between researchers, practitioners, and policymakers, to encourage interdisciplinary research and implementation, and to help advance the field of translational science.

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