

# Digital Experiences of Saudi Adolescent Girls: Insights into Their Internet Usage, Risks and Safety

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May 2024

## **ABSTRACT**

The increase in internet use among adolescents has introduced both opportunities and risks, especially within culturally unique contexts. This study addresses the gap in understanding internet usage patterns among Saudi adolescent girls aged 12 to 17, a group that has not been extensively studied. In Saudi Arabia, where rapid technological adoption combines with traditional cultural values, it is important to explore how these girls interact with the digital world. The research used a mixed-methods approach, starting with semi-structured interviews of 29 participants: 8 adolescent girls, 8 mothers, and 13 female teachers. These interviews offered detailed insights into online behaviours, perceived risks, and safety practices. This was followed by a quantitative phase using structured questionnaires distributed to 158 girls and 111 mothers to further clarify digital behaviours and risk perceptions. The analysis of interview data employed thematic analysis to identify key patterns and themes, while the quantitative data were analysed using descriptive statistics and visual representation tools in Qualtrics. This combined approach ensured a thorough examination of the participants' digital interactions and the effectiveness of current safety measures. Grounded in the Bio-ecological Systems Theory with an emphasis on the Techno-Subsystem, the study provides a framework for understanding how socio-cultural and technological factors shape online experiences. Findings reveal that Saudi adolescent girls are heavy internet users, with significant concerns about online risks such as exposure to inappropriate content and interactions with strangers. Mothers are particularly worried about online safety, highlighting a need for improved parental mediation and educational interventions. This research offers valuable insights into

the digital lives of Saudi girls and highlights the need for culturally sensitive digital literacy programmes and better parental and educational strategies. The study's findings have implications for policy and practice, aiming to create safer online environments that align with socio-cultural values.

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## **ACKNOWLEDGEMENTS**

First, I must express my sincere gratitude to Allah, the Almighty, for guiding me through my PhD journey. His blessings have made this challenging journey possible. I am deeply thankful to the Saudi Ministry of Education for their generous scholarship and support, which allowed me to pursue my studies in the United Kingdom. My heartfelt thanks to my supervisor, Dr Clementine Beauvais. Her kindness, insightful guidance, and appreciated support during tough times helped me overcome many challenges.

I owe my heartfelt gratitude to my parents for their endless love, prayers, and unwavering belief in me. Your support has kept me going. A special thank you to my siblings, whose care and good wishes always lifted my spirits. My sincere thanks to my husband, Dr Faris, and my children, Aseel and Aser, for their patience, encouragement, and for standing by me through every up and down of this journey. To my youngest, Aous, a special kind of thanks: Your first year of life coincided with my most challenging academic year, making the journey harder but also giving me strength. Your joy has been a source of comfort and motivation when I needed it most.

I am also grateful to my friends in Saudi Arabia and Britain for their comforting words and encouragement throughout this journey. My sincere thanks go to all the mothers, daughters, and teachers who participated in my study. Your involvement greatly enriched my research.

Lastly, I thank myself for pushing through every challenge. Each step was a milestone towards achieving this long-awaited dream. This journey has transformed me, making me stronger and more adaptable than I ever imagined.

## **DECLARATION**

I declare that this thesis is a presentation of original work, and I am the sole author.

This work has not previously been presented for an award at this, or any other, University. All sources are acknowledged as References.

In the writing-up process, the following software were sometimes used with the knowledge of my supervisor, in compliance with university regulations on authorship and proofreading: DeepL (for translation), Quillbot (for grammatical checks) and ChatGPT (for proofreading). No artificial intelligence software was used for processing or analysing the data.

## **CHAPTER 1:**

### **INTRODUCTION AND BACKGROUND**

#### **1.1 Introduction**

In the digital age, the internet has become an integral part of daily life, greatly influencing social interactions, education, and entertainment. This is particularly true for adolescents, who are among the most active internet users worldwide. In the Kingdom of Saudi Arabia, a country known for its rich cultural heritage and rapid adoption of technology, the patterns of internet use among the youth present a unique landscape for exploration. With the widespread availability of internet access and the rising use of smart devices, Saudi adolescents are increasingly navigating the digital world, making it crucial to understand their online behaviours, preferences, and challenges.

Studies in various parts of the world, particularly in Western countries, such as those conducted by EU Kids Online, have shed light on how adolescents engage with the internet, revealing a complex interplay of opportunities and risks. However, the specific experiences of adolescents in the Muslim and Arab world, and more specifically, Saudi adolescents, remain underexplored, especially in the context of cultural and regulatory variation. This research seeks to bridge that gap by providing an in-depth analysis of internet usage patterns, preferences, and perceptions among Saudi female adolescents. It aims to understand how these elements interact with the broader socio-cultural environment of the Kingdom.

This introductory chapter sets the stage for the study by outlining its background, rationale, significance and objectives. In addition to the specific context of Saudi Arabia that frames this exploration. Finally, the structure of the thesis is presented, offering a roadmap for the comprehensive investigation that follows.

## **1.2 Background and Rationale**

The revelation by UNICEF in 2017, stating that children and adolescents under the age of 18 account for an estimated one in three internet users around the world, underscores the vast number of young individuals navigating the online world. This statistic not only highlights the critical global responsibility to ensure their safety in this expansive digital landscape but also adds to the importance of gaining a profound understanding of digital engagement among the youth.

Studies of Internet use around the world, especially among young people, have revealed a complex landscape of digital engagement. This landscape is characterised by a complicated interaction of opportunities and risks. Initiatives such as EU Kids Online and Global Kids Online projects (discussed in Chapter Two) have played a key role in uncovering these patterns and providing insights into the digital life of young people around the world. While these studies are invaluable, they mostly reflect Western perspectives. In contrast, research on the Middle East region, particularly Saudi Arabia, is notably scarce.

The Kingdom of Saudi Arabia presents a unique case due to its distinct socio-cultural and regulatory contexts, rapid technological advances, and widespread internet adoption. This creates a digital environment vastly different from that observed in Western studies. Saudi adolescents navigate the web within a framework of traditional values and norms, mixing a rich cultural heritage with modern digitalisation.

This stark contrast and the lack of region-specific research underscore the great need for in-depth investigations into the digital experiences of Saudi adolescents. Such studies are not only essential for understanding the local patterns of internet use but are also critical for developing targeted policies, educational programmes, and guidance strategies that resonate with the Kingdom's unique context. This research aims to explore this new area, providing a detailed examination of how Saudi adolescents interact with the digital world, their online behaviours, preferences, and the challenges they face.

By addressing this significant gap, the study aims to enrich the global discourse on adolescent internet use, introducing a vital perspective from the Middle Eastern region that has been largely overlooked. It is hoped that the findings of this research will offer invaluable insights for educators, policymakers, and parents, contributing to the development of more informed, inclusive, and effective approaches to managing internet use among adolescents in Saudi Arabia and potentially other similar contexts worldwide. This study also stands as a response to the global call for continuous, context-sensitive research that keeps pace with the digital age's rapid advancements. It ensures that the unique experiences of Saudi adolescents are understood,

acknowledged, and addressed in the broader narrative of digital safety and engagement.

### **1.3 Significance of the Study**

This research holds significant value across multiple dimensions, extending its impact beyond the academic sphere into practical applications for policymakers, educators, parents, and the adolescents themselves. Its implications are particularly striking in light of the clear findings by UNICEF (2018) about the vast number of children and adolescents going online daily without adequate protective measures in place:

- **Policy Influence:** By providing a detailed understanding of internet usage among Saudi adolescents, this study offers evidence-based insights that can inform the development of policies aimed at creating a safer online environment. Policymakers can use the findings to tailor internet governance frameworks that balance the need for access to information and freedom of expression with protections against online risks, an urgent need highlighted by the global underemphasis on young users' safety.
- **Academic Contribution:** This study enriches the academic literature by adding a detailed exploration of adolescent internet use within the unique context of Saudi Arabia, a relatively underrepresented area in global internet usage research. By documenting and analysing the experiences of Saudi adolescents, the research contributes to the predominantly Western-centric body of data. It addresses the call for up-to-date, region-specific studies that accurately reflect the rapidly



evolving digital landscape, thereby enhancing comparative studies in the field of internet usage among children and youth.

- **Educational Strategies:** Educators can use the findings to develop or refine digital literacy programs that are culturally and contextually relevant. Understanding the specific ways in which Saudi adolescents use the internet, including their preferences and challenges, enables the creation of more effective educational content that promotes responsible and beneficial online behaviours.
- **Parental Guidance:** The insights gained from this research can aid parents in navigating the complex task of overseeing their children's internet use. By highlighting the common online activities, perceived benefits, and potential risks faced by adolescents, the study equips parents with knowledge to foster open dialogues about internet use, set appropriate boundaries, and support their children's positive online experiences.
- **Youth Empowerment:** Finally, this research empowers Saudi adolescents by highlighting their voices and experiences in the digital world. Understanding their perspectives not only acknowledges their influence but also ensures that actions and policies aimed at safeguarding their online experiences are grounded in their actual needs and realities.

In summary, the significance of this study lies in its potential to effect meaningful change across various levels of society, from individual households to national policy frameworks. By focusing on the digital experiences of Saudi adolescents, the research

leads to more informed, inclusive, and effective approaches to managing internet use in the Kingdom and potentially other similar contexts globally.

#### **1.4 The Aim of the Study**

The primary objective of this research is to explore and understand internet use among adolescent girls aged 12 to 17 in the Kingdom of Saudi Arabia. This study aims to provide a comprehensive overview of their online engagement, covering various aspects such as the duration of internet use, preferred devices, preferred locations for accessing the internet, and the types of activities they participate in while online. By examining these factors, the research seeks to create a clear view of the digital lives of adolescent girls within the Saudi context, highlighting their interactions, preferences, and the digital environment they navigate.

In addition to detailing the patterns of internet use, this study aims to explore the perceptions and real experiences of online risks as understood and experienced by the girls themselves and their mothers. It seeks to uncover the awareness levels, concerns, and perceived preparedness to handle potential online threats. This exploration is crucial for developing a clear understanding of how internet risks are perceived and managed within the family setting, particularly from the perspectives of the girls and their mothers. Furthermore, the research intends to identify the specific risks that Saudi girls might encounter in the online world. This involves cataloguing and analysing the potential dangers they face, and understanding the frequency and impact of such risks.

Lastly, the study aims to assess the support systems in place for ensuring the online safety of these adolescent girls, both at home and in school. This involves evaluating the perceptions of the girls, their mothers, and female teachers regarding the effectiveness of existing safety measures and guidance provided to navigate the internet safely. This aspect of the research is particularly significant as it sheds light on the roles and responsibilities of key stakeholders in fostering a safe online environment for the girls.

**To achieve the above objectives, the study is guided by the following research questions:**

1. How do adolescent girls in Saudi Arabia, aged 12 to 17 use the Internet in terms of duration, location, device preference, and activities engaged in?
2. What are the perceptions of Saudi adolescents girls and their mothers regarding Internet risks?
3. What potential risks might Saudi adolescent girls encounter online?
4. How is the online safety of these adolescent girls supported at home and at school, as perceived by the girls, their mothers, and female teachers?

These questions aim to provide a clear understanding of the experience of adolescent girls with the internet in Saudi Arabia, ensuring that the research covers a wide range of relevant and critical issues related to their online engagement and safety.

### **1.5 The Study Setting: Kingdom of Saudi Arabia**

Saudi Arabia, officially known as the Kingdom of Saudi Arabia (KSA), is situated in the southwest corner of Asia, bordered by the vast Red Sea and the Persian Gulf. With an area of approximately 2.25 million square kilometres (SGS, 2023), the Kingdom's geographical and cultural landscapes are as vast as its historical significance. Home to a vibrant population of around 32.175 million, of which a significant around 40% are under the age of 19 (SAUDI-CENSUS, 2022), Saudi Arabia stands at a crossroads of tradition and modernisation, particularly evident in the digital behaviours of its youth.

As the birthplace of Islam, Saudi Arabia holds an important role in the Muslim world, with its religious and cultural norms deeply influencing the daily lives of its citizens. This mixing of religion and daily life extends into the digital world, where the Kingdom has navigated the integration of technology with traditional values. The legal system, based on Sharia, and the widespread use of Arabic not only preserve the Kingdom's heritage but also frame the digital experience for Saudi adolescents.

The rich pattern of Saudi culture, with its emphasis on family values, and gender-specific norms, provides a unique backdrop to the exploration of internet use among the Kingdom's youth. The traditional dress codes and social practices reflect a society that values modesty and privacy, principles that extend into the online world. Economically, the Kingdom's identity has been historically linked to its oil wealth, but recent efforts under Vision 2030 aim to diversify the economy, including significant investments in technology and digital framework. This has led to a notable digital

transformation, particularly relevant to the younger generation, who are at the forefront of the Kingdom's digital engagement (SaudiData, 2024).

The digital landscape in Saudi Arabia has evolved dramatically, especially with Vision 2030. This change has significantly influenced how adolescents interact with the internet. Initially, internet access was limited and cautious. Now, it has become widespread, with a significant portion of the population, including the youth, online. This shift has particularly affected adolescent girls. Their online engagement is shaped by the opportunities presented by digital access and the cultural and social norms that guide their daily lives.

The increasing access to the internet, coupled with the high engagement on social media platforms, underscores the relevance of this study. As Saudi adolescents navigate this digital landscape, they encounter a blend of opportunities and challenges. This research aims to examine these aspects, shedding light on the digital lives of Saudi adolescent girls. By situating the study within the broader socio-cultural and digital context of Saudi Arabia, it seeks to contribute to the understanding of how these young individuals use the internet, the risks they face, and the role of family and school in supporting their safe online engagement. This exploration is crucial for developing informed strategies that ensure a positive and safe online experience for the Kingdom's youth, aligning with the objectives of Vision 2030 and addressing the clear needs of its digital natives.

## **1.6 Researcher's Voice and Positionality**

Growing up in Saudi Arabia, I witnessed the introduction of the internet during my childhood. This new technology provided access to a world vastly different from our traditional and religious society, profoundly shaping my perspectives and interests. As social media emerged during my Adolescence years, I observed both the positive and negative impacts of online interactions on myself and those around me. These experiences motivated me to explore the influence of the internet on young people in Saudi Arabia.

As a teacher of adolescent girls, I have seen firsthand their strong attachment to the internet and digital devices. With the rapid advancement of technology and the increasing popularity of social media, young people are becoming more immersed in the online world. This, combined with my concerns as a mother regarding my own children's internet use, has heightened my awareness of the potential risks and the lack of comprehensive education on safe internet practices.

This research is driven by my personal and professional commitment to understanding and addressing the negative effects of internet use among Saudi adolescents. I aim to provide valuable insights that can help develop protective measures and educational strategies that align with our cultural context. My roles as both a mother and a teacher offer a unique perspective, ensuring that the voices and experiences of Saudi adolescents are central to this study.

## **1.7 Structure of the Thesis**

This thesis is organised into eight chapters, each serving a specific purpose within the overall research framework. The structure is designed to guide the reader through a logical progression from the introduction of the topic to the final conclusions and recommendations. Below is an outline of each chapter and its contents:

- **Chapter 1: Introduction**

This chapter sets the stage for the research by providing an overview of the study's background, its significance, aims, and the specific context of Saudi Arabia in relation to adolescent internet use. It lays the foundation for understanding the relevance and scope of the study.

- **Chapter 2: Literature Review**

The literature review chapter synthesises existing research related to adolescent internet use, with a focus on studies from various global contexts, including insights from organisations like EU Kids Online and Global Kids Online. This chapter aims to highlight the current understanding of adolescent internet behaviours, perceived risks, and protective measures, identifying gaps that the present study seeks to fill, especially in the context of Saudi Arabia.

- **Chapter 3: Theoretical Framework**

This chapter outlines the theoretical underpinnings that guide the research. It discusses the Bio-ecological Systems Theory, as initially conceptualised by Bronfenbrenner, and its subsequent adaptation to include the Techno-Subsystem, as proposed by Johnson and Pupilampu. This adaptation is particularly relevant to

understanding internet use among adolescents, risk perception, and the role of social support systems. The framework provides a lens through which the study's findings can be interpreted and understood, offering insights into the relationship between adolescents' digital environments and their developmental outcomes.

- **Chapter 4: Methodology**

The methodology chapter details the research design, data collection methods, and analytical approaches employed in this study. It explains the rationale behind the choice of methods, the study's sample, and the procedures for ensuring ethical standards and data reliability.

- **Chapter 5: Interview Results**

This chapter presents the findings from interviews conducted with adolescent girls, their mothers, and female teachers. It provides a qualitative insight into the personal experiences, perceptions, and narratives surrounding internet use and safety among the participants.

- **Chapter 6: Survey Study Results**

The survey results chapter offers a quantitative analysis of the broader patterns of internet use, risk perceptions, and protective behaviours among a larger sample of Saudi adolescent girls and their mothers. This section complements the qualitative findings with statistical data to provide a comprehensive view of the study's subjects.

- **Chapter 7: Discussion of Research Findings**

This chapter integrates the findings from the interviews and surveys, discussing them in the context of the existing literature and the theoretical framework. It aims to draw



meaningful conclusions about the internet use patterns, risks, and protective strategies among adolescent girls in Saudi Arabia, highlighting the implications for policy, education, and family guidance.

- **Chapter 8: Conclusion**

The final chapter concludes the thesis by summarising the key findings, discussing the study's limitations, and suggesting areas for future research. It also offers recommendations for stakeholders involved in adolescent internet safety, including policymakers, educators, parents, and the girls themselves.

The next chapter, the Literature Review, examines the existing body of research on adolescent internet use, setting the stage for the subsequent chapters that build upon this foundational knowledge to explore the specific context and experiences of Saudi adolescent girls.

## **CHAPTER 2:**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

In the modern age, where digital connectivity is increasingly recognised as a basic aspect of daily life, the internet has been identified as a key platform for adolescent exploration, education, and social interaction. While it is often assumed that adolescents, often referred to as 'digital natives', possess an inherent ability to navigate online spaces with ease, this view oversimplifies the diverse range of skills and competencies required to engage effectively with the digital world. Adolescents' interactions with digital environments present both opportunities and challenges, necessitating a deeper understanding of their internet use. This understanding is particularly important given the substantial implications of digital engagement for educational achievements, social development, and mental well-being.

The aim of this literature review is to examine the body of existing research that sheds light on various aspects of adolescent internet use. This examination covers a broad array of topics, including the nature of and access to online activities, the digital skills of adolescents, and the differences in internet usage and perceptions between adolescents and their parents. A critical component of this review is the exploration of the perceptions and realities of online risks faced by adolescents, alongside the identification of protective factors that contribute to their safety in digital

environments. Within this framework, the roles of parental and school mediation are highlighted as pivotal in providing guidance and oversight in the digital sphere.

Given the universal nature of the internet, it is important to consider the cultural, social, and regulatory contexts within which adolescent internet use occurs. This is particularly relevant in the context of the Kingdom of Saudi Arabia, where distinct cultural and religious values intersect with rapid technological progress and evolving policies. The task of situating global research findings within the Saudi context emerges as crucial, paving the way for crafting culturally sensitive strategies that support positive and safe online experiences for Saudi children and youth. Thus, this review seeks to link the global discussion on adolescent internet use with the specific circumstances of Saudi adolescents, aiming to enrich the understanding of their digital engagement.

As this chapter progresses, an attempt will be made to shed light on the complexities of adolescent internet use, drawing on a wide range of international research. However, it is acknowledged that studies in the Middle East and Arab countries are exceedingly rare, leading to a dominance of literature originating from Western contexts. Where possible, reference may also be made to select studies from other regions of the Global South. Towards the end of this chapter, a few of the limited studies conducted in Saudi Arabia on adolescent or child internet use will be discussed. This approach is not merely about contributing to academic discussions but also about informing policy-making, educational practices, and parenting strategies that fit with

the unique societal fabric of Saudi Arabia. The ultimate goal is to ensure that the digital world becomes a pathway for growth, learning, and safety for its young participants.

## **2.2 Overview of Adolescent Internet Use**

Adolescence is universally identified as a critical and formative period of development, characterised by major physical, psychological, and social changes (Berk, 2022). During this active phase, individuals are observed to be actively engaged in forming their own identity, seeking independence, and expanding their social circles (Benvenuti et al., 2023; Pechmann et al., 2005). The internet, with its vast and extensive resources and platforms, plays a key role in this developmental journey, offering adolescents great opportunities for education, self-expression, and connectivity (Benvenuti et al., 2023). However, the journey into the digital world is accompanied by inherent risks. The vulnerabilities associated with adolescence, such as the search for identity and the influence of peers, are potentially increased online, where a variety of risks are prevalent. Given the important role of the internet in the lives of adolescents today, an in-depth exploration into their online access, engagements, and the digital skills they either possess or lack is deemed crucial. Such an understanding is vital for identifying the opportunities and challenges presented by the digital world to young users. This insight is important in building strategies and interventions that can promote safe and beneficial internet use among adolescents.

Considerable focus has been directed towards the patterns of digital engagement among children and young people in Western contexts, particularly in Europe and

America. Within this scope, the EU Kids Online project, alongside its extension into the Global Kids Online initiative, is highlighted as a significant and noteworthy effort. Initiated by researchers at the London School of Economics and Political Science, this project has played a key role in enhancing the understanding of how the internet is used by children and adolescents. This project's expansion into Global Kids Online extends this exploration beyond Europe, aiming to understand the digital experiences of children and adolescents in a wider, global context. Employing rigorous methodologies and fostering dialogues with stakeholders across various levels, these projects have gathered a comprehensive repository of evidence-based information, showing the online experiences of young users. A critical insight from this body of research reveals the correlation between internet access and digital literacy, indicating that enhanced access is associated with improved digital competencies and opportunities for children and adolescents. Nonetheless, this expanded access is also linked with increased exposure to potential risks and harm (Livingstone et al., 2011; Livingstone et al., 2019; Livingstone, Nandi, et al., 2017; Livingstone, Ólafsson, et al., 2017; Stoilova et al., 2021).

The findings derived from Western studies, including the EU Kids Online and Global Kids Online projects, serve as a guiding framework for this inquiry into adolescent internet use. These studies offer a foundational perspective on how adolescents interact with the digital world, the skills they develop, and the challenges they encounter in the online environment.

### **2.2.1 Access and Use**

The landscape of adolescent internet use is greatly shaped by the context in which they gain access, and the benefits derived from their online activities. This trend has been highlighted extensively by initiatives such as the EU Kids Online 2020 project, which conducted a survey involving 25,101 internet users aged 9–17 across 19 European countries. The findings from this project offer a detailed perspective on how young individuals engage with the digital world, emphasising the significant role played by both the devices used for access and the duration of internet use in shaping their experiences (Smahel et al., 2020).

UNICEF's 2017 estimate that one in three internet users worldwide are under the age of 18 underscores the significant presence of children and adolescents in the digital world. Additionally, a surprising statistic from UNICEF in 2018 revealed that over 175,000 children go online for the first time every day, highlighting the ever-expanding digital footprint of the younger generation. However, these already substantial figures were further increased by the impact of the COVID-19 pandemic, which led to a dramatic increase in both the number of young internet users and the amount of time they spent online. The necessity of remote learning and the restrictions on physical social interactions led to a reliance on digital platforms for education, socialisation, and entertainment, causing a marked shift in daily internet usage habits among children and adolescents. This shift was not just a temporary adjustment; even as life gradually returned to normalcy, the pandemic's influence persisted, leaving a lasting imprint on the digital engagement patterns of young users, with many continuing to spend

significant portions of their day connected to the internet. This was evidenced by a reported surge in children's online time during and after the pandemic, a worldwide phenomenon that was corroborated by various studies (Choi et al., 2023; Kerekes et al., 2021; Lobe et al., 2021; Madigan et al., 2022; Marciano et al., 2022; Schmidt et al., 2020; Siste et al., 2021; Ten Velde et al., 2021).

Turning to the specifics of time spent online, the EU Kids Online 2020 report sheds light on the continuous nature of internet use among children and adolescents, making it challenging to ascertain precise durations (Smahel et al., 2020). However, notable studies such as those by Pew Research Centre and Ofcom provide some clarity. The Pew Research Centre's 2022 study, which surveyed 1,453 U.S. adolescents, reveals that a staggering 97% use the internet daily, with nearly half online almost constantly (Anderson et al., 2023). In the UK, Ofcom's 2023 findings vary widely, showing that children's daily internet use can range from as little as 30 minutes to as much as 16 hours (Ofcom, 2023b).

Within this context, a significant study by the University of East London involving 7,974 adolescents aged 16 to 18 from eight European countries highlights the considerable amount of time dedicated to online activities by this age group. It reveals that half of these adolescents spend between 4 to 7 hours daily on the internet, with 37.8% exceeding 8 hours. The study also sheds light on the prevalent ownership and use of digital devices among adolescents: 84% own a smartphone, about three-quarters have their own laptop, and roughly half own a smart TV. Notably, an overwhelming 86.6%

of adolescents use their smartphones multiple times a day, with many keeping their devices within arm's reach, even in bed (Davidson et al., 2022).

Device preference also plays a crucial role in how adolescents access the internet. The Pew Research (2023) study indicates that 95% of adolescents either own or have access to a smartphone, making it the most common device among this demographic (Anderson et al., 2023). This preference for smartphones is corroborated by the EU Kids Online 2020 report, which highlights a significant shift towards mobile internet access since 2010. The report notes that in several countries, over 80% of children use a smartphone daily to go online (Smahel et al., 2020). This trend is not limited to the West; the Global Kids Online (2019) project, which surveyed nearly 15,000 children in diverse regions including Europe, Africa, and Latin America, confirms the dominance of mobile phones as the primary device for internet access. Similarly, a comparative study in Brazil, Chile, Costa Rica, and Uruguay also found similar patterns of mobile internet access predominantly from home (Trucco et al., 2020).

Demographic factors such as age, gender, and socioeconomic status also influence internet use among adolescents. Older children tend to have greater internet access, with the gap between different age groups being quite pronounced in terms of online time (Global Kids Online, 2019; Livingstone et al., 2019; Mascheroni & Ólafsson, 2014; Ofcom, 2021). The EU Kids Online 2020 report highlights that teenagers aged 14 to 16 spend nearly double the amount of time online compared to 9- to 10-year-olds (Smahel et al., 2020). These findings from significant studies underline a global increase in internet use among adolescents, with a clear preference for smartphones



as the primary access device. The majority of this internet access occurs at home, often in private spaces, underscoring the importance of considering demographic factors when examining patterns and preferences in adolescent internet use.

Furthermore, disparities in access to digital devices and the internet underscore the concept of the digital divide, where socioeconomic and geographical factors can significantly influence a young person's ability to engage with the digital world effectively. These disparities affect not only the amount of time adolescents spend online but also the quality of their engagement and the development of essential digital skills. Research highlights that unequal access to digital resources contributes to varying levels of digital literacy and proficiency among young people, emphasising the need for a more equitable digital landscape (Buckingham, 2013). Various studies further support this view, indicating that efforts to bridge the digital divide must address both access and the quality of digital learning opportunities (Aydin, 2021; Eynon, 2009; Eynon & Geniets, 2016; Livingstone & Helsper, 2007; Wilkin et al., 2017).

### **2.2.2 Digital Literacy Skills**

Understanding adolescent internet use requires an exploration of digital literacy skills, which involve not only effective and critical engagement with digital technologies but also the ability to navigate, evaluate, and create digital content (Meyers et al., 2013; Pangrazio et al., 2020). While often equated with digital skills, digital literacy encompasses a broader range of competencies. Research reveals that although many

adolescents are proficient with digital devices, their depth of digital literacy varies significantly due to factors such as educational background, socioeconomic status, and access to technology (Gui & Argentin, 2011; Livingstone & Helsper, 2007; Masanet et al., 2019; Ng, 2012).

Digital literacy, a vital skill for the 21st century, includes several dimensions. Martínez-Bravo, Sádaba Chalezquer, and Serrano-Puche (2022) describe it as involving more than just operational use of technology. Their framework identifies six dimensions: critical, cognitive, social, operational, emotional, and projective. These dimensions represent a spectrum of skills necessary for effective digital engagement, including evaluating information critically, problem-solving, communication, collaboration, managing one's digital identity, and forward-thinking innovation (Martínez-Bravo et al., 2022).

The concept of "digital natives," introduced by Prensky (2001), suggests that individuals born after the widespread adoption of digital technology inherently possess advanced digital skills. However, this notion has been criticised for oversimplifying the relationship between youth and technology. It assumes uniform digital competence among all young people, overlooking the considerable variation in digital skills. For instance, Bennett et al. (2008) note that while many adolescents excel in using digital devices for entertainment and communication, they often lack critical skills such as evaluating online information and understanding digital privacy.

Furthermore, the concept of digital natives fails to account for the impact of socioeconomic status and educational background on digital skills. Research by Helsper and Eynon (2010) shows that access to technology and digital learning opportunities is uneven, leading to disparities in digital literacy. This challenges the assumption that being a "digital native" automatically equates to comprehensive digital skills.

The digital natives framework also often neglects the critical and ethical dimensions of digital literacy. Despite familiarity with digital tools, many adolescents lack the critical thinking skills needed to address issues such as misinformation and ethical considerations (Flanagin & Metzger, 2008; Livingstone, 2010). This highlights the need for digital literacy education that extends beyond mere technical proficiency. As Selwyn (2009) argues, assuming that all young people are naturally adept with technology can result in inadequate educational support. Therefore, a more comprehensive approach to digital literacy is needed, one that not only fosters technical skills but also emphasises critical evaluation and ethical understanding, addressing the diverse factors influencing digital competence.

### **2.2.3 Online Activities and Skills**

The exploration of the digital world by children and adolescents is a subject of extensive research, particularly in relation to the range of online activities they engage in and the consequential development of digital skills. Findings from Global Kids Online

(2019) highlight that as children age, their engagement in online activities, the digital skills they develop, and the online risks they encounter all tend to increase, suggesting a closely related progression. This aligns with the diverse digital engagements highlighted by existing research, emphasising the importance of understanding these activities to grasp how young individuals navigate the digital world and to identify their potential impact on wellbeing (Livingstone et al., 2019; Smahel et al., 2020).

The EU Kids Online (2020) project explored into the digital habits of a vast number of young users, indicates substantial engagement in communication, entertainment, and educational activities online, with a subset of children and adolescents also exploring content creation and seeking news (Smahel et al., 2020). These activities, notably watching videos, listening to music, and social networking, reflect a broader trend observed across various countries, as highlighted by the Global Kids Online (2019) research, which particularly emphasises the widespread activity of video watching.

The journey through the digital world appears to evolve with age, transitioning from basic activities such as gaming and educational searches to more complex and interactive engagements like content creation and participation in online communities. Livingstone and Helsper (2007) introduced the 'Ladder of Opportunities' to describe this progression, suggesting that children gradually rise through stages of internet use, from basic information-seeking to more expressive and creative online participation. However, it is noted that while activities related to communication, information, and entertainment are widely adopted, fewer children and adolescents step into areas of online creativity and participation (Livingstone et al., 2019; Manches

et al., 2015; Mascheroni & Ólafsson, 2016), pointing to potential areas for further development in digital literacy.

The landscape of adolescents' online activities has experienced substantial transformations over the past decade. Platforms such as YouTube have surged in popularity, with Ofcom's (2023) survey naming it as the most frequented platform among 3-17-year-olds (Ofcom, 2023a). This trend is further evidenced by the shifting changes in of social networking sites, where traditional platforms like Facebook have seen a decline in favour among adolescents, as indicated by a Pew Research Centre survey (Anderson et al., 2023). This survey highlights TikTok's remarkable rise as a preferred platform among American adolescents aged 13 to 17, contrasting Facebook's decreasing usage (Anderson et al., 2023). The EU Kids Online (2020) study also notes significant variation in the daily use of social networking sites among children aged 9–16, with many transitioning from Facebook to platforms like Instagram and WhatsApp (Smahel et al., 2020). This evolving digital engagement landscape is highlighted in the European Youth research, which points to the dominance of YouTube, Instagram, and WhatsApp among adolescents, with Instagram notably marked by its extensive use and the prevalence of private, multiple accounts among adolescents (Davidson et al., 2022).

Existing research suggests that a broader engagement in online activities expose children and adolescents to increased risks (Kalmus et al., 2015; Lee & Chae, 2012; Livingstone, Ólafsson, et al., 2017; Livingstone & Smith, 2014; Maghsoudi et al., 2020; Nikken & Schols, 2015; Rodríguez-de-Dios et al., 2018; Sonck & de Haan, 2013;

Staksrud et al., 2013). However, restricting their online activities could also limit valuable opportunities, potentially hindering the development of crucial digital competencies needed in the current digital age (Livingstone & Byrne, 2018; Livingstone et al., 2019; Rodríguez-de-Dios et al., 2018; Stoilova et al., 2021). The EU Kids Online findings indicate that while engaging in a wide variety of online activities can indeed increase children's exposure to various risks, it at the same time fosters the development of skills that enable them to navigate these risks more effectively, potentially reducing the likelihood of encountering harm (Livingstone & Byrne, 2018; Livingstone et al., 2012; Livingstone, Haddon, et al., 2014; Smahel et al., 2020; Staksrud et al., 2013; Stoilova et al., 2021). Their findings also suggest that exposure to online risks does not uniformly result in harm, with the impact varying greatly among individuals, suggesting that factors other than exposure influence a child's resilience or vulnerability to digital world challenges (Livingstone et al., 2011; Livingstone, Nandi, et al., 2017; Livingstone & Smith, 2014; Smahel et al., 2020; Stoilova et al., 2021). This complex interplay between online activities, digital skills, and exposure to risks calls for a comprehensive understanding to guide young individuals through the digital world safely. It has been suggested that the enhancement of children's digital competence can be achieved through continuous digital practices and experiences, further supported by guidance from peers, teachers, and parents. This calls for concerted efforts from educators, policymakers, and parents to support children and adolescents in harnessing the full potential of the digital world, equipping them with the necessary skills and critical awareness to navigate this landscape safely and effectively (Livingstone & Byrne, 2018; Livingstone, Ólafsson, et al., 2017).

### **2.3 Differences in Internet Use Between Adolescents and Parents**

Research into the digital engagements of children and adolescents highlights a pronounced divide in digital literacy between these groups and their parents. Adolescents, immersed in digital culture from an early age, navigate online platforms with an ease that contrasts with their parents' more cautious approach. Many parents, less familiar with the digital world, may not possess the same intuitive grasp of technology, essential not only for personal use but for effectively mentoring their children in safe online practices (Akter et al., 2022; Clark, 2009; Pons-Salvador et al., 2022; Romero, 2014; Segatto & Dal Ben, 2013; Tomczyk & Potyrała, 2021).

The literature points out that this gap extends beyond mere skill differences, impacting parents' ability to understand and participate in their children's digital worlds. Such understanding is vital for helping young people deal with online challenges and develop the digital skills crucial in today's world, as highlighted by the EU Kids Online project (Duerager & Livingstone, 2012; Livingstone & Byrne, 2018). The difference in online activities, where adolescents tend to use social media and entertainment while parents use the internet for practical purposes, further highlights the varying perspectives. This can sometimes lead to misunderstandings about online risks and opportunities (Rutkowski et al., 2021).

Additionally, a perceptual gap in recognising online risks exists between generations. Adolescents, confident in their digital navigation skills, might underplay potential threats, viewing their online interactions as largely safe. Parents, however, often

approach these risks with heightened concern, influenced by their own uncertainties about digital platforms. This disparity can lead to familial discord regarding internet usage, with parental restrictions sometimes seen by adolescents as overly protective (Clark, 2009; Livingstone & Byrne, 2018; Rutkowski et al., 2021).

Addressing these disparities requires fostering an environment of open communication and shared learning within families. Encouraging dialogue where parents can learn from their children's digital experiences, and vice versa, can lead to a more nuanced approach to online safety and engagement. This collaborative effort, as supported by research, is essential for enhancing digital competencies across generations (Livingstone & Byrne, 2018).

## **2.4 Understanding Adolescent Risk Perception**

Since the 1970s, significant development has been observed in the study of risk perception, with a focus on the complicated interaction between individual judgments and broader societal influences. This area of research, initially explored by scholars such as Slovic, examined the complexities of risk-related decision-making uncovering a notable discrepancy between expert assessments and public perceptions (Boholm, 1998). This led to the development of the "social amplification of risk" framework (Kasperson et al., 1988). This theory suggests that the way individuals perceive and react to risks is not only a matter of personal judgment but is also significantly shaped by wider societal, cultural, and community norms. The process of evaluating risks, therefore, is not isolated but occurs within a larger context of social interactions and



cultural beliefs, which in turn, influence and are influenced by individual experiences and perceptions (Kasperson et al., 1988).

As the digital age emerged, these foundational theories of risk perception found new relevance, especially in understanding adolescent engagement with online platforms. Extensive involvement in various online activities by adolescents naturally comes with exposure to potential online risks. However, it is suggested by the development of digital skills through these activities that a detailed landscape exists where risk perception is closely tied to digital literacy and experience (Livingstone & Byrne, 2018; Livingstone et al., 2012; Livingstone, Haddon, et al., 2014). This landscape is further complicated by the generational gap in digital fluency between adolescents and their parents, highlighting a disparity that influences how risks are perceived and managed within the family, and also affects the effectiveness of parental guidance in fostering safe online behaviours among adolescents (Clark, 2009; Livingstone & Byrne, 2018; Rutkowski et al., 2021). Adolescents, often perceived as 'digital natives,' demonstrate a comfort and proficiency with technology that sets them apart from previous generations. This difference significantly impacts their perception and management of online risks, underscoring the need for a deeper understanding of how adolescents navigate these challenges.

Research consistently demonstrates that individuals often perceive their own risk level as lower than that of others engaging in similar risky behaviours, a phenomenon known as "optimistic bias" or "risk denial" (Sjoberg, 2000). This trend of underestimating personal risk is particularly noticeable among adolescents. For

example, in the context of cyberbullying, studies have shown that young individuals often consider themselves less at risk compared to others (Betts et al., 2019; Chapin, 2016; Chapin & Coleman, 2017). This pattern of minimising risks and overestimating one's ability to control outcomes is shaped by a combination of cognitive growth and the emotional changes that are typical of the teenage years (Steinberg, 2007, 2010).

Studies comparing children, adolescents, and young adults revealed that the willingness to make risky choices peaks during adolescence, suggesting a heightened vulnerability to risk-taking during these years (Duell & Steinberg, 2019; Van Leijenhorst et al., 2010). Research by Van Leijenhorst et al. (2010) further emphasises that adolescents may exhibit a heightened sensitivity to rewards, attributed to the distinct developmental paths of reward-related brain regions, potentially contributing to this increased risk-taking behaviour. This vulnerability is intricately linked to adolescents' exaggerated sense of invulnerability, a result of cognitive developments characteristic of this life stage (Youn, 2005). The interaction between the socio-emotional system, which drives reward-seeking behaviours and becomes notably active in early adolescence, and the cognitive control system, responsible for impulse control and maturing more gradually, results in a developmental mismatch. This mismatch notably heightens vulnerability, especially in mid-adolescence, leading to a surge in risk-taking behaviours (Steinberg, 2007, 2010).

The digital landscape further exposes the risk-taking tendencies of adolescents. Despite concerns about online privacy, many adolescents exhibit a willingness to trade personal information for rewards, showcasing a pattern of reward-seeking and

impulsive behaviours (Youn, 2005). This trend aligns with the Protection Motivation Theory, suggesting that the assessment of risks and benefits heavily influences individuals' protective actions. In the context of online safety, adolescents appear more driven by the perceived benefits of disclosing information than by the potential risks (Youn, 2005).

Furthermore, the significant role of peer influence in shaping adolescents' risk perceptions and behaviours becomes increasingly pronounced during this developmental stage (Gardner & Steinberg, 2005). Younger adolescents, in particular, are more susceptible to peer-influenced risk perceptions, emphasising the impact of social norms and peer interactions on their online interactions and behaviours (Rodríguez-de-Dios et al., 2018). This underlines the complex interplay of developmental, cognitive, and social factors in shaping adolescent risk perception, especially within online spaces.

## **2.5 Exploring the Landscape of Online Risks for Adolescents**

In exploring the landscape of online risks for adolescents, the concept of 'risk' has long been recognised as a fundamental aspect of human interaction with technology. Defined by researchers such as Echemendía Tocabens (2011) as the potential for loss or the presence of factors that lead to undesirable, negative, or hazardous outcomes, and by Klinké and Renn (2002) as the likelihood that human actions or events could result in consequences that negatively impact valued aspects of life, the perspective of risk is particularly relevant when examining the digital domain. This area, rich with

opportunities for learning, socialising, and entertainment, is also filled with potential dangers, especially for young users.

The digital world, characterised by its vast expanse of information and interconnectedness, introduces a range of risks faced by adolescents. These risks are generally classified into three main categories: contact, content, and conduct risks. Each category encompasses specific challenges and threats that can significantly affect the well-being and safety of young individuals.

**Contact risks** in the digital landscape encompass various forms of communication or interaction with potentially harmful or inappropriate individuals (Stoilova et al., 2021). Adolescents, navigating through a complicated set of online platforms, from social networks to gaming chats, are particularly vulnerable to encountering cyberbullies, predators, financial scammers, and various exploiters. The anonymity afforded by the internet complicates the identification of such threats, making adolescents vulnerable to cyber grooming and other predatory behaviours (Stoilova et al., 2021). The phenomenon where adolescents engage with unknown individuals online, occasionally leading to real-world encounters, underscores the serious nature of these risks. Surveys across different regions have reported significant interactions between children and strangers online, sometimes resulting in dangerous situations. For instance, the EU Kids Online 2020 survey highlighted a considerable portion of young users across 19 countries interacting with strangers, with some instances leading to face-to-face meetings (Smahel et al., 2020). Additional research supports these findings, revealing high rates of online sexual solicitation and victimization among

adolescents (Dev et al., 2022; Greene-Colozzi et al., 2020; Mýlek et al., 2020; Savoia et al., 2021).

This issue is further emphasised by the Disrupting Harm (2022) surveys across 13 countries, which reported that a significant number of children and adolescents became victims of online sexual exploitation and abuse over just one year. Alarming, many of these young victims chose not to disclose their abuse to anyone, often due to a lack of trust or knowledge about where to seek help, highlighting the need for more accessible reporting mechanisms. The scope of online dangers was further detailed in the 2023 Global Threat Assessment by the We Protect Global Alliance, showing that over half of the surveyed adolescents across 54 countries encountered some form of online sexual harm. The report also pointed out emerging threats like financial sexual blackmail and the harmful use of generative AI to exploit children.

Furthermore, cyberbullying is identified as a critical issue, with surveys such as the 2022 Pew Research Centre study showing that nearly half of U.S. adolescents experienced cyberbullying, particularly older girls. Similarly, Ofcom's 2023 report disclosed that 84% of 8-17 year-olds in the UK encountered bullying online (Ofcom, 2023a). This challenge is not confined to any single region; studies from diverse countries consistently report significant instances of cyberbullying among adolescent populations (Balas et al., 2023; Gohal et al., 2023; Lobe et al., 2021; Smahel et al., 2020). Additionally, the Global Kids Online 2019 report across 11 countries found varying rates of children reporting hurtful treatment online, with older children aged 15–17 most likely to report such experiences. This report also indicated that

approximately 25% of children in these countries met someone offline whom they had first encountered online, with older children more likely to engage in such meetings, underscoring the complex parts of online interactions as children age.

Adding to these concerns are the risks of financial fraud and identity theft, often arising from interactions with ill-intentioned individuals online. Though less common than issues like cyberbullying, these risks are significant and have been reported across various countries. The EU Kids Online 2020 survey highlighted that a small but notable number of children experienced losing money by being cheated on the internet, with incidents ranging between 1% and 8% across different countries. Moreover, personal data misuse, including identity theft and hacking, was reported by children, with occurrences varying between 4% and 23%, often increasing with age.

These insights collectively highlight the need for vigilant digital literacy and safety education to address the widespread risks faced by children and adolescents in their online interactions, emphasising the importance of accessible support and reporting mechanisms to mitigate these prevalent dangers.

**Content risks** involve exposure to inappropriate, harmful, or distressing material online. This includes encounters with sexually explicit, hateful or violent content, as well as content promoting harmful behaviours like self-harm or eating disorders, causing major impacts for young users' well-being and development (Staksrud & Livingstone, 2009; Stoilova et al., 2021).

The digital landscape, with its widespread use of digital devices among adolescents, significantly intensifies these risks. Smartphones and tablets, providing a sense of privacy, may encourage the exploration of harmful content (Carnevali et al., 2022; Horner, 2020; Robb & Mann, 2023; Stoilova et al., 2021). Furthermore, the shift from traditional web-based platforms to more interactive social media applications like Snapchat, TikTok, and Instagram has made it more challenging to monitor and control exposure to such content (Carnevali et al., 2022).

A particular concern within content risks is the exposure to online pornography, which is prevalent and can have a significant impact on adolescent development. Surveys across various regions have revealed significant exposure rates to sexual content online, underscoring the widespread nature of this issue. Disrupting Harm's 2022 surveys across 13 countries in Eastern and Southern Africa and Southeast Asia revealed that accidental exposure to sexual content online ranged from 22% to 48% among children, depending on the country. A comprehensive survey across six European countries found that 59% of adolescents had encountered pornographic content online, with one-quarter experiencing such exposure weekly (Andrie et al., 2021). In the United States, a national survey found that 70% of adolescents aged 13 to 17 had encountered pornography online, with 58% accessing it accidentally (Robb & Mann, 2023).

In addition to pornography, there are severe concerns regarding content related to suicide, self-harm, and violence. Such content is not only prevalent but strongly linked to self-harm behaviours and suicidal ideation among adolescents (Mars et al., 2015).

The EU Kids Online 2020 survey reported hate messages and violent images as the most frequently encountered harmful content among children in Europe (Smahel et al., 2020). Similarly, studies in United States, Finland, Germany, United Kingdom, and other countries highlighted that a significant portion of adolescents had encountered violent and self-harm contents online, underscoring the widespread nature of such risks (Hawdon et al., 2015; Lobe et al., 2021; Savoia et al., 2021).

The exposure to dangerous content, including self-harm, violence, sexual content, and hate speech, varies between countries but is notably widespread. The Global Kids Online (2019) report, covering nearly 15,000 children who use the internet across diverse regions, highlights that adolescents are particularly vulnerable to such content due to their greater internet use and participation in various online activities. This vulnerability is compounded by the typically reduced parental supervision as children age, increasing their exposure to dangerous content. The report also indicates that hate speech and violent content are more commonly encountered by old children than self-harm or suicide content, potentially due to older children's increased engagement in information-seeking, news reading, and online political debates, which may raise the likelihood of encountering hate content (Global Kids Online, 2019). These insights into the digital interactions of children and adolescents with harmful online content further highlight and underscore the critical need for digital literacy and vigilant oversight from parents and teachers to mitigate these prevalent risks.

**Conduct risks** covering behaviours by individuals that might lead to negative outcomes for themselves or others (Staksrud & Livingstone, 2009; Stoilova et al.,



2021). This includes activities such as bullying, sexting (sex and texting), hateful activity, hacking, and trolling — sharing controversial or offensive material to get a reaction from others —, sharing personal information or media with online strangers and participation in extreme online challenges. With the advancement of the digital era, risky and sometimes criminal online behaviours are becoming normalised among young people. A comprehensive survey covering nine European countries and involving 8,000 individuals aged 16-19 revealed concerning statistics: one in four admitted to trolling someone online, one in eight engaged in online harassment, and a significant number participated in hate speech, hacking, sexting, and digital piracy (Davidson et al., 2022).

Studies from different countries have consistently reported high prevalence rates of cyberbullying perpetration among adolescents (Baumann et al., 2023; Lobe et al., 2021; Mak et al., 2014; Paez, 2020; Yudes et al., 2020), as well as sexting (Boer et al., 2021; Kim et al., 2020; Lobe et al., 2021; Molla-Esparza et al., 2023; Tomczyk & Szotkowski, 2023; Vente et al., 2020), emphasising the global nature of these risks, and identifying factors such as age, previous victimisation, and problematic internet use as significant predictors of such conduct.

The scope of conduct risks is broad, extending to various online behaviours that could endanger adolescents safety. careless sharing of personal information, interactions with strangers, and participation in hazardous online challenges stand out as primary contributors to these risks. Studies have highlighted how easily shared personal information on social media platforms can inadvertently guide predators to young

individuals (Kite et al., 2013). Engaging with strangers online can sometimes lead to unwelcome sexual advances, stressing the need for cautious online interactions (Dev et al., 2022; Jones et al., 2013; Savoia et al., 2021). Recent research has also shed light on the dangerous trend of extreme online challenges among adolescents. These challenges, often shared on social media, create significant health risks and, in some cases, can lead to tragic outcomes (Astorri et al., 2022; Ferreira Deslandes et al., 2021).

The autonomy and anonymity provided by digital platforms often encourage risky conduct among adolescents, with potentially severe real-world consequences (Ofcom, 2023b). The social context, notably single-parent households and the absence of parental engagement in children's digital lives, has been linked to an increased tendency for such risky online activities (Notten & Nikken, 2016). Additionally, the use of multiple social media platforms has been associated with an increase in risky behaviours among adolescents (Vente et al., 2020).

To conclude, the digital landscape presents numerous conduct risks, including behaviours that may lead to adverse consequences for adolescents. The normalisation of such behaviours necessitates the implementation of extensive digital literacy initiatives and effective protective measures. It is within this context that the forthcoming discussion will explore the protective factors instrumental in safeguarding adolescents online, with a particular focus on the crucial roles assumed by parents and educational institutions in mediating online safety.

## **2.6 Protective Factors Against Online Risks for Adolescents**

In light of the numerous risks presented by the digital world, particularly for the younger generation, as outlined in the previous sections, it is critical to identify protective factors that shield young users from online dangers. While current research provides limited insights into effective safeguards against the adverse impacts of internet exposure among children and adolescents, a growing number of studies have begun to emphasise the crucial role of social support and positive relationships in mitigating the risks associated with online activities (Dou et al., 2022; Ofcom, 2023b). Adolescents lacking in such support systems are doubly disadvantaged, facing increased exposure to online risks and a diminished likelihood of seeking assistance when needed (Faltýnková et al., 2020; Livingstone & Smith, 2014; Ofcom, 2023b).

The effectiveness of these protective measures appears to vary with the specific online threats encountered, and while comprehensive data is sparse, certain factors have been consistently identified as beneficial. A nurturing environment at home, along with vigilant parental oversight, the presence of caring teachers, strict enforcement of school policies, and personal qualities like resilience, and confidence are all cited as barriers to cyberbullying (Elboj-Saso et al., 2023; Khurana et al., 2015; Uslu & Durak, 2022; Zych et al., 2019). Parental vigilance and peer support specifically emerge as critical protective factors against the risky online behaviours of adolescents (Dou et al., 2022; Faltýnková et al., 2020; Kvardova et al., 2021; Lukavská et al., 2020; Niu et al., 2023; Pujazon-Zazik & Park, 2010). Moreover, children who participate in a range of offline activities and work towards specific goals are less likely to experience online

harm, indicating the protective effect of a balanced and goal-oriented offline lifestyle (Ofcom, 2023b).

Parental strategies, such as imposing time restrictions on internet use, have emerged as double-edged swords in some exploratory studies. While they can indeed reduce exposure to online dangers, they might simultaneously limit the opportunities for digital skill development and broader learning experiences for children (Livingstone, Ólafsson, et al., 2017; Steinfeld, 2021). Fostering digital privacy awareness in children through open conversations with adults promotes proactive engagement in online safety measures (Andrews et al., 2020; Youn, 2008). Comprehensive support in parenting, extending beyond the digital sphere, has been shown to decrease the likelihood of the exposure and perpetration of online risks more effectively than merely monitoring online interactions (Carnevali et al., 2022; Lukavská et al., 2020; Ofcom, 2023b; Sela et al., 2020).

Furthermore, the role of the school environment and the social climate within it also cannot be understated. A positive school atmosphere and peer support have been firmly linked to a decrease in cyberbullying incidents (Hayixibayi et al., 2021; Schultze-Krumbholz et al., 2020), highlighting the importance of initiatives aimed at enhancing the school climate to control victimisation (Casas et al., 2013). In addition, integrating digital literacy and ethical online behaviour into the curriculum can empower children and adolescents with the knowledge and skills necessary to navigate the internet safely (Turner et al., 2017). Engaging them in discussions about online safety, privacy, and the consequences of their digital footprint fosters a culture of mindfulness and

responsibility in their online interactions (Desimpelaere et al., 2020; Mascheroni & Ólafsson, 2014).

This narrative sets the stage for an in-depth exploration of the pivotal roles played by parental guidance and educational frameworks in safeguarding the online experiences of adolescents, a topic that will be further dissected in the following section focused on mediating online safety.

## **2.7 Mediating Online Safety**

Online safety for adolescents is a complicated issue that necessitates a collaborative approach from various stakeholders, including parents and schools. This section explores the critical roles they play in safeguarding young internet users, drawing on insights from international research to provide a comprehensive overview.

### **2.7.1 Parental Mediation in the Digital Age**

The digital landscape presents a complicated mix of opportunities and risks, particularly for the younger demographic. As children and adolescents navigate this ever-evolving space, the role of parental mediation becomes crucial in safeguarding their online experiences. This section draws upon extensive research to explore the different approaches parents adopt in mediating their children's engagement with digital media, highlighting the specific strategies that have evolved from traditional media contexts to address the unique challenges of the internet.

### **2.7.1.1 Understanding Parental Mediation**

Parental mediation includes the range of strategies that parents use to oversee and influence their children's engagement with media (Duerager & Livingstone, 2012; Koch et al., 2024; Mascheroni et al., 2018; Nikken & Jansz, 2014; Young & Tully, 2022). It has long been a subject of academic inquiry, with initial studies focusing on television's impact on children's well-being (Livingstone & Helsper, 2008). This body of research laid the groundwork for understanding how families might mitigate the potential negative effects of media consumption through various strategies. As digital media, particularly the internet, became more widespread, the scope of parental mediation expanded to address the complexities of online interactions and content (Duerager & Livingstone, 2012; Eastin et al., 2006; Livingstone & Helsper, 2008).

The conceptual framework for parental mediation in the context of digital media typically encompasses three primary strategies: active mediation, restrictive mediation and co-use. Active mediation involves open dialogues and shared perspectives on appropriate and inappropriate digital content, fostering critical thinking and safe online practices among children (Alkan et al., 2021; Cricchio et al., 2021; Livingstone & Helsper, 2008). By contrast, restrictive mediation involves setting rules around digital media use, such as time limits and access restrictions, often without in-depth discussions about content implications (Livingstone & Helsper, 2008; Mendoza, 2009; Steinfeld, 2021). Co-use indicates shared media consumption without explicit parental guidance, relying on the implicit influence of joint engagement (Cricchio et al., 2021; Livingstone & Helsper, 2008). Additionally, the emergence of the

internet introduced new forms of mediation, such as monitoring strategies, where parents oversee their children's online activities either overtly or covertly (Bleakley et al., 2016), and technical mediation, which employs software solutions to restrict or filter access to certain online content (Livingstone & Helsper, 2008; Nagy et al., 2023).

#### **2.7.1.2 Factors Influencing Parental Mediation**

The approach to parental mediation is shaped by various factors, including parental attitudes towards digital media, socio-demographic characteristics, and cultural norms. Parents who perceive digital media positively are more likely to engage in active mediation and co-use, promoting a balanced and informed online experience for their children (Nikken & Schols, 2015; Wang et al., 2023). In contrast, parents concerned about the adverse effects of digital media may implement more restrictive measures to limit their children's exposure (Livingstone, Ólafsson, et al., 2017; Mendoza, 2009; Nikken & Schols, 2015; Wang et al., 2023).

Demographic factors, including the age and gender of both the parent and child, also play a significant role in shaping mediation practices. Studies have shown that girls often receive more extensive mediation from their parents than boys (Khurana et al., 2015; Livingstone, Nandi, et al., 2017; Sonck et al., 2013; Talves & Kalmus, 2015), and younger children than teenagers (Cabello-Hutt et al., 2018; Chan & McNeal, 2003; Livingstone & Helsper, 2008; Nikken & Jansz, 2014; Padilla-Walker et al., 2012; Shin & Lwin, 2017; Steinfeld, 2021), reflecting concerns about exposure to harmful content and the perceived vulnerability of these groups. Furthermore, mothers are frequently

identified as the primary mediators, reflecting broader societal norms around caregiving and supervision (Iqbal et al., 2021; Warren, 2001).

Cultural and socioeconomic factors further influence parental mediation strategies. Research suggests that cultural norms and values significantly influence parents' preferences for specific mediation approaches, leading to diverse patterns of parental engagement across different countries (Dulkadir Yaman & Kabakçı Yurdakul, 2022; Livingstone, Ólafsson, et al., 2017; Piotrowski, 2017). Parents with higher educational levels and digital literacy are more likely to engage in active mediation, providing guidance and support to their children in navigating online risks (Cabello-Hutt et al., 2018; Livingstone & Byrne, 2018; Paus-Hasebrink et al., 2012; Stoilova et al., 2021; Warren & Aloia, 2019). This active involvement is further facilitated in households where both parents are present, as indicated by Barkin et al. (2006), suggesting that a dual-parent environment may provide enhanced opportunities for supervision and collaborative mediation efforts. Conversely, socioeconomic challenges and limited digital proficiency may steer parents towards a more restrictive mediation approach, characterised by the setting of rules and limitations on internet use without the depth of engagement found in active mediation discussions (Duerager & Livingstone, 2012; Garmendia et al., 2012; Livingstone & Byrne, 2018). This situation highlights the complex relationship between familial structure, economic background, and digital competence in shaping the landscape of parental mediation.



### **2.7.1.3 Evaluating Parental Mediation's Impact on Online Safety**

The effectiveness of parental mediation in reducing online risks for children and adolescents is well-documented across diverse studies, showcasing significant benefits for users of varying ages and genders (Chen et al., 2023; Chen & Chng, 2016; Koch et al., 2024; Kuldass et al., 2023; Livingstone & Helsper, 2008; Livingstone, Ólafsson, et al., 2017; Rodríguez-de-Dios et al., 2018; Steinfeld, 2021). Active and restrictive mediation strategies, in particular, have been thoroughly examined for their roles in fostering safer digital environments for young users. This ongoing scholarly conversation sheds light on a nuanced array of outcomes tied to these mediation approaches.

Previous research indicates that restrictive mediation, which involves setting clear rules around internet use, can effectively reduce risk exposure by narrowing the breadth of digital engagement (Livingstone, Ólafsson, et al., 2017). This method is particularly beneficial in limiting risky behaviours online, thus offering a layer of protection for adolescents, especially those younger or less inclined towards self-regulation (Lee, 2013; Len-Ríos et al., 2016). However, criticisms of restrictive mediation point to its potential in hindering the exploration and proficiency of digital environments, crucial for competent navigation of today's internet landscape (Buijzen & Valkenburg, 2005; Livingstone, Ólafsson, et al., 2017; Shin & Ismail, 2014).

Conversely, active mediation, characterised by open discussions and guidance on navigating online spaces, appears to have a less direct impact on risk exposure but is

linked to enhanced digital literacy and more effective coping methods following unpleasant online experiences (Qin et al., 2023; Shin & Lwin, 2017; Wisniewski, Jia, Wang, et al., 2015). The interactive nature of active mediation supports adolescents in developing critical thinking skills, essential for understanding and managing online content and interactions (Liu et al., 2013; Nielsen et al., 2019).

Research also indicates that the effectiveness of parental mediation is moderated by several critical factors, including the child's age, the specific risks encountered, the mediums through which these risks are presented, and the cultural context within which the mediation occurs. These elements significantly influence the outcomes of both active and restrictive mediation strategies in terms of reducing media usage and the prevalence of media-related risks among adolescents (Chen & Shi, 2019; Lee, 2013; Shin & Lwin, 2017).

In light of these discussions, it can be argued that a balanced approach, integrating both restrictive and active mediation strategies, offers the most supportive structure for adolescents to navigate the digital world safely. Such a balanced approach seems to equip young individuals with the necessary boundaries to avoid risks while simultaneously fostering the skills and critical thinking needed for independent and responsible internet use. This holistic strategy appears to ensure that adolescents are not only protected from immediate online dangers but are also prepared to manage and mitigate potential risks independently, aligning with the ultimate goal of developing self-regulating digital citizens.

#### **2.7.1.4 Parental Challenges in Ensuring Online Safety**

Navigating the digital safety of children places parents at the forefront, yet they encounter a host of challenges that hinder their ability to effectively mediate their children's online experiences. The private nature of internet use, often within the child's bedroom, creates a substantial barrier to parental oversight (Livingstone & Bober, 2006; Livingstone et al., 2011). The challenges of small screens, long periods of sitting, and isolated device locations make it difficult for parents to engage in or supervise their children's online activities, with the multitasking nature of the internet making brief screen glances inadequate for understanding a child's online interactions (Auxier et al., 2020; Livingstone & Byrne, 2018; Livingstone et al., 2011; Livingstone & Helsper, 2008; Page Jeffery, 2021; Savoia et al., 2021).

The rapid pace of digital advancements often leaves parents struggling to keep up with their tech-savvy children, creating a knowledge gap that can hinder effective guidance and supervision (Davis et al., 2021; Fix et al., 2021; Livingstone & Byrne, 2018). Making this challenge even harder is the large number of online platforms, which makes it tough for parents to keep track of their children's online activities (Livingstone & Byrne, 2018; Page Jeffery, 2021). Moreover, many parents find themselves constrained by limited time, knowledge, or resources to effectively manage their children's internet use, further complicating their mediation efforts (Livingstone & Byrne, 2018).

A pivotal challenge in parental mediation is the prevalent lack of awareness regarding their children's online engagements. Studies consistently show that parents may not fully grasp the extent of their children's exposure to online risks (BBFC, 2022; Byrne et al., 2014; Liu et al., 2021; Livingstone et al., 2011; Pacheco & Melhuish, 2020; Page Jeffery, 2021). This awareness gap is often a result of generational differences in digital literacy and children's tendency to seek peer advice, coupled with their unwillingness to discuss their online experiences with parents due to fears of losing access or privacy (Geržičáková et al., 2023; Liao et al., 2008; Livingstone & Byrne, 2018; Page Jeffery, 2021). Research highlights the disconnection between parents' perceptions and the reality of their children's online experiences. Studies across various regions have revealed that a significant portion of parents are unaware of their children's encounters with sexual images, cyberbullying, and meetings with online contacts, underscoring a widespread underestimation of online hazards (Ahmad et al., 2019; Byrne et al., 2014; Liu et al., 2021; Livingstone et al., 2011; Pacheco & Melhuish, 2020; Symons et al., 2017). This disconnect leaves children navigating the digital world with limited guidance and protection. The challenges are further compounded by children's preference to learn about the internet from their peers rather than from adults, leading to a lack of exposure to safe browsing behaviours (Pasquier, 2008; Payne, 2015). In addition, the influence of peers, coupled with children's desire for independence and privacy, can discourage them from disclosing their online activities to parents, making effective parental mediation and monitoring even more challenging (Page Jeffery, 2021; Payne, 2015; Priebe et al., 2013; Sorbring & Lundin, 2012; Young & Tully, 2022).

Given these multifaceted challenges, it is clear that ensuring children's online safety is a collective responsibility that extends beyond the capacity of parents alone. The subsequent sections of this literature review will explore the crucial contributions of schools, teachers, and peers in creating a supportive and secure online environment for children, highlighting the importance of a united approach to digital safety.

### **2.7.2 The Role of Schools and Teachers in Online Safety**

Schools play a pivotal role in fostering a safe digital environment for children and adolescents. As primary settings for learning and social development, educational institutions have a unique opportunity to embed principles of digital literacy and online safety within their teaching frameworks. This role encompasses not only safeguarding students within the digital boundaries of the school environment but also equipping them with the critical skills required for navigating the complexities of the online world. The effectiveness of teacher mediation in enhancing students' digital skills and fostering a culture of open communication within the school environment is closely linked to various factors, including teachers' proficiency and commitment to digital safety education (Shin & Lwin, 2017; Stoilova et al., 2021).

Recent studies highlight the significance of professional development in equipping teachers with the necessary knowledge to navigate and teach digital safety topics effectively (Martin et al., 2022; Montero-Mesa et al., 2023). For instance, initiatives that provide professional development in digital citizenship, covering a wide array of subjects such as cyberbullying and digital privacy, have shown effective outcomes.

Educators who participated in such programs reported not only an enhancement in their understanding of digital safety issues but also in their ability to craft and implement relevant lessons for their students (Martin et al., 2022). The link between teachers' knowledge of digital safety guidelines and their integration of digital safety skills into classroom instruction has also been highlighted in the literature. A comprehensive survey of teachers revealed that those with a deeper understanding of digital safety standards are more likely to recognise the importance of such skills and incorporate them into their teaching (Berger & Wolling, 2019). Beyond theoretical knowledge, taking active and practical steps to teach digital safety and citizenship is advocated. Unlike fear-based reactive strategies, a continuous and proactive educational approach is recommended to effectively instil digital safety principles among students (Jones & Mitchell, 2016). This method educates students on safe online practices while also developing a sense of responsible digital citizenship.

Promoting digital safety extends beyond individual classrooms to encompass school-wide initiatives and community partnerships. These collective efforts enable a consistent and holistic approach to digital safety education, ensuring all stakeholders, including parents and community members, are engaged and informed. Continuous and collaborative initiatives are recognised as the most effective means of raising awareness and preventing online risks, fostering an environment where digital safety education is a shared responsibility (Grigutyte et al., 2020; Mark & Nguyen, 2017; Unicef, 2011; Vanderhoven et al., 2014). Furthermore, forming partnerships between schools and the wider community can enhance strategies for managing digital

footprints, ensuring students are equipped with the skills necessary to navigate the online world safely and responsibly (Buchanan, 2021).

#### **2.7.2.1 Peer Influence for Enhancing Digital Safety**

The impact of peer pressure within schools plays a critical role in shaping adolescents' online behaviour, offering both opportunities and challenges for digital safety education. Research underscores the importance of peer relationships in adolescent development, with peers significantly influencing each other's approach to digital engagement (Choukas-Bradley & Nesi, 2020; Hamilton et al., 2020). This influence extends beyond mere social interactions, impacting adolescents' decisions and behaviours in the digital world (Hinduja & Patchin, 2013; Ibrahim & Vi, 2021).

Peers often serve as the primary source of information and guidance for one another in navigating the online world, from exploring new social media platforms to understanding the digital behaviours (Livingston & Bober, 2005; Unicef, 2011; Zhao et al., 2011). The collaborative nature of peer interactions presents a valuable way for promoting positive online practices and enhancing digital safety awareness among children and adolescents (Smahel & Wright, 2014).

However, reliance on peer-led learning for internet education presents its set of challenges. While fostering a sense of independence, it may inadvertently expose students to unsafe browsing practices and increased online risks due to the lack of adult supervision and guidance (Payne, 2015; Strasburger et al., 2013). Moreover,

peer influence can sometimes lead towards negative outcomes, such as encouraging risky online behaviours (Soh et al., 2018), underscoring the careful balance required in managing peer interactions within the context of digital safety education (Shin & Ismail, 2014).

The literature highlights the evolving nature of peer influence as children age, with adolescents increasingly turning to their peers for advice and support, particularly in matters related to the online environment. This shift often occurs as direct communication with parents decreases, increasing the impact of peer interactions on adolescents' online experiences and potentially their exposure to online risks (Choukas-Bradley & Nesi, 2020; Giletta et al., 2021; Grigutytė et al., 2020; Pacheco & Melhuish, 2020; Shin & Lwin, 2017; Unicef, 2011).

Given these insights, educational institutions are uniquely positioned to use the positive aspects of peer influence in promoting digital safety. By integrating structured peer-led programs into the digital safety curriculum, schools can create an environment where students learn from one another in a guided and constructive manner (Atkinson et al., 2009). Initiatives such as peer mentoring, where older students educate younger ones about online safety, can foster a culture of shared support and responsibility (Unicef, 2011). This strategy not only takes advantage of the relatability and influence of peers but also contributes to building a united school community committed to ensuring a safe and respectful digital environment for all students.



In summary, the role of schools in fostering digital safety extends beyond the classroom, including informed teacher-led instruction, proactive educational practices, and the strategic use of technological monitoring. Crucially, it also involves using the influential role of peers in shaping each other's online behaviours. Through a holistic approach that integrates these elements, schools can effectively equip students with the skills and knowledge needed to navigate the digital world safely and responsibly.

## **2.8 Adolescent Internet Use in the Saudi Context**

In the context of adolescent internet use in Saudi Arabia, research remains relatively scarce, particularly in comparison to the more extensive studies conducted in Western countries. The existing literature, often characterised by small sample sizes and individual efforts rather than large-scale, national initiatives commonly seen in Western contexts. Moreover, much of the existing research is not recent, leaving a gap in the understanding of current trends and issues.

Despite these limitations, the available research sheds light on several critical aspects of adolescent internet use in Saudi Arabia. For instance, Al-Omri (2018) found that a significant portion of Saudi adolescents are heavily engaged in social media, with nearly 40% spending over seven hours daily. Smartphones emerge as the preferred device, indicating a high level of accessibility and personal engagement with digital content. In addition, their study findings indicates that a substantial number of adolescents discuss social media topics primarily with peers, and the influence of

educational institutions and family appears notably less pronounced, suggesting a potential area for stronger guidance and involvement.

Al-Anzi's (2009) work highlights Saudi parents' concerns about the internet's potential to negatively influence their children's behaviour, ethics, and beliefs, emphasising the vulnerability of adolescents to online content that may conflict with Islamic teachings and societal norms. Similarly, Hamdan (2014) points out ethical concerns, particularly regarding gender interactions online, and underscores the importance of religious principles as a protective factor against online risks. Further research by Khazna Al-Adwani (2011) and supported by Abu-Khalil's (2018) study, indicates the significant impact of foreign cultural influences on Saudi adolescent girls, leading to familial disagreements and a clash with local customs and traditions. This aspect of cultural conflict extends to broader concerns about global exposure and its alignment with local values, as highlighted by social workers in Saudi girls' high schools.

Noura Al-Qahtani's (2017) research sheds light on the disconnect between children's internet activities and parental awareness, pointing to the challenges parents face in effectively monitoring and guiding their children's online presence due to constraints such as time, knowledge, and effective strategies. Additionally, the influence of social media influencers on adolescents, as explored by Al-Ansi et al. (2023), and the high rate of cyberbullying reported by Gohal et al. (2023), further underline the complex landscape of online risks Saudi adolescents face. Moreover, Alashwali and Alashwali's (2021) study on Saudi parents' concerns about the security and privacy of smart device

applications used by their children highlights significant anxiety over content and security, with less focus on privacy issues.

These insights collectively underscore the critical need for comprehensive research and initiatives tailored to the Saudi context, aimed at understanding and mitigating the risks faced by adolescents online. The current study aims to contribute to bridging this gap by providing a detailed exploration of adolescent girls' use of the Internet in the Kingdom of Saudi Arabia, and contributing to a more accurate understanding of their digital experiences and the protection measures necessary to ensure their safety on the Internet. This effort is in line with the broader goal of enhancing digital literacy and promoting a safer online environment for young users, not only in Saudi Arabia but globally.

## **2.9 Summary of the Literature Review**

The exploration of adolescent internet use, as detailed in the previous sections, shows that it is a complicated aspect connected with modern life. Adolescents navigate through this digital world, engaging with various platforms and content, using the internet for education, socialising, and various forms of entertainment. The widespread use of mobile devices, particularly smartphones, underscores a shift towards an always-connected lifestyle, where online interactions become as routine as face-to-face engagements. However, this digital immersion comes with many challenges. Adolescents find themselves navigating a landscape filled with risks, from exposure to inappropriate content to the threats posed by cyberbullies and online

predators. These risks, categorised into contact, content, and conduct, highlight the need for effective protective measures, ensuring a safe online environment for this vulnerable demographic.

The protective measures established to safeguard adolescents online are varied. They include careful supervision by parents, educational efforts led by schools, and the significant influence of peers. Parental involvement, through active engagement and setting limits, plays a crucial role, though it faces challenges in bridging the digital gap between generations. The constantly changing nature of digital platforms adds to this complexity, requiring a flexible and informed approach. Schools and teachers are key players in promoting digital safety, integrating principles of digital literacy and online safety into the curriculum. Their role goes beyond just adding to the curriculum; it includes creating a positive educational environment that helps students develop the resilience to navigate online risks. In these protective strategies, the influence of peers stands out for its dual nature. While peer influence can guide adolescents towards positive online practices, it also has the potential to encourage risky behaviours. Harnessing this influence through structured programs presents an opportunity to foster a culture of digital safety and responsible internet use among adolescents.

Within the Saudi context, the digital engagement of adolescents presents unique challenges, highlighted by the limited research available. Concerns related to the impact of digital engagement on cultural values, ethical conduct, and family relationships are prominent. The influence of global content, social media influencers, and cyberbullying necessitates a clear understanding within the Saudi socio-cultural

landscape. This blend of global insights and local challenges underscores a significant gap in current understanding of adolescent internet use in Saudi Arabia. The study at hand aims to narrow this gap by exploring the digital lives of Saudi adolescent girls, shedding light on their online activities, perceptions of risk, and the protective measures in place. While this research will contribute valuable insights, it acknowledges that it is only a step towards a comprehensive understanding of this complex issue. It seeks to lay a foundation for future studies, advocating for broader investigations that encompass the diverse demographics of the Kingdom, thereby enriching the understanding of adolescent internet use in Saudi Arabia and beyond.

In conclusion, the narrative that unfolds from the literature review combines global insights with local perspectives, highlighting the careful balance between opportunity and risk in the digital age. By situating these insights within the Saudi context, this study attempts to chart a path towards safer and more enriching online experiences for adolescents, contributing to the ongoing dialogue on digital safety and engagement in an ever-evolving global landscape.

## **CHAPTER 3:**

### **THEORETICAL FRAMEWORK**

#### **3.1 Introduction**

This chapter outlines the theoretical foundation of this study, which is grounded in the Bio-ecological Systems Theory as originally formulated by Bronfenbrenner. It further explores the theory's evolution to incorporate the Techno-Subsystem, a concept proposed by Johnson and Puplampu that emphasises the significant impact of technology on developmental contexts. This theoretical approach is crucial for analysing internet use among adolescent girls in Saudi Arabia, offering a comprehensive view of the complex interactions between individuals and their diverse environments, both offline and online.

The Bio-ecological Systems Theory, incorporating the Techno-Subsystem, aligns with frameworks used in major research initiatives, such as the EU Kids Online project. This alignment underscores the theory's relevance and applicability to studies examining young people's digital engagement, thereby enhancing its credibility in the context of this research. By using this well-established theoretical foundation, the present study situates itself within the broader scholarly discourse, thereby enriching the understanding of adolescent internet use.

The application of this theory to the Saudi context is particularly insightful, shedding light on how socio-cultural and technological factors uniquely shape young girls' online

experiences. This chapter will provide a detailed overview of the Bio-ecological Systems Theory and its adaptation to include technological influences, setting the stage for a detailed examination of internet use among Saudi adolescent girls.

### **3.2 Overview of Bio-ecological Systems Theory**

The Bio-ecological Systems Theory, originally conceptualised by Urie Bronfenbrenner, offers a multi-layered perspective on human development. It is suggested that an individual's development is influenced by their interactions within various environmental systems (Bronfenbrenner, 1979, 1989). This theory's adaptability to the evolving technological landscape makes it highly relevant for modern research, especially in contexts like Saudi Arabia, where societal and technological landscapes are rapidly changing.

#### **3.2.1 Theoretical Foundation and Development**

Initially, Bronfenbrenner's Ecological Systems Theory presented the idea that human development is influenced by different types of environmental systems. These range from immediate, directly interactive settings like family and school, referred to as the Microsystem, to more extensive societal and cultural contexts, termed the Macrosystem. Over time, Bronfenbrenner expanded this theory, incorporating the role of biological factors and the significance of time in development, leading to the Bio-ecological Systems Theory (Bronfenbrenner & Morris, 1998). This expanded theory emphasised active Interaction between an individual's physical and genetic

characteristics and their environmental contexts, across various periods (Rosa & Tudge, 2013; Tudge et al., 2009).

### **3.2.2 Integration of the Techno-Subsystem**

Recognising the growing impact of digital technology on children's development, Johnson and Puplampu's 2008 proposition of the Ecological Techno-Subsystem represents a key development in Bronfenbrenner's theory. This addition significantly highlights digital technology as a major influence within both the immediate and broader contexts of children's environments, critically shaping their developmental experiences (G. M. Johnson, 2010b; Johnson & Puplampu, 2008). For instance, the way children allocate their time to various activities, influenced by technological tools, can lead to diverse outcomes, ranging from educational benefits to exposure to online risks. This extended framework reflects the deep integration of technology in both home and school settings, influencing not just interactions within these environments but also shaping the nature of these settings for digital technology usage, such as access and mediation strategies. Earlier research has demonstrated the varied developmental consequences of these technological influences, underlining the critical role of technology in child development (G. Johnson, 2010; G. M. Johnson, 2010a).

This Techno-Subsystem, initially described as an aspect of the Microsystem (Johnson & Puplampu, 2008), has been argued to span all levels of Bronfenbrenner's model due to the widespread presence of the internet and its significant role in every part of life



(Byrne et al., 2014). This broader perspective recognises the impact of digital technology across all ecological systems, influencing not only adolescent online behaviours but also shaping parental and educational mediation strategies. For example, within the Microsystem, factors like parenting style and internet accessibility at home are important, while in the Mesosystem, the interaction between home and school contexts in terms of technology use becomes significant. The Exosystem considers broader factors like media perceptions, and in the Macrosystem, overarching media policies and social norms play a role. Finally, the Chronosystem highlights the importance of timing aspects, such as time spent online, in understanding the impact of digital technology on development (Byrne et al., 2014).

### **3.3 Application to the Saudi Arabian Context**

Applying the Bio-ecological Systems Theory, enriched with the Techno-Subsystem, to the Saudi Arabian context offers a unique lens through which to view and understand the internet usage patterns and experiences of young girls in this distinct cultural setting. This application provides a detailed exploration of the connection between familial, educational, societal, and technological factors, and their collective influence on the digital lives of these young individuals.

#### **3.3.1 The Microsystem: Immediate Environment's Influence**

The Microsystem is the closest environmental layer to the individual, including direct interactions within immediate settings such as family, school, and peer groups (Swick & Williams, 2006). For Saudi adolescent girls, this layer is significant in shaping their

initial engagement with digital technology. For instance, the familial setting, with its specific cultural norms and values, can significantly dictate girls' access to and usage of the internet. A potential hypothesis here could be that more conservative family environments might impose stricter controls on internet usage, thereby shaping the nature of online activities that girls engage in. Similarly, schools as part of the Microsystem might vary in their integration of digital tools in education, affecting how girls perceive and use the internet for learning purposes.

### **3.3.2 The Mesosystem: Connecting Different Environments**

The Mesosystem links various microsystems, highlighting how experiences in one environment can affect another (Bronfenbrenner, 1979). For Saudi girls, the relationship between home internet use and school-based digital activities is a key focus. For example, a coordinated effort between parents and teachers on internet safety and digital literacy could encourage a more balanced and informed approach to online activities among these girls.

### **3.3.3 The Exosystem: Indirect Influences on Development**

The Exosystem includes wider social and community settings that, although not directly involving the individual, affect their developmental environment (Swick & Williams, 2006). For instance, the digital policies set by schools or the community norms regarding internet use can indirectly influence the online experiences of Saudi girls.

### **3.3.4 The Macrosystem: Cultural and Societal Influences**

The Macrosystem, which is the outermost layer, consists of societal and cultural beliefs, norms, and policies (Swick & Williams, 2006). In Saudi Arabia, cultural views on female independence and technology use greatly influence the digital environment for young girls. This layer helps explain how wider societal values and government policies affect their internet use.

### **3.3.5 The Chronosystem: The Role of Time and Change**

The Chronosystem includes the element of time, acknowledging that personal and environmental factors change over time (Swick & Williams, 2006). In Saudi Arabia, recent reforms and an increasing focus on women's empowerment could change how young girls interact with and use the internet, potentially expanding their access and influencing their online behaviour.

### **3.3.6 The Techno-Subsystem: Embracing Digital Influence**

Lastly, the Techno-Subsystem directly relates to the influence of digital devices and internet connectivity on Saudi girls. This system is crucial in examining the types of digital technologies that are most popular among young girls, how they access information, and the nature of their interactions on social media platforms.

### **3.4 Research Methodology and Theoretical Application**

In this study, Bronfenbrenner's Bio-ecological Systems Theory is not directly tested empirically but rather serves as a guiding framework for the research methodology and approach. The application of this theory is crucial in providing a comprehensive view of online risks and the influences of parental and educational mediation. By incorporating insights from girls, their mothers, and schoolteachers, the study gains a diverse range of perspectives, enhancing the depth and breadth of its analysis. The theory's role extends beyond shaping the investigative methods; it also offers a contextual lens for interpreting findings and guiding subsequent discussions. However, it does not impose any limitations on the study's findings and discussion or serve as their fundamental basis.

The modified version of the model, which includes the Techno-Subsystem, was also crucial for this study in investigating the influence of digital technology on individuals. However, it should be noted that this aspect of the study aligns with Byrne et al. (2014)'s viewpoint, which presents the Techno-Subsystem as encompassing all of an individual's ecological systems, extending beyond just the Microsystem.

### **3.5 Conclusion**

Incorporating the Bio-ecological Systems Theory, especially with the addition of the Techno-Subsystem, provides a comprehensive and insightful framework for understanding the digital lives of young girls in Saudi Arabia. This theory highlights the complex interactions between various environmental factors and the widespread

influence of digital technology, offering a thorough perspective to study their internet experiences. It outlines the complexities of internet usage, safety perceptions, and other influential factors within the unique socio-cultural context of Saudi Arabia.

This theoretical approach not only aids in understanding the complexity of their digital experiences but also guides the research methodology to explore these experiences in depth. The next chapter will describe the research methods used in this study, explaining how they are shaped by the theoretical framework established in this chapter.

## **CHAPTER 4:**

### **METHODOLOGY**

#### **4.1 Introduction**

This chapter details the methodology used in this study, which aims to explore and understand the internet use among adolescent girls aged 12 to 17 in the Kingdom of Saudi Arabia. Specifically, the study seeks to examine the duration and preferences of internet use, the nature of online engagement, and the perceptions and experiences of online risks as understood by both the girls and their mothers. To address these objectives comprehensively, a mixed methods approach was used, combining both qualitative and quantitative research methods.

A mixed methods design is particularly appropriate for this study due to its exploratory nature. This approach captures the detailed experiences of participants, which is crucial when examining the digital lives of young girls in Saudi Arabia, where cultural and legal factors significantly influence internet use. By integrating quantitative data with qualitative insights, this method allows for a richer exploration of themes and patterns, providing both contextual richness and deeper insights (Creswell & Clark, 2017; Onwuegbuzie et al., 2007; Teddlie & Tashakkori, 2009). This multi-method strategy adapts various research design elements to fit the specific research questions, making it a logical and effective approach (Creswell & Clark, 2017; Onwuegbuzie et al., 2007). Consequently, the findings are more inclusive, consistent, and valid, enhancing understanding and leading to more definitive conclusions (Denscombe, 2017;

Onwuegbuzie et al., 2007). This is particularly valuable given the limited research on this demographic in Saudi Arabia.

To effectively collect diverse and comprehensive data, the study employed two main data collection tools: individual semi-structured interviews and self-administered questionnaires. The interviews were tailored for different groups—adolescent girls, their mothers, and female teachers—to explore personal experiences and perceptions in depth. These are particularly beneficial for exploring sensitive topics such as internet use and safety (Lobe et al., 2008; Trier-Bieniek, 2012). In contrast, self-administered questionnaires offer a broader overview of patterns and trends across a larger sample, providing a structured framework for collecting specific information about internet use frequency and exposure to online risks (Annansingh & Veli, 2016; Lobe et al., 2008).

This chapter will detail the specific procedures followed in the research design, participant selection, data collection, and analysis. It ensures that the study's objectives are addressed with methodological rigour and ethical integrity. By linking the research methods with the theoretical framework outlined in Chapter 3, this approach not only enhances the reliability and validity of the findings but also ensures a comprehensive understanding of the phenomena under study.

## **4.2 Research Design**

The research design employed in this study is structured to address the complexities and unique aspects of internet use among adolescent girls in Saudi Arabia. A sequential mixed methods approach is employed to systematically combine qualitative and quantitative data, facilitating a comprehensive understanding of the topic. This design is particularly ideal for exploratory studies that aim to not only quantify phenomena but also provide rich contextual insights (Creswell, 2014; Johnson & Onwuegbuzie, 2004).

### **4.2.1 Sequential Phases of Research**

**Qualitative Phase:** The study initiated with qualitative interviews targeting three distinct groups: adolescent girls, their mothers, and female teachers. This phase is designed to capture the personal experiences and perceptions concerning internet use, associated risks, and mediation strategies within their immediate environments. The qualitative phase employed semi-structured interviews, which are effective for in-depth exploration of complex behaviours and motivations (Brinkmann, 2013; Bryman, 2016; Creswell, 2014; Eder & Fingerson, 2002; Lobe et al., 2008). Initially, a pilot phase was conducted to refine the interview questions, ensuring their cultural appropriateness and sensitivity.

**Quantitative Phase:** Following the qualitative interviews, the insights gained were used to inform the development of a structured questionnaire. This instrument was then administered to a broader population to quantify patterns of internet use,



preferences, and risk perceptions among adolescent girls and their mothers. The quantitative phase aimed to validate and extend the qualitative findings, providing statistical evidence to support the emergent themes (Bryman, 2016; Creswell, 2014; Lobe et al., 2008; Teddlie & Tashakkori, 2009).

#### **4.2.2 Integration and Complementarity**

This study's design leverages the complementary strengths of mixed methods research, as discussed by Onwuegbuzie and Leech (2004). Each phase of the study builds upon the findings of the previous one, enhancing the research's depth and validity. The sequential application of qualitative and quantitative methods allows for an iterative approach to data collection and analysis, ensuring that the insights from one phase inform the next. By integrating the findings from both the qualitative and quantitative phases, this study provides a comprehensive view of internet use among Saudi adolescent girls and strengthens the study's conclusions. The mixed methods approach thus enables a deeper understanding of the interaction between individual, familial, and societal influences on digital behaviours.

### **4.3 Data Collection Methods**

#### **4.3.1 Individual Semi-structured Interviews**

Semi-structured interviews were conducted to gather detailed, qualitative insights into the personal experiences of internet use among adolescent girls, the perceptions of their mothers, and the observations of teachers. This method facilitates a deep exploration of individual perspectives and experiences, allowing for emergent themes

that are responsive to the participants' own contexts (Brinkmann, 2013; Denscombe, 2017; King et al., 2018).

The exploratory nature of the study was a key factor in choosing the interview method, which is regularly recommended as a useful way to obtain data from children and adolescents (Eder & Fingerson, 2002; Lobe et al., 2008), as well as adults (Bryman, 2016; Cohen et al., 2007; Gillham, 2000; King et al., 2018). This approach is particularly effective for studies like the present one, aiming to uncover deep understandings of behaviours and perceptions, specifically, the internet usage patterns among adolescent girls in Saudi Arabia. The format of semi-structured interviews provides a structured yet flexible approach. Using a guide with prepared questions ensures that all relevant topics are covered while allowing the conversation to flow naturally. This format strikes a balance between staying focused on the research objectives and accommodating individual experiences and viewpoints. It also allows for deeper exploration of important topics as they arise, leading to a more comprehensive understanding of the subject (Brinkmann, 2013; Bryman, 2016; Cohen et al., 2007; King et al., 2018).

Moreover, semi-structured interviews facilitate a conversational approach that can make participants feel more at ease, encouraging them to express their thoughts and feelings openly. This is crucial in a cultural context where discussions about personal or sensitive issues like internet use and its associated risks might be constrained by social norms. The flexibility of this method allows the researcher to adjust the phrasing

or order of questions in response to the flow of the conversation, enhancing the depth and quality of the data collected (Bryman, 2016; Cohen et al., 2007; Creswell, 2014).

#### **4.3.1.1 Development of Interview Schedule**

The development of the interview schedule was a crucial process aimed at ensuring the collection of comprehensive and contextually relevant information from each participant group. This preparation was essential for the success of the semi-structured interviews, as it directly influenced the depth and quality of the insights gathered.

##### **4.3.1.1.1 Tailored Approach for Each Participant Group**

To align with the four research questions, tailored interview schedules were developed for each participant group, ensuring that all perspectives were covered comprehensively. The questions for each group were designed to address the research questions from different angles, reflecting their unique experiences and roles. For adolescent girls, the interview schedule aimed to address all four research questions by exploring their daily online activities, perceptions and experiences of online risks, and the mediation they receive from family and school. The interview questions for mothers focused on their perceptions of their daughters' internet use and concerns about online risks. These questions provided insights into Research Questions 1, 2, 3 and 4, examining how mothers view the risks associated with internet use and their strategies for managing online safety, which complements the perspectives gathered from the adolescent girls. In regard to teachers, the interview schedule was designed

to address mainly the fourth research question by examining their observations of students' internet use, the challenges of managing online safety, and the role of schools in supporting safe internet practices. This included questions about school policies and educational approaches, thus covering aspects of online risks and safety support from an educational standpoint.

The interview questions for all three groups were inspired by established literature, including the Global Kids Online toolkit, and were adapted through a thorough review of related studies. This ensured that the interviews comprehensively addressed the research questions from multiple perspectives, enriching the overall understanding of internet use and safety among Saudi adolescent girls.

#### **4.3.1.1.2 Detailed Structuring of the Interview Schedule**

The interview schedule was organised into distinct sections to ensure a smooth flow of conversation and comprehensive coverage of all relevant topics. The first section, Introduction, set the stage by explaining the study's purpose, ensuring confidentiality, and emphasising the voluntary nature of participation, aiming to make participants feel comfortable and secure in sharing their experiences. The second section, Online Behaviour, focused on participants' daily internet activities, the devices they use, and their favourite online spaces to understand their patterns of internet use. The third section, Online Risks, explored participants' experiences with online risks and their feelings of safety online, aiming to uncover their perceptions and experiences of potential online threats. The fourth section, Mediation by Family/School, examined

the rules and guidance provided by parents and schools regarding internet use, exploring the support systems in place to enhance online safety. Finally, the Conclusion section allowed participants to offer feedback on the discussion, ensuring all relevant topics were covered and giving them a chance to add any final thoughts. This structured approach ensured that all research questions were comprehensively addressed (See Table 4.1).

**Table 4.1: Overview of Interview Parts and Their Correspondence with Research Questions**

	<b>Part</b>	<b>Description</b>	<b>Corresponds to RQ</b>
<b>1</b>	<b>Introduction</b>	Explanation of the study's purpose, confidentiality, and participant rights.	General context for all RQs
<b>2</b>	<b>Online Behaviour</b>	Queries about daily internet activities, devices used, and favourite online spaces.	RQ1: Patterns of internet use
<b>3</b>	<b>Online Risks</b>	Questions about experiences with online risks and safety feelings.	RQ2 and RQ3: Risks and perceptions
<b>4</b>	<b>Mediation by Family/School</b>	Discussion on rules set by parents and school, and safety support and guidance provided by them.	RQ4: Support systems
<b>5</b>	<b>Conclusion</b>	Summary of discussion and participant feedback opportunity.	General feedback

#### **4.3.1.1.3 Developing and Adapting Interview Questions**

The initial framework for the interview questions was informed by the Global Kids Online toolkit. This resource has been widely used for studying children's and adolescents' online behaviours and experiences (Stoilova et al., 2016). It offers a robust foundation with themes of opportunities, risks, mediation, and digital skills that are globally recognised and methodologically sound. Recognising the unique cultural and regulatory environment in Saudi Arabia, the themes from the Global Kids Online toolkit were carefully adapted to be culturally sensitive and relevant to the Saudi context, particularly focusing on the experiences of adolescent girls, their mothers, and teachers. This adaptation involved incorporating local cultural norms and values into the framework, ensuring that the questions addressed issues pertinent to Saudi society while retaining the methodological robustness of the original toolkit.

**Interview Questions for Adolescent Girls:** The focus of the Global Kids Online toolkit on young users made it highly relevant for framing questions to gain detailed insights into the daily online experiences of adolescent girls. The original questions from the toolkit were adapted to align more closely with the objectives of this study. For example:

- **Original Question from Toolkit:** "Tell me how it was the last time you used the internet – who were you with, what did you do, was it fun?"
- **Adapted Question for Study:** "Could you describe a typical day for you on the internet? Who are you usually with, and what activities do you engage in?"

- **Reason for Adaptation:** This adaptation was made to obtain a more consistent and detailed account of daily internet use rather than a single instance, providing better data for analysing patterns over time.

**Addition of Custom Questions:** To address gaps not covered by the toolkit and to meet specific research objectives, new questions were added. For example:

1. "Are there rules about internet use at school? What are they?" This question aims to understand the regulatory environment surrounding internet use within school settings.
2. "Does your school teach you how to be safe online and what to do about online dangers?" This question was included to gather specific data on the role schools play in internet safety, directly addressing the fourth research question regarding support systems in schools for online safety.

**Interview Questions for Mothers and Teachers:** The interview questions for mothers and teachers, while inspired by the Global Kids Online toolkit, were developed independently to suit the adult perspective and the different focus of these interviews. This adaptation was necessary because the Global Kids Online resources are primarily designed for interviewing children and adolescents, and therefore, the language and focus of the questions needed to be adjusted to suit an adult perspective and to directly address the study's objectives. This process also involved ensuring that questions related to parental and educational roles in internet use reflected local expectations and practices, thereby enhancing the relevance of the responses to the Saudi context.

**For mothers**, questions aimed to understand their perceptions of their daughters' internet use, their concerns about risks, and their mediation strategies.

- **Example Question:** "How do you monitor your daughter's internet activities, and what rules have you set regarding her internet use?" This question seeks to understand the extent and nature of parental mediation, which is crucial for assessing how parents influence their daughters' online behaviours and safety.
- **Example Question:** "Have you had conversations with your daughter about the dangers she might encounter online, and how do you approach these discussions?" This question aims to explore the communication patterns between mothers and daughters concerning online risks, shedding light on how well-prepared daughters are to handle potential online issues based on their mothers' guidance.

Some questions directed at mothers were similar to those asked of girls to compare perceptions and awareness levels.

- **Girl's Question:** "What are your favourite activities online?"
- **Mother's Question:** "Can you describe the activities your daughter usually does on the internet?"
- **Girl's Question:** "Have you ever faced any unpleasant experiences online that bothered or upset you"?
- **Mother's Question:** "Has your daughter ever experienced anything online that bothered or upset her"?



This comparative approach helps to assess the accuracy of mothers' perceptions of their daughters' online activities and risks, which is crucial for understanding familial mediation strategies.

**For teachers,** the questions focused on their observations of students' internet use, the challenges they face in promoting safe online practices, and the role of educational policies in managing students' online behaviour.

- **Example Question:** "What measures does your school implement to educate students about internet safety, and how do you personally contribute to this education?" This question is intended to assess the educational strategies and curricula in place at schools that address internet safety, providing insight into the institutional support available to students.
- **Example Question:** "Have you encountered any instances where a student has faced online risks, and how was the situation handled by the school?" This question explores the practical application of school policies and teacher actions when actual online risks are encountered, helping to evaluate the effectiveness of existing measures and the responsiveness of the school environment.

These tailored questions for mothers and teachers enhance the depth of the research findings by examining the roles of key influencers in the adolescents' digital lives. They also ensure that the information gathered is directly relevant to the study's focus on mediation strategies within family and school settings, reflecting the specific context and challenges present in Saudi Arabia.

#### **4.3.1.2 Testing and Improving the Interview Questions**

Prior to the main data collection phase, a pilot test was conducted in June 2021 with a convenience sample of two participants from each group: adolescent girls, their mothers, and teachers. This pilot phase was crucial for several reasons. Firstly, it allowed for testing the clarity, relevance, and flow of the interview questions. Secondly, it assessed the functionality of the online platforms used for conducting the interviews, which was necessary due to the shift from traditional face-to-face interviews to a virtual format caused by the COVID-19 pandemic.

The pilot study served multiple purposes. It provided the researcher with practical experience in conducting online interviews with diverse groups and allowed for an evaluation of the interview schedule's effectiveness in eliciting detailed and meaningful discussions. Participants were encouraged to share their opinions on the relevance of the topics covered, their feelings about specific questions, and any suggestions they had for improving the questions. The feedback received during this pilot phase was overwhelmingly positive. Participants noted that the questions facilitated meaningful discussions and were relevant to their experiences.

The insights gained from the pilot testing were instrumental in refining the interview guide. Participants' responses confirmed the appropriateness of the questions and the overall interview flow, leading to minor adjustments rather than significant changes. These adjustments ensured that the interview guide was not only aligned with the study's objectives but also resonated well with the participants' understanding and

experiences. Constructive feedback helped improve the wording and order of questions, enhancing the guide's effectiveness in capturing rich, contextual data.

The data collected during the pilot phase were considered valid and were subsequently included in the main study, enriching the research findings with preliminary insights. This initial phase confirmed that the semi-structured interviews were well-structured to meet the research objectives while remaining flexible enough to adapt to the natural flow of conversation, thus ensuring the collection of comprehensive and contextually relevant data.

#### **4.3.1.3 Participant Selection and Recruitment**

##### **4.3.1.3.1 Defining the Target Population**

The process of selecting participants was carefully planned to match the study's goal of exploring internet use among Saudi adolescent girls, their mothers, and female teachers. The target group included girls aged 12 to 17 years, along with their mothers and female teachers who interact with them. This age range was chosen because it represents a key stage in adolescent internet use, where parents and teachers play a significant role in shaping their online experiences.

##### **4.3.1.3.2 Recruitment Strategy and Process**

The initial strategy for recruiting participants involved collaborating with the Saudi Ministry of Education to send invitations through middle and high schools in the Makkah region. This approach was chosen because schools are key environments for

reaching the target demographic. However, the COVID-19 pandemic caused significant disruptions, including interruptions in regular school operations and delays in communication with educational institutions. These challenges were compounded by the summer holiday period, making it even more difficult to engage with schools.

To adapt to these unforeseen circumstances, the recruitment strategy was revised to use digital platforms, particularly social media, which provided a direct and flexible way to reach potential participants. This adjustment involved contacting middle and high school teachers through platforms like Telegram and other social media. These teachers helped disseminate the study's invitations through channels like Telegram and WhatsApp parent-teacher groups. The invitations included an information sheet detailing the study's scope, objectives, and ethical considerations, ensuring that all potential participants were fully informed about the nature of their participation and the measures in place to safeguard their confidentiality. Interested participants were asked to express their interest by responding via email within a specified timeframe, providing basic demographic information to confirm their eligibility for the study. This streamlined process ensured efficient and comprehensive recruitment, allowing the study to effectively reach a diverse group of participants.

This revised recruitment strategy, conducted between June and September 2021, used non-probability convenience sampling to efficiently gather a diverse group of participants, including 23 participants (5 mothers, their 5 daughters, and 13 teachers). This method helped minimise potential biases that could arise from a less varied sample. The initial phase indicated that theoretical saturation had been reached, as

the collected data were sufficient to illuminate the central themes of the study. However, additional interviews were conducted in 2023 with three more pairs of girls and their mothers to validate the findings, especially those potentially affected by pandemic-related changes in internet behaviour. This subsequent round of data collection followed the same recruitment methodology as before, ensuring consistency in participant engagement.

#### **4.3.1.3.3 Rationale for Focusing on Female Participants**

The decision to exclusively focus on female participants (adolescent girls, their mothers, and female teachers) was based on several important reasons specific to the Saudi context. Adolescent girls, more than any other group, face significant risks when using the internet, especially those related to sexual harassment and sexual blackmail. This is a global issue, not just limited to Saudi Arabia (Livingstone & Görzig, 2014; Steinfeld, 2023). This vulnerability makes it essential to closely examine their online activities and the protective measures available to them. Furthermore, In Saudi culture, mothers often bear primary responsibility for overseeing their children's digital activities (Alharthi, 2023; Alosaimy, 2023), thus, their insights are crucial for understanding how families manage and guide internet use. Additionally, because of the gender-segregated education system in Saudi Arabia, female teachers are the main educators in girls' schools. This justifies the exclusion of male participants from the study. Focusing on these groups aligns with cultural norms and allows the study to use its resources effectively, concentrating on those most relevant and impacted.

This targeted approach is intended to enhance the depth and relevance of the research findings.

#### **4.3.1.4 Adapting the Interviews to The COVID-19 Pandemic**

Initially, the plan was to conduct interviews in schools, as this environment was considered ideal for accessing all research participants in a setting that was open, secure, and comfortable. However, due to the restrictions imposed by the COVID-19 pandemic and in line with the University of York's guidelines, the plan was revised to accommodate online interviews instead.

Contrary to initial expectations that online interviews might be more challenging than in-person interactions, several positive outcomes emerged from this modification. The shift to online interviews allowed engagement with a more diverse sample of participants across various regions of Saudi Arabia. This increased the study's geographic diversity, which would have been limited if interviews were confined to a single city. Additionally, conducting interviews online proved to be more efficient and cost-effective than in-person alternatives. The acceptance of online interviews among participants was high, reflecting the general convenience of this method, which allows participants to choose their preferred place, day, and time for the interview, as highlighted by Salmons (2009) and Hanna (2012).

The online format also aligned with the summer holiday, during which participants typically had more availability and were possibly more willing to engage deeply with

the study, potentially enhancing the richness and completeness of the data collected. Importantly, the online setting provided a confidential and safe space that was particularly beneficial when discussing sensitive topics such as negative internet experiences (Salmons, 2009). Many participants, especially the adolescent girls, participated from the privacy of their rooms with only audio recording being used, which helped to ensure their privacy and comfort. This arrangement is likely to have facilitated a more open and honest dialogue about their experiences. In contrast, if the interviews had been conducted at schools with adult staff present, the responses might have been more reserved and influenced by social expectations, as suggested by previous research (Lobe et al., 2008; Morrison, 2013).

Despite the increased geographic diversity of the sample due to the online format, the small number of eight pairs of mother-daughter participants should be considered in terms of representativeness. Given Saudi Arabia's culturally and religiously homogeneous context, along with its advanced technological infrastructure, significant regional variations in the study's focus may be limited. The similarities in cultural norms and widespread internet access across different regions suggest that the core experiences and attitudes regarding online behaviours and safety are likely to be relatively consistent. However, minor regional differences in specific practices or access might still be present, which could provide additional insights into localised variations if they exist.

Thus, the switch to online interviews not only addressed the challenges posed by the pandemic but also unexpectedly improved the data collection process. It broadened

participant diversity and enhanced the depth of information gathered, showing that adapting to unforeseen circumstances can lead to positive outcomes in research methodologies.

#### **4.3.1.5 Conducting the Interviews**

Before conducting the interviews, an information sheet was provided to all participants to ensure they were fully informed of their rights and could make an informed decision about their involvement. This document explained how data would be collected and used, measures to ensure confidentiality, and how data would be managed after the project's completion. Consent forms were given to all adult participants, and mothers were specifically asked to discuss the information sheet with their daughters to help them understand and give their consent.

Participants were informed that the interviews would be conducted online. They were given the flexibility to choose a convenient time and their preferred communication platform, such as FaceTime or Zoom. To respect their privacy and comfort, especially for the girls, participants were advised to find a private space where they would not be overheard during the discussion. This precaution was essential to enhance the quality and completeness of the data collected and to protect the participants, particularly the girls, from any potential repercussions from discussing their internet activities and experiences openly.



The interview process began with the researcher introducing themselves and providing an overview of the study's objectives. The importance of confidentiality and anonymity was emphasised, and participants were reassured about the measures in place to protect their privacy, with personal identifiers replaced with codes. The voluntary nature of their participation was highlighted, and they were informed that they could withdraw from the study at any time without needing to justify their decision. Consent to record the interviews was sought at the beginning of each session, with a particular focus on obtaining verbal agreement from the girls regarding their participation.

Throughout the interviews, the researcher aimed to foster a relaxed and conversational atmosphere, using neutral language and avoiding any reactions that could influence the participants' responses. Leading questions were avoided, and simple, clear language was used to ensure understanding across all participant groups, especially the adolescent girls. This approach was aligned with best practices in qualitative research, ensuring that participants felt comfortable and understood (Alderson & Morrow, 2020; Seidman, 2006).

At the end of each interview, participants were given the opportunity to ask additional questions or provide further comments, ensuring they felt their contributions were valued. The duration of the interviews varied, typically lasting between 40 and 60 minutes for teachers and girls. Interviews with mothers, who often had more to discuss regarding concerns about internet risks, ranged from 55 to 90 minutes. This flexible timing allowed for a thorough exploration of topics relevant to each group's

experiences and concerns, effectively capturing the detailed perspectives needed for the study.

#### **4.3.1.6 Analysis of Interview Data**

The interview data was analysed using thematic analysis, a method well-suited for uncovering and understanding complex patterns in qualitative data (Braun & Clarke, 2006; Willig, 2013). This approach allowed for a systematic examination of the different perspectives of adolescent girls, their mothers, and teachers, leading to the formation of cohesive themes that accurately reflect their experiences and insights.

The data analysis began with a thorough reading of the interview transcripts to gain a complete understanding of the collected information. This initial step was crucial in preparing for the coding process, where initial codes were generated to identify significant patterns and statements related to the research questions. Coding was done in two ways: inductively, letting themes naturally emerge from the data, and deductively, guided by the research questions and existing literature. This approach ensured that the analysis was deeply rooted in the data while also aligning with theoretical frameworks.

As the coding process progressed, codes were grouped into potential themes that reflected broader patterns across the data set. This phase involved an iterative process, where codes were continuously improved and reorganised as emerging themes became clearer. For example, initial codes related to "parental supervision"

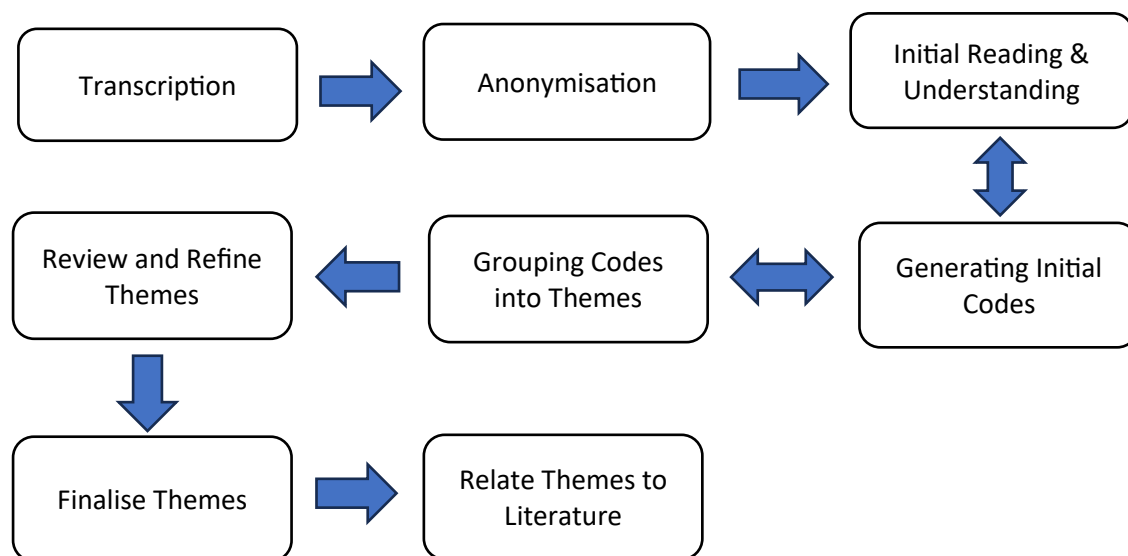
and "school policies" were combined under a broader theme of "mediation strategies." This ongoing coding process led to identifying seven main themes and twenty-five sub-themes, each encapsulating key aspects of digital experiences and perceptions among the participants.

To enhance the reliability of the findings and confirm the accuracy of the thematic analysis, a double-coding approach was implemented. This method involved collaboration with another skilled researcher who had recently earned a Ph.D. from the University of York. This individual was given transcripts from three randomly chosen interviews involving a girl, a mother, and a teacher. The researcher was also provided with the seven primary themes from the initial analysis to help with the re-coding effort. The independent evaluation by this researcher mostly verified the consistency of the initially identified themes, with only minor differences found. These discrepancies were resolved after reviewing the sub-themes. This collaborative method of double-coding not only reinforced the credibility of the analysis framework but also introduced an element of peer review, thus improving the study's interpretative depth and reliability (Shenton, 2004).

The process of thematic analysis required ongoing and flexible engagement with the data set. This involved constantly moving back and forth between the raw data, coded extracts, and the developing analysis to ensure that the themes accurately reflected the collected data. Once the main themes and sub-themes were established, each was described in detail, supported by direct quotes and patterns observed in the data. These themes were then critically compared to existing literature to place the findings

within the broader field of study, often confirming and expanding upon previous research while also introducing new insights unique to this research. This approach not only reinforced the credibility of the analysis but also deepened the understanding of the internet use among Saudi adolescent girls. The entire analysis required flexibility and continuous interaction between the analyst and the data, allowing adjustments as new patterns emerged and ensuring that the findings were grounded in the participants' realities and aligned with scholarly research and theory. The data analysis steps are summarised in Figure 4.1.

**Figure 4.1: Interview Data Analysis Steps**



### 4.3.2 Self-administered Questionnaire

The self-administered questionnaire was a crucial tool in this research, designed to quantitatively complement the rich qualitative insights gathered from the interviews. By assessing the prevalence and patterns of internet use among Saudi adolescent girls and their mothers, the questionnaire extended the findings from personal narratives

to a wider population. Researchers like Greene and Hogan (2005) have emphasised the usefulness of such tools for exploring children's access to and use of online technologies, especially in capturing different behavioural patterns across various demographic groups.

This method was especially beneficial for this study as it allowed for the collection of data in a way that respected participant anonymity and privacy, encouraging respondents to be open and honest when discussing sensitive topics. The questionnaire's dual approach, using both scaled and open-ended questions, enabled a thorough analysis of participants' experiences, attitudes, and the factors influencing their digital behaviour. It also allowed for a detailed comparison between mothers' perceptions and the actual behaviours reported by the girls, highlighting discrepancies and alignments. This is crucial for identifying areas where parental awareness might not match the reality of adolescents' behaviours. Such insights are essential for developing targeted educational interventions.

The following sections describe the design, implementation, and analysis of the questionnaire, showing how this tool contributed to the study's goals by expanding the empirical foundation of the research.

#### **4.3.2.1 Questionnaire Design**

The questionnaire design was essential for achieving the research objectives. It was carefully developed to reflect a deep understanding of both the global digital

landscape and the specific cultural context of Saudi Arabia. Insights from initial interviews, existing literature, and standardised items from the Global Kids Online and EU Kids Online Quantitative Research Toolkits were used to create the questionnaire. These toolkits are known for their thorough approach to assessing children's internet access and usage, providing a solid foundation for comparing behaviours across different cultural settings. The questionnaire aimed to effectively explore how children and adolescents interact with digital technology.

To enhance the questionnaire's validity and reliability, significant emphasis was placed on the clarity and accuracy of each question (Greene & Hogan, 2005). The initial section of the questionnaire provided a detailed explanation of how to complete it, with guiding instructions placed throughout to prevent any misunderstandings. Additionally, the development process included strict measures to ensure the content aligned with the cultural sensitivities of the Saudi context. Topics that might be considered sensitive or inappropriate were avoided to respect cultural norms and ensure participant comfort. This careful consideration was crucial in creating an environment where participants could respond honestly without feeling cultural or social pressures. Additionally, two Saudi academics, fluent in both Arabic and English, reviewed the questionnaire to ensure linguistic accuracy and cultural relevance. Their expert feedback led to several important refinements, improving the overall clarity and ensuring the questions were suitable for the Saudi audience.

The questionnaire was structured into five main sections, each designed to gather specific information about the participants' internet use behaviours and the environmental factors influencing these behaviours:

#### **4.3.2.1.1 Demographic Information**

The first section, "Demographic Information," was crucial for understanding the socio-demographic backgrounds of the participants. This data was essential for contextualising their internet use patterns and for the subsequent analysis. This section collected important details such as age, living arrangements, educational attainment, and employment status, providing demographic information of each respondent.

In the girls' survey, age was a key variable. Participants selected their age from predefined categories ranging from "under 12" to "18 and over." This question was not just about gathering basic data; it was critical for ensuring the study's findings were relevant and accurate. Responses from girls outside the target age range of 12 to 17 years were automatically filtered out and not included in the final data analysis. This age-specific approach allowed for a focused examination of internet use, risk exposure, and safety behaviours relevant to the different stages of adolescence. It also made it easier to compare behaviours across different age groups to identify patterns.

The mothers' survey extended demographic questions to include the mother's age, educational background, and employment status. These elements provided a snapshot of the adult demographic responsible for supervising and influencing

adolescents' internet use. Understanding the mothers' education levels and employment statuses helped infer socioeconomic factors that might influence digital literacy and parental mediation styles. For instance, a mother's educational attainment could correlate with her awareness and understanding of online risks, potentially impacting how she monitored and guided her daughter's internet use. While the results did not compare findings based on the mother's education level or employment status, asking these questions provided a general picture of the participating mothers. This broader understanding was crucial as their input significantly influenced the study's findings.

Both surveys asked about living arrangements to understand the familial and social environments of the respondents. For the girls, options included living with both parents, one parent, other relatives, or in institutional settings like foster homes. This information helped identify who might influence or regulate the girls' internet activities, providing insights into family relationships that affected their online experiences and risk exposure. This foundational data set the stage for deeper analysis in subsequent sections of the study.

#### **4.3.2.1.2 Internet Access and Behaviour**

This section of the questionnaire aimed to gather detailed information about how participants used the internet, which devices they used, and their online activities. This data was essential for understanding the digital landscape in which Saudi adolescent girls and their mothers engaged. In the girls' survey, questions started by assessing their perceived internet skills compared to their peers and parents, helping



to understand their confidence in navigating online environments. For example, girls were asked to rate their internet proficiency on a scale from "Very poor" to "Very good," both in general and compared to their parents and other girls their age. This helped identify any perceived skill gaps or overconfidence in internet usage.

The survey also asked about the types of devices used to access the internet, such as smartphones, computers, tablets, game consoles, and connected TVs. This was followed by questions about device preferences and locations where internet access occurred, home, school, public places, relatives' homes, or on friends' devices. Understanding device usage and preferred access points provided insights into the privacy and supervision levels these girls experienced while online. Additionally, the girls reported the frequency of their internet use in different settings and for varying durations, from "Never" to "Almost all the time." They were asked to select how frequently they engaged in specific online activities, such as watching videos, playing games, listening to music, and using social media platforms like Facebook, Instagram, and Twitter, during the week. This provided a complete picture of their digital engagement.

For the mothers' survey, a similar approach was taken. Mothers were asked to report not only their own internet skills but also their perceptions of their daughters' internet activities. They evaluated how often their daughters engaged in various online activities, such as using social media, online shopping, and participating in online communities. Additionally, mothers provided information about the privacy settings of their daughters' social media profiles, indicating whether they were public, private,

or a mix of both. The girls were also asked the same question about the privacy settings of their profiles. This dual perspective allowed for a comparison between the actual behaviours reported by the girls and the perceptions of their mothers, highlighting any discrepancies or agreements between what the girls reported and what their mothers believed about their internet use.

#### **4.3.2.1.3 Risk Perception**

This section of the questionnaire was carefully designed to understand how participants perceived potential dangers they might encounter online. This crucial part provided valuable insights into the awareness of online risks among Saudi adolescent girls and their mothers.

In the girls' survey, respondents were asked to express their level of agreement or disagreement with a variety of statements concerning online safety. These statements probed their beliefs about the safety of interacting with strangers online, the honesty of people on the internet, and the security of social networking sites for their age group. Additional statements assessed their personal concerns about internet safety, their confidence in handling online challenges, and their perceptions of parental support in dealing with online issues. For instance, girls responded to statements such as "Chatting with strangers online is often safe" and "I am confident that I can handle unpleasant situations online effectively," using a Likert scale from "Strongly agree" to "Strongly disagree." This approach helped quantify their perceived risk and preparedness, which were vital for understanding their online experiences and the effectiveness of existing safety measures. The scale items in this section were

developed based on categories from risk perception literature. These categories included knowledge about risks, such as believing people are generally honest online; fear of risks, exemplified by concerns about potential online dangers; and controllability of risks, reflecting beliefs about their ability to manage online threats.

For the mothers' survey, the questions were similar to those asked to the girls but were adjusted to capture the mothers' perspectives on the same issues. Mothers were asked about their own views on online risks as well as their concerns about their daughters' internet activities. Questions like "I am concerned about my daughter's safety on the internet" and "It is crucial for parents to monitor their daughters' internet use to ensure their safety" highlighted how vigilant and proactive mothers felt they needed to be to protect their children. By looking at both the mothers' self-assessed readiness to help their daughters and their views on the safety of online environments, this section provided a deeper understanding of the important parental role in internet safety.

#### **4.3.2.1.4 Internet Risks**

This section was designed to explore the direct experiences and perceptions of online dangers faced by participants. This part was important for understanding the real threats that Saudi adolescent girls encounter online and how aware their mothers are of these risks. This information is crucial for identifying areas where internet safety measures might be needed.

In the girls' survey, questions were posed to understand firsthand experiences with various types of online risks over the past year. Participants were asked if they had encountered situations that made them feel uncomfortable, scared, or regretful. For example, the survey asked: "In the past 12 months, have you experienced anything on the Internet that made you feel upset or uncomfortable?" with response options ranging from "Never" to "Many times". This question aimed to gauge the frequency and intensity of negative experiences encountered online.

Additional questions looked into the types of content and interactions that concerned them, such as encountering hate speech, explicit content, or being contacted by strangers. Girls were asked where they had seen disturbing content (e.g., "On video sharing platforms like YouTube"), and how often they engaged in potentially risky activities like "Talking to strangers on the internet for fun" or "Sending personal information to someone they had never met in person." These questions not only identified the types of risks they faced but also their behaviours that might expose them to such risks.

For the mothers' survey, similar questions were asked to understand their perceptions and concerns regarding their daughters' online experiences. Mothers were asked how often their daughters had faced online situations that bothered or upset them, such as feeling uncomfortable or scared. For instance, one question asked, "How often, if at all, has your daughter experienced something online that bothered or upset her in the past 12 months?" with response options "never," "only once," "a few times,"

"many times," or "I don't know." Mothers were also asked if their daughters had ever been contacted by strangers online and how often such interactions occurred.

Additional questions asked mothers how often their daughters had encountered specific online risks, such as hacking, losing money to scams, or being treated badly. Mothers answered questions like, "How often, if ever, has your daughter encountered any of these situations while using the internet?" with the same response options. They were also asked if their daughters had seen harmful content online, like websites about suicide, hate messages, or violent images. Finally, mothers were asked how often their daughters engaged in risky online behaviours, such as talking to strangers or sharing personal information. By collecting this data, the survey assessed whether there was a gap between the experiences reported by the girls and the awareness of these issues by their mothers. This understanding could be crucial for developing effective parental guidance and monitoring strategies.

#### **4.3.2.1.5 Digital Safety Mediation**

The "Digital Safety Mediation" section of the questionnaire explored the methods and strategies used by both parents and schools to manage and reduce risks associated with girls' internet use. This part was crucial for understanding how internet safety was viewed and implemented within the family and school settings, from the perspectives of adolescents and their mothers.

In the girls' survey, participants were asked to identify the family members most actively involved in supervising their online activities. Options included mother, father,

both parents, other guardians, or no one, aiming to reflect the family arrangements and level of parental involvement in digital safety. Further, the girls responded to questions about their openness with their parents regarding their internet use and the specific content they accessed. This was explored through questions like, "How open were you with your parents or carers about what you did or saw on the internet?" with options from "Not at all" to "Completely open". Such questions assessed the communication gap between girls and their parents concerning online activities, which was vital for effective mediation. The survey also looked into how aware the girls thought their parents were about their online interactions, with questions like, "To what extent do you think your parents are aware of the people you communicated with online, what you watch or read online, and your general use of the Internet?" This helped understanding the accuracy of parental perceptions and their understanding of their daughters' online world.

Further, the questionnaire addressed the frequency of various parental activities related to internet use, such as engaging in online activities together, discussing internet safety, and setting rules about internet use. These questions aimed to capture the extent of active, restrictive, monitoring and technical mediation strategies parents use, as outlined by scholars like Livingstone & Helsper (2008). This included active mediation involving explanations of internet content, restrictive measures like requiring permission for online access, and technical mediation like the installation of filtering software. Moreover, the survey examined the role of schools in educating about online safety, asking adolescents about the effectiveness of school teachings regarding internet risks and what measures they were taught to handle internet risks.

This aspect was crucial for understanding the differences in how internet safety is managed at home versus at school and assessing the overall approach to digital safety education.

For the mothers' survey, the questions were similarly structured to reflect their concerns and awareness. Mothers indicated the extent to which they supervised and participated in their daughters' internet usage, with items such as, "How often did you engage in online activities with your daughter?" and "Did you set rules regarding when or how long your daughter could use the Internet?" These responses were crucial for understanding the efforts made by parents to safeguard their daughters and foster safe internet habits. Additionally, the questionnaire explored the tools and methods parents used to monitor and restrict internet use, asking if they employed parental controls or other means to block or filter websites and track online activities.

The mothers' survey also included an open-ended question that allowed for the collection of diverse parental perspectives on effective strategies for internet safety. This question not only revealed the range of parental understanding and concern but also provided valuable insights into potential gaps in existing safety measures and suggestions for new ones. Open-ended questions like this enrich the data, providing detailed perspectives that structured questions might not address, thus aiding in the development of effective and context-relevant online safety strategies.

By examining both the adolescents' and mothers' perspectives on digital safety mediation, the survey provided a comprehensive view of the effectiveness and gaps

in current internet safety practices within families. This dual approach helped identify areas where more education or resources were needed to enhance safety measures and better equip both parents and children to navigate the challenges of the digital world.

#### **4.3.2.2 Pilot Testing and Feedback Integration**

Before its full implementation, the questionnaire was piloted with a group of 20 girls from the same school. This initial stage was crucial for checking the practicality of administering the questionnaire and ensuring that all questions were understood and relevant to the participants. During this phase, participants completed the entire questionnaire and were also given a section to provide feedback on the clarity and relevance of the questions, along with any suggestions for improvements. The feedback received was positive, indicating that the questions were both clear and relevant to the participants' experiences. No major changes were needed based on the responses received. As a result, the data from this pilot test were included in the main study's dataset, confirming the reliability and effectiveness of the questionnaire as a research tool, and strengthening its value for the broader study objectives.

#### **4.3.2.3 Implementation of the Questionnaire**

The implementation of the questionnaire was a crucial phase of this study. It aimed to gather extensive data on the internet use behaviours of adolescent girls and their mothers across Saudi Arabia. Following the start of the COVID-19 pandemic and the transition from traditional classrooms to virtual environments, the study's



methodology underwent a significant shift. The questionnaire was distributed online using the Qualtrics web software, which was provided by the University of York at no cost.

This unexpected shift to an online format, despite being challenging, offered several significant advantages. Primarily, adopting a digital approach allowed the survey to reach a broader geographical area, encompassing a diverse sample from various regions of the Kingdom. This broadened scope significantly enhanced the representativeness of the sample, mitigating potential biases associated with localised data collection practices.

Moreover, transitioning to an online method proved advantageous in terms of the organisation and accuracy of data. It was also less time-consuming and more cost-effective compared to traditional methods. Additionally, it improved the anonymity and confidentiality for participants. The online format minimised the risk of data breaches that could occur in a physical collection process, where paper responses might be viewed by unauthorised individuals before being securely transferred to the researcher. This shift adhered to the necessary pandemic safety measures and ensured that the data collection phase was conducted with enhanced security and efficiency, facilitating a smoother and more reliable collection of the required data.

In addition, the online format enabled easier data management and analysis. Responses were automatically recorded and stored, reducing the likelihood of human error in data entry. The use of Qualtrics also provided robust tools for data analysis,

allowing for a more detailed and clear understanding of the collected information. This transition to an online methodology not only maintained the integrity of the research but also used technological advancements to improve the overall quality and accuracy of the data gathered.

#### **4.3.2.4 Tool and Platform Selection**

The choice of Qualtrics as the platform for survey distribution was influenced by several critical factors. Its effective features support complex survey designs and are instrumental in managing and securing data collection. Qualtrics is particularly known for its user-friendly interface and its ability to support multiple languages, including Arabic. This feature was crucial in making sure that the questionnaire was accessible and understandable to all participants, thus reducing language barriers that could affect the data. Furthermore, the platform's support for comprehensive analytical tools was another key factor, anticipated to play a significant role in the later data analysis phase.

Moreover, Qualtrics provides extensive capabilities for securely handling large amounts of data, which is essential for maintaining the confidentiality of the responses. Choosing this platform was essential in enabling a smooth shift from paper-based to digital format, providing a reliable and efficient means of collecting data from a wide geographic and demographic range.

#### **4.3.2.5 Participant Recruitment and Data Collection**

The recruitment and data collection process was carefully designed to be efficient and to ensure a representative sample. In collaboration with the Saudi Ministry of Education, the survey link, accompanied by an information sheet, was systematically distributed. This process was facilitated through educational district offices which targeted an established list of girls' schools across various regions. The school principals played a key role in this process by forwarding the survey link directly to parents, ensuring that the target group, which included female students and their mothers, was effectively reached. To protect the privacy of participants and ensure ethical data collection, communication from schools to parents was managed carefully. This direct approach helped to build trust and encourage participation, while also maintaining the confidentiality of the responses.

Data collection was scheduled to align with the academic calendar, running from July to September 2022, to take advantage of a time when participants were likely more available to engage with the study. An important part of the survey was an initial screening question to confirm the eligibility of participants based on the study's age criteria, which included girls aged 12 to 17 and their mothers. This screening resulted in the exclusion of 34 girls outside the target age range and 31 mothers whose daughters did not fall within this bracket, refining the sample size to 158 girls and 111 mothers. This process was essential for ensuring the relevance and accuracy of the data collected.

This rigorous approach not only aligned with the research objectives but also demonstrated the adaptability of the methodology in overcoming potential challenges posed by the pandemic. By using technology and strategic partnerships, the study effectively enhanced the scope and quality of data collection, creating a strong foundation for the subsequent analysis of internet usage patterns and related perceptions within the target groups.

#### **4.3.2.6 Data Analysis Strategy**

The data analysis phase of the study was carefully planned to ensure that the insights derived from the self-administered questionnaires were strong and informative. Using the comprehensive analytical capabilities of Qualtrics, the strategy was developed to handle and interpret a large amount of data efficiently and effectively.

##### **4.3.2.6.1 Analytical Tools Used in Qualtrics**

Qualtrics was chosen for its survey distribution abilities and its wide range of analytical tools, essential for processing the data collected from both adolescent girls and their mothers. The key features used included:

- **Descriptive Statistics:** This tool provided simple calculations of frequencies, percentages, averages, and standard deviations for various responses. It was used mainly to summarise the data, giving an initial overview of the findings.
- **Filtering and Segmentation:** Data was divided based on age and specific responses. This approach allowed for a deeper examination of the details in the

data, highlighting significant differences and similarities within the participant groups.

- **Graphical Representation:** Different types of charts and graphs were created to visually represent the data. This visualisation helped in making the results more accessible and understandable to a broader audience, making it easier to communicate the findings clearly.

#### 4.3.2.6.2 Procedure Followed in Qualtrics

The data analysis process involved several methodical steps, each designed to maximise the integrity and depth of the analysis:

1. **Data Cleaning:** Initially, data was reviewed for any inconsistencies or missing entries. Qualtrics' data cleaning tools were used to ensure that the dataset was complete and accurate before beginning the analysis.
2. **Application of Analytical Tools:** Once the data was clean, descriptive statistics were applied to establish a foundational understanding of the dataset. This step was followed by more complex analytical processes, such as filtering and segmentation, to provide deeper insights into specific aspects of the data.
3. **Interpretation of Outputs:** The outputs generated by Qualtrics were carefully examined to interpret the findings. Each graphical output and statistical result was analysed to draw conclusions about the internet usage patterns and associated perceptions of the participants.
4. **Feedback and Iteration:** Throughout the analysis, iterative reviews were conducted to refine the approach as needed. This included revisiting the results

multiple times to ensure depth and accuracy in the analysis. The academic supervisor also reviewed the findings and provided guidance, prompting re-analysis of certain data segments to ensure alignment with the research objectives. This Careful approach ensured that the findings were robust and reliable, consistently reflecting the underlying data.

This detailed and structured approach to data analysis ensured that the findings were not only statistically valid but also meaningful in understanding internet usage patterns among Saudi adolescent girls and their mothers.

#### **4.3.3 Ethical Considerations**

In conducting this study, strict ethical considerations were followed to maintain the integrity of the research and ensure the protection of all participants. The process began with a detailed proposal submitted to the University of York Ethics Committee. This proposal outlined the study's objectives, methodologies, and steps taken to protect participants' confidentiality and well-being. After a thorough review, the committee granted ethical approval, confirming that the study met ethical research standards. Additional approval was obtained from the Ministry of Education in Saudi Arabia, which was essential for accessing a representative sample of female students in middle and high schools, as well as their mothers and teachers.

Several ethical challenges emerged during the study, especially in involving adolescent girls in discussions about their online experiences. These challenges were addressed

through careful planning to ensure participant safety and comfort. One key challenge was involving adolescent girls in sensitive discussions about their online experiences. To mitigate potential discomfort, the girls were interviewed separately from their mothers, allowing them to speak freely without the influence of parental presence. This helped ensure a more honest and open account of their digital experiences, which might have been otherwise restrained. Addressing sensitive topics such as online risks and negative experiences posed another challenge. Participants were well-informed about the nature of the discussions ahead of time and encouraged to raise any concerns. Consent forms clearly stated that some discussions might cause discomfort, and participants were offered various options for support if they felt distressed during or after the interviews.

A comprehensive safeguarding and consent process was central to the study's ethical approach. Consent procedures were rigorous, involving several layers of permission to protect both the adolescent participants and their families. Mothers were interviewed first to provide an overview of the study and grant consent for their daughters' participation. They were then asked to inform their daughters about the study, ensuring that the girls were fully aware of their involvement. Separate interviews with the daughters were arranged, and mothers were instructed to ensure their daughters had privacy during these sessions to avoid any potential influence. This approach maintained the accuracy of the responses and safeguarded the girls' comfort throughout the process. Safeguarding measures also included informing participants about confidentiality limits, ensuring that any potential safety concerns identified

during the study would be reported to the appropriate authorities. Fortunately, no significant safety disclosures occurred during the research.

Confidentiality and data protection were prioritised throughout the research. No personal identifying information was collected in the online surveys, and pseudonyms were used for all interviews. These pseudonyms were later replaced with numerical identifiers (e.g., Girl1, Girl2, Mother5) during data analysis. A list linking real names to these identifiers was securely stored on a password-protected laptop, accessible only to the researcher. All electronic data, including audio recordings and interview transcripts, were stored on password-protected devices and backed up on the university's Google Drive, adhering to data protection standards.

Participation in the study was voluntary, with participants having the right to withdraw at any stage without consequence. For the anonymous online surveys, once data was submitted, it could not be withdrawn, but participants were fully informed of this limitation beforehand. They were also reassured of their right to withdraw from the study at any time if they chose.

Overall, these ethical measures met the standards established by the university and the wider academic community. The comprehensive approach to ethical considerations ranging from obtaining necessary approvals to carefully managing consent and safeguarding procedures ensured that the study was both responsible and respectful of participants' rights. Through the strategic use of technology and ethical planning, the research was able to overcome challenges related to the



pandemic and gather reliable, accurate data while safeguarding participant well-being.

#### **4.3.4 Conclusion of Methodology**

This chapter has provided a comprehensive overview of the mixed-methods approach used in this study, which aimed to explore and understand the internet use among adolescent girls aged 12 to 17 in the Kingdom of Saudi Arabia, as well as the perceptions of their mothers and teachers. By integrating both qualitative and quantitative research methods, the study managed to capture a complete picture of the participants' digital experiences, their preferences, and the risks they encounter online.

The methodology began with semi-structured interviews that explored the personal experiences and perceptions of adolescent girls, their mothers, and female teachers. This qualitative phase was essential for uncovering detailed understandings of how the internet is used, the risks involved, and the strategies for managing these risks within their immediate environments. The development and pilot testing of the interview schedule ensured that the questions were culturally appropriate and sensitive to the unique Saudi context, allowing for deep and meaningful insights.

Following the qualitative phase, the insights gained informed the development of a structured questionnaire. This questionnaire was then administered to a broader population of adolescent girls and their mothers. This quantitative phase expanded

the findings from personal narratives to a larger demographic, quantifying patterns of internet use, preferences, and risk perceptions. The transition to online distribution of the questionnaire, facilitated by Qualtrics, was a key adjustment due to the COVID-19 pandemic. This change improved the representativeness and diversity of the sample while ensuring the efficiency and security of data collection.

Ethical considerations were strictly followed throughout the research process, from getting the necessary approvals to implementing a two-layer consent process for minors and their parents. The careful attention to confidentiality, anonymity, and data protection standards ensured that the study respected the rights and privacy of all participants involved, while also being prepared to address any potential risks of harm.

Overall, the methodology used in this study was robust, adaptable, and ethically sound, providing a solid foundation for the presentation and analysis of results. The following chapters will present the detailed results of the interviews and the survey separately, followed by a discussion chapter where these findings are combined and explained in the context of the broader research objectives. This approach will not only enhance the reliability of the findings but also contribute significantly to the broader understanding of adolescent internet use and the effectiveness of protective measures within the Saudi context.

## **CHAPTER 5:**

### **INTERVIEWS RESULTS**

#### **5.1 Introduction**

This chapter explores the qualitative findings obtained from in-depth interviews, which were conducted as a main part of this research. The primary aim of these interviews was to gain a comprehensive understanding of the internet usage patterns, perceptions of online risks, and the existing support systems for Saudi adolescents girls aged 12 to 17 at home and school. This investigation was crucial in addressing the main research questions:

1. How do adolescent girls in Saudi Arabia, aged 12 to 17 use the Internet in terms of duration, location, device preference, and activities engaged in?
2. What are the perceptions of Saudi adolescent girls and their mothers regarding Internet risks?
3. What potential risks might Saudi adolescent girls encounter online?
4. How is the online safety of these adolescent girls supported at home and school, as perceived by the girls, their mothers, and female teachers?

The objectives of this research are closely linked to these questions, focusing on enhancing online safety and digital literacy among the target demographic. By exploring their digital engagement and the cultural contexts influencing their

interactions, this study seeks to bridge knowledge gaps in online safety awareness and inform relevant policy and educational practices.

The methodology adopted for this phase of the research involved using semi-structured interviews, selected for their ability to provide detailed and comprehensive responses. Participants included a diverse group of eight girls aged 12 to 17, eight mothers, and thirteen female teachers, ensuring a broad range of perspectives. The interviews aimed to capture their experiences and views, contributing significantly to understanding the digital lives of Saudi adolescent girls, and the roles played by their mothers and teachers in ensuring online safety, both at home and in school.

Data from these interviews were carefully analysed using a thematic analysis approach. This method helped identify and explore key themes and sub-themes from the narratives, allowing for a detailed and structured examination of the data. The thematic analysis was crucial in uncovering patterns and insights that are essential for understanding the digital realities of the participants and addressing the research objectives effectively.

The subsequent sections of this chapter will present and discuss these findings, organised thematically to provide clarity and coherence. Each theme and its corresponding sub-themes are explored in detail, supported by direct quotes from the participants, ensuring the authenticity of their voices and experiences.

## **5.2 Thematic Analysis and Findings**

### **5.2.1 Internet Access and Usage Patterns**

This theme focuses on the patterns of internet access and use among Saudi adolescents girls aged 12 to 17. Understanding these patterns is crucial for grasping how the digital world integrates into their daily lives and influences their experiences.

#### **5.2.1.1 Duration and Frequency of Internet Use**

The data showed a significant variation in the daily amount of time the girls spent online. On average, they reported spending 2 to 8 hours online during weekdays, with this time increasing to as much as 12 hours during weekends or holidays. Age was a factor, with older girls (16-17 years) spending more time online compared to younger ones. For example, a 16-year-old girl said, "On school days, I'm online for about 4 hours, but during the weekends, it can go up to 10 hours easily."

#### **5.2.1.2 Changes in Usage Patterns Due to COVID-19**

The start of the COVID-19 pandemic led to significant changes in internet usage patterns. During the lockdown, with schools shifting to online classes, their screen time jumped to an average of 6 to 12 hours a day during weekdays. One girl shared, "During lockdown, my entire school day was on the internet, from morning to evening" (Girl 6). When lockdown restrictions eased and schools reopened, their weekday internet use dropped. However, their online time during weekends and holidays stayed high, averaging 6 to 12 hours. This consistent internet use during free time highlights its

lasting role in their lives beyond formal education. "During holidays, if I am awake for 12 hours, I spend 8 of them on the internet. I have been trying to keep myself busy with something else, because if I don't, I will spend the whole day online," shared a participant (Girl 2).

## **5.2.2 Location and Devices for Internet Access**

This theme examines the preferred locations and devices used by Saudi adolescents girls for accessing the internet, which provides insight into their digital engagement environments and preferences.

### **5.2.2.1 Preferred Locations for Internet Access**

The data highlighted a clear preference among the adolescent girls for accessing the internet within the privacy of their homes. They particularly favoured the comfort and privacy of their bedrooms, reflecting a trend towards private and personal internet use. This preference aligns with cultural norms in Saudi Arabia, where privacy and modesty are highly valued. Using the internet in private spaces like bedrooms allows them to explore online activities without direct supervision, while still within the protective environment of their homes. The preference for using the internet at home, particularly in their bedrooms, also reflects a level of autonomy granted by parents, trusting them to manage their online interactions responsibly. Only one participant did not express a preference for where in her home she accessed the internet. For her, the physical space was not important to her online experience, setting her apart from the other respondents who showed a clear preference for privacy. Beyond the boundaries

of home, schools, public spaces such as cafes and libraries, and the homes of friends and relatives emerged as secondary access points. This suggested that the girls' internet use is not limited to a single location but is part of a broader pattern of activity across various environments. One girl mentioned, "At home, I mostly use the internet in my room. It's my personal space. But when I'm out, cafes with good Wi-Fi are my go-to places" (Girl 7).

#### **5.2.2.2 Devices Used for Internet Access**

The girls used a range of devices to access the internet, including smartphones, iPads, personal computers (PCs), smart TVs, and gaming consoles with online features. Most of the girls (n=7) showed a clear preference for smartphones because of their portability and convenience. One participant noted, "My smartphone is like my digital world. I use it for everything, from studying to social media" (Girl 6). iPads and personal laptops were also popular choices. A few girls (n=3) reported using smart televisions and gaming consoles to go online, indicating a wide range of internet-enabled devices being used. Personal device ownership was common among the adolescent girls, and device-sharing within families was also noted. This indicated a common pattern of both individual ownership and shared use of technology within their family settings.

#### **5.2.3 Common Internet Activities and Platforms Used**

This theme explores the various activities that Saudi adolescent girls engage in while online, along with the platforms they usually use. This part of the research provides a comprehensive view of their digital interaction and preferences.

### 5.2.3.1 Internet Activities

**Entertainment:** A major part of their online activity was entertainment. The girls often enjoyed watching videos on sites like YouTube. "I often find myself binge watching shows online or catching up on my favourite YouTube channels," one girl stated (Girl 8). Watching short, funny videos was a favourite activity among them, and social media sites were especially popular. Online gaming was another big part, with several girls (n=4) playing multiplayer games and using interactive platforms. This highlighted a growing trend towards digital interaction during their free time.

**Communication:** The discussion on daily internet activities revealed communication as one of the key activities. The girls reported using social media, messaging apps, and video calling features to stay connected with friends and family. These interactions took various forms, such as voice or video calls, messaging, posting comments, checking status updates, and engaging with photos and posts through likes and comments. Most of the participants (n=6) highlighted the role of online communication as a vital link to their social circles during the COVID-19 pandemic. This aspect of digital interaction was described as a source of comfort and an emotional bridge to their loved ones during a time of increased isolation.

**Content Creation:** Half of the girls (n=4) are not just passive consumers of digital content but also active creators. This included blogging, creating and editing videos, designing digital artwork, and sharing personal content on social networking sites. One participant described her collaborative online engagement, saying, "I share an



Instagram account with two of my best friends. We make cute videos and post them on this account that we manage together" (Girl 1). Another girl mentioned, "I started a blog where I write about my hobbies. I also enjoy editing videos and sharing them on social media" (Girl 3).

**Learning and Education:** The use of the internet for educational purposes was a significant part of the girls' online activities. This ranged from attending online classes and workshops to using educational resources available on various platforms. Most of the girls (n=6) mentioned using the internet for self-directed learning, such as learning new languages, coding, or artistic skills through platforms like YouTube and specialised online courses.

A significant aspect of the girls' educational activities online was their engagement with religious studies, especially those related to Islam. Several of them (n=4) used the internet to deepen their understanding of the Islamic faith, including learning to read and interpret the Quran. Virtual classes for memorising the Quran were also quite popular. One of the girls shared, "I attend online Quran classes almost every day. It helps me understand my religion better and brings a sense of peace" (Girl 1). These online resources provide a valuable platform for religious education, reflecting the blend of faith and technology in their daily lives.

With regard to formal education, most of the girls (n=6) mentioned that they spend a significant amount of time online daily or nearly daily to complete school assignments

and tasks. The education system in Saudi Arabia often requires students to engage in daily homework and assignments, which necessitates extensive internet use. One of the girls explained, "We are required to do a lot of homework, and I find myself spending several hours online every day just to keep up with it" (Girl 6). In this way, the internet has become an essential tool, aiding not only in academic success but also in personal and religious growth among these young girls.

**Online Commercial Activities:** Online shopping was a common activity among the girls, with most of them (n=6) mentioning that they make purchases from the internet at least once a month. They often browse goods and compare prices online, showing a strong trend in their internet use for shopping. However, using the internet for business activities was much less common. Only one girl mentioned engaging in online selling. A sixteen-year-old participant shared her entrepreneurial venture into starting a business focused on crafting and selling flavoured iced coffee drinks. She used social media channels, mainly Instagram and TikTok, to interact with her customers. This interaction involved sharing images of her products, managing order requests via direct messaging, and coordinating home deliveries. Reflecting on her experience, she said, "I started selling iced coffee drinks online, and I use Instagram and TikTok to reach my customers" (Girl 6). She also recalled her earlier experience with e-commerce at the age of thirteen, when she used her Instagram account to market and sell handmade thread bracelets.

In summary, the range of internet activities Saudi girls engage in is wide and varied. Their involvement goes beyond passive consumption and includes active participation

in communication, creative expression, learning, and even small business ventures. Many of the girls use social media and messaging apps to stay in touch with friends and family, showing the importance of online communication. They also take part in creative activities like blogging, video creation, and digital art, which allows them to showcase their talents and share their work. The internet plays a crucial role in their education, with many using it for self-directed learning, online classes, and accessing educational resources, supporting both academic growth and personal interests. Although entrepreneurial activities are less common, some girls use social media to sell handmade products and launch small businesses. This diverse use highlights the integral role of the internet in their daily lives, providing means for entertainment, connection, education, and self-expression.

#### **5.2.3.2 Most Used Platforms**

When it came to the platforms most used by the girls, Instagram was the top choice, closely followed by Snapchat, TikTok, and WhatsApp. The preference for Instagram was particularly noteworthy, with one participant remarking, "Instagram is where I connect with friends, follow my interests, and get my news" (Girl 1). They enjoyed posting photos, sharing stories, and following influencers. Snapchat was favoured for its quick and fun way to share daily moments through snaps and stories. TikTok was popular for its entertaining short videos, where they could watch and create content. WhatsApp was essential for staying in touch with family and friends through messaging and calls. Twitter (recently renamed X) was also mentioned by three of the girls as a regularly visited platform for staying updated with news and trends.

#### **5.2.4 Behaviour on Social Networking Sites**

Exploring the behaviour of Saudi adolescent girls on social networking sites provided valuable insights into their digital social interactions and online presence. These platforms played a significant role in shaping their social lives, offering them a space to interact, share, and learn.

##### **5.2.4.1 Engagement on Social Networks**

The girls actively used various social networking platforms, each serving different roles in their social lives. They mainly used Instagram, Snapchat, and TikTok to share personal experiences, create content, and keep up with the latest trends and news among their friends. One girl explained, "I use Snapchat to stay in touch with my friends, and Instagram is where I share my life's moments" (Girl 4). Another girl mentioned, "TikTok is where I find the funniest videos and share them with my friends" (Girl 5).

##### **5.2.4.2 Privacy and Online Interactions**

Privacy settings and online interactions were major concerns. Many girls were careful about their digital footprint and privacy. Half of the participants said they kept their accounts private, only allowing known contacts to see their profiles. "I keep my social media profiles private. It's important for me to know who can see my posts," shared one girl (Girl 3). They often used privacy settings to control who could view their content. However, the other half of the participants preferred public profiles to

expand their social reach, despite being aware of the potential risks involved. They enjoyed gaining more followers and interacting with a larger audience.

#### **5.2.4.3 Online Communication Patterns**

Communication patterns on these sites varied, with some girls actively engaging in conversations and others preferring to observe and consume content passively. One girl (Girl 2) noted, "I mostly like and comment on posts. I rarely share personal stuff." This varied approach to interaction reflects the diverse personalities and comfort levels of the girls in the digital world. Some girls enjoyed being more vocal and interactive, while others felt more comfortable observing and reacting to others' content.

#### **5.2.4.4 Social Media for Educational Purposes**

Most of the girls (n=6) also used social networking sites for educational purposes. They followed educational accounts, participated in knowledge-sharing groups, and used these platforms to collaborate on school projects. "Twitter is where I follow many educational accounts. It helps in my studies," mentioned one girl (Girl 7). They found valuable resources and tips for their studies and enjoyed engaging with educational content that complemented their schoolwork.

In summary, the behaviour of Saudi adolescent girls on social networking sites is varied, including social interaction, content creation, education, and a conscious approach to privacy and online safety. This diverse engagement shows a generation

that is not only tech-savvy but also aware of digital communication and its impact. They use these platforms to stay connected, express themselves creatively, enhance their learning, and navigate the digital world with an awareness of privacy and safety.

### **5.2.5 Perceptions of Internet Risks and Safety**

This section explores the perceptions and awareness of internet risks and safety, not only among Saudi adolescents girls but also from the perspective of their mothers, providing a complete picture of family attitudes towards online dangers.

#### **5.2.5.1 Awareness of Internet Risks**

The girls showed different levels of awareness about internet risks. While all of them acknowledged the existence of online dangers such as cyberbullying, exposure to inappropriate content, and privacy breaches, their depth of understanding varied. Older girls had a better understanding of these risks compared to the younger ones who tended to focus primarily on technical threats, such as viruses and hacking. Similarly, the mothers expressed concerns about various online risks, emphasising the potential dangers of unsupervised internet use. One mother commented, “I worry about who my daughter might be talking to online. There’s a lot of dangers out there” (Mother 4). This highlights the importance of parental guidance in navigating these risks.

#### **5.2.5.2 Attitudes Towards Online Safety**

Both the girls and their mothers showed an active role in online safety. Most of the girls (n=6) actively managed their privacy settings and were cautious about sharing personal information. One girl mentioned, “I always check my privacy settings and think before I post anything personal,” (Girl 6). The mothers often played a significant role in guiding and setting rules for their daughters’ internet use. One mother stated, “I’ve set clear rules for my daughter’s internet use. It’s about keeping her safe,” (Mother 2). These practices reflect a shared commitment to maintaining a secure online environment and highlight the role of family in fostering safe internet habits.

#### **5.2.5.3 Confidence in Handling Online Risks**

A significant finding in the study was the level of confidence shown by the girls in managing potential online risks. This confidence came from a mix of personal experience, digital skills, and parental guidance. These young girls indicated a strong sense of self-reliance in their ability to navigate the digital world safely. They talked about strategies like using privacy settings, recognising and avoiding suspicious online content, and understanding the importance of not sharing personal information with strangers. “I feel pretty confident about my ability to stay safe online. I know what signs to look out for and how to protect my privacy,” explained one participant (Girl 8).

Despite their confidence, the girls still faced some challenges. While they believed in their ability to handle online interactions on their own, the girls also acknowledged the risks of unsupervised internet use. They understood that peers their age, driven

by curiosity and a sense of exploration, might not fully grasp the potential consequences of their online actions. “Though I feel equipped to handle the online world, I think some of my friends might not be as aware of the dangers. They sometimes share too much online without thinking about the risks,” shared another girl (Girl 4).

From the mothers’ perspective, there was a mix of trust in their daughters’ online abilities and concern about their overall safety. Almost all of them expressed worry, believing that their daughters, despite their confidence, might not fully understand how to navigate online spaces safely. “I trust my daughter, but I also worry. The internet is vast, and I’m not sure if she fully understands the implications of everything she does online,” a mother (Mother 3) reflected. This view was also expressed by other mothers who felt a constant need to supervise and guide their daughters, fearing that their natural curiosity could lead to unintended exposure to online risks. In addition, some mothers (n=4) mentioned their struggles to keep up with technological advancements, which affected their confidence in guiding their daughters. “Sometimes I feel outpaced by technology. What I know might not be enough to help her navigate newer online risks,” shared another mother (Mother 6). This combination of self-reliance among the girls and cautious oversight from their mothers highlights the flexible approach to managing online safety within these families. It shows the importance of ongoing conversation and education about the evolving nature of internet risks.



### **5.2.6 Potential Risks Encountered Online**

An examination of the potential risks encountered online by Saudi adolescent girls revealed a complex situation with various concerns shared by the girls, their mothers, and the teachers. These insights are categorised into several subheadings to clearly present the findings.

#### **5.2.6.1 Strangers and Online Predators**

The online experiences of Saudi adolescent girls revealed significant concerns about their interactions with strangers and the threat of online predators. These issues, highlighted by the girls, their mothers, and the teachers, underlined an important area of internet safety that needs attention.

The stories shared by the girls highlighted troubling experiences they have faced online. For example, one girl described an incident on social media: "Someone I didn't know sent me a message on Instagram, asking personal questions. It made me feel really uncomfortable," (Girl 2). Another girl shared an experience from an online game: "While playing a game, an unknown player kept sending me messages" (Girl 5). These incidents show the risks young girls face in the vast and often anonymous online world, where they can be targeted by harmful individuals.

The mothers expressed deep concerns about their daughters communicating with strangers online. They worried about the potential for these strangers to be adults pretending to be peers or individuals with bad intentions. "The internet can be a

dangerous place for young girls. You never know if the person on the other side is really who they say they are,” a mother expressed her worries (Mother 6). This anxiety was heightened by the thought that their daughters might accidentally share personal information or photos with these strangers.

The teachers also voiced their worries, often citing incidents they had encountered in their professional capacity. One teacher described a distressing incident where a student was emotionally tricked by an online predator: “A student told me about someone she met online. It turned out to be an adult trying to take advantage of her trust” (Teacher 1). This highlighted the vulnerability of young girls in online spaces and the importance of adult guidance in these matters.

The desire for social media fame also added complexity, as the quest for more followers led some girls to interact with unknown individuals, increasing their exposure to potential risks. “Many girls don’t realise the danger of accepting friend requests from strangers. They just want to feel popular,” noted another mother (Mother 3). Despite these risks, the girls believed they could navigate these interactions safely, distinguishing between harmless and harmful exchanges. “I like meeting new people online, but I’m always careful about sharing any personal information,” stated a girl (Girl 4), reflecting a careful but open way of communicating online.

#### **5.2.6.2 Exposure to Sexually Explicit Content**

Exposure to sexually explicit content was a major concern for most of the mothers and teachers when considering the online experiences of adolescent girls. They were particularly worried about how easily young girls, often unintentionally, come across such material on the internet, especially on social media platforms and video-sharing sites.

Two girls shared instances of accidentally encountering explicit content, which left them feeling upset and uncomfortable. “While browsing through videos online, I once came across something explicit. It was really upsetting and not something I was searching for,” revealed one girl (Girl 2). Another incident involved a girl inadvertently encountering adult content on a site she believed was harmless: “I clicked on a link thinking it was a normal video, but it led to explicit content. I was shocked and didn’t know how to react,” she explained (Girl 5).

For the mothers, the possibility of their daughters being exposed to such content caused anxiety, particularly considering the potential impact on their developing understanding of relationships and sexuality. “As a parent, it's worrying to think that my daughter could be exposed to such content at a young age. It's not just about the immediate shock but how it shapes her perceptions,” expressed a concerned mother (Mother 2).

The teachers also struggled to protect students from inappropriate content, even in controlled settings like schools. “We try our best to filter content, but the internet is vast. There’s always a risk of students encountering something they shouldn’t,” a teacher noted (Teacher 4). The challenge is the enormous amount of easily accessible content online, making it hard to fully safeguard young users.

This issue also strongly resonated within the context of cultural and religious values. The teachers and mothers were particularly worried about the conflict and distress it could cause for Muslim girls, who might face more severe mental health impacts due to the clash with their religious teachings. “For girls in our community, encountering such content can lead to confusion and guilt, given our cultural and religious beliefs,” a teacher noted (Teacher 9).

#### **5.2.6.3 Cyberbullying and Hate Speech**

Cyberbullying and hate speech were significant issues among the participants, especially for the girls active on social media. They shared experiences of online harassment, hurtful comments, and targeted hate because of their religious beliefs. “I posted a picture once, and the number of mean comments I received was overwhelming. It made me think twice about posting again,” a girl recounted her distressing experience (Girl 3). Another girl shared a similar experience: “When I make things and share them on social media, people laugh and make fun of me” (Girl 7). One girl recounted a particularly troubling encounter with hate speech: “I’ve been

called names online, just for being Muslim. They make fun of my hijab, calling it a 'terrorist headwrap' or worse" (Girl 9).

The impact of these experiences was significant, affecting the girls' self-esteem and online behaviour. The fear of repeated targeting led some to limit their online interactions or change their digital identities. The mothers and the teachers voiced deep concerns about both cyberbullying and hate speech. They highlighted the difficulty in protecting their daughters from online bullying and hate, which is made worse by the anonymous and widespread nature of the internet. "As a mother, it's heartbreaking to see your child upset because of online bullying or hateful comments about her faith. It's hard to control what happens on these platforms," a concerned mother expressed (Mother 3). The teachers also noted the challenge in addressing cyberbullying: "We try to educate the students about respectful online behaviour, but once they're outside the classroom, it's out of our hands," a teacher complained (Teacher 5).

Efforts to address cyberbullying and hate speech included educating adolescents about respectful online behaviour and encouraging them to use blocking and reporting tools on social media. "I've learned to block anyone who posts mean comments. It's important to protect yourself online," a girl stated, showing an active way to handle the situation (Girl 6). The mothers and the teachers stressed the importance of these tools to help the girls manage their online experiences better and stay safe from harmful interactions.

#### **5.2.6.4 Unwanted Content**

The issue of unwanted content online was a common concern among the girls, their mothers, and the teachers. This type of content included various materials, such as violent images, inappropriate advertisements, and content promoting bad or illegal behaviour.

Most of the girls (n=6) recounted instances where they encountered disturbing content during their online activities. “I was browsing through a social media feed when I suddenly saw a violent video. It was really shocking and stayed with me for a long time,” a girl shared her unsettling experience (Girl 2). Another girl mentioned her exposure to frightening content, “I’ve accidentally clicked on links that led to really scary videos. It’s disturbing when you’re not expecting it” (Girl 5).

The mothers expressed particular concern about this issue, emphasising the potential negative impact on their daughters' mental well-being. “It's worrying that our children can so easily come across harmful content. It can have a lasting effect on their minds,” a mother voiced her concern (Mother 1). The teachers also shared this worry, noting the challenges in controlling students' exposure to such content, even in educational settings. “Sometimes inappropriate ads pop up even during educational videos. It's embarrassing and concerning,” a teacher explained (Teacher 8). Furthermore, the presence of unwanted content on platforms used by girls, such as YouTube and social media sites, added to the difficulty of monitoring their online exposure. The

unpredictable nature of this content made it hard for mothers and teachers to fully protect the girls from potential harm.

#### **5.2.6.5 Financial Risks and Scams**

Financial risks, particularly related to online scams and fraud, were frequently mentioned by the participants. The girls, their mothers, and the teachers all shared concerns about the potential of falling victim to internet scams. “I remember receiving a message that looked like it was from a well-known charity asking for personal information. It turned out to be a scam,” a teacher recalled a misleading incident (Teacher 7). Some of the girls (n=3) also reported encounters with misleading financial communications, highlighting their vulnerability to online fraud. “I got an email claiming I had won a prize, but it asked for my bank details. I was suspicious and didn’t respond,” shared a girl, recounting her experience with a potential scam (Girl 8). Another girl mentioned receiving misleading financial communications on the internet multiple times.

Recently, I got a message from an unknown number on WhatsApp with a code, and then I got four phone calls from an Australian number. They asked me for the code number I had received. My mother had told me about Internet scams before, so when it happened to me, I deleted the texts, blocked the number, and reported it” (Girl 3).

The mothers expressed their worries about these scams, noting how easily their daughters could be Tricked. “It’s scary to think how convincing these scams can be. I

constantly remind my daughter to never share personal information online,” a concerned mother remarked (Mother 4).

#### **5.2.6.6 Hacking and Privacy Breaches**

Hacking was another key area of concern, with several of the girls and their mothers sharing stories of social media accounts being compromised. “A friend’s social media account got hacked, and the hacker started posting inappropriate content. It was really frightening,” a girl described the impact of such an incident (Girl 4). The mothers also expressed their worries about the security of their daughters' online accounts and the potential for privacy breaches. “I’m always telling my daughter to be careful with her passwords and personal information online. You never know who might try to access her accounts,” a mother stated (Mother 5).

The teachers particularly emphasised the risk of hacking, noting that many young girls are not fully aware of the dangers. “I've seen cases where students' accounts were hacked, leading to serious privacy issues. It’s a growing concern,” a teacher mentioned (Teacher 12). Some girls (n=4) also shared their experiences and fears regarding hacking. “I’ve heard about hacking stories, and it makes me worried about my own accounts. I try to use strong passwords and change them regularly,” said one girl (Girl 6). Another girl added, “When my friend’s account got hacked, I immediately checked all my social media to make sure I wasn’t next” (Girl 4).



The mothers and the teachers both stressed the importance of educating girls on how to protect their online accounts. “We need to teach them about the importance of strong passwords and being cautious with their personal information,” explained a teacher (Teacher 10).

#### **5.2.6.7 Sharing private information**

The sharing of personal information and photos online was another significant concern among the participating girls, as well as their mothers and the teachers. The girls discussed the social pressure to share personal details on social media platforms, with one girl noting, “There’s a lot of sharing on social media. Sometimes, it feels like you have to share to fit in,” highlighting the influence of digital culture on their behaviour (Girl 8).

The participants, including both the girls and the adults, highlighted the risks associated with being overly trusting online. The mothers and the teachers particularly emphasised the dangers of sharing full names, phone numbers, or addresses with individuals met online. “Our girls don’t always realise the risks of sharing personal details. It can lead to serious consequences like identity theft or worse,” expressed a concerned mother (Mother 4).

A particularly sensitive issue in the Saudi community is the practice of posting personal photos online. Most of the mothers (n=6) and a number of the teachers (n=4) discussed this behaviour, noting that it not only raises privacy concerns but also goes

against traditional norms and Islamic values, particularly the concept of hijab. “Sharing photos online isn't just about privacy. It's about preserving the principles of hijab, which includes how we present ourselves in the digital world,” stated a mother, highlighting the cultural and religious aspects of this issue (Mother 5).

Some of the girls (n=4) acknowledged the protective role of hijab in their digital lives. “Adhering to the hijab isn’t just about clothing. It guides how we present ourselves online too. It’s like a shield, keeping us safe from sharing too much and exposing ourselves to risks on the internet,” a girl explained, reflecting on the broader implications of hijab in online interactions (Girl 3). She further explained, “Following Islamic teachings of modesty makes us more cautious about what we share online. It’s about protecting ourselves in a world where so much can be seen and misused.”

Reflecting these views, a teacher discussed the challenge of balancing global social media influences with cultural and religious values. “It's a challenge for us, balancing the impact of global social media trends with our cultural and religious values,” the teacher explained, speaking to the complexities young Muslim girls face in the digital age (Teacher 2).

#### **5.2.6.8 Health-Related Risks**

The health-related risks associated with internet use were a major concern among the participants, including both physical and mental health aspects. The girls, the mothers, and the teachers shared insights about the potential negative impacts of excessive

internet use. The girls mentioned how being online for too long could hurt their health “Sometimes after spending hours online, I feel really tired and fatigued. I know it's not good for me, but it's hard to disconnect,” a girl confessed, acknowledging the challenge of managing her online time (Girl 2). Another girl mentioned, “I try to limit my screen time, especially before bed, because it affects my sleep” (Girl 4), highlighting the awareness some girls have about the need for balance.

Most of the mothers (n=7) expressed concerns about the long-term effects of internet addiction on their daughters' health. “I worry about the impact of constant screen time on my daughter's physical and mental health. It's not natural for them to be glued to their devices all day,” a mother shared her anxiety about the situation (Mother 2). Some of the teachers (n=7) also warned about the health implications of excessive internet use, particularly in relation to copying dangerous behaviours seen online. “We've had incidents where students tried to replicate risky pranks they saw online, not realising the harm they could cause themselves,” a teacher recounted, stressing the need for awareness and supervision (Teacher 9).

The conversation around health-related risks also touched on the mental health implications. A number of the participants (n=8) noted the potential for increased anxiety and stress resulting from constant connectivity and exposure to negative online content. “The pressure to always be online and the things they see there can really affect the girls' mental health,” a teacher observed, pointing out the less visible but equally significant psychological risks (Teacher 3).

#### **5.2.6.9 Cultural and Religious Influence through Online Exposure**

The potential impact of exposure to diverse cultural, ethical, and religious backgrounds on social media was a major concern for a number of the mothers (n=5) and the teachers (n=7). Their concerns centred around the possibility that such exposure could lead Saudi girls to adopt beliefs and practices that go against their cultural and religious values. Concerns included the acceptance of ideas like homosexuality and premarital sexual relations, which are strictly prohibited in Islam. "I'm worried about the amount of non-Islamic cultural content my daughter sees on social media. It might influence her to adopt ideas that are against our religion and customs," said one mother (Mother 2). Another mother added, "It's worrying how easily our kids can access content that normalises behaviours we do not accept" (Mother 5). The teachers also voiced similar concerns, particularly about exposure to atheist perspectives on platforms like TikTok, YouTube, and Clubhouse. "Some of my students are encountering atheist arguments online. They are not mature enough to understand or respond to these ideas, which can leave them feeling confused and vulnerable," explained a teacher (Teacher 13).

The influence of social media influencers was another area of concern. Almost all the mothers spoke about the need for vigilance regarding who their daughters follow online. "I'm cautious about the influencers my daughter follows. They can have a big impact on her values and beliefs," a mother said (Mother 8). Another mother emphasised, "It's important to monitor and discuss the content our girls see, especially from influencers who might not share our cultural values" (Mother 3).

In summary, exploring the potential risks faced online by Saudi adolescent girls reveals a complex digital landscape, filled with challenges. These concerns range from interactions with strangers and exposure to inappropriate content to cyberbullying, privacy issues, and the influence of differing cultural norms. While these issues are similar to global concerns, they also highlight specific risks within Islamic societies and Arab culture. This shows the need for strategies that balance global digital realities with local cultural and religious values.

#### **5.2.7 Parental and School Mediation of Internet Use**

As Saudi adolescent girls navigate the digital world, the role of parental and school mediation in guiding and regulating their internet use becomes crucial. This section explores how parents and schools help ensure that these young users practice safe and responsible internet use. It also explores the strategies they use and the challenges they face in achieving this goal.

##### **5.2.7.1 Parental Mediation Strategies**

The approach to parental mediation of internet use among Saudi adolescent girls appears to be constantly adapting to the changing digital landscape and the developmental stages of the girls. Primarily led by mothers, these strategies range from direct supervision in younger children to more open discussions and trust-building as girls enter their teenage years.

For younger girls, mothers often employ direct supervision and set strict limits on internet usage. This includes controlling the duration of use, the types of websites visited, and the content viewed. "I keep a close eye on the websites my daughter visits and regularly check the browser history," shared one mother, demonstrating her active involvement (Mother 5). Restrictions also commonly extend to social media platforms, with mothers frequently updating privacy settings to ensure their daughters' online safety.

As girls approach their teenage years, around age 14, there appears to be a noticeable shift in parental mediation. This shift is characterised by a gradual increase in autonomy, moving away from direct oversight to a strategy focused more on guidance and trust. "When she turned 14, I started to loosen the reins a bit, trusting her more with her online activities," a mother explained, indicating this strategic shift (Mother 7). The girls themselves acknowledged this change: "I've noticed more freedom online as I got older. My mom trusts me more now," a girl observed (Girl 3).

In addition, a significant aspect of parental mediation is finding the right balance between control and trust. Almost all of the mothers expressed the struggle in this balancing act but recognised its importance in fostering independence and critical thinking. "It's not just about controlling what she does online. It's also about teaching her to think critically and make smart choices," stated another mother, emphasising the need for equipping girls with skills for independent navigation of the online world (Mother 6).

A key factor that the mothers believed contributed to reducing their daughters' exposure to online risks was instilling religious faith and awareness of God's presence. Most of the mothers (n=6) shared that reinforcing the concept of God's constant monitoring has a significant impact on girls' behaviour online. "Instilling faith in God and making her aware that He is always watching helps her make better choices online," one mother commented (Mother 7). Teaching religious values was seen not only as a way to protect them but also as a way to strengthen their minds, guiding girls to better behaviour even in difficult situations. Some of the girls (n=4) also recognised this influence: "Knowing that God is watching makes me think twice before doing anything wrong online," a girl added (Girl 6).

#### **5.2.7.2 Challenges Faced by Mothers in Internet Mediation**

In mediating their daughters' internet use, the mothers reported facing a range of challenges. These include keeping pace with technological advancements, managing growing demands for privacy and independence, and navigating cultural and generational differences. Each of these aspects presents its unique set of difficulties in ensuring safe and responsible internet use by their daughters.

**Technological Advancements and Keeping Pace:** From what the mothers shared, one of the biggest challenges they face is keeping up with the rapid pace of technological advancements. As new apps and digital trends emerge almost daily, mothers find it increasingly difficult to stay informed and effectively guide their daughters. "It's overwhelming trying to keep up with all the new apps and online trends that my

daughter knows about,” a mother expressed, highlighting the struggle to remain up-to-date with the digital world (Mother 5).

**Generation gap in technology:** The challenge is further increased by the generation gap in technology. Most of the mothers indicated that their daughters, often perceived as digital natives, are more adept and comfortable with new technology than they are. “There’s a significant gap between what I understand about these new technologies and what my daughter does. She’s always ahead of me,” shared another mother, emphasising the generational divide in digital literacy (Mother 7). This perception of daughters as digital natives, implying an inherent proficiency with technology, may contribute to feelings of being outpaced and less confident in their ability to provide effective guidance and supervision. “It’s like she speaks a different language when it comes to technology. I try to learn, but it’s hard to keep up,” another mother admitted, highlighting the ongoing struggle to bridge the technological gap (Mother 4). Additionally, the fast-paced changes of technology means that what might have been effective supervision techniques a year ago can quickly become outdated. Mothers must continuously update their knowledge and strategies to ensure they are still relevant and effective. This constant need for adaptation adds to the stress and pressure they experience in their role as mediators of their daughters’ internet use.

**Managing Privacy and Independence:** As daughters grow older, their desire for privacy increases, making it challenging for mothers to balance monitoring with respect for personal space. “My daughter wants more privacy online now that she’s a teenager. It’s hard to monitor her activity without prying into her personal space,” one mother



shared (Mother 1). This need for privacy often leads to tensions as mothers strive to protect their daughters while respecting their growing independence. “I want to keep her safe, but I also want to respect her need for privacy. It’s a tough balance to maintain,” another mother explained (Mother 3). This ongoing balance between privacy and independence requires mothers to continuously adapt their approaches as their daughters grow and as the digital landscape changes.

**Navigating Cultural and Generational Differences:** Cultural and generational divides add another layer of challenge. “It’s hard to understand and guide my daughter in these new cultural contexts,” stated one mother, pointing to the differences in online behaviours and trends across generations (Mother 3). These differences make it challenging for mothers to relate to their daughters' online experiences and the cultural influences they encounter. The rapid pace of change in digital culture means that mothers often feel out of touch with the online world their daughters live in. “The things that are popular now are so different from what I grew up with. It’s like we’re from different worlds,” another mother noted (Mother 4). This disconnect makes it difficult for mothers to provide relevant advice and support.

**Addressing Safety Concerns:** Finding the right way to communicate online risks without causing fear or resistance was a challenging task for the mothers. “I want to warn her about the dangers online, but I don’t want to scare her or make her push back,” a mother explained (Mother 7). This balance is difficult because overly strict warnings can lead to fear or defiance, while too little guidance can leave girls unprepared for potential dangers. The mothers strive to educate their daughters about

online safety in a way that is informative yet not alarming. “I try to talk about the risks in a calm way, so she understands without feeling scared,” another mother shared (Mother 8).

**Lack of Resources and Support:** The lack of resources and support for mothers in digital literacy was another challenge. “There are few resources available that can guide us on how to teach our daughters about safe internet use,” said one mother (Mother 2). This lack of guidance makes it challenging for mothers to stay informed about the best practices for ensuring their daughters’ online safety. The mothers felt that they are navigating the digital world without adequate support or information. “We need more workshops and materials to help us understand the internet better and protect our children,” a mother suggested (Mother 3). Furthermore, the rapid development of technology means that any available resources quickly become outdated, making it hard for parents to keep up with the latest trends and threats. “Even when there are resources, they often don't cover the newest apps or the latest online dangers,” noted another mother (Mother 1). This constant change requires ongoing education and up-to-date resources to be truly effective.

**Absence of Fathers’ Participation:** Furthermore, a significant challenge for the mothers was the absence of fathers’ participation in monitoring the digital activities of their daughters. “Our partners don’t help with this at all, so it’s all on us mothers,” one mother pointed out, indicating a noticeable gap in shared parenting responsibilities in this area (Mother 5). This lack of fathers' involvement highlights a

societal trend in Saudi Arabia where the burden of supervising children's technology use mostly falls on mothers.

These challenges highlight the various responsibilities Saudi mothers play in guiding their daughters' internet use. They are tasked with keeping up with rapid digital changes, balancing privacy and supervision, navigating cultural shifts, addressing safety concerns effectively, and doing so often without adequate resources or support, and without the involvement of fathers. This emphasises the need for more comprehensive support systems and resources to assist mothers in this important part of parenting in the digital age.

#### **5.2.7.3 Schools and Teachers' Role in Mediation**

The role of schools and teachers in guiding and regulating internet use by Saudi adolescents girls was an important issue, viewed differently by the mothers, the teachers, and the girls themselves. Each group brought a unique perspective, highlighting different aspects of this important educational challenge.

The mothers generally expressed a desire for schools to take a more active role in educating their daughters about online safety. "I think schools could do more. It's not just about using the internet for research or homework; it's about understanding the risks and how to navigate them," a concerned mother voiced (Mother 3). This reflects a broader expectation that schools should play a key role in teaching digital literacy.

The girls, as the direct recipients of these educational efforts, also felt that there is a need for more engaging and relevant content in school curricula regarding internet use. “Most of what we learn about the internet in school is technical. They don’t really tell us about things like privacy or cyberbullying,” one girl pointed out (Girl 7). This indicates a gap in education that could be filled with more practical lessons about the online challenges young people face.

The teachers, while aware of the importance of their role, face several challenges. “Balancing the regular curriculum with internet safety education is tough. There’s so much to cover, and sometimes it feels like there isn’t enough time,” a teacher explained, highlighting the practical challenges (Teacher 2). The rapid changes in technology and the rise of new social media platforms make it hard for teachers to provide relevant and up-to-date guidance. “Every few months, there’s a new app or a new online trend. It’s hard to keep track and educate the students about these new developments,” a teacher expressed, highlighting the fast-paced nature of the digital world (Teacher 9). Additionally, most of the teachers (n=10) felt that they lack adequate training and support in digital literacy and online safety education. “We need more professional development in this area. Understanding the challenges of the digital world is essential for us to guide our students effectively,” a teacher pointed out, suggesting the need for more comprehensive training programs (Teacher 10).

Despite these obstacles, there was agreement on the need for schools to adapt and improve their approach to digital education. Integrative methods, such as interactive workshops, real-life case studies, and open discussions, were often suggested as more

effective ways to engage students. “Interactive sessions, rather than just lectures, could really help. Maybe bringing in experts or having open forums where students can share and learn,” suggested a teacher, offering solutions to enhance engagement (Teacher 6).

### 5.3 Conclusion

The interviews conducted for this research have provided valuable insights into the digital lives of Saudi adolescents girls, their perceptions of online risks, and the ways their internet use is managed both at home and at school. This chapter has set the stage for understanding the complex relationship these adolescent girls have with the internet, a critical part of this thesis.

#### Key Findings:

- 1. Internet Usage:** The interviews revealed significant differences in internet usage patterns, both in terms of duration and the nature of engagement. The COVID-19 pandemic played a big role, leading to an increase in online activity during lockdown periods.
- 2. Online Activities and Platforms:** The girls are involved in a wide range of online activities, including entertainment, education, communication, and creative expression. Platforms like Instagram, Snapchat, and TikTok are particularly popular, highlighting their importance in the girls' social and educational lives.
- 3. Perceptions of Online Risks:** Both the girls and their mothers are aware of the dangers online, such as exposure to inappropriate content, cyberbullying, and

privacy issues. However, there are differences in how well they understand and handle these risks.

- 4. Parental and School Mediation:** The interviews highlighted the different strategies parents, especially mothers, use to manage internet use. These range from direct supervision to open discussions, changing as the girls get older. Schools and teachers also play a key role, but they face challenges in teaching digital literacy effectively.

These findings are integral to the thesis narrative, providing a detailed understanding of the digital experiences and challenges faced by Saudi adolescents girls. The themes and patterns from these interviews provided a critical perspective on how digital engagement influences their lives, their awareness of online risks, and the effectiveness of existing mediation strategies. This understanding is essential for developing targeted policies to enhance online safety and digital literacy among this demographic.

The information gained from these interviews sets the stage for the next chapter, which will examine the results of a comprehensive survey. This survey, involving a broader group of girls and mothers, aims to confirm, expand, and contextualize the themes identified in the interviews. By offering a wider quantitative look at the observed patterns and attitudes, the survey is designed to offer a more holistic and detailed picture of the digital experiences of Saudi adolescent girls.

## **CHAPTER 6**

### **SURVEY STUDY RESULTS**

#### **6.1 Introduction**

In this chapter, the results of a comprehensive survey conducted among a specific demographic within Saudi Arabian society. The survey included a sample of 158 Saudi girls, aged 12 and 17 years, along with 111 of their mothers. This specific demographic was chosen to provide insights into the digital lives of Saudi adolescents and the influence of parents and teachers on their online experiences.

The chapter begins by examining the demographic characteristics of the participants to set the context for the findings that follow. It then explores the patterns of internet usage among these girls, detailing the various online activities they engage in and the potential risks they face in the digital space. Additionally, the strategies used by parents, especially mothers, to manage their daughters' internet use are examined.

This chapter is dedicated to presenting the survey data clearly and systematically. A critical analysis of these findings, especially in relation to existing academic literature, will be addressed in the next chapter. This structure ensures a clear separation between the presentation of data and its subsequent analysis, providing a solid basis for the detailed discussions to follow.

## 6.2 Participant Demographics

In this section, the characteristics of the participants sampled in the study are described, offering essential context for the survey's subsequent findings. Initially, the survey involved 334 individuals, comprising both girls and their mothers from various regions of the Kingdom of Saudi Arabia. However, adjustments to the sample size were necessitated by specific age criteria.

A screening question at the outset of the survey ensured the inclusion of only those girls and their mothers who fell within the designated age range. This measure led to the exclusion of 34 girls whose ages were outside the 12 to 17 years bracket, as well as 31 mothers whose daughters were outside this age range. Consequently, the final sample size encompassed 158 girls and 111 mothers. The breakdown of participants by age group is as follows:

- Girls aged 12-13 years constituted 14% of the sample (n=22).
- The 14-15 years age category represented the largest segment, accounting for 64.5% of the sample (n=102).
- Girls aged 16-17 years comprised 21.5% of the sample (n=34).

The mothers of these participants were also categorised by age, with the following distribution:

- Mothers aged 26-35 years accounted for 17% of the sample (n=19).
- The 36-45 years age group was the most represented, comprising 58.5% of the mothers (n=65).
- Mothers aged 46-55 years made up 24.5% of the sample (n=27).



The survey also explored the living arrangements of the participating girls, with a particular focus on identifying the primary caregivers. It was found that a majority, 81%, lived with both parents, while 84% reported having at least one sibling living with them. This data suggests that the common family structure among the participants involved both parents, highlighting the potential influence of a household with both parents on the girls' internet usage and associated behaviours (Table 6.1).

**Table 6.1: Living Arrangements of Girl Participants**

<b>Composition of Households Where Participating Girls Reside</b>	
Both parents	81% (n=127)
Mother	10% (n=15)
Father	5% (n=8)
Step or foster mother	5% (n=8)
Step or foster father	0.6% (n=1)
Grandparent(s)	9% (n=14)
Siblings	84% (n=133)
live in a foster home or children's home	0% (n=0)
Someone or somewhere else	0% (n=0)
All girls 12-17 years old (n=158)	

Mothers' survey included a question regarding their relationship with the participating girls. This question was important, as the term "mothers" in this study included a wide range of primary caregivers. These included not only biological mothers but also older sisters, aunts, grandmothers, and even unrelated women serving as guardians or caregivers. The survey results revealed that the majority of adult participants, 92%, were biological mothers. The different types of relationships between the caregivers and the girls are detailed in Table 6.2.

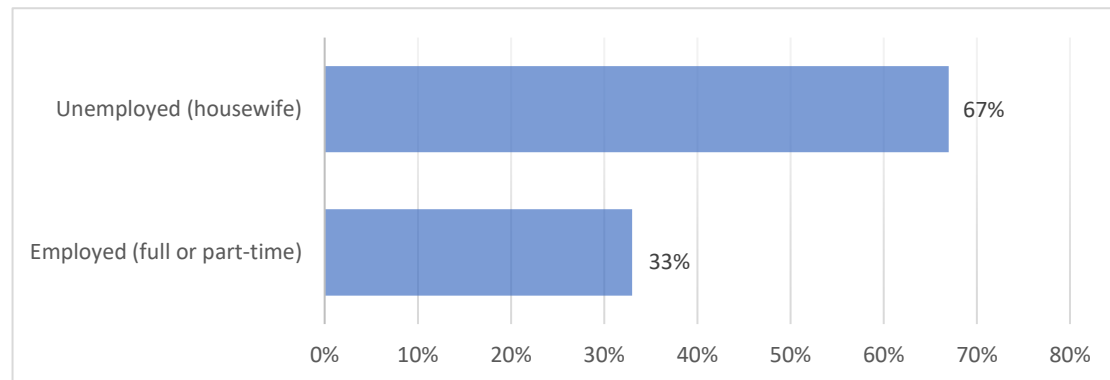
**Table 6.2: Caregiver Relationships to Participating Girls**

Types of Caregiver Relationships with Girls in the Study	
Mother	92% (n=102)
Foster mother	0% (n=0)
Stepmother	3% (n=3)
Old sister	2% (n=2)
Aunt	0% (n=0)
Grandmother	0% (n=0)
Other relative	3% (n=3)
Unrelated guardian/caregiver	0% (n=0)
All Mothers (n=111)	

The survey further explored the mothers' employment status, a factor potentially influential in their ability to regulate and supervise their daughters' internet usage. It was found that the majority, specifically 67%, were classified as unemployed (housewives), indicating their potential availability for more active involvement in their daughters' online activities. This aspect is illustrated in Figure 6.1, which presents the employment status distribution of the mothers.

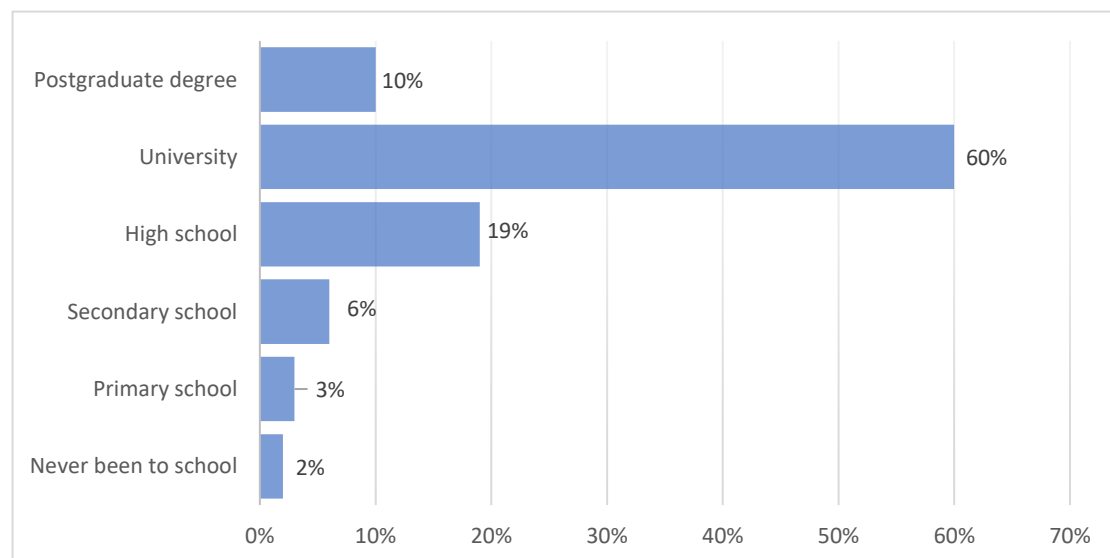
However, it is important to consider the evolving context of women's employment status in Saudi Arabia. Recent government policies in Saudi Arabia aim to increase female participation in the workforce. These changes may lead to a shift in employment status for some mothers, potentially affecting their availability for supervising their daughters' internet use. As more women join the workforce, balancing work and family responsibilities may become a factor in their ability to oversee online activities.

**Figure 6.1: Mother employment status**



In addition to employment status, the survey examined the educational background of the mothers. This aspect is crucial as it could influence their awareness and understanding of online safety for their children. The data showed that a significant portion, 70%, had attained a bachelor's degree or higher. This level of education among the mothers could indicate their ability to comprehend and address the complexities associated with internet use and safety for their children. The details of the mothers' educational levels are depicted in Figure 6.2.

**Figure 6.2: Educational Levels of Participating Mothers**



It is important to note that not all of the girls' mothers participated in the survey. Consequently, direct matching of the samples of girls and their mothers is not feasible. Therefore, any comparative analysis between the data pertaining to the girls and their mothers should be approached with caution, considering the potential discrepancies in the respondent groups.

### **6.3 Online Access and Behaviours**

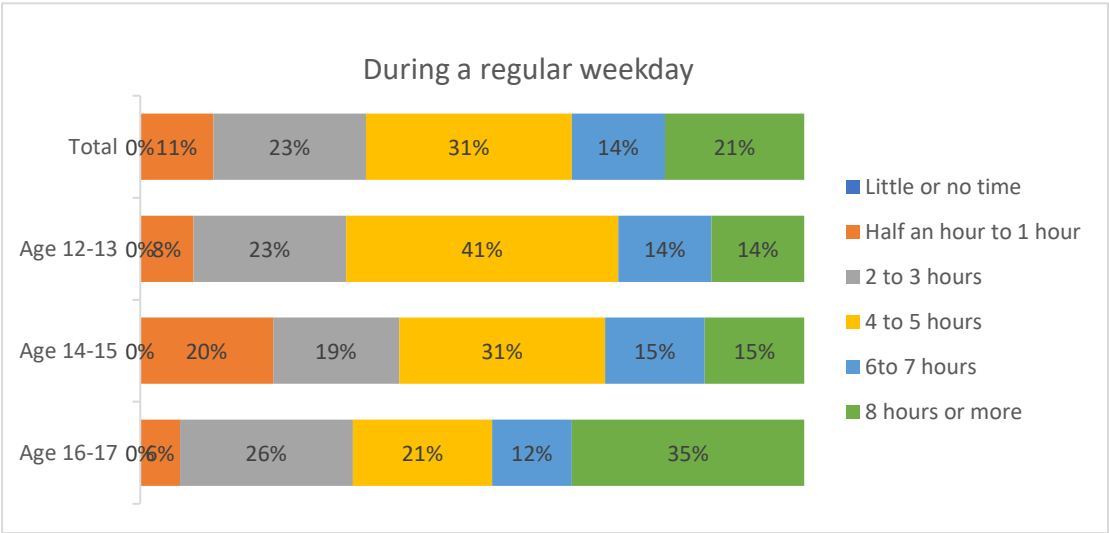
This section of the survey study, focusing on online access and behaviours, offers important insights into the digital lives of Saudi girls aged 12 to 17 and their internet usage patterns.

#### **6.3.1 Time Spent Online**

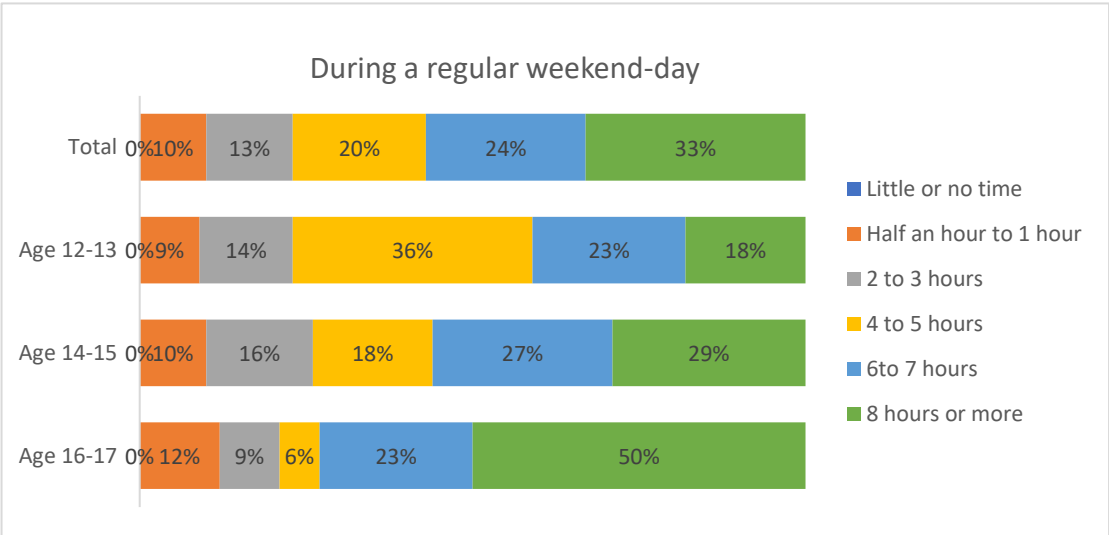
The survey data reveals the pervasive role of the internet in these young individuals' lives, showing significant daily usage. Figures 6.3 and 6.4 provide a detailed breakdown of time spent online. On weekdays, 23% of the girls spent around three hours online, while 31% engaged for four to five hours daily. A further 14% were online for six to seven hours, and a significant 21% spent over eight hours online (keep in mind that this data was collected post-COVID-19, when they were also attending school for approximately seven hours per day). During weekends and school breaks, internet usage increased notably, with 24% spending six to seven hours and 33% exceeding eight hours daily.

A noteworthy pattern emerged showing that older girls (16-17 years) tended to spend more time online. Specifically, during weekends and school breaks, up to 50% of this age group reported being online for more than eight hours. These figures reflect not only the widespread access to the internet at home but also its deep integration into the daily routines of these girls, illustrating how the digital landscape shapes their everyday lives and activities.

**Figure 6.3: Average Daily Online Time During Weekdays by Age Group**



**Figure 6.4 Average Online Time on Weekends by Age Group**

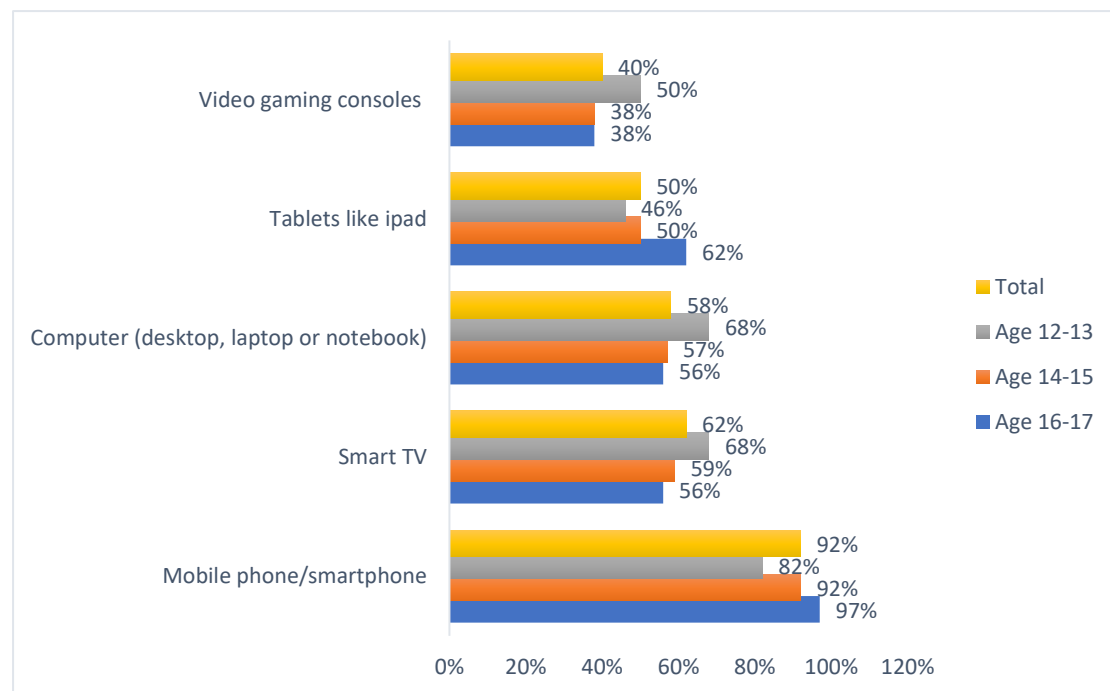


### 6.3.2 Devices Used for Internet Access

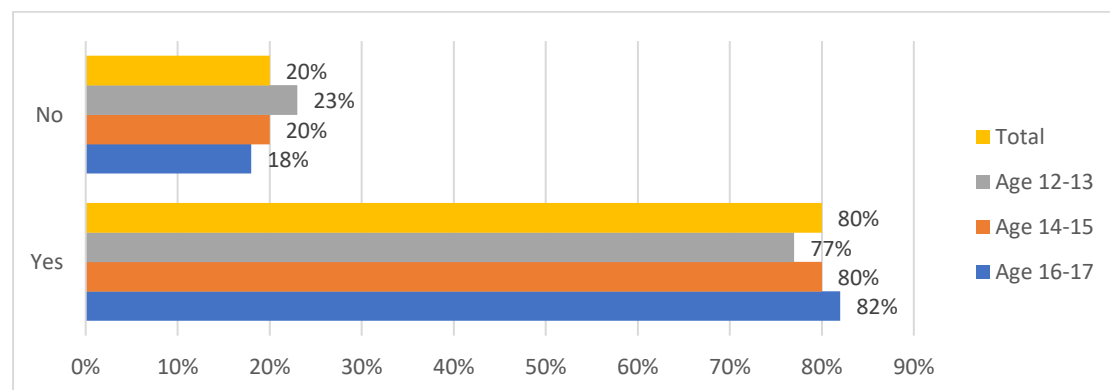
The survey sheds light on the variety of devices used for internet access, showing that smartphones are the most commonly used devices. A significant 92% of the girls used smartphones for online activities, with 80% owning a personal device (Figure 6.6). A diverse range of devices was reported: 62% used internet-connected smart TVs, 58% used computers, and 50% used tablets like iPads. Additionally, 40% engaged with video game consoles like Xbox and PlayStation, which enable them to play online games with others, chat with friends, browse the internet, and watch streaming videos on different apps including YouTube, Netflix, Apple TV, and Disney+. (Figure 6.5).

The preference for smartphones as the primary internet access device was reported by 61% of participants. Tablets were preferred by 22%, and computers by 16%, with no significant differences in device preference across age groups (Figure 6.7). These findings clearly demonstrate a preference for mobile and easily accessible devices among Saudi adolescents girls, with smartphones being the most favoured device for internet activities. This preference underscores the flexibility and convenience that smartphones offer, allowing users to stay connected and engaged with digital content at any time and from any location.

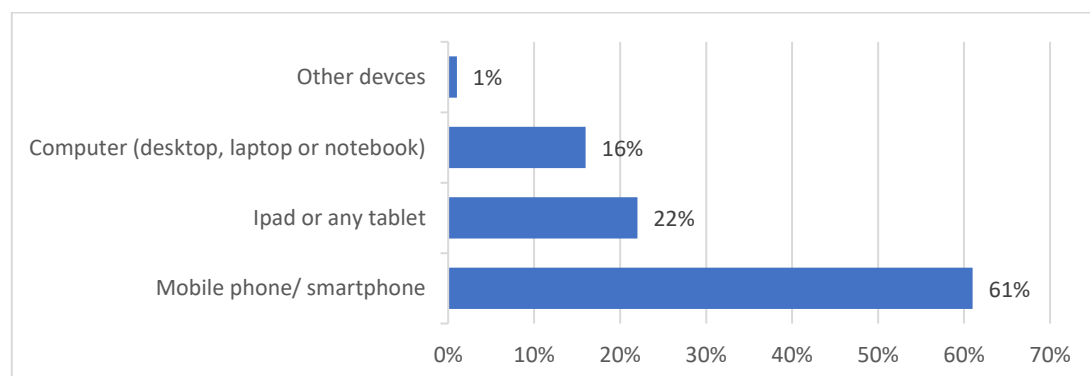
**Figure 6.5: Internet Access Devices Used by Girls**



**Figure 6.6: Smartphone Ownership Among Girls by Age Group**



**Figure 6.7: Girls' Preferred Devices for Internet Access**



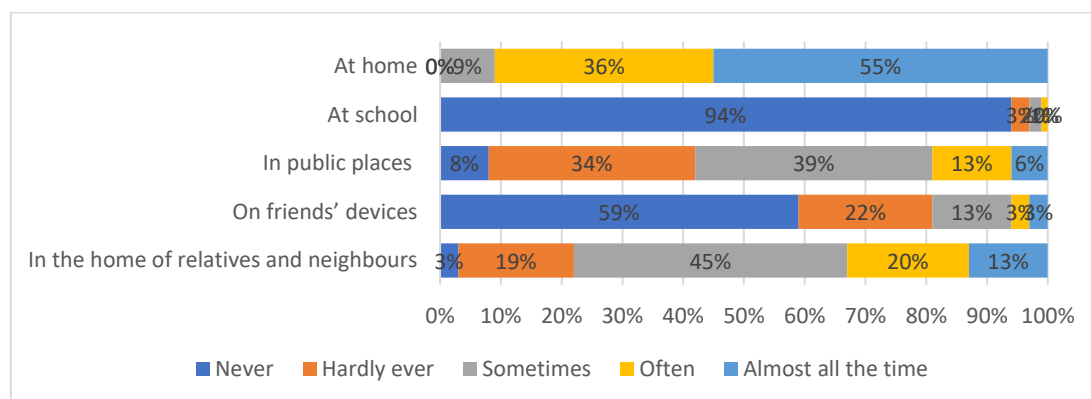
### 6.3.3 Locations for Internet Access

This section of the survey study offers valuable insights into the various settings where Saudi adolescents girls access the internet. The home environment emerged as the main location for internet use. Over half of the respondents (55%) reported using the internet almost continuously at home, and an additional 36% frequently used it in this setting (Figure 6.8). In contrast, internet access at school was notably minimal, with approximately 94% of participants indicating they never used the internet in this setting.

#### 6.3.3.1 Age-Related Variations in Internet Usage Locations

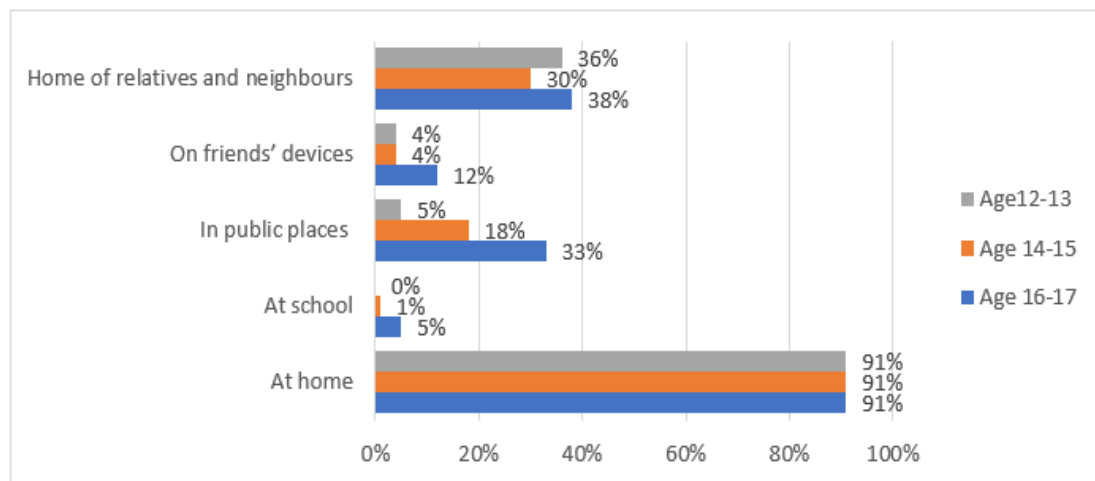
An exploration of internet usage across different locations reveals an increase in usage frequency with age. In public places like cafes or libraries, 33% of girls aged 16-17 frequently accessed the internet, a marked increase compared to 18% of 14-15 year-olds and only 5% of 12-13 year-olds (Figure 6.9). These trends indicate that older girls are more inclined to use the internet in various locations, showing a growth in digital engagement beyond the home as they age.

**Figure 6.8: Location-Based Frequency of Internet Use by Girls**





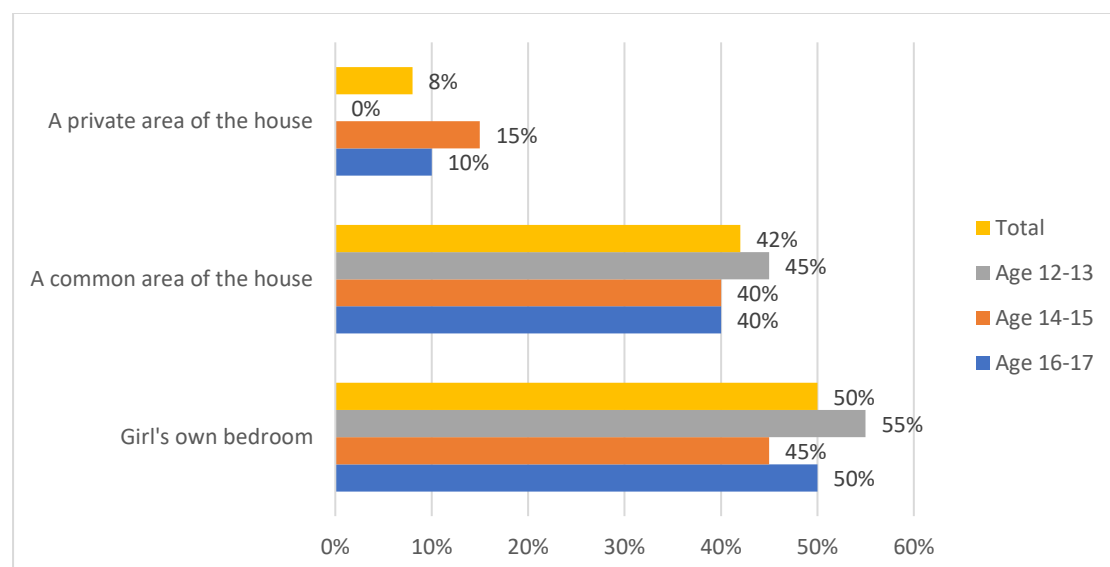
**Figure 6.9: Frequent Internet Access Locations by Age Group (Often or Almost All the Time)**



### 6.3.3.2 Internet Usage in Private vs Shared Spaces

A significant portion of the girls (50%) mainly used the internet in their bedrooms, suggesting a preference for privacy during online activities. A smaller segment (8%) used private areas such as study rooms or home libraries, while others reported using shared spaces like living rooms for internet access. The distribution of these preferences was similar across different age groups (Figure 6.10).

**Figure 6.10: Home Internet Usage Locations by Age Group**



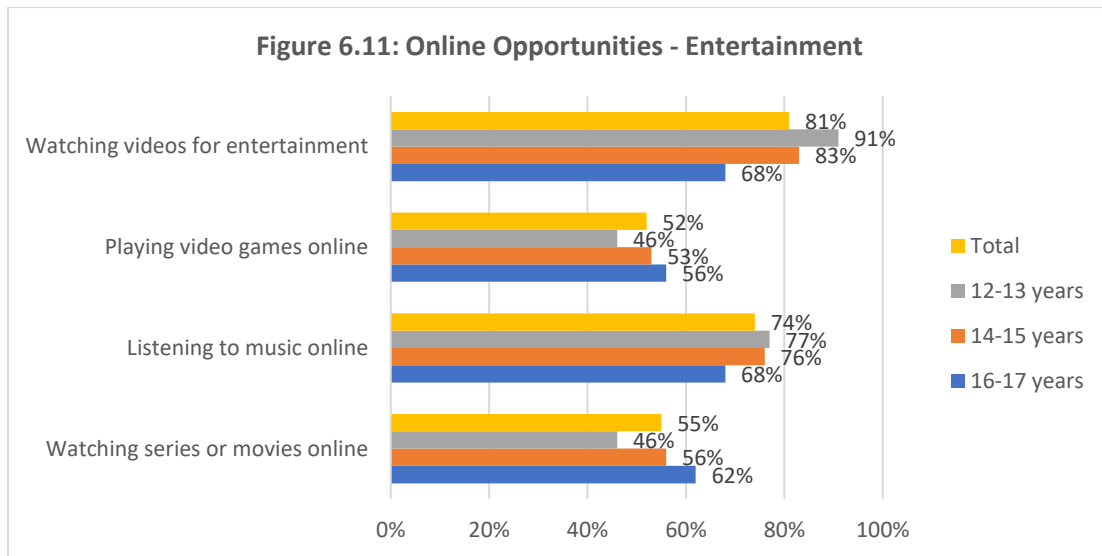
### **6.3.4 Online Opportunities**

The survey explored a wide range of online activities, offering insights into how Saudi girls use the internet for various purposes, including education, communication, creativity, and entertainment.

#### **6.3.4.1 Entertainment**

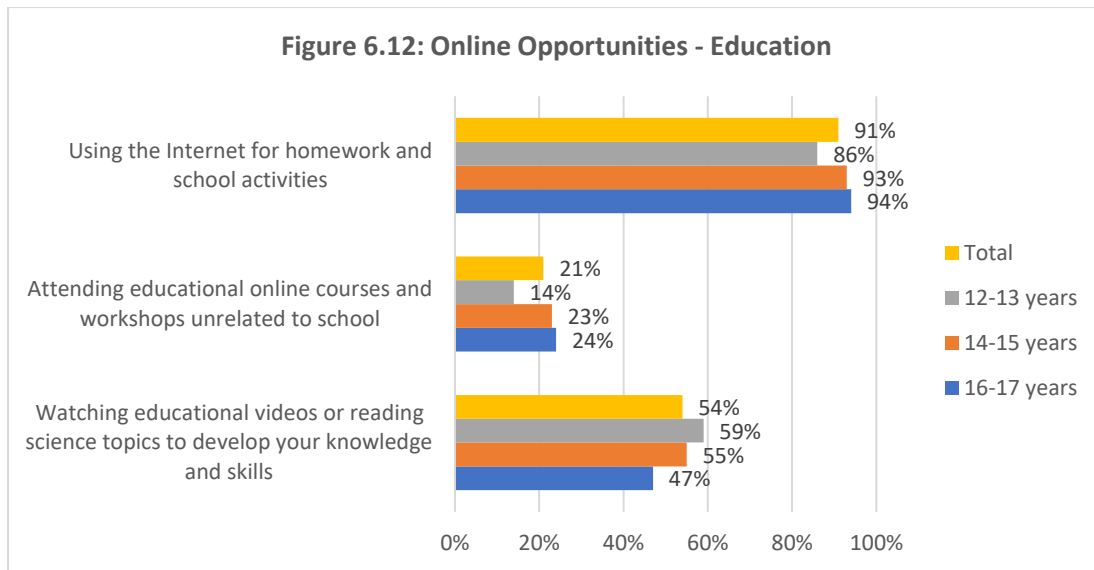
The data highlights entertainment as a major use of the internet amongst Saudi girls. A vast majority, across all age groups, actively engage in watching videos for entertainment, such as on YouTube. The younger age group (12-13 years) showed a particularly high interest in this activity. Playing online games was also notably popular, with the percentage increasing among older age groups. The data suggests that as girls mature, their engagement in online gaming becomes more pronounced.

The trends in listening to music and watching series or movies online also varied with age. Younger girls favoured music and video streaming platforms more, while older girls showed a growing preference for online series and movies. These patterns indicate a shift in entertainment choices as girls grow older, possibly reflecting evolving interests and a greater degree of autonomy in media consumption (Figures 6.11).



#### 6.3.4.2 Education

Internet use for education was a significant online activity among Saudi adolescent girls of all age groups. The survey results showed a strong focus on school-related internet use. A large number of participants, especially older girls, reported using the internet frequently for their schoolwork. This trend was clear across all age groups, with 86% of 12-13 year-olds, 93% of 14-15 year-olds, and 94% of 16-17 year-olds using the internet daily or weekly for educational activities. The internet's role as an educational tool extended beyond school assignments. Although fewer girls reported taking non-school online courses and workshops weekly, many used the internet to gather information and learn on their own. More than half of the girls in all age groups used the internet to explore scientific topics and watch educational videos. This trend highlights the internet's growing importance as an extra educational resource that complements traditional schooling.

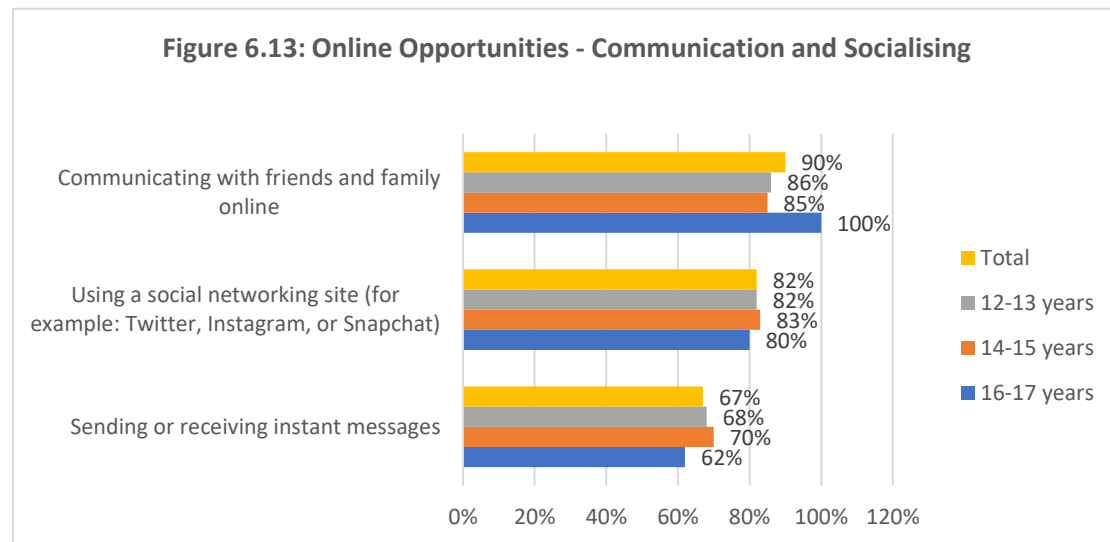


#### 6.3.4.3 Communication and Socialising

Using the internet for communication and socialising have emerged as key activities for Saudi adolescent girls, with a considerable majority engaging in these practices. A striking 90% of girls reported using the internet either daily or at least once a week to communicate with friends and family, showing its importance as a primary tool for interaction. The use of social networking sites is also notably high, with 82% of participants regularly using these platforms. This reflects the importance of digital social spaces in the lives of young Saudi females. Sending and receiving instant messages is common, with two-thirds (67%) of the girls engaging in this activity weekly. This underlines the preference for immediate, real-time communication among the participants.

The data analysis across different age groups revealed that the frequency of internet use for communication purposes did not vary significantly with age. This suggests a

consistently high reliance on the internet as a communication tool across all age groups (Figure 6.13).



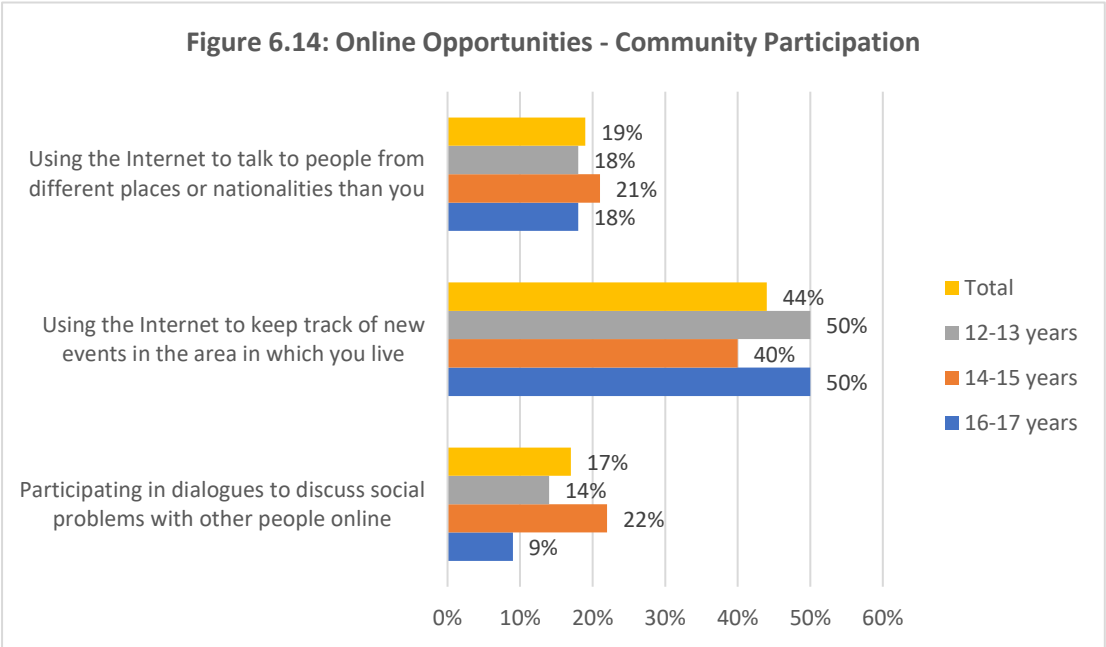
#### 6.3.4.4 Community participation

Another interesting aspect of internet usage among Saudi adolescent girls is their involvement in community-based activities, although this is less common than entertainment and socialising. The survey results showed that a large number of the surveyed girls use online platforms to engage with their communities. This includes using the internet to stay updated on local events, with 44% of participants engaging in such activities on a weekly basis.

The internet also serves as a medium for girls to share their personal experiences related to social issues. This is reflected in the data, where 17% of the girls reported participating in online discussions or forums about social problems at least once a week. Additionally, the survey highlights the role of the internet in fostering cross-cultural interactions. A considerable number of the girls engage in conversations with

individuals from different cultural backgrounds, highlighting the internet's role in broadening their social and cultural views.

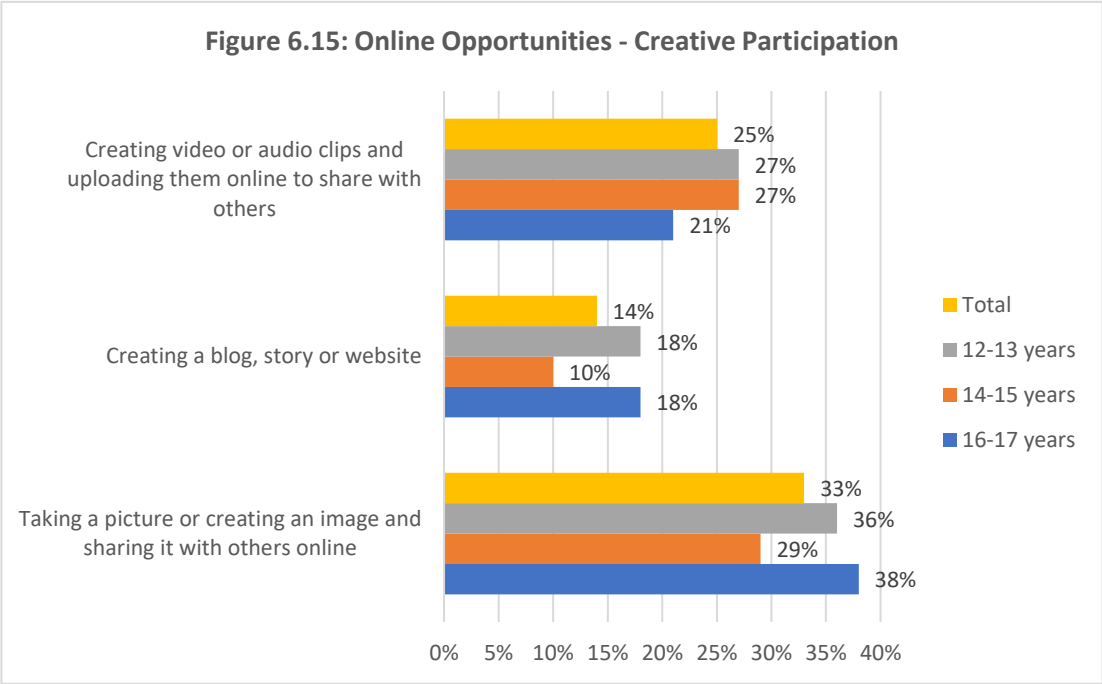
The data also indicates an age-related trend in community participation. Older girls, particularly those aged 16-17, show higher engagement in community-related activities compared to younger girls. This suggests a growing inclination towards more diverse internet use as girls grow older (Figure 6.14).



**6.3.4.5 Creative participation**

Creative participation, which includes activities like creating and sharing original content online, is an important but less common aspect of internet use among the surveyed girls, particularly when compared to entertainment and socialising. The survey findings indicated that some girls engage in creative activities on the internet. Among these, 25% of the participants reported creating and uploading video or audio

clips at least once a week. Writing blogs, stories, or websites is another way of expressing creativity online, but fewer girls, only 14%, reported doing this regularly. Another form of creative participation involves sharing personal images or artwork online. According to the survey results, 33% of the girls engage in this activity on a weekly basis, indicating a moderate level of engagement in visual creative expression. Additionally, data did not reveal any major differences in creative online participation based on age. The interest in creative activities stayed fairly consistent across different age groups, suggesting a similar level of interest in these activities regardless of age (Figure 6.15).



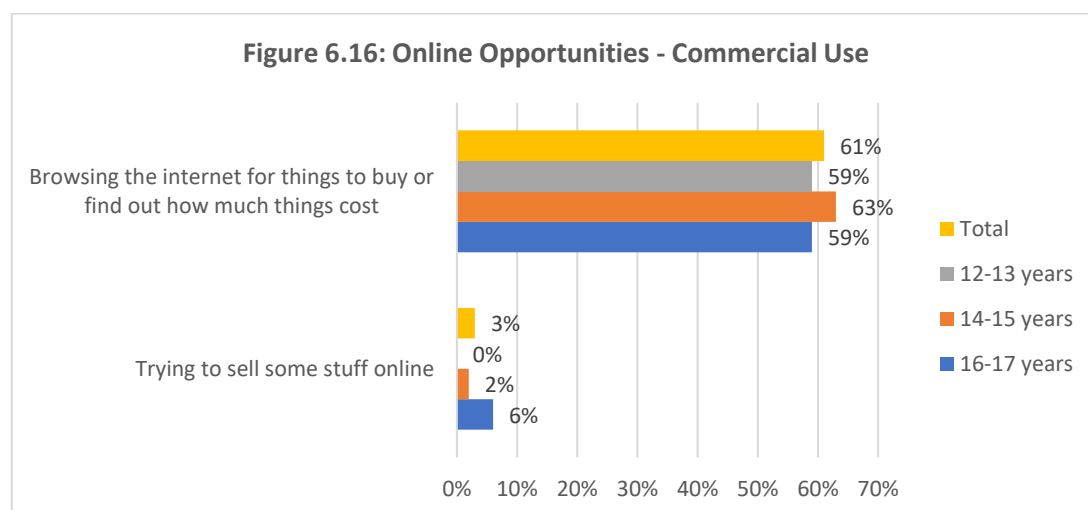
**6.3.4.6 Commercial use**

The survey explored the extent of commercial use of the internet among the participating girls, focusing on activities like online shopping and selling. The findings showed clear patterns in their engagement with these activities. A significant

proportion, 61% of the surveyed girls, reported engaging in online shopping or price comparisons on a weekly or more frequent basis. This reflects a considerable interest in using the internet for consumer purposes.

On the other hand, online selling activities were considerably less common among the participants. Only 3% of the girls reported engaging in selling items online. This low percentage suggests that while the internet is a popular tool for shopping and browsing products, it is less used by the girls for selling or entrepreneurial activities.

When looking at the data by age, there were noticeable differences in online commercial behaviour among the different age groups. The survey results indicated that the older age groups, particularly girls aged 16-17, were more actively involved in online selling compared to their younger counterparts in the 14-15 or 12-13 age groups. This trend might suggest increased independence and interest in entrepreneurship as the girls grow older (Figure 6.16).





For more information, Table 6.3 provides detailed data on the frequency of girls' engagement in various online activities during a one-year period prior to their survey participation.

**Table 6.3: Frequency of Girls' Participation in Diverse Online Activities During A One-Year Period**

How often have you done these activities while using the Internet in the past 12 months?	Never	Just once or twice	At least every month	At least every week	Daily or almost daily	Several times each day	Almost all the time
<b>Entertainment</b>							
Watching videos for entertainment and fun (e.g. on YouTube)	2.53%	6.33%	10.13%	22.78%	24.05%	18.35%	15.82%
Playing video games online	10.13%	24.68%	12.66%	22.15%	12.66%	12.03%	5.70%
Listening to music online	7.59%	10.76%	7.59%	23.42%	20.25%	10.76%	19.62%
Watching series or movies online	10.13%	17.09%	17.09%	13.92%	14.56%	12.66%	14.56%
<b>Learning</b>							
Using the Internet for homework and school activities	2.53%	3.80%	1.27%	5.70%	32.91%	21.52%	32.28%
Attending educational online courses and workshops unrelated to the school	40.51%	25.95%	12.03%	10.76%	3.80%	2.53%	4.43%
Watching educational videos or reading science topics to develop your knowledge and skills	8.86%	19.62%	17.72%	23.42%	11.39%	7.59%	11.39%
<b>Community participation</b>							
Using the Internet to talk to people from different places or nationalities than you	50.63%	22.15%	7.59%	5.70%	6.33%	0.63%	6.96%
Using the Internet to keep track of new events in the area in which you live	26.58%	16.46%	13.29%	10.76%	16.46%	7.59%	8.86%
Participating in dialogues to discuss social problems with other people online	60.76%	16.46%	5.06%	6.33%	6.33%	2.53%	2.53%
<b>Socialising</b>							
Using a social networking site (for example: Twitter, Instagram, or Snapchat)	10.76%	2.53%	4.43%	6.96%	18.99%	20.25%	36.08%
Communicating with friends and family online	3.80%	3.16%	4.43%	12.03%	27.85%	14.56%	34.18%
Sending or receiving instant messages	20.89%	7.59%	3.80%	4.43%	16.46%	22.78%	24.05%
<b>Creative participation</b>							
Creating video or audio clips and uploading them online to share with others	50.00%	17.72%	6.33%	8.86%	5.06%	4.43%	7.59%
Creating a blog, story or website	72.78%	11.39%	3.16%	5.70%	1.27%	3.80%	1.90%
Taking a picture or creating an image and sharing it with others online	39.87%	18.35%	9.49%	12.03%	5.70%	7.59%	6.96%
<b>Commercial use</b>							
Browsing the internet for things to buy or find out how much things cost	10.13%	10.13%	18.35%	23.42%	13.92%	14.56%	9.49%
Trying to sell some stuff online	81.65%	11.39%	4.43%	0.00%	0.63%	1.27%	0.63%

#### **6.3.4.7 Discrepancies Between Girls' Reports and Mothers' Perceptions of Daughters' Internet Activities**

In examining the girls' reports and their mothers' perceptions regarding the frequency of the daughters' internet activities over the past year, a general similarity was observed with some notable exceptions. The survey data indicated that mothers and daughters mostly agreed on the regularity of the daughters' engagement in online activities. This agreement suggests that mothers are somewhat aware of their daughters' internet habits. However, despite this general alignment, there were some differences in specific areas.

In activities related to community engagement, socialising, and shopping, the differences became noticeable. Mothers tended to underestimate their daughters' participation in these areas. For example, mothers thought their daughters were less involved in online community discussions and keeping track of local events than the daughters reported. Similarly, in social activities like using social networking sites and communicating online with friends and family, mothers' perceptions did not fully align with the reported frequency by their daughters. Daughters indicated they used these platforms more often than their mothers believed. The same pattern was seen in online shopping, where daughters reported more frequent browsing and purchasing than their mothers realised. This underestimation suggests that mothers might not fully understand or notice their daughters' online interactions in these specific areas. The data, as outlined in Table 6.6, provides valuable insights into how well mothers understand their daughters' online activities.

**Table 6.4: Girls vs. Mothers: Perceptions of Online Activity Engagement**

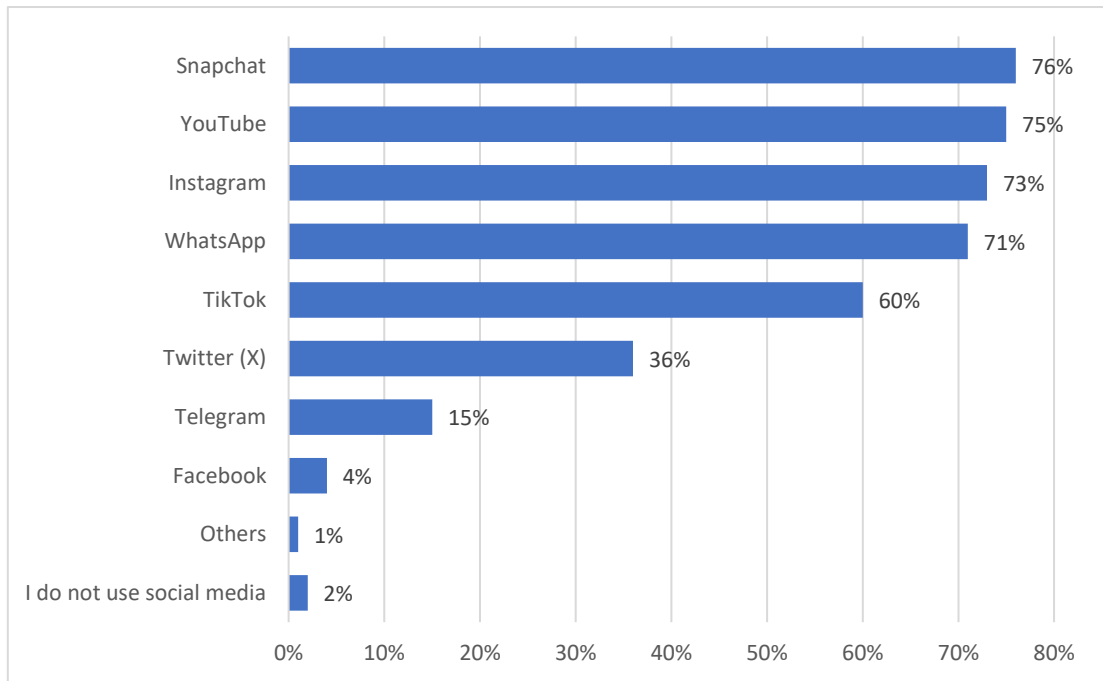
<b>Girls' Engagement in Online Activities (At Least Weekly)</b>	<b>Girls Reports</b>	<b>Mothers Perceptions</b>
<b>Entertainment</b>		
Watching videos for entertainment and fun (e.g. on YouTube)	81%	83%
Playing video games online	52%	54%
Listening to music online	74%	62%
Watching series or movies online	55%	57%
<b>Learning</b>		
Using the Internet for homework and school activities	91%	93%
Attending educational online courses and workshops unrelated to school	21%	17%
Watching educational videos or reading science topics	54%	53%
<b>Community/ Civic Participation</b>		
Using the Internet to talk to people from different places or nationalities	19%	8%
Using the Internet to keep track of new events in the area in which they live	44%	19%
Participating in dialogues to discuss social problems with others	17%	11%
<b>Socialising</b>		
Using a social networking site (for example: Twitter, Instagram)	82%	77%
Communicating with friends and family online	90%	78%
Sending or receiving instant messages	67%	53%
<b>Creative Participation</b>		
Creating video or audio clips and uploading them online to share with others	25%	22%
Creating a blog, story or website	14%	10%
Taking a picture or creating an image and sharing it with others online	33%	36%
<b>Commercial Use</b>		
Browsing the internet for things to buy or find out how much things cost	61%	44%
Trying to sell some stuff online	3%	3%

### 6.3.5 Girls' Social Networking Sites Behaviour

The survey explored the usage patterns of social networking sites and social media platforms among the participating girls. A large proportion, 76%, reported using Snapchat, making it the most commonly used platform in their digital environment.

YouTube and Instagram were almost equally popular, with usage rates of 75% and 73%, respectively. WhatsApp was also widely used, with 71% of the girls using the platform. TikTok was used by 60% of the girls, while Twitter (recently renamed X) had a lower usage rate of 36%, making it less favoured. This distribution of platform usage is shown in Figure 6.17, which also includes other applications with much lower usage percentages.

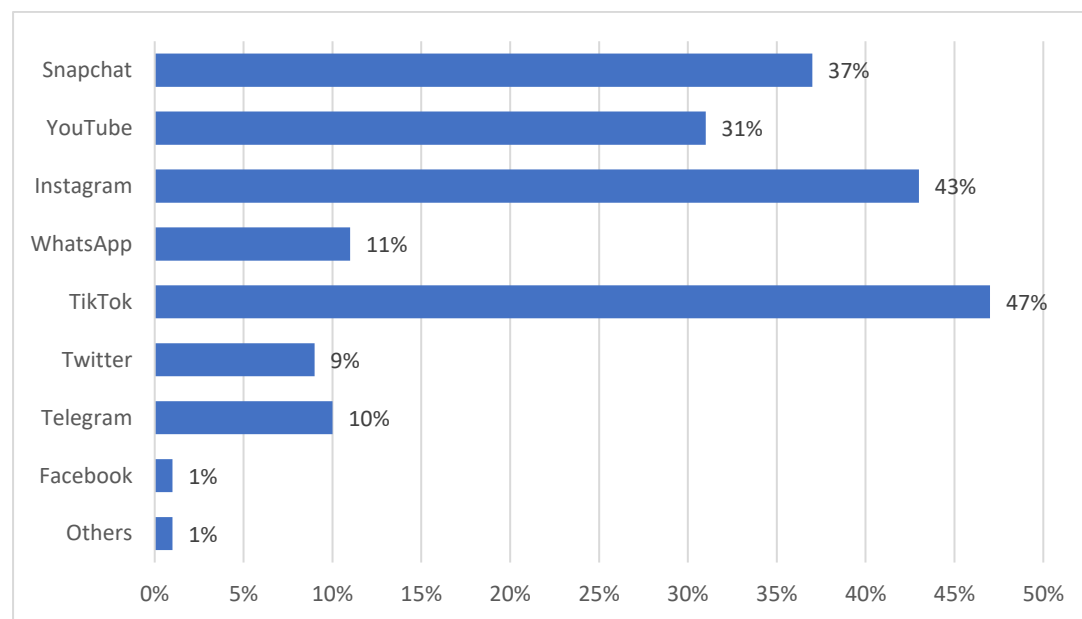
**Figure 6.17: Social Media Platform Usage Among Girls**



Girls 12-17 years old who use social media (n=150)

When asked about their favourite social media platforms, TikTok stood out as the most preferred, with nearly half (47%) of the girls choosing it as their main social networking platform. Instagram followed closely, being the platform of choice for 43% of the girls. Snapchat and YouTube were also popular, with 37% and 31% of the girls preferring them, respectively. This data is shown in Figure 6.18, which also includes preferences for other sites and applications.

**Figure 6.18: Favourite Social Media Platforms as Chosen by Girls**



Girls 12-17 years old who use social media (n=150)

In exploring the privacy settings of their social media profiles, a significant 54% of the girls who use social media stated that their profiles are accessible only to authorised followers, indicating a preference for private content sharing. Conversely, 38% reported having a mix of public and private profiles, showing a balanced approach towards online visibility. A minority, 8%, indicated that all of their profiles are publicly accessible, suggesting a more open approach to online sharing (Table 6.5).

**Table 6.5: Privacy Settings of Girls' Social Media Profiles**

Distribution of Public and Private Social Media Profile Settings Among Girls	
<b>Public:</b> Anyone can see your profiles	8% (n=13)
<b>Private:</b> Only approved people can see your profiles	54% (n=81)
<b>Mixed:</b> Some of your social media profiles are public, and some are private	38% (n=56)

Girls 12-17 years old who use social media (n=150)

#### **6.3.5.1 Discrepancies Between Girls' Reports and Mothers' Perceptions**

The data reveals a noteworthy agreement between the girls' reports and their mothers' perceptions regarding the use of social media and the privacy settings of their profiles. This alignment suggests a high level of awareness among mothers about their daughters' engagement with social media platforms.

According to the survey results, a substantial majority of girls reported using social media, a finding that was closely mirrored in the mothers' responses. Specifically, 89% of the girls acknowledged their use of social media, which was similar to the 92% of mothers who were aware of their daughters' social media usage (Table 6.6). This similarity in responses indicates that most mothers have an accurate understanding of their daughters' presence on social media platforms. Moreover, when it came to the privacy settings of the girls' social media profiles, the mothers again showed awareness of their daughters' practices. While 54% of the girls reported having private profiles accessible only to selected individuals, 75% of mothers believed their daughters' profiles to be private. Additionally, the proportion of mothers and girls reporting mixed public and private profiles was relatively similar, with 38% of the girls and 10% of the mothers acknowledging this setting (Table 6.7). The small differences observed in these percentages may reflect differences in perception or understanding of what constitutes a private versus public profile.

**Table 6.6: Comparison of Social Media Usage - Girls and Mothers' Perspectives**

<b>Social Media Usage: Self-Reported by Girls vs. Reported by Mothers</b>	<b>Mothers</b>	<b>Girls</b>
Yes	92% (n=102)	89% (n=141)
No	8% (n=9)	11% (n=17)
I don't know	0% (n=0)	

Girls 12-17 years old who use social media (n=150) and Mothers whose daughters use social media (n=102)

**Table 6.7: Discrepancies in Social Media Privacy Settings - Girls vs. Mothers**

<b>Privacy Settings on Social Media: Girls' Self-Reports vs. Mothers' Perceptions</b>	<b>Mothers</b>	<b>Girls</b>
<b>Public:</b> Anyone can see her profiles	15% (n=15)	8% (n=13)
<b>Private:</b> Only approved people can see her profiles	75% (n=77)	54% (n=81)
<b>Mixed:</b> Some of her social media profiles are public, and some are private	10% (n=10)	38% (n=56)
I don't know	0% (n=0)	

Girls 12-17 years old who use social media (n=150) and Mothers whose daughters use social media (n=102)

## 6.4 Risk Perception

This section provides a detailed look at how Saudi adolescent girls perceive risks related to their online activities, based on survey data. The findings show how these girls view various dangers associated with internet use.

### 6.4.1 Chatting with Strangers, Identity Honesty, and Social Networking Safety

The survey included questions addressing girls' perceptions of safety when chatting with strangers online, the honesty of people on the internet about their real identities, and the safety of using social networking sites. The responses were categorised by age, showing clear patterns. A common feeling among all age groups (12-13, 14-15,

and 16-17 years) was a general scepticism towards the safety of chatting with strangers online. The 14-15 age group had the highest level of concern, with 60% finding it unsafe.

**Table 6.8: Girls' Perceptions of Safety When Chatting with Strangers Online**

<b>Responses by Age Group on the Perceived Safety of Online Conversations with Strangers</b> (Chatting with Online Strangers Is Often Safe)			
<b>Girls' age range</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>
12-13	22%	32%	46%
14-15	18%	22%	60%
16-17	15%	38%	47%

This cautious approach extended to the perception of honesty in online identities, especially among the youngest group (12-13 years), where 68% doubted the genuineness of people's online personas.

**Table 6.9: Girls' Perceptions on Honesty of Online Identities**

<b>Perceptions of Identity Authenticity on the Internet by Age Group</b> (Most people who use the internet are honest about their real identities)			
<b>Girls' age range</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>
12-13	14%	18%	68%
14-15	11%	32%	57%
16-17	18%	18%	64%

Regarding the safety of social networking sites, a majority across all age groups felt these platforms were not particularly safe for girls their age.

**Table 6.10: Perceived Safety of Social Networking Sites Among Girls**

<b>Girls' Agreement on Safety of Social Networking Sites</b> (Social networking sites is safe for girls my age)			
<b>Girls' age range</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>
12-13	14%	27%	59%
14-15	10%	33%	57%
16-17	12%	29%	59%



#### 6.4.2 Nervousness, Confidence, and Parental Support

The survey also explored girls' emotions and confidence levels regarding online activities, along with their perceptions of parental support in case of unpleasant online experiences. A significant number of participants reported feelings anxious about using the internet, fearing potential negative experiences. This anxiety was especially common in the oldest group (16-17 years).

**Table 6.11: Girls' Anxiety Levels Regarding Internet Use**

<b>Analysis of Nervousness Among Girls When Using the Internet</b> (Sometimes I feel concerned about my safety on the internet )			
<b>Girls' age range</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>
12-13	50%	32%	18%
14-15	46%	26%	28%
16-17	59%	23%	18%

Despite these concerns, there was notable confidence among the girls in handling unpleasant online situations effectively, a feeling shared across all age groups (Table 6.12). This confidence was strengthened by their belief that they would receive parental support in challenging online situations, a belief that was most strongly felt among the youngest participants (Table 6.13).

**Table 6.12: Girls' Confidence in Handling Unpleasant Online Experiences**

<b>Self-Assessed Confidence in Managing Online Challenges</b> (I am confident that I can handle unpleasant situations online effectively)			
<b>Girls' age range</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>
12-13	68%	32%	0%
14-15	72%	22%	5%
16-17	71%	29%	0%

**Table 6.13: Girls' Confidence in Receiving Parental Support**

<b>Perceptions of Parental Assistance During Online Issues</b> (I am confident that if something unpleasant happens to me online, my parents\ carers will assist me)			
<b>Girls' age range</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>
12-13	87%	5%	8%
14-15	72%	15%	14%
16-17	74%	18%	9%

#### 6.4.3 Benefits vs Risks of Internet Use and Importance of Parental Supervision

The survey looked into the girls' perception of the balance between the benefits and risks of internet use and how important they think parental supervision is for their online safety. The girls' opinions were divided on whether the benefits of the internet outweigh its risks. The youngest and oldest groups were more likely to agree that the benefits were greater, while the middle group (14-15 years) was more sceptical (Table 6.14).

**Table 6.14: Girls' Views on the Benefits vs. Risks of Internet Use**

<b>Perceived Internet Benefits and Risks Among Girls</b> (The advantages of using the Internet outweigh the risks for girls my age)			
<b>Girls' age range</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>
12-13	60%	32%	8%
14-15	36%	46%	19%
16-17	59%	35%	6%

Lastly, the importance of regular parental supervision for online safety was recognised by all age groups (Table 6.15).

**Table 6.15: Perceived Importance of Parental Supervision for Online Safety Among Girls**

<b>The Importance of Parental Supervision as Viewed by Different Age Groups</b> (Parents' regular supervision of their daughters' Internet use is important to keep them safe)			
<b>Girls' age range</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>
12-13	55%	36%	9%
14-15	61%	23%	16%
16-17	53%	15%	33%

These insights reflect the participants' clear understanding of online environments, showing their awareness of risks and the need for careful engagement. They also highlight the crucial role

#### **6.4.4 Discrepancies Between Girls and Mothers' Perceptions**

When looking at risk perception, notable differences emerged between the perspectives of the mothers and their daughters. The survey results showed that mothers tend to see the internet as less safe for their daughters compared to the daughters' own views. For instance, only 8% of the mothers believed that chatting with strangers online is often safe, while 18% of the girls thought it was safe. Similarly, only 4% of the mothers agreed that most people on the internet are honest about their real identities, compared to 13% of the girls who believed this. The perception of safety on social networking sites also differed significantly, with only 3% of the mothers considering these platforms very safe for girls their daughters' age, while 10% of the girls agreed.

The discrepancy was even more noticeable regarding concerns about potential negative experiences online. An overwhelming 93% of the mothers felt nervous about

their daughters using the internet, fearing something might go wrong, compared to 50% of the girls who shared this concern. Despite these worries, the mothers showed high confidence in their ability to assist their daughters in unpleasant online situations (92%), which was higher than the daughters' confidence in their parents' help (74%).

Furthermore, while 44% of the girls believed that the benefits of internet usage significantly outweigh the risks, only 28% of the mothers agreed with this perspective. The importance of regular parental supervision was highlighted by 92% of the mothers, a view that was less common among the daughters, with only 59% acknowledging its significance. These findings show the differences in risk perception and the importance of parental involvement as perceived by both the mothers and their daughters. (Table 6.16).

**Table 6.16: Girls vs. Mothers - Analysis of Internet Risk Perception**

Comparison of Risk Perception on the Internet Between Girls and Their Mothers	Agree	
	Girls	Mothers
Chatting with strangers online is often safe	18% (n=28)	8% (n=9)
Most people who use the internet are honest about their real identities	13% (n=20)	4% (n=4)
Social networking sites is safe for girls my \ my daughter age	10% (n=15)	3% (n=3)
Sometimes I feel concerned about my \ my daughter's safety on the internet	50% (n=79)	93% (n=104)
I am confident that I \ my daughter can handle unpleasant situations online effectively	72% (n=113)	58% (n=64)
I am confident that if something unpleasant happens to me online, my parents will assist me	74% (n=117)	92% (n=102)
I feel prepared to help my daughter if she encounters unpleasant situations online		
The advantages of using the Internet outweigh the risks for girls my age \ my daughter age	44% (n=69)	28% (n=31)
Parents' regular supervision of their daughters' Internet use is important to keep them safe	59% (n=93)	92% (n=102)

## **6.5 Online Risks**

The internet, while offering many opportunities, also poses various risks to children. These risks can be broadly categorised into three types: contact, content, and conduct. 'Contact' risks involve interactions with potentially harmful individuals, 'content' risks include exposure to inappropriate or damaging material, and 'conduct' risks relate to children's own actions that may be reckless or harmful. This study aimed to understand the nature of these risks as experienced by Saudi girls. Both the girls and their mothers were asked about the girls' encounters with these risks, providing insight into how aware mothers are of their daughters' online experiences.

### **6.5.1 Negative Online Experiences**

The data revealed a significant number of negative experiences among the participants. Specifically, 65% of the girls reported encountering one or more negative incidents online within the last year. Breaking down these figures further, it was found that 16% of these girls experienced such incidents only once, while 33% encountered them a few times, and another 16% faced them many times. This pattern offers a detailed insight into how often these online risks occur.

Age emerged as a critical factor in the prevalence of these negative online experiences. A clear upward trend was observed with increasing age: 54% of the girls aged 12-13 years reported negative incidents, which rose to 66% among those aged 14-15, and further to 68% in the 16-17 age group (Table 6.17). This increase

underscores the heightened vulnerability to online risks as girls grow older and possibly spend more time on the internet.

**Table 6.17: Age-Based Frequency of Negative Online Experiences Among Girls**

Reported Incidences of Negative Online Experiences in the Past Year, Categorised by Age Group					
Girls' age range	Never	Only once	Few times	Many times	Prefer not to say
<b>12-13</b>	37% (n=8)	18% (n=4)	27% (n=6)	9% (n=2)	9% (n=2)
		<b>54% (n=12)</b>			
<b>14-15</b>	24% (n=25)	17% (n=17)	32% (n=33)	17% (17)	10% (n=10)
		<b>66% (n=67)</b>			
<b>16-17</b>	20% (n=7)	12% (n=4)	38% (n=13)	18% (n=6)	12% (n=4)
		<b>68% (n=23)</b>			
<b>Total</b>	25% (n=40)	16% (n=25)	33% (n=52)	16% (n=25)	10% (n=15)
		<b>65% (n=102)</b>			

#### 6.5.1.1 Discrepancies Between Girls and Mothers' Perceptions

The exploration into online risks and negative experiences extends further into examining the differences between the perceptions of the girls and their mothers. The focus here is on understanding how the mothers' awareness matches the actual experiences reported by the girls. This comparison is crucial for understanding how families communicate and how aware they are of the online challenges their daughters face.

The data in Table 6.18 highlights this comparison. The girls' responses show that 25% never experienced negative incidents online, 16% faced them only once, 33% a few times, 16% many times, and 10% preferred not to share their experiences. In contrast, the mothers' perceptions show a tendency to underestimate how often these

incidents happen. With 35% of them believing their daughters never had negative online experiences, and only 10% acknowledging that their daughters faced them many times, there is a clear difference between the mothers' perceptions and the girls' actual experiences. This difference suggests potential communication barriers and a lack of awareness among parents about the online challenges their daughters face.

**Table 6.18: Differences Between Girls' Reports and Mothers' Perceptions of Negative Online Experiences**

	Never	Only once	Few times	Many times	Prefer not to say	I don't know
<b>Mothers</b>	35% (n=39)	17% (n=19)	30% (n=33)	10% (n=11)		8% (n=9)
		57% (n=63)				
<b>Girls</b>	25% (n=40)	16% (n=25)	33% (n=52)	16% (n=25)	10% (n=15)	
		65% (n=102)				

### 6.5.2 Key Online Safety Concerns Identified by Participants

This section presents the primary online safety concerns for Saudi girls and their mothers based on their responses to an open-ended question within the survey. This question was designed to allow participants the freedom to express their main concerns about Internet use, providing them with the opportunity to voice their worries without any limitations. It is noteworthy that the response rate from the mothers was significantly higher at 54% (60 out of 111), compared to that of the girls at 8% (13 out of 158). This difference in response rates suggests that mothers may be more vocal or concerned about these issues, while girls might be less inclined to share their thoughts in this context.

Among the 60 mothers who participated in answering this question, 25 of them expressed deep concern over the possibility of their daughters encountering sexually explicit content online. This worry included both intentional and accidental exposure. Mothers pointed out various ways through which such unintended exposure might occur, such as through pop-up advertisements or while browsing social media platforms and YouTube. They highlighted that these platforms can sometimes show inappropriate content without warning. One mother shared her anxiety:

The thing that scares me most about my daughter using the internet is her possibly seeing sexual stuff that upsets her, or by chance watching videos that are not suitable, and picking up wrong ideas from them. I'm really not sure about letting her use YouTube because it often shows videos that aren't good.

This quote exemplifies the depth of concern some mothers have about the unpredictability of content on widely used platforms and the potential negative impact on their daughters' perceptions and mental well-being.

Another major concern for the mothers, mentioned by 21 out of the 60 who responded, was the impact of different cultures on their daughters. They feared that these external influences might conflict with Saudi traditions and Islamic values, especially regarding topics like homosexuality and premarital relationships. One mother expressed, "I worry that what my daughter sees and reads on the internet, like ideas about accepting homosexuality, might change her thoughts and values."

Additionally, 19 mothers were concerned about their daughters being exposed to non-Islamic ideologies, such as atheism, and the potential impact on their religious beliefs.



Another mother stated: "I'm concerned about various things like pornography, atheism, and being influenced by stuff that doesn't fit with our religion and traditions,". Mothers also voiced concerns about the potentially negative influence of certain social media influencers on their daughters. They were concerned that their daughters might imitate behaviours such as overspending or buying expensive items that are out of the family's budget. These mothers feared that the luxurious lifestyles often portrayed by influencers could encourage unrealistic and harmful financial habits in their daughters.

Additionally, the mothers mentioned concerns about their daughters interacting with strangers online (16 times), being victims of blackmail (8 times), hate speech (8 times), sexual harassment (8 times), cyberbullying (6 times), or hacking (4 times). They were also worried about their daughters sharing personal information with strangers, which could lead to risks (3 times). Some mothers were concerned about exposure to disturbing online content, such as violent or upsetting material, and its impact on mental health (2 times). These concerns highlight the broad range of dangers that mothers perceive in the online environment and their potential effects on their daughters' safety and well-being.

On the other hand, a smaller group of girls (13 out of 158) shared their concerns, which included the risk of communicating with strangers, accidentally finding pornographic or other unwanted content like crime-related news and images, as well as the possibility of facing hacking, blackmail, sexual harassment, and hate speech related to Islamophobia. Each of these concerns was raised once or twice. This smaller response

rate from the girls suggests that they might either be less aware of these risks or less willing to express their worries compared to their mothers.

### 6.5.3 Contact Risks

This section examines the contact risks encountered by Saudi adolescents girls online, highlighting their experiences with strangers and the potential dangers involved. The survey asked about various risks associated with online interactions, revealing significant findings. A substantial 66% of the girls reported being approached by a stranger online in the past year. Additionally, 18% of them had met someone in person whom they initially connected with online. An important detail from Table 6.19 is that 32% of those who met someone in person did not inform a responsible adult beforehand. This lack of communication raises serious concerns about the safety measures the girls are taking and their understanding of the potential risks involved in meeting in person with individuals they first met online.

**Table 6.19: Interaction with Online Strangers**

Contacted by Strangers Online in the Past Year	Never	31% (n=50)	66% (n= 105)
	Only once	18% (n=28)	
	A few times	27% (n=43)	
	Many times	22% (n=34)	
	Prefer not to say	2% (n=3)	
Face-to-Face Meetings with Online Contact	Never	82% (n=130)	18% (n=28)
	Only once	6% (n=9)	
	A few times	8% (n=12)	
	Many times	4% (n=7)	
	Prefer not to say	0% (n=0)	
Of Those Girls Who Have Met Face-to-Face with Online Strangers			
Disclosure to Adults about Meeting Online Contacts	Yes	68% (n=19)	
	No	32% (n=9)	
	Prefer not to say	0% (n=0)	

All girls 12-17 years old (n=158)

Table 6.20 reveals that older girls (age groups 14-15 and 16-17) were more inclined to communicate with online strangers and to meet them in person, suggesting an age-related increase in exposure to contact risks.

**Table 6.20: Age Group Analysis of Interaction with Online Strangers**

	<b>Girls' Age Range</b>	<b>Percentage of Girls ho Answered (Yes)</b>
<b>Contacted by Strangers Online</b>	12-13	45% (n=10)
	14-15	72% (n=73)
	16-17	74% (n=25)
<b>Face-to-Face Meetings with Online Contact</b>	12-13	14% (n=3)
	14-15	19% (n=19)
	16-17	17% (n=6)
<b>Of Those Girls Who Have Met Face-to-Face with Online Strangers</b>		
	<b>Girls' Age Range</b>	<b>Percentage of Girls Who Answered (Yes)</b>
<b>Disclosure to Adults about Meeting Online Contacts</b>	12-13	50% (n=2)
	14-15	79% (n=15)
	16-17	33% (n=2)

Furthermore, the girls were asked about other potential risks associated with online contact. The findings show that 15% experienced hacking, 9% were victims of financial fraud, 8% faced identity theft, and 32% encountered some form of online mistreatment or hurtful behaviour. Most girls experienced these risks only once or a few times, but a few reported multiple instances (Table 6.21).

**Table 6.21: Incidence of Online Contact Risks in the Past Year**

	<b>Never</b>	<b>85% (n=134)</b>	
<b>Experiences of Hacking</b>	Only once	12% (n=19)	15% (n= 24)
	A few times	3% (n=5)	
	Many times	0% (n=0)	
	Prefer not to say	0% (n=0)	

<b>Incidents of Financial Fraud Online</b>	Never	91% (n=143)	9% (n=15)
	Only once	7% (n=11)	
	A few times	1% (n=2)	
	Many times	1% (n=2)	
	Prefer not to say	0% (n=0)	
<b>Cases of Identity Theft Online</b>	Never	90% (n=142)	8% (n=13)
	Only once	4% (n=7)	
	A few times	2% (n=3)	
	Many times	2% (n=3)	
	Prefer not to say	2% (n=3)	
<b>Experiences of Hurtful or Nasty Treatment Online</b>	Never	66% (n=104)	32% (n=50)
	Only once	14% (n=22)	
	A few times	11% (n=17)	
	Many times	7% (n=11)	
	Prefer not to say	2% (n=4)	

An analysis by age group (Table 6.22) shows varied exposure to these risks, but no clear pattern emerged to suggest whether risk exposure increases or decreases with age. This suggests that girls of all ages are similarly vulnerable to these online risks.

**Table 6.22: Age Group Analysis of Online Contact Risks in the Past Year**

	<b>Girls' age range</b>	<b>Percentage of girls who answered yes</b>
<b>Experiences of Hacking</b>	12-13	23% (n=5)
	14-15	16% (n=16)
	16-17	9% (n=3)
<b>Incidents of Financial Fraud Online</b>	12-13	14% (n=3)
	14-15	8% (n=8)
	16-17	12% (n=4)
<b>Cases of Identity Theft Online</b>	12-13	4% (n=1)
	14-15	13% (n=13)
	16-17	6% (n=2)
<b>Experiences of Hurtful or Nasty Treatment Online</b>	12-13	23% (n=5)
	14-15	39% (n=40)
	16-17	26 % (n=9)

### 6.5.3.1 Discrepancies Between Girls' Reports and Mothers' Perceptions

A significant gap was found between the girls' experiences and their mothers' awareness of these risks (Table 6.23). While 66% of the girls reported being contacted by strangers online, only 35% of the mothers were aware of this. Similarly, 18% of the girls reported meeting someone in person whom they first met online, compared to only 12% of the mothers acknowledging their daughters' involvement in such encounters. In terms of exposure to specific online risks, mothers generally underestimated their daughters' experiences. For hacking, only 8% of the mothers thought their daughters had been hacked, compared to 15% of the girls reporting such incidents. The girls also reported higher instances of financial fraud, cyberbullying, and identity theft than their mothers perceived.

These findings highlight a crucial communication gap between mothers and daughters regarding online activities and risks, underscoring the need for more open dialogue and awareness about internet safety within families.

**Table 6.23: Comparison of Girls' Experiences and Mothers' Perceptions of Online Risks**

	Girls	Mothers
Girls vs. Mothers: Contacted by Strangers Online	66% (n= 105)	35% (n=39)
Girls vs. Mothers: In-Person Meetings with Online Contact	18%(n=28)	12% (n=13)
Girls vs. Mothers: Experiences of Hacking, Financial Fraud, Identity Theft, and Cyberbullying	Hacking	15% (n=24)
	Financial fraud.	9% (n=15)
	Identity theft.	10% (n=16)
	Cyber bullying	34% (n=54)
		25% (n=28)

#### 6.5.4 Content Risk

This section explores the exposure of Saudi girls to content risks online, focusing on their encounters with potentially harmful user-generated content. The survey asked about their exposure to discussions or images related to self-harm, suicide, hate speech, violence, and sexually explicit material. The findings revealed that a significant number of girls had come across such harmful content online within the past year. Specifically, 36% of the girls encountered content promoting self-harm or suicide, 58% were exposed to hateful content directed at specific groups based on race, ethnicity, or religion. In addition, 60% of them witnessed violence against humans or animals, 31% came across explicit pornography, and 57% saw content advocating extreme diets (Table 6.24).

**Table 6.24: Exposure to Harmful Online Content**

<b>Girls' Reported Encounters with Various Types of Harmful Online Content in the Past Year</b>			
Ways of Committing Suicide or Self-harm	Never	58% (n=91)	36% (n= 57)
	Only once	11% (n=18)	
	A few times	15% (n=24)	
	Many times	10% (n=15)	
	Prefer not to say	6% (n=9)	
Hate Messages	Never	41% (n=65)	58% (n=91)
	Only once	14% (n=22)	
	A few times	16% (n=25)	
	Many times	28% (n=44)	
	Prefer not to say	1% (n=2)	
Violence Directed at Humans or Animals	Never	37% (n=59)	60% (n=95)
	Only once	16% (n=26)	
	A few times	25% (n=39)	
	Many times	19% (n=30)	
	Prefer not to say	2% (n=4)	
Sexual Content	Never	63% (n=99)	31% (n=48)
	Only once	12% (n=18)	
	A few times	10% (n=16)	
	Many times	9% (n=14)	
	Prefer not to say	6% (n=10)	

Content Diets	Advocating Extreme	Never	42% (n=67)	57% (n=89)
		Only once	15% (n=24)	
		A few times	22% (n=34)	
		Many times	20% (n=31)	
		Prefer not to say	1% (n=2)	

The analysis further shows that older girls (14-17 years) had higher exposure levels to harmful content compared to younger ones (12-13 years), suggesting an increase in risk with age. This trend indicates that as girls grow older, they are more likely to encounter potentially dangerous material online.

**Table 6.25: Age-Based Exposure to Harmful Online Content**

Comparison of Exposure to Harmful Content Among Different Age Groups	Girls' age range	Percentage of girls who answered yes
Ways of Committing Suicide or Self-harm	12-13	27% (n=6)
	14-15	46% (n=47)
	16-17	38% (n=13)
Hate Messages	12-13	36% (n=8)
	14-15	69% (n=70)
	16-17	44% (n=15)
Violence Directed at Humans or Animals	12-13	55% (n=12)
	14-15	65% (n=66)
	16-17	62% (n=21)
Sexual Content	12-13	32% (n=7)
	14-15	36% (n=37)
	16-17	41% (n=14)
Content Advocating Extreme Diets	12-13	27% (n=6)
	14-15	59% (n=60)
	16-17	62% (n=21)

The girls identified the most common sources of risky content as social media platforms like TikTok and Snapchat (44%), followed by video-sharing sites like YouTube (35%), and pop-up windows during internet use (30%). Only a minority (11%) encountered such content on gaming sites, and 8% received inappropriate material

from strangers. Additionally, some girls (6%) actively sought out risky content. These findings are illustrated in Table 6.26.

**Table 6.26: Sources of Exposure to Harmful Online Content**

<b>Where Girls Most Frequently Encounter Harmful Content Online</b>	
On Social Networking Sites	44% (n=70)
On Video Sharing Platforms	35% (n=55)
By Pop-up Windows During Internet Use	30% (n=48)
Prefer Not to Say	19% (n=30)
In Online Games	11% (n=17)
Received from Online Strangers	8% (n=13)
On websites specifically related to these topics	6% (n=9)
Received from Friends or Family	3% (n=5)
By Instant Messaging	3% (n=4)
Other	1% (n=2)

#### **6.5.4.1 Discrepancies Between Girls' Reports and Mothers' Perceptions**

There were noticeable discrepancies between the girls' reports of their exposure to harmful online content and their mothers' perceptions. Mothers generally underestimated the extent of their daughters' exposure to harmful online content. This difference was evident across various types of content. For instance, while 36% of the girls reported encountering content related to self-harm or suicide, only 26% of the mothers believed their daughters had seen such material. Similarly, 58% of the girls reported encountering hate speech, yet only 43% of the mothers believed their daughters had experienced it. When it came to violent content, 60% of the girls acknowledged their exposure, compared to 48% of the mothers who were aware of this exposure. The gap widened further with sexually explicit content; 31% of the girls reported seeing this type of content, whereas only 14% of the mothers were aware of their daughters encountering it. Additionally, content promoting extreme diets was



seen by 57% of the girls, but only 40% of the mothers thought their daughters had come across such material (Table 6.27). This notable difference in perceptions indicates a significant communication gap between girls and their mothers, emphasising the need for more awareness and open discussions about the range of risks present on the internet and how they affect young users.

**Table 6.27: Content Risk - Girls' Reports vs. Mothers' Perceptions**

<b>Comparing Girls' Reported Exposure to Harmful Content with Mothers' Perceptions</b>	<b>Girls Reports</b>	<b>Mothers Perceptions</b>
<b>Ways of Committing Suicide or Self-harm</b>	36% (n= 57)	26% (n=29)
<b>Hate Messages</b>	58% (n=91)	43% (n=48)
<b>Violence Directed at Humans or Animals</b>	60% (n=95)	48% (n=53)
<b>Sexual Content</b>	31% (n=48)	14% (n=16)
<b>Content Advocating Extreme Diets</b>	57% (n=89)	40% (n=44)

### 6.5.5 Conduct Risk

In examining the risks related to online behaviour, the study looked into the girls' involvement in certain risky internet activities over the past year. This part of the survey was important for understanding the dangers that come from the girls' own actions online. The findings were quite revealing as over half of the girls, specifically 53%, admitted to having online conversations with strangers for fun. A significant portion, 25%, shared personal information such as their full name, address, and phone number with people they had never met in person, and 14% did so hoping to win a prize. Additionally, 27% of the participants shared personal photos with strangers, and 45% allowed strangers to follow their social media accounts and view their content.

The study also found that 7% of the girls had engaged in hurtful or mean online behaviours towards others at least once in the past year, showing another type of risk where the girls not only expose themselves to danger but also potentially harm others. These statistics, detailed in Table 6.28, highlight how young girls may unknowingly put themselves or others at risk online through their behaviours.

**Table 6.28: Frequency of Engagement in Risky Online Behaviours Among Girls**

Various Forms of Risky Internet Behaviour Undertaken by Girls in the Past Year			
Conversing with Strangers Online for Fun	Never	47% (n=75)	
	Only once	15% (n=23)	53% (n= 83)
	A few times	17% (n=27)	
	Many times	21% (n=33)	
	Prefer not to say	0% (n=0)	
Sharing Personal Information with Strangers	Never	75% (n=118)	
	Only once	12% (n=19)	25% (n=40)
	A few times	8% (n=13)	
	Many times	5% (n=8)	
	Prefer not to say	0% (n=0)	
Sending Personal Photos to Strangers	Never	73% (n=115)	
	Only once	13% (n=20)	27% (n=43)
	A few times	7% (n=11)	
	Many times	7% (n=12)	
	Prefer not to say	0% (n=0)	
Accepting Follow Requests from Strangers on Social Media	Never	55% (n=87)	
	Only once	9% (n=14)	45% (n=71)
	A few times	14% (n=22)	
	Many times	22% (n=35)	
	Prefer not to say	0% (n=0)	
Sharing Personal Information Online for Prizes	Never	86% (n=135)	
	Only once	9% (n=14)	14% (n=23)
	A few times	2% (n=4)	
	Many times	3% (n=5)	
	Prefer not to say	0% (n=0)	
Treating Someone Else Online in a Hurtful or Nasty Way	Never	90% (n= 143)	
	Only once	3% (n=4)	7% (n=11)
	A few times	2% (n=3)	
	Many times	3% (n=4)	
	Prefer not to say	0% (n=0)	

A particularly interesting aspect of these findings was the connection between age and risky behaviour. The data indicated that older girls, particularly those between 14-16 years, were more likely to participate in risky online activities compared to the younger group of 12-13 years old, as shown in Table 6.29.

**Table 6.29: Age-Based Engagement in Online Risky Conduct**

Comparison of Risky Online Behaviour Across Different Age Groups	Girls' Age Range	Percentage of Girls Who Answered (Yes)
Conversing with Strangers Online for Fun	12-13	45% (n=10)
	14-15	56% (n=57)
	16-17	47% (n=16)
Sharing Personal Information with Strangers	12-13	14% (n=3)
	14-15	23% (n=23)
	16-17	41% (n=14)
Sending Personal Photos to Strangers	12-13	14% (n=3)
	14-15	29% (n=30)
	16-17	29% (n=10)
Accepting Follow Requests from Strangers on Social Media	12-13	36% (n=8)
	14-15	47% (n=48)
	16-17	47% (n=16)
Sharing Personal Information Online for Prizes	12-13	5% (n=1)
	14-15	15% (n=15)
	16-17	21% (n=7)
Treating Someone Else Online in a Hurtful or Nasty Way	12-13	5% (n=1)
	14-15	6% (n=6)
	16-17	12% (n=4)

#### 6.5.5.1 Discrepancies Between Girls' Reports and Mothers' Perceptions

As observed in other parts of the survey, there was a significant difference between the girls' self-reported involvement in risky online behaviour and their mothers' perceptions of such activities. According to the data presented in Table 6.30, 53% of the girls admitted to chatting with strangers online just for fun. However, only 30% of

the mothers were aware that their daughters were engaging in such activities. Similarly, while 25% of the girls acknowledged sharing personal information, such as their full name, address, or phone number, with unknown individuals online, only 9% of the mothers believed that their daughters were doing this. Additionally, 27% of the girls admitted to sharing personal photos with strangers, but only 7% of the mothers were aware of this behaviour. Another area of concern is the acceptance of follow requests from strangers on social media platforms. About 45% of the girls reported allowing strangers to follow their accounts and view their content, whereas only 27% of mothers knew this was happening. Moreover, 15% of the girls shared personal information online in hopes of winning prizes, but only 12% of the mothers were aware of this risky behaviour. Lastly, 7% of the girls admitted to behaving hurtfully or nastily towards others online, yet only 4% of mothers recognised that their daughters were involved in such conduct.

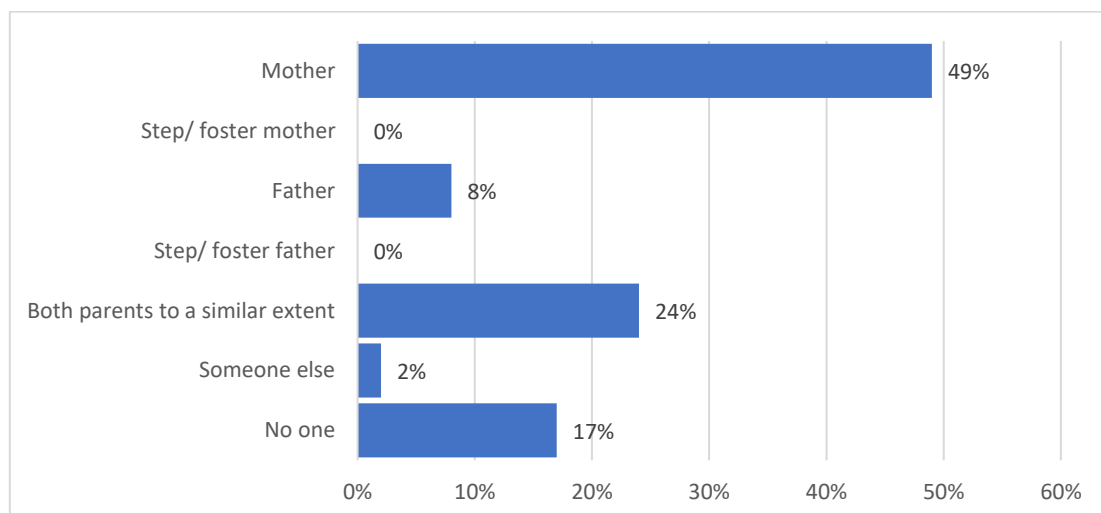
**Table 6.30: Conduct Risks - Girls' Reports vs. Mothers' Perceptions**

<b>Comparative Analysis of Girls' Involvement in Risky Online Behaviours and Mothers' Awareness of the Same</b>	<b>Girls Reports</b>	<b>Mothers Perceptions</b>
Conversing with Strangers Online for Fun	53% (n= 83)	30% (n=33)
Sharing Personal Information with Strangers	25% (n=40)	9% (n=10)
Sending Personal Photos to Strangers	27% (n=43)	7% (n=8)
Accepting Follow Requests from Strangers on Social Media	45% (n=71)	27% (n=30)
Sharing Personal Information Online for Prizes	15% (n=23)	12% (n=13)
Treating Someone Else Online in a Hurtful or Nasty Way	7% (n=11)	4% (n=5)

## 6.6 Parental Mediation

This section explores the critical role played by parents in overseeing and guiding their daughters' internet activities, which is essential for maintaining online safety within Saudi Arabian families. The initial part of this section in the survey aimed to identify the primary supervisors of girls' internet use at home. The responses, as shown in Figure 6.19, highlighted different patterns of supervision. Nearly half of the girls (49%) indicated their mothers as the sole supervisors of their online activities. About a quarter (24%) reported that both parents shared this responsibility, while a smaller group (8%) identified their fathers as the main supervisors. Alarming, a significant 17% of the girls disclosed the absence of any supervision, and an additional 2% were under the watch of non-parental guardians.

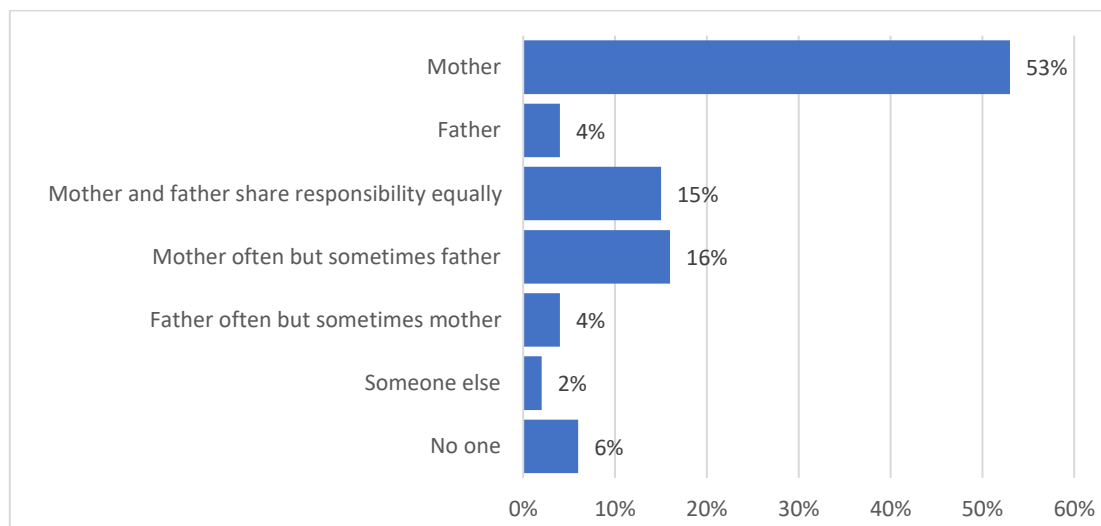
**Figure 6.19: Primary Supervisors of Girls' Internet Use at Home - Girls' Perspective**



Mothers' responses largely matched those of their daughters. Over half (53%) said they alone supervise their daughters' internet use, with no involvement from the

fathers. About 16% of the mothers reported taking the lead in this role with occasionally some assistance from their partners. An equal share of responsibility between mothers and fathers was reported by 15% of the respondents. In contrast, only a small number of the mothers (4%) recognised fathers as the only or main supervisors. Additionally, 6% of the mothers admitted the absence of any parental supervision over their daughters' internet activities, and 2% reported that someone other than themselves supervised their daughters (Figure 6.20).

**Figure 6.20: Primary Supervisors of Girls' Internet Use at Home - Mothers' Perspective**

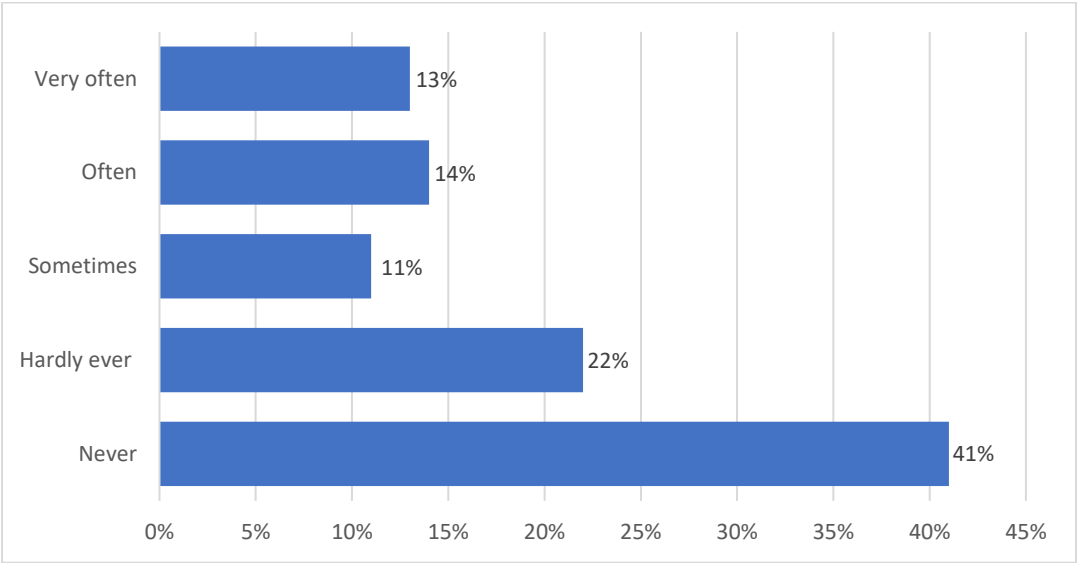


### 6.6.1 Insights into Parental Awareness

The study examined how frequently girls discuss their online experiences, particularly negative ones, with their parents. The findings revealed a communication gap: approximately 41% of the girls indicated they never shared negative online experiences with their parents, and an additional 22% rarely did so. The remaining girls varied in how often they shared these experiences: 11% said they sometimes

talked about them, 14% said they often did, and 13% said they almost always had these discussions. This shows that a significant number of girls do not regularly communicate with their parents about their negative online experiences, which could impact how well parents understand and can help with online safety.

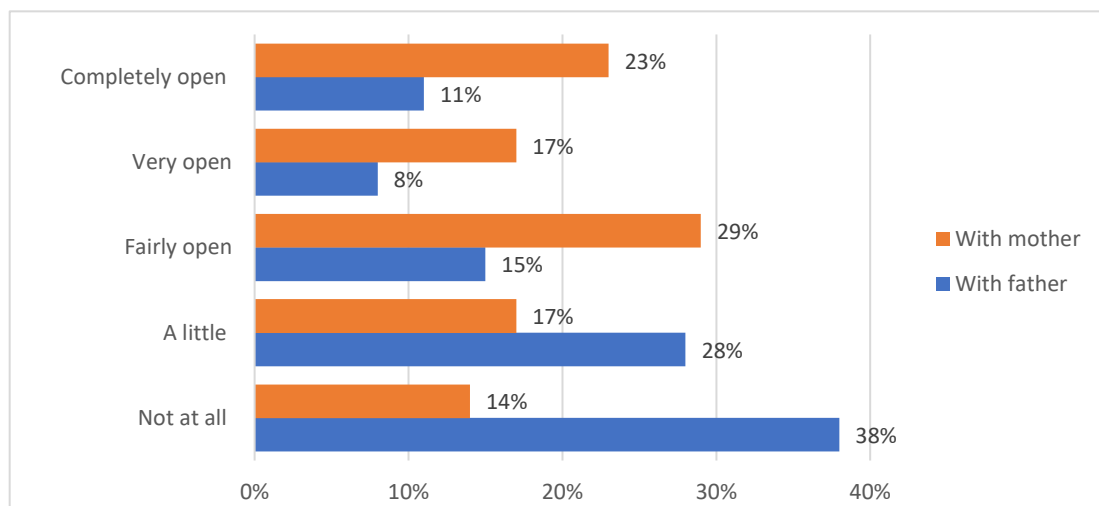
**Figure 6.21: Frequency of Girls Communicating Upsetting Online Experiences to Their Parents**



When exploring the general openness of girls with their parents regarding their internet usage, including both positive and negative experiences, the survey highlighted a difference between communication with mothers and fathers. The results indicate that girls are more likely to discuss their online activities with their mothers. Specifically, 23% of the girls reported complete openness with their mothers, compared to just 11% reported the same level of openness with their fathers. Additionally, 17% of girls reported being very open with their mothers, sharing most but not all details of their online activities, while only 8% felt similarly open with their fathers. On the other hand, 14% of the girls never discuss internet-related issues with

their mothers, which is much lower than the 38% who never have such discussions with their fathers (Figure 6.22). This suggests that mothers may have a better understanding of their daughters' online lives compared to fathers.

**Figure 6.22: Girls' Openness with Parents Regarding Internet Use**



Further investigation was conducted into the parents' awareness of their daughters' online interactions, digital media consumption, and overall internet usage. The findings indicated a higher perceived awareness among mothers compared to fathers. According to Table 6.31, 28% of the girls believed that their mothers were fully aware of their online interactions, compared to only 13% who felt the same about their fathers. When it came to online media consumption, 19% felt their mothers were fully aware, whereas only 8% believed their fathers were. Similarly, 29% thought their mothers were fully aware of their overall internet usage, while just 15% thought this was true for their fathers. These results suggested that mothers generally had a better understanding of their daughters' online activities compared to fathers.



Despite these differences, the data showed that a significant portion of parents, both mothers and fathers, might not have a complete understanding of their daughters' internet use and the related risks. Notably, 54% of fathers and 28% of mothers had limited or no knowledge of who their daughters interacted with online. Additionally, 53% of fathers and 29% of mothers were not well-informed about the online content their daughters accessed. Furthermore, 45% of fathers and 23% of mothers had limited or no understanding of their daughters' overall internet use.

**Table 6.31: Girls' Perceptions of Their Parents' Awareness of Their Internet Activities**

Assessment of Parental Awareness Regarding Girls' Internet Activities										
	Nothing		Just a little		Quite a bit		A lot		Everything	
	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother
<b>Online Communication</b>	37% (n=58)	15% (n=23)	17% (n=27)	13% (n=21)	15% (n=23)	20% (n=32)	14% (n=22)	19% (n=30)	13% (n=20)	28% (n=44)
<b>Online Content Consumption</b>	30% (n=47)	16% (n=26)	23% (n=37)	15% (n=24)	16% (n=25)	24% (n=38)	16% (n=26)	20% (n=31)	8% (n=13)	19% (n=30)
<b>General Internet Use</b>	21% (n=32)	8% (n=12)	24% (n=37)	15% (n=24)	20% (n=31)	21% (n=33)	17% (n=26)	21% (n=33)	15% (n=23)	29% (n=46)

#### 6.6.1.1 Discrepancies Between Girls' Reports and Mothers' Perceptions

The survey aimed to compare mothers' perceptions of their awareness about their daughters' internet use with the daughters' views on the same. The responses painted a clear picture: a significant majority of the mothers (56%) believed they were highly or fully informed about who their daughters were communicating with online. Regarding the daughters' online content consumption, 41% of the mothers felt they

were highly or fully aware. Moreover, nearly half (48%) of the mothers considered themselves to be well-informed about all aspects of their daughters' internet usage. Conversely, the percentage of mothers admitting to a lack of awareness in these areas was considerably low (Table 6.32).

**Table 6.32: Mothers' Perception of Their Awareness of Daughters' Online Activities**

	<b>Nothing</b>	<b>Just a little</b>	<b>Quite a bit</b>	<b>A lot</b>	<b>Everything</b>
<b>Online Communication</b>	7% (n=8)	11% (n=12)	26% (n=29)	28% (n=31)	28% (n=31)
<b>Online Content Consumption</b>	4% (n=5)	20% (n=22)	34% (n=38)	25% (n=28)	16% (n=18)
<b>General Internet Use</b>	1% (n=2)	10% (n=10)	41% (n=46)	30% (n=33)	18% (n=20)

The difference becomes even more clear when the daughters' views are considered. For example, 28% of the daughters felt their mothers had limited or no knowledge of their online interactions, while only 18% of the mothers thought they lacked awareness in this area. Similarly, 23% of the daughters saw their mothers as having limited or no knowledge of their overall internet use, a concern only 11% of the mothers shared. This difference in perceptions highlights a potential communication gap and misunderstanding between the mothers and their daughters regarding online activities and related risks. For a detailed comparison, see Table 6.33.

**Table 6.33: Contrasting Views on Mothers' Awareness of Daughters' Internet Use Between Girls and Mothers**

<b>Differences in the Levels of Mothers' Awareness as Perceived by Both Parties</b>						
	Nothing or Just a little		Quite a bit		A lot or Everything	
	<b>Mother</b>	<b>Girls</b>	<b>Mother</b>	<b>Girls</b>	<b>Mother</b>	<b>Girls</b>
<b>Daughters' Online Communication</b>	18% (n=20)	28% (n=44)	26% (n=29)	20% (n=32)	56% (n=62)	47% (n=74)
<b>Daughters' Online Content Consumption</b>	24% (n=27)	31% (n=50)	34% (n=38)	24% (n=38)	41% (n=46)	39% (n=61)
<b>Daughters' General Internet Use</b>	11% (n=12)	23% (n=36)	41% (n=46)	21% (n=33)	48% (n=53)	50% (n=69)

## 6.6.2 Parental Challenges and Strategies for Online Safety

### 6.6.2.1 Challenges Mothers Face in Supervising Daughters' Online Activities

The survey sought insights from the mothers regarding the obstacles they faced in supervising their daughters' online activities. A surprising 62% of the mothers reported no challenges, claiming they were fully aware of their daughters' online actions. Yet, 14% admitted that they no longer supervised their daughters, believing these girls had matured beyond the need for parental oversight. The remaining mothers mentioned various challenges that affected their ability to monitor their daughters' internet use effectively. The most significant issue, reported by 27% of the mothers, was time management, with many expressing the difficulty of balancing numerous responsibilities and the limited time available for supervision.

Another common challenge, experienced by 21%, was the daughters' preference to use the internet in their private spaces, such as their bedrooms, away from parental

observation. Alongside this, 20% of the mothers pointed out the use of headphones by their daughters as a problem in understanding who they were communicating with or what they were listening to online. Technical knowledge gaps also presented a challenge for 12% of the mothers, making it harder to supervise or understand their daughters' activities on tech devices. The small screen size of devices, particularly smartphones, was noted by 8% as a barrier to monitoring what their daughters view. The daughters' unwillingness to share what is on their devices with their mothers was another significant obstacle, mentioned by 6%. Additionally, the same percentage of mothers noted the ease with which their daughters could access the internet outside the home, such as at friends' houses or public places, as a challenge in maintaining oversight of their online activities

**Table 6.34: Challenges Mothers Face in Supervising Daughters' Online Activities**

	%
Limited time due to multiple responsibilities, hindering supervision	27%
Daughter's use of the internet in private spaces, reducing oversight	21%
Inability to hear online interactions due to daughter's use of headphones	20%
Lack of internet know-how, making supervision challenging	12%
Small device screens, preventing clear visibility of daughters' activities	8%
Daughter's preference to keep online content private from mother	6%
Daughter's internet access outside the home, reducing control	6%

#### **6.6.2.2 Mothers' Perspectives on Protective Measures for Online Safety**

Mothers were asked to identify key factors they believed could effectively reduce their daughters' exposure to online risks. Their responses highlighted a variety of protective measures considered crucial for ensuring the safety of girls online.

**Religious Faith as a Safeguard:** A significant 87% of mothers emphasised the important role of religious faith. They stressed the importance of instilling a strong sense of God's presence in their daughters, believing that a deep-rooted belief in God acts as a powerful safeguard against risky online behaviours. Such behaviours include viewing or sharing prohibited content like pornography, engaging in sexual activities, or forming inappropriate relationships with strangers online, all of which go against Islamic teachings. The mothers believed that this faith-based approach not only helps in avoiding such activities but also protects girls from being influenced by content promoting illegal activities like drug use, smoking, and self-harm, all of which are strictly forbidden in Islam. "I always tell my daughter, 'Remember, Allah is always watching over us.' This belief, I think, keeps her from going down the wrong path online, especially when she comes across stuff about sex, drugs or self-harm," one mother shared. Another mother emphasised, "Believing that God is watching over us protects girls from bad things on the Internet, like seeing pornographic stuff or chatting with the wrong kind of people. It is like a protective shield around their hearts and minds."

**Discussions on Internet Safety:** In the view of 83% of the mothers, regular dialogues between parents and daughters about the potential dangers of the internet and necessary safety measures were another key protective factor. These discussions are

seen as essential in raising awareness and guiding girls in navigating the digital world safely. One mother shared, "I believe that parents' constant discussions with girls about the dangers of the Internet greatly help in protecting them. It is crucial to keep them informed and aware." Another mother added, "Talking openly about online risks helps build trust and ensures that daughters feel comfortable coming to their parents if they encounter any issues."

**Importance of Parental Supervision:** Parental supervision and careful monitoring of girls' online activities were highlighted by 76% of the mothers as essential. This includes keeping an eye on the websites visited, the content consumed, and the people interacted with online. One mother shared, "Regularly monitoring what my daughter does online significantly reduces her exposure to potential dangers. It's a key part of keeping her safe." Another mother added, "Being aware of my daughter's online friends and activities helps me guide her better and address any issues before they become serious problems."

**Encouraging Offline Activities:** Additionally, 73% of mothers stressed the importance of engaging girls in offline activities. They encouraged parents to find useful ways to fill their daughters' free time, which helps reduce the hours spent online and the related risks. One mother noted, "Getting daughters to do more offline activities is a good way to keep them away from online dangers. It keeps them connected to the real world." Another mother added, "Activities like sports, reading, and family outings will keep them busy and also help them develop skills that are beneficial for their growth."

**Limiting Online Time:** Limiting the amount of time spent online was seen as important by 58% of the mothers. They suggested that reducing the time girls spend on the internet can significantly lower their exposure to potential online dangers. One mother said, "By limiting the amount of time girls spend on the internet, I believe we can significantly reduce the risk of encountering dangerous situations online." A different mother commented, "Setting clear rules about internet use helps keep our kids safe from the many risks they might face online."

**Schools' Role in Online Safety:** The role of schools was also highlighted, with more than half of the mothers recognising the importance of schools in educating girls about online risks and safety measures. They emphasised the need for a collaborative effort between schools and parents in this regard. "It's crucial that schools also play a part in teaching girls about staying safe online," a mother commented.

**Supervised Internet Access:** Lastly, 43% of the mothers supported supervised internet access within the family. They recommended using technical tools like site blocking and content filtering to prevent access to inappropriate online material. One mother said, "Using technical tools helps in making sure kids don't see harmful content."

These responses highlight the mothers' belief in a comprehensive approach that combines religious guidance, education, supervision, and communication to effectively reduce the risks girls face in the digital world.

### **6.6.3 Parental Mediation Approaches in Internet Use**

In the context of digital parenting, it is important to understand the strategies parents use to manage and guide their daughters' internet activities. A range of questions was posed to both the girls and their mothers to find out the common strategies used by Saudi Arabian parents in managing their daughters' internet use. Both groups were asked about a variety of parenting practices that indicate the form of parental mediation applied. These practices were categorised into four main types based on established research: active mediation, restricted mediation, technical mediation, and monitoring. This classification helps to clearly define and understand the different strategies parents use to guide their daughters' online activities.

#### **6.6.3.1 Active parental mediation**

Active parental mediation includes the support, advice, and interactive guidance parents provide to their children regarding digital media use. This involves active discussions and shared activities. The survey asked the girls how frequently their parents, or at least one of them, engage in six specific actions that show this active mediation approach. Data from Table 6.35 and Figure 6.22 show a significant number of girls noting their parents' involvement in various active support strategies for internet use. Notable among these are encouraging online learning and skill improvement (72%), participating in online activities together (51%), guiding safe internet practices (73%), discussing ways to handle negative online incidents (56%), helping with internet-based tasks (65%), and offering support in response to troubling online content (54%). The data also shows that active mediation by parents generally

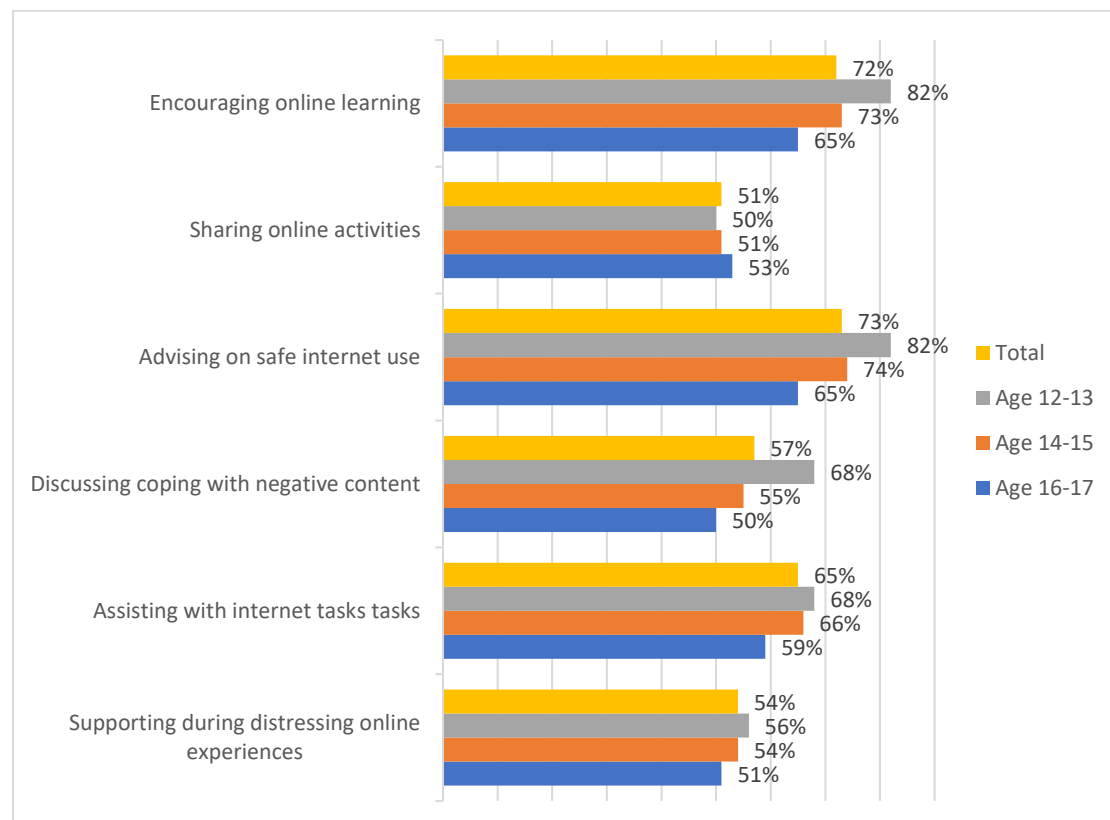


decreases as daughters get older, except for shared online activities, which seem to increase slightly with age (Figure 6.23).

**Table 6.35: Girls' Reports on Parents' Use of Active Mediation**

Actions	Never	Hardly ever	Sometimes	Often	Very often
Encouraging online learning	15% N=23	13% N=21	19% N=30	26% N=41	27% N=43
Sharing online activities	29% N=46	20% N=31	19% N=30	19% N=30	13% N=21
Advising on safe internet use	12% N=19	15% N=24	20% N=31	21% N=33	32% N=51
Discussing coping with negative content	28% N=44	16% N=26	15% N=23	20% N=32	21% N=33
Assisting with internet tasks	19% N=30	16% N=26	20% N=31	19% N=30	26% N=41
Supporting during distressing online experiences	30% N=47	15% N=25	23% N=36	19% N=30	13% N=20

**Figure 6.23: Age-Based Distribution of Girls Reporting Active Parental Mediation (At Least Sometimes)**



#### **6.6.3.1.1 Discrepancies in Perceptions Between Girls and Their Mothers**

A detailed examination of the responses from the girls compared to the perceptions of their mothers showed significant differences in their perspectives. Data presented in Table 6.36 highlights these gaps. For example, in the context of encouraging online learning, 72% of the girls reported frequent support from their parents, a higher percentage of mothers (90%) believed they were often or very often engaging in this form of mediation. A more pronounced disparity was observed in sharing online activities. While 70% of the mothers thought they were actively involved, only 51% of the girls reported similar experiences.

When it came to discussing safe internet use, the contrast was even more clear. A large majority of mothers (93%) believed they often or very often advised on safe internet practices, compared to 73% of the girls who said they received such guidance. The discussion of coping strategies for handling negative online content also revealed a substantial perceptual gap. While 85% of the mothers believed they frequently engaged in such discussions, only 56% of the girls felt the same. Assistance with internet tasks and support during distressing online experiences further illustrate the differences between mothers' and daughters' perceptions. While the majority of mothers perceived themselves as supportive, a considerable number of girls reported receiving less help and support than what their mothers believed they were providing (Table 6.36).

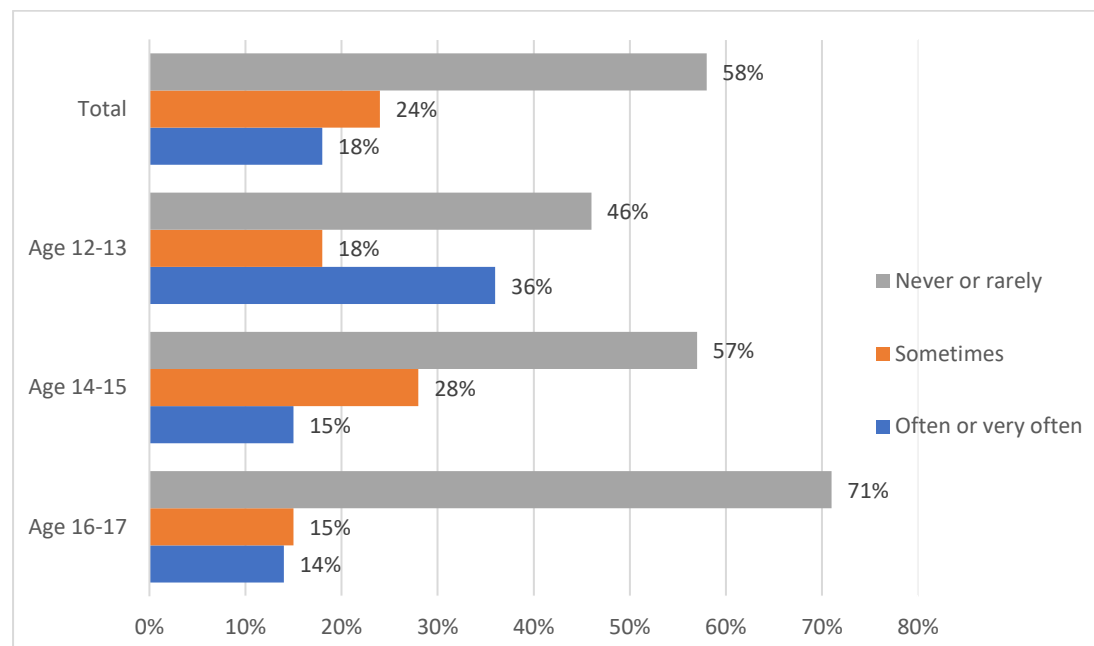
**Table 6.36: Discrepancies in Active Parental Mediation: Girls' Reports vs. Mothers' Perceptions**

Actions	Never/ Hardly Ever		Sometimes/ Often/ Very Often	
	Girls	Mothers	Girls	Mothers
Encouraging online learning	28% N=44	10% N=12	72% N=114	90% N=99
Sharing online activities	49% N=77	30% N=33	51% N=81	70% N=78
Advising on safe internet use	27% N=43	7% N=8	73% N=115	93% N=103
Discussing coping strategies	44% N=70	15% N=17	56% N=88	85% N=94
Assisting with internet tasks	35% N=56	14% N=16	65% N=102	86% N=95
Supporting during distressing online experiences	45% N=72	19% N=21	55% N=86	81% N=90

### 6.6.3.2 Restrictive Parental Mediation

Restrictive parental mediation involves strategies used by parents to set boundaries or limits on their children's internet activities. The survey explored whether such rules existed in the girls' homes, focusing on rules about the duration and timing of their online use. The data, shown in Figure 6.24, indicates a clear trend: 58% of the girls reported that their parents rarely or never set restrictions on their internet use. Additionally, an age-related pattern emerges, where the lack of internet restrictions at home increases from 46% in the 12-13 year age group to 57% among 14-15 year-olds, and further to 71% in the 16-17 year age group. This trend suggests a decrease in restrictive mediation practices as girls grow older.

**Figure 6.24: Girls' Reports on Parents' Use of Restrictive Mediation By Age Group**



The girls were further asked to specify the extent of permission or supervision required for various internet-based activities. The responses, as detailed in Table 6.37, provide insight into the different levels of freedom and restriction the girls have in the digital space. The data shows a significant level of independence granted to the girls in certain online activities. A large majority, 85%, reported having unrestricted access to watching video clips, such as those on YouTube. Similarly, 68% experienced no parental limits when visiting social networking sites like Snapchat or TikTok.

In contrast, some activities were more regulated, especially using web or phone cameras for Skype or video chats. Only 43% had unrestricted access and 32% required parental permission or supervision. This trend of conditional access extended to sharing personal photos with friends and family online, with 25% needing parental approval. The mixed responses continued in activities like participating in online games with others and sharing multimedia on social networking sites. Approximately

31% could play online games freely, while 19% needed parental oversight, and 34% faced restrictions. Similarly, for sharing multimedia on social networking sites, 39% had unrestricted access, yet 17% needed parental approval and 34% were restricted.

The survey highlighted that the strictest rules were in place for sharing personal photos on social media. Only 8% of the girls had unrestricted freedom, while a significant 77% were not allowed to share photos at all (Table 6.37). This reflects a cautious approach by parents regarding their daughters' exposure on social media platforms. Overall, these findings suggest that parents strive to balance online safety with digital freedom, taking into account the varied needs and maturity levels of their daughters.

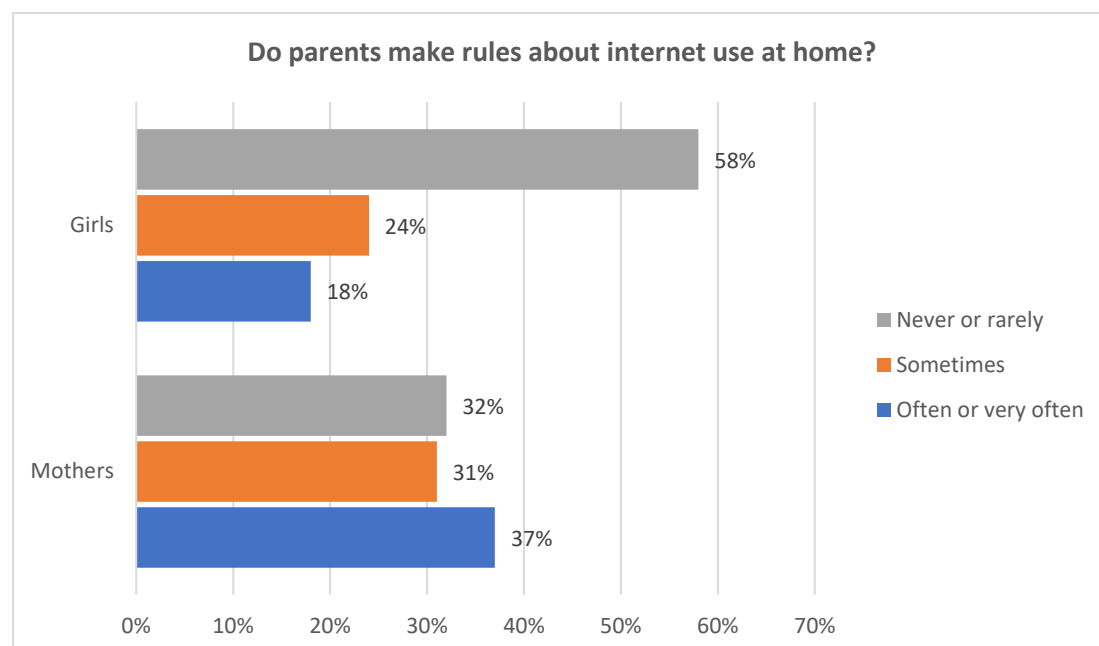
**Table 6.37: Girls' Reports on Parental Supervision Requirements for Online Activities**

<b>Activity</b>	<b>Unrestricted Access</b>	<b>With Permission/ Supervision</b>	<b>Not Allowed</b>	<b>Uncertain About Permission</b>
Watching video clips (e.g., YouTube)	85% (n=134)	9% (n=15)	1% (n=2)	4% (n=7)
Visiting social networking sites (e.g., Twitter, Snapchat, TikTok)	68% (n=107)	14% (n=22)	12% (n=20)	6% (n=9)
Using a webcam (e.g., for Skype, video chat)	43% (n=68)	32% (n=51)	15% (n=24)	10% (n=15)
Downloading films or music	67% (n=106)	14% (n=22)	11% (n=18)	8% (n=12)
Sharing multimedia on social networking sites	39% (n=62)	17% (n=27)	34% (n=53)	10% (n=16)
Playing online games with others	31% (n=49)	19% (n=30)	34% (n=54)	16% (n=25)
Sharing Personal Photos with Friends and Family on the Internet	40% (n=63)	25% (n=39)	27% (n=43)	8% (n=13)
Sharing Personal Photos with Others on Social Media	8% (n=13)	8% (n=13)	77% (n=121)	7% (n=11)

#### 6.6.3.2.1 Discrepancies in Perceptions Between Girls and Their Mothers

There appears to be a notable discrepancy between the mothers and their daughters concerning the implementation of restrictive mediation on internet use at home. Analysis from Figure 6.25 showed that the mothers tended to perceive themselves as more controlling than what the girls reported. While 63% of the mothers claimed they imposed internet use restrictions on their daughters at least occasionally, only 42% of the girls agreed with this. Conversely, 58% of the girls reported that their parents rarely or never set rules for internet usage, while only 32% of the mothers admitted to this.

**Figure 6.25: Comparative Analysis of Restrictive Mediation Between Daughters and Mothers**



The data also covered the allowance of specific online activities. Mothers often believed their daughters needed permission or supervision for various online activities more than the girls reported. For instance, nearly half of the mothers (46%) stated

that their daughters required parental permission or supervision to access social networking sites, compared to only 14% of the girls who believed they needed such consent. A similar pattern was observed with downloading media: 47% of the mothers reported requiring permission or supervision, whereas only 14% of the girls felt the same.

Table 6.38 presents these differences in perceptions more clearly. In activities such as using a webcam, downloading media, and visiting social networking sites, there is a marked contrast between the mothers' more restrictive views and the girls' perception of having greater freedom. For example, while only 13% of the mothers reported unrestricted webcam usage for their daughters, 43% of the girls claimed they had free access. Similarly, while 32% of the mothers believed their daughters were free to download music or films, 67% of the girls reported they could do so anytime.

This difference in perceptions suggested a communication gap or a misunderstanding of internet rules and permissions between mothers and daughters. It highlighted the need for clearer discussion and mutual understanding of parental mediation strategies within families.

**Table 6.38: Perception Gaps in Parental Permission for Online Activities Between Girls and Mothers**

	Unrestricted Access		With Permission/Supervision		Not Allowed		Uncertain About Permission
	Girls	Mothers	Girls	Mothers	Girls	Mothers	Girls
Using a webcam (e.g., for Skype, video chat)	43% (n=68)	13% (n=15)	32% (n=51)	49% (n=54)	15% (n=24)	38% (n=42)	10% (n=15)
Downloading films or music	67% (n=106)	32% (n=36)	14% (n=22)	47% (n=52)	11% (n=18)	21% (n=23)	8% (n=12)
Visiting social networking sites (e.g., Twitter, Snapchat, TikTok)	68% (n=107)	35% (n=39)	14% (n=22)	46% (n=51)	12% (n=20)	19% (n=21)	6% (n=9)
Sharing multimedia on social networking sites	39% (n=62)	20% (n=22)	17% (n=27)	40% (n=44)	34% (n=53)	40% (n=45)	10% (n=16)
Watching video clips (e.g., YouTube)	85% (n=134)	56% (n=62)	09% (n=15)	38% (n=42)	1% (n=2)	6% (n=7)	4% (n=7)
Playing online games with others	31% (n=49)	14% (n=16)	19% (n=30)	35% (n=39)	34% (n=54)	51% (n=56)	16% (n=25)
Sharing Personal Photos with Friends and Family on the Internet	40% (n=63)	15% (n=17)	25% (n=39)	39% (n=43)	27% (n=43)	46% (n=51)	8% (n=13)
Sharing Personal Photos with Others on Social Media	8% (n=13)	2% (n=2)	8% (n=13)	7% (n=8)	77% (n=121)	91% (n=101)	7% (n=11)

### 6.6.3.3 Parental Use of Technical Mediation

Parental technical mediation involves using digital tools and software by parents to supervise and manage their children's online activities. The survey findings indicated

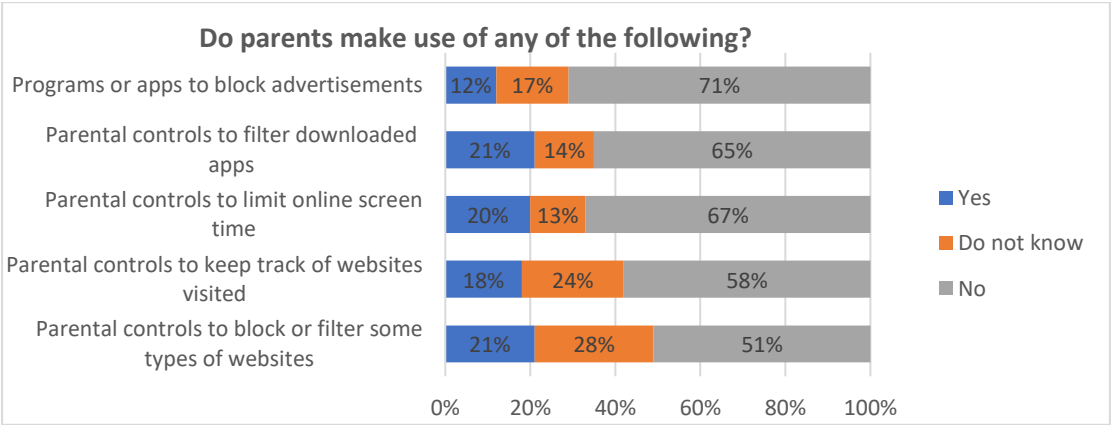


limited use of technical mediation among parents, with less than a quarter of the participating girls reporting their parents' use of such methods. This trend is shown in Figure 6.26. Figure 6.27 revealed that younger girls experienced a higher frequency of technical mediation compared to their older counterparts, suggesting a possible reduction in parents' reliance on technical tools as girls grew older.

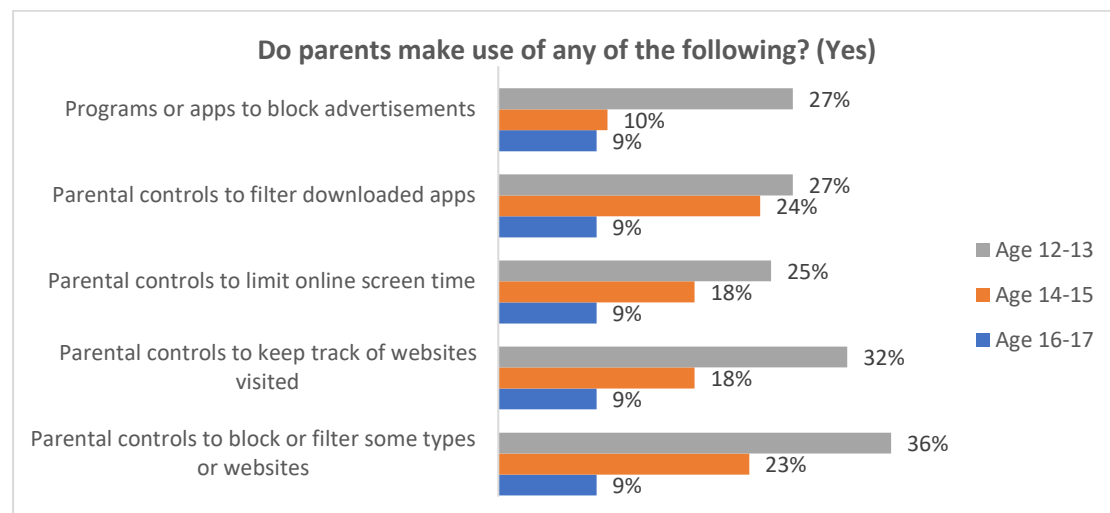
6.6.3.3.1 Discrepancies in Perceptions Between Girls and Their Mothers

A notable discrepancy emerged between the mothers and the girls regarding the implementation of technical mediation. The mothers claimed a higher use of technological controls than what was reported by the girls. For instance, while 43% of the mothers stated they used monitoring software to track their daughters' website visits, only 18% of the girls acknowledged such parental monitoring. Similarly, a gap was evident in the use of time-limiting software, with 41% of the mothers claiming its usage versus only 20% of the girls reporting it. Further differences were observed in the use of ad blockers, app filters, and website blocking/filtering tools, as shown in Figure 6.28.

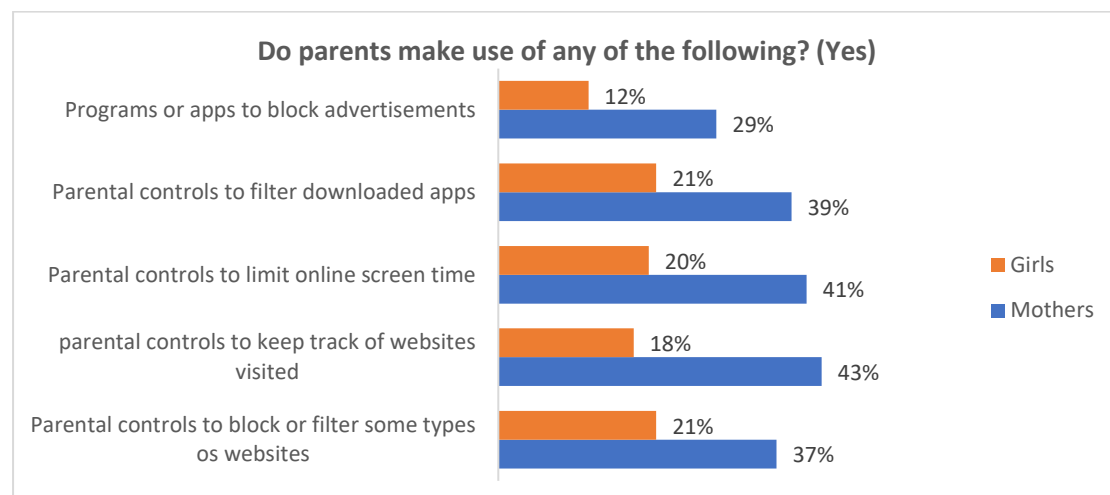
Figure 6.26: Girls' Reports on Parents' Use of Technical Mediation



**Figure 6.27: Girls' Reports on Parents' Use of Technical Mediation By Age Group**



**Figure 6.28: Parents Use of Technical Mediation: Girls' Reports vs. Mothers' Perceptions**



#### 6.6.3.4 Parental monitoring

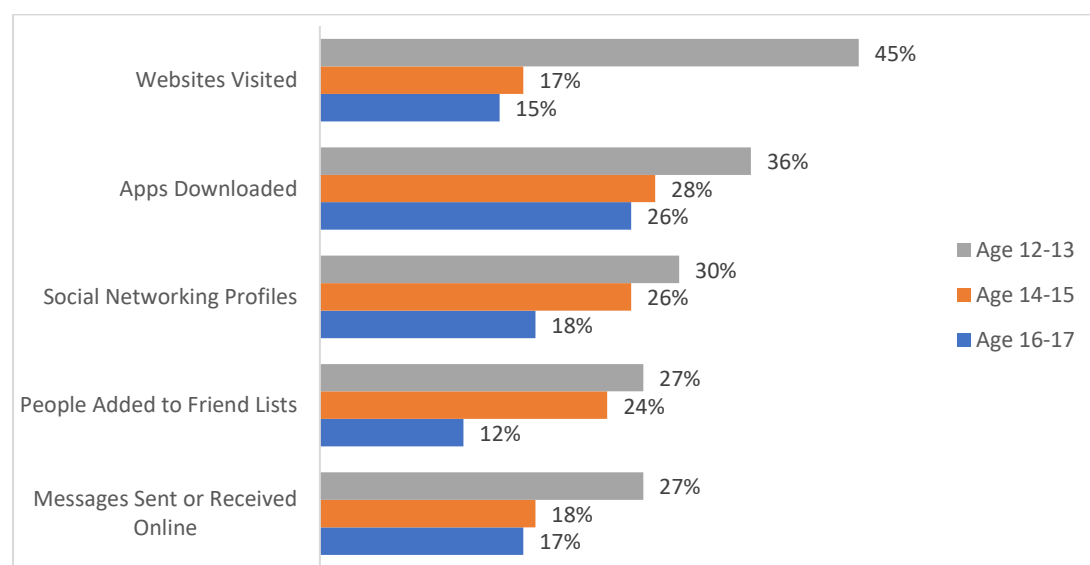
Parental monitoring is a strategy where parents oversee their children's use of electronic devices for internet access, their email, social media, and instant messaging interactions. The survey results, as shown in Table 6.39, reveal that about a quarter of the girls experience regular monitoring by their parents. This oversight includes checking the websites they visit (20%), monitoring the apps they download (29%), overseeing their social media profiles (28%), reviewing their friend lists (22%), and

checking their email or text messages (19%). Figure 6.29 shows a trend where younger girls report more frequent parental monitoring than older girls, indicating a probable decrease in monitoring intensity as girls grow older.

**Table 6.39 Frequency of Parental Monitoring as Reported by Girls**

Activity Checked by Parents	Never or Hardly Ever	Sometimes	Often or Very Often	I Don't know
Websites Visited	46% (n=72)	25% (n=40)	20% (n=32)	9% (n=14)
Apps Downloaded	44% (n=70)	19% (n=30)	29% (n=46)	8% (n=12)
Social Networking Site Profile	40% (n=64)	18% (n=28)	28% (n=44)	14% (n=22)
People Added to Friend Lists	51% (n=81)	18% (n=28)	22% (n=35)	9% (n=14)
Messages Sent/Received via Email or Other Messaging Applications	62% (n=98)	8% (n=12)	19% (n=30)	11% (n=18)

**Figure 6.29: Age-Related Variation in Girls' Reports of Parental Internet Monitoring (At Least Sometimes)**

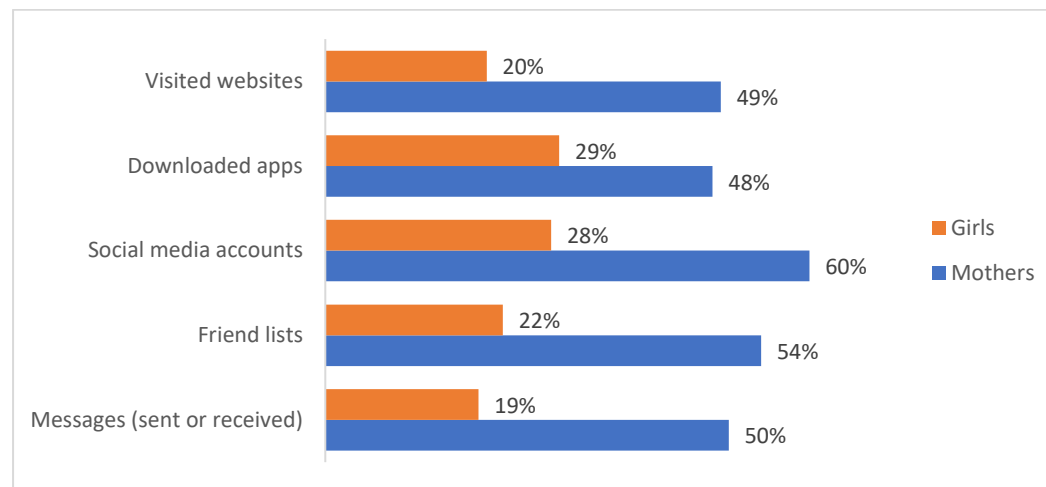


#### **6.6.3.4.1 Discrepancies in Perceptions Between Girls and Their Mothers**

When it comes to parental monitoring, there is a noticeable gap between the reports of the mothers and their daughters. The data, as presented in Figure 6.30, highlights this disparity. For instance, while 60% of the mothers reported that they frequently (often or very often) monitor their daughters' social networking accounts, only 28% of the girls acknowledged such a level of monitoring by their parents.

This trend of the mothers reporting a higher frequency of monitoring than what their daughters perceive continues across several online activities. According to the mothers' reports, 54% of them frequently check their daughters' online friend lists, contrasting with just 22% of the girls who reported the same level of monitoring. Similarly, for online messaging, 50% of the mothers claimed to frequently monitor their daughters' messages, yet only 19% of the girls agreed with this claim. Regarding website visits, 49% of the mothers stated they often or very often check the websites their daughters visit, whereas only 20% of the daughters reported such frequent monitoring from their parents. For downloaded applications, 48% of the mothers reported frequent monitoring, which is significantly higher than the 20% reported by the girls.

**Figure 6.30: Comparison of Girls' and Mothers' Reports on Frequent Parental Monitoring Activities (Often or Very Often)**

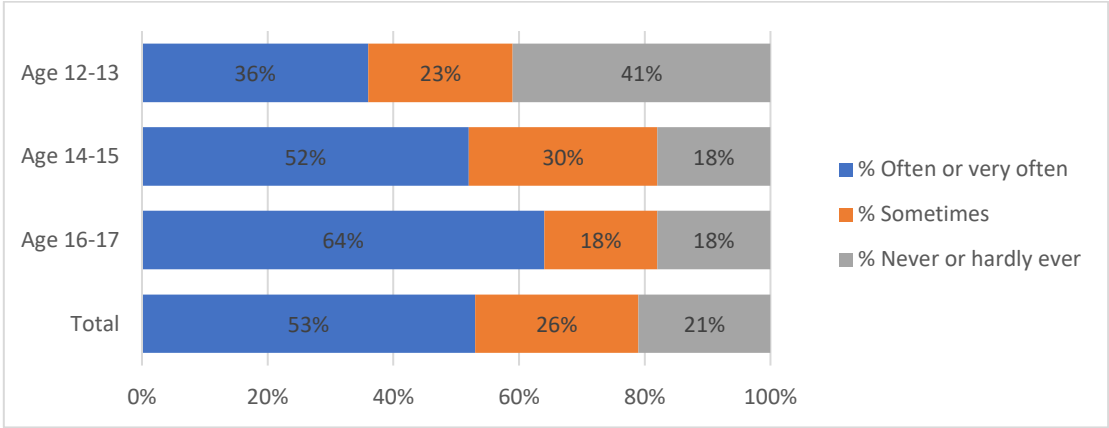


#### 6.6.3.5 Reverse mediation

Reverse mediation, a scenario where children guide their parents in understanding and navigating the internet and digital technologies, presents an interesting aspect of family digital interactions. The survey explored this aspect by asking the girls about how often their parents seek their help for online tasks they find challenging. The findings, shown in Figure 6.31, reveal a significant engagement in reverse mediation. Over half of the girls (53%) indicated that they often help their parents with various online tasks. This practice of reverse mediation appears to be more common among older girls. The data suggests that as girls grow older and become more skilled at handling digital technologies, they increasingly find themselves in the role of digital guides for their parents. This trend in reverse mediation not only highlights the evolving digital proficiency of the younger generation but also sheds light on the sharing of knowledge and skills in digital literacy between generations. It

demonstrates how digital interactions within families can lead to mutual learning, where parents benefit from their children's expertise in navigating the digital world.

**Figure 6.31: Frequency of Girls Assisting Parents with Online Tasks, Categorized by Age**

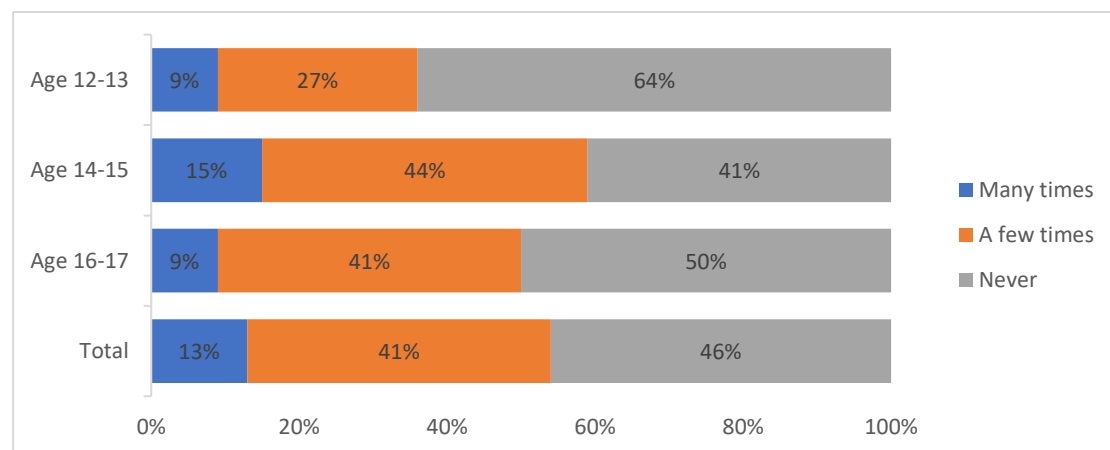


**6.6.4 Parental Guidance and Children Independence in Internet Use**

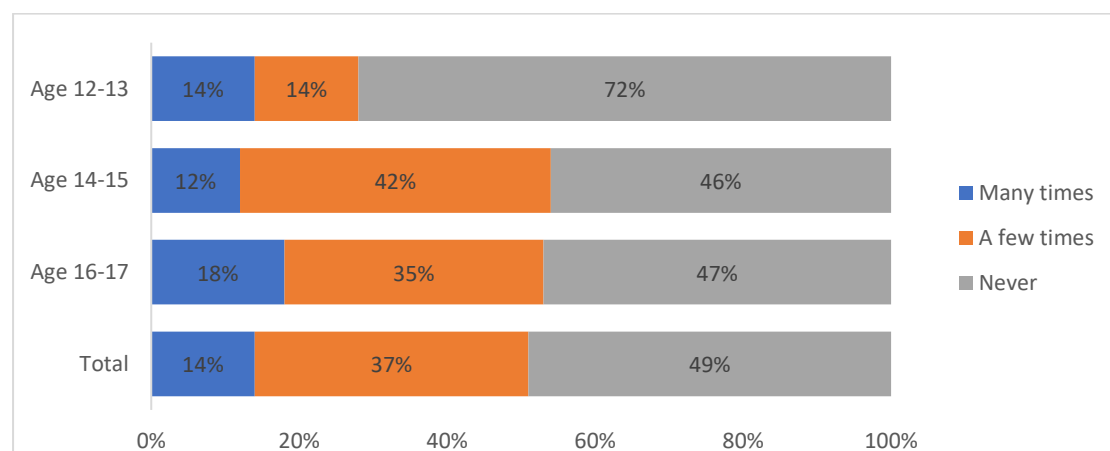
Parental guidance on internet usage and children's responses to it often vary, especially as children strive for greater independence. This aspect was explored by asking the girls about instances where they might have disregarded their parents' internet-related advice or rules. The results, as shown in Figure 6.32, revealed a notable tendency among the girls to sometimes ignore parental guidance, with 54% acknowledging that they had at some point ignored their parents' rules or advice regarding internet use. This included 41% who mentioned doing so several times and 13% who had frequently ignored parental advice. This tendency was particularly pronounced among girls aged 14 to 15, suggesting a peak in the search for digital independence during middle adolescence.

Additionally, the survey examined whether the girls had ever hidden their online activities from their parents, whether for privacy reasons or other motives. A significant number, 54%, admitted to having done so, with 14% indicating frequent Hiding and 37% acknowledging occasional secrecy in their online activities. The data indicated a growing preference for privacy in online matters among older girls, reflecting a common trend of increasing desire for personal space and independence during the teenage years (Figure 6.33).

**Figure 6.32: Tendency to Ignore Parental Internet Guidance by Age Group**



**Figure 6.33: Tendency to Conceal Online Activities from Parents by Age Group**



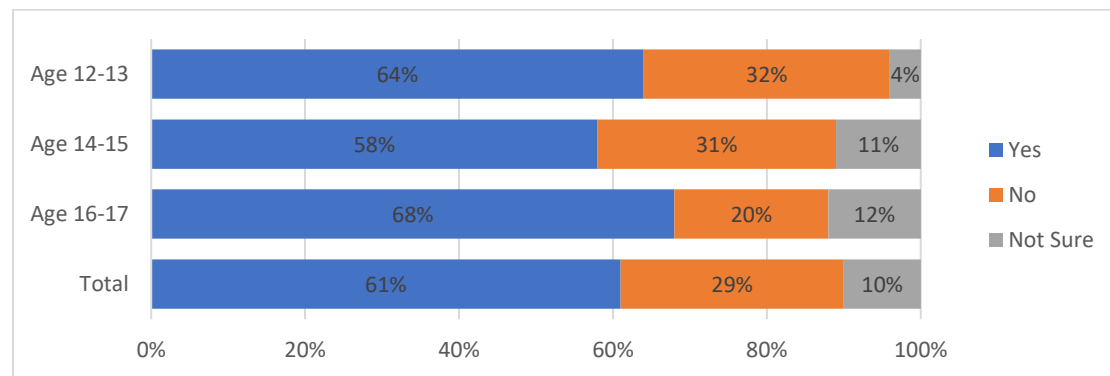
### **6.6.5 Assessing School Involvement in Online Safety Education**

The role of schools in providing online safety education to students was evaluated through the survey. When asked about receiving guidance on online safety at school, 61% of the girls acknowledged having some form of education on this topic. Despite this, the level of satisfaction with the schools' efforts in teaching online safety appeared relatively low. Only 36% of the girls reported being satisfied with their schools' approach to online safety education. In contrast, a notable 44% expressed dissatisfaction with the schools' efforts in this area, as shown in Figures 6.34 and 6.35. These findings suggest that while a majority of the girls received some online safety education, there is a significant gap between what is provided and what is needed or expected by the students.

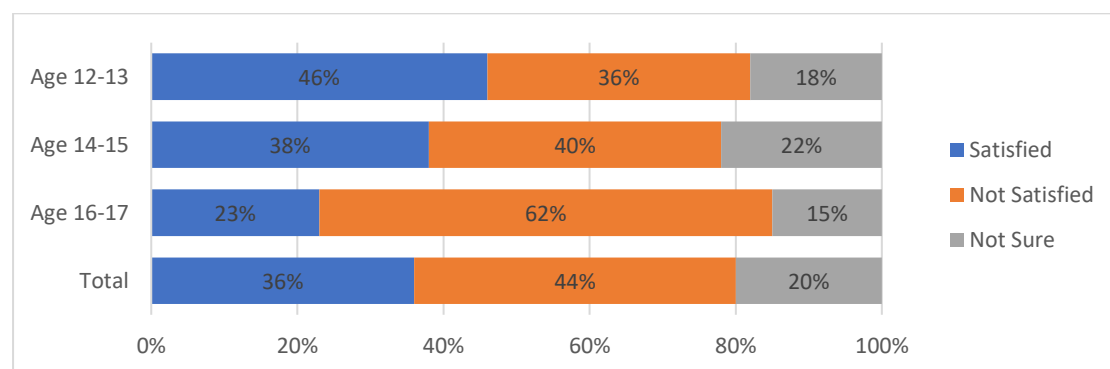
An age-related trend emerged from the data, revealing an increasing level of dissatisfaction among older girls. The survey results showed that dissatisfaction grew with age: 36% among the youngest group, 40% among the middle-aged group, and a significant 62% among the older group. This trend suggests that as girls grow older and perhaps become more aware of the challenges of internet use, they might perceive the online safety education provided at school as insufficient or less relevant to their experiences.



**Figure 6.34: Girls' Reports on Receiving Internet Safety Education at School by Age Group**



**Figure 6.35: Girls' Satisfaction Levels with Internet Safety Education at School by Age Group**

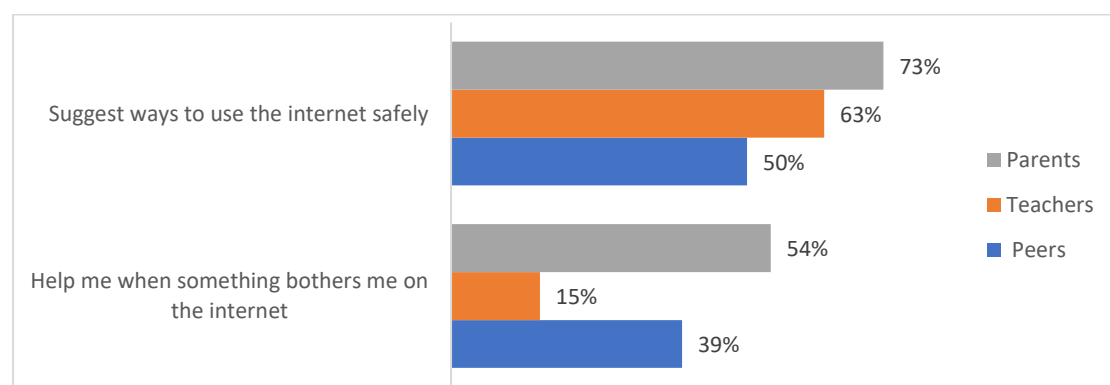


### 6.6.6 Guidance and Support from Parents, Teachers, and Peers

To determine the key figures in shaping safe internet practices among girls, inquiries were made about the frequency of receiving internet safety advice from various sources. According to the findings illustrated in Figure 6.36, a significant majority, 70%, reported frequently or occasionally receiving such guidance from their parents. Teachers were also a notable source of advice, with 63% of the girls acknowledging their role in providing internet safety guidance at least sometimes. Additionally, peers were identified as a source of guidance by half of the participants, showing the influence of friends in shaping their online safety practices.

The survey further explored who among parents, teachers, and peers the girls turn to when encountering distressing online experiences. It emerged that parents are the primary support system, with over half of the girls (54%) seeking their help in such situations. Friends were the next most common source of support, with 30% of the girls turning to them. Teachers were less frequently approached, with only 15% of the girls seeking their assistance. However, it is essential to consider that these responses might be influenced by the number of girls who have experienced upsetting incidents online, as detailed on page 192.

**Figure 6.36: Frequency of Receiving Internet Safety Guidance from Parents, Friends, and Teachers**



### 6.6.7 Conclusion

This chapter has provided a detailed overview of the survey findings concerning the digital experiences of Saudi adolescents girls aged 12 to 17 and their mothers. The results offered valuable quantitative insights that complemented and enriched the qualitative themes explored in the interviews. By integrating the perspectives of both the girls and their mothers, the study has painted a clear picture of the digital experiences of Saudi girls, as seen through their own eyes and those of their mothers.

## **Key Findings:**

### **1. Usage Patterns of Internet among Saudi Adolescents Girls:**

- **Duration:** A significant portion of the girls showed heavy daily internet use, with older girls (16-17 years) spending more time online, especially during weekends and holidays.
- **Location:** The home was the main place for internet access, with older girls more likely to use the internet in various locations, including public spaces.
- **Device Preference:** Smartphones were the most preferred device for internet access, with most owning personal devices. Other commonly used devices included smart TVs, computers, and tablets.
- **Activities Engaged In:** Key online activities included entertainment (watching videos, playing games), educational purposes, socializing through social media and instant messaging, community participation, creative expression, and commercial use (online shopping and selling).

### **2. Perceptions of Internet Risks and Safety:**

- **Daughters' Perspective:** Concerns about exposure to inappropriate content, online interactions with strangers, and engagement in risky activities were common. Girls expressed varied levels of anxiety and confidence in dealing with unpleasant online situations.
- **Mothers' Perspective:** Mothers generally perceived the internet as less safe for their daughters than the daughters themselves did. They showed heightened concern about exposure to inappropriate content and interactions with strangers.

### 3. Potential Online Risks Encountered by Saudi Girls:

Girls reported various negative experiences online, including exposure to harmful content (self-harm, hate speech, violence, sexually explicit material), encounters with strangers, and instances of hacking, financial fraud, identity theft, and mistreatment. Older girls were more likely to engage in risky online behaviour, such as communicating with strangers for fun or sharing personal information.

### 4. Support for Online Safety at Home and School:

- **At Home:** Parental mediation strategies varied, including active participation, restrictive measures, technical monitoring, and general supervision. Reverse mediation was also noted, where girls assisted parents with digital tasks.
- **At School:** The role of schools in providing online safety education was acknowledged, though the effectiveness of these initiatives received mixed reviews, with older girls expressing higher levels of dissatisfaction.
- **Support System:** Parents, particularly mothers, emerged as the primary source of guidance and support in online safety matters, followed by peers and teachers.

These findings provide a comprehensive understanding of how Saudi girls interact with the digital world, their perceptions of online risks and safety, the potential online risks they face, and the support systems in place for their online safety. The survey's results showed a detailed picture of how Saudi girls interact with the digital world. It highlighted the importance of age, family relationships, and school environments in shaping their online experiences.

The following chapter will explore these findings further, discussing the results obtained from both the interviews and the questionnaire in detail. This discussion will be framed within the context of existing literature, allowing for a detailed analysis of how these findings align with, differ from, or extend current academic understandings of young females' digital experiences in Saudi Arabia. The aim is to provide a holistic understanding that highlights the current state of digital engagement among Saudi girls and also addresses the implications for parental guidance, educational policy, and future research in the field of digital literacy and online safety.

## **CHAPTER 7:**

### **DISCUSSION OF RESEARCH FINDINGS**

#### **7.1 Introduction**

This chapter discusses the findings of this study in detail, placing them within the wider academic context and the theoretical framework that guided this research. The main focus is on understanding how adolescent girls aged 12 to 17 in the Kingdom of Saudi Arabia use the internet, the potential digital risks they face, and the mediation efforts by their parents and schools.

A mixed-methods approach was used, incorporating insights from semi-structured interviews with 8 girls, 8 mothers, and 13 female teachers, alongside data from online questionnaires completed by 158 Saudi girls and 111 of their mothers. This combination of qualitative and quantitative data collection methods has enabled a thorough understanding of the internet habits, perceived risks, and protective measures concerning Saudi adolescent girls.

The discussion in this chapter will address each research question individually, clarifying the detailed layers of understanding they reveal:

**Research Question 1** examines the practical aspects of internet use, including the duration of online engagement, preferred devices and locations for internet access, and the variety of activities engaged in. This will help in understanding not only how

and what they do online, but also why they make these choices and what the consequences are.

**Research Question 2** explores how Saudi adolescent girls, and their mothers perceive and understand internet risks. This involves comparing and contrasting the viewpoints of the two groups, highlighting how family interactions and cultural contexts shape their perceptions.

**Research Question 3** focuses on identifying the potential online risks faced by Saudi adolescents girls. This discussion will extend to how these risks are experienced differently among different age groups and the methods used to address them.

**Research Question 4** seeks to identify the support systems in place for online safety, both at home and in schools. It will take into account the viewpoints of the girls, their mothers, and female teachers to provide a complete understanding of the protective environment for these young internet users.

Central to the analysis of these findings is the Bio-Ecological Systems Theory, supported by the Techno-Subsystem. This theoretical framework provides a multi-layered lens through which to view the interaction between Saudi girls and their digital environment. The theory highlights the interconnectedness between individual factors, the immediate environment (including family and school), connections between different environments, broader social influences, cultural norms, and the influence of time and changes over periods. This framework helps in understanding how these various factors shape the online experiences of Saudi adolescents girls.

By incorporating this theory, the discussion aims to move beyond surface-level observations, providing insights into how the digital experiences of Saudi girls are influenced by a complex interplay of personal, familial, educational, societal, and technological factors. This comprehensive approach allows for a detailed understanding of the digital landscape navigated by these young individuals and the various factors that shape their online journeys.

## **7.2 Discussion of Research Question 1: How Do Adolescent Girls in Saudi Arabia, Aged 12 to 17, Use the Internet in Terms of Duration, Location, Device Preference, and Activities Engaged In?**

### **7.2.1 Duration of Internet Use**

Examining how long Saudi adolescent girls spend online provides valuable insights into their digital habits. The research uncovered that Saudi girls typically spend between 2 to 8 hours online on weekdays, with this time increasing to up to 12 hours on weekends or holidays. This trend mirrors global patterns noted in previous studies, which have shown a significant increase in daily internet usage among adolescents, particularly exacerbated by the COVID-19 pandemic (Choi et al., 2023; Kerekes et al., 2021; Madigan et al., 2022; Marciano et al., 2022; Schmidt et al., 2020; Siste et al., 2021; Ten Velde et al., 2021). The increased reliance on digital platforms for education, socialisation, and entertainment during the pandemic has evidently left a lasting impact on internet usage patterns among young users.



The survey results support the interview findings, with 23% of the girls spending approximately three hours online, while a significant 21% were online for more than eight hours on weekdays. The trend towards increased online engagement during weekends and holidays, where 33% of the girls exceed eight hours of internet use, reflects the deep integration of the internet into their daily lives. This trend aligns with global patterns of adolescent internet use (Anderson et al., 2023; Choi et al., 2023; Madigan et al., 2022; Marciano et al., 2022; Ofcom, 2023b; Smahel et al., 2020; Ten Velde et al., 2021).

An important aspect highlighted in the findings is the influence of age on internet usage duration. Older girls (aged 16-17 years) tended to spend more time online, especially during weekends and holidays, with a significant proportion (up to 50%) exceeding eight hours of daily internet use. This observation is consistent with previous research indicating that internet usage tends to increase with age among adolescents, leading to a wider range of online activities and potentially higher digital literacy (Global Kids Online, 2019; Livingstone et al., 2019; Mascheroni & Ólafsson, 2014; Ofcom, 2021).

The observed internet usage patterns among Saudi adolescent girls can be seen as a reflection of broader socio-cultural trends within Saudi Arabia. The country's harsh weather conditions often encourage individuals to engage in indoor activities, including internet-related activities (Al-Khani et al., 2021). Additionally, the rapid technological advancements and increased internet penetration within the Kingdom have enhanced greater digital access for younger populations (Al-Khani et al., 2021).

These advancements, coupled with evolving cultural attitudes towards female autonomy and digital engagement, likely contribute to the extensive internet use observed among Saudi adolescent girls.

The continued high usage of the internet during leisure time, despite reduced online schooling post-pandemic, highlights the internet's pivotal role in adolescents' social and entertainment activities. This change highlights the importance of understanding the implications of prolonged internet use on adolescents' well-being and development. It also reflects concerns from previous research about finding a balance between the benefits of digital engagement with the potential risks associated with excessive use (Livingstone & Byrne, 2018; Livingstone, Ólafsson, et al., 2017; Smahel et al., 2020; Stoilova et al., 2021).

Overall, the duration of internet use among Saudi adolescent girls reflects broader global trends, highlighting the significant role of the digital world in their lives. The findings underscore the importance of considering age-related differences in internet use patterns and the need for strategies that support healthy digital engagement, particularly in the post-pandemic age where online activities continue to play an important role in adolescents' daily routines.

### **7.2.2 Location of Internet Access**

Exploring the locations where Saudi adolescent girls access the internet provides a deeper understanding of their digital environments. Both survey and interview data

highlight a clear preference among girls for accessing the internet within the comfort of their homes, with a particular emphasis on the privacy of their bedrooms. This preference highlights the significant role of the home in shaping their digital experiences, with 91% of survey respondents indicating home as their primary internet access point, contrasting starkly with minimal access reported in schools. The preference for accessing the internet in bedrooms suggests a desire for private and individualised online experiences, aligning with global trends observed among children and adolescents (Livingstone et al., 2011; Livingstone & Helsper, 2007; Livingstone & Sefton-Green, 2016). This consistent preference across age groups underscores the universal importance placed on privacy in their digital interactions.

While home is the primary access point for the internet, other places such as schools, cafes, libraries, and the homes of friends and relatives serve as secondary locations. However, these alternate locations are less commonly used for internet access, indicating a preference for the privacy and security afforded by home-based internet use. An interesting age-related pattern is that older girls tend to access the internet more frequently in public places, indicating a progression towards greater independence and broader integration of digital activities into their lives as they mature. This observation aligns with the Bio-Ecological Systems Theory, which posits that an individual's interactions with their environment evolve over time, influencing their experiences and development (Bronfenbrenner & Morris, 1998).

The cultural context of Saudi Arabia, known for its conservative social norms and limitations on girls' physical social interactions, likely influences these location

preferences, guiding online activities towards the secure and private environment of the home. Additionally, the prevalence of home-based internet use may reflect parental efforts to monitor and guide their daughters' online interactions, in accordance with the protective nature of Saudi parenting styles. These findings indicate that the locations where Saudi girls access the internet are connected with socio-cultural dynamics, including privacy requirements, increasing autonomy, and the integration of digital activities into their daily lives. Understanding these aspects can inform strategies to promote healthy and beneficial online engagement, making digital spaces better for positive development.

### **7.2.3 Preferred Devices for Internet Access**

The data gathered from interviews and surveys strongly suggest that Saudi adolescent girls favour smartphones as their primary means of accessing the internet, reflecting a global trend towards increased mobile connectivity among young people. Survey results indicate that 92% of respondents use smartphones for online activities, with 80% owning their personal device and 61% choosing smartphones as their preferred tool for accessing the internet. This widespread use of mobile devices across different age groups highlights the significant role smartphones play in facilitating daily digital interactions for Saudi girls, aligning with the global shift towards personalised and portable internet experiences (Anderson et al., 2023; Odgers, 2018; Serra et al., 2021; Škařupová et al., 2016; Smahel et al., 2020).

Aside from smartphones, other devices such as smart TVs, computers, and tablets also contribute to the digital experiences of Saudi girls, indicating a diverse digital landscape. The use of various devices suggests broad online engagement, encompassing activities related to entertainment, education, and socialisation, similar to trends observed in other cultural contexts (Smahel et al., 2020). The high rate of personal device ownership and usage among Saudi girls reflects the rapid pace of digitalisation within the Kingdom, indicative of the broader digital transformation taking place across Saudi Arabia due to technological advancements and increased internet accessibility (Al-Khani et al., 2021). The data also reveal a combination of individual ownership and communal device usage within families, illustrating how personal autonomy and family interactions come together to shape digital practices in Saudi society.

These insights, when viewed alongside existing research, underscore the significance of considering device preferences in discussions about adolescent internet use. Additionally, they highlight the need for flexible approaches to digital engagement that accommodate the diverse digital environments navigated by Saudi adolescent girls.

#### **7.2.4 Online Activities**

Examining the online activities of Saudi adolescent girls provides a comprehensive understanding of their digital interactions. These activities encompass various aspects, including entertainment, communication, content creation, learning, commercial use,

and community participation. Each of these categories sheds light on different aspects of their digital experiences, reflecting a diverse mix of personal interests, social interactions, and educational activities. This overview lays the groundwork for a detailed examination of each category, beginning with the central role of entertainment in their online participation.

- **Entertainment**

Entertainment plays a significant role in the online activities of Saudi girls, with clear preferences evident across different age groups. The data highlights a strong inclination towards video streaming platforms like YouTube, particularly among younger girls. This preference for video content mirrors global trends, where visual and interactive media attract young audiences, serving both as entertainment and a means of social connection (Global Kids Online, 2019; Ofcom, 2023a; Smahel et al., 2020; Trucco et al., 2020).

As girls grow older, there is a noticeable shift towards more interactive forms of entertainment, such as online gaming and streaming services for TV shows and movies. This shift from mainly watching videos to engaging in interactive media suggests a development in media consumption habits. It may indicate increasing digital literacy and a broader exploration of the digital world as these adolescents seek more complex and engaging forms of entertainment. This age-related progression in entertainment choices highlights the changing nature of digital engagement among adolescents. It shows how digital preferences shift with age, reflecting a journey of

growth and evolving interests. The shift from simpler forms of media consumption to more complex and interactive digital engagements aligns with broader research findings, suggesting a universal path in adolescent digital behaviour (Livingstone & Helsper, 2008; Livingstone et al., 2019; Manches et al., 2015; Mascheroni & Ólafsson, 2016; Ofcom, 2023a).

Understanding these entertainment preferences is crucial for understanding the broader digital world of Saudi adolescents girls. It shows their current digital engagements and how their interaction with digital media is changing. This insight into their entertainment choices helps in discussing other aspects of their online activities, from socialisation to education and beyond.

- **Communication and Socialisation**

Communication and socialisation are central to the online activities of Saudi adolescent girls, bridging the gap between traditional and digital interactions. The survey data indicate a widespread use of social media platforms and messaging apps, facilitating the easy exchange of ideas, emotions, and experiences among peers and family members. This digital communication takes many forms, from instant messaging and emails to social media interactions through likes, comments, and shares.

The survey data reveals that a vast majority, 90%, engage in digital communication activities weekly, highlighting the internet's crucial role in their social lives. This trend

is particularly evident on social networking sites, with 82% of participants reporting regular activity, underscoring the importance of these digital spaces in their social interactions. The digital socialisation patterns among Saudi adolescent girls do not show significant age-related differences, indicating a consistent reliance on digital platforms for social interaction across different age groups. Social media platforms such as Instagram, Snapchat, TikTok, and WhatsApp are particularly popular, each serving distinct purposes in facilitating connections, sharing personal experiences, and accessing information. These findings align with existing literature, which emphasises the growing importance of these digital platforms in the socialisation and communication of children and adolescents worldwide (Anderson et al., 2023; Davidson et al., 2022; Montag et al., 2024; Smahel et al., 2020).

The girls' behaviour on social networking sites is characterised by active participation, involving both consuming and creating content. They engage in various interactions, from commenting and liking posts to sharing personal content, showing a lively engagement with digital communities. However, privacy remains a significant concern, with many choosing private account settings to control their online visibility and protect personal information. This focus on privacy and careful management of online interactions reflects a mature approach to digital engagement, likely influenced by the cultural and societal context of Saudi Arabia. The social context of the country, along with the changing digital landscape, shapes how Saudi girls manage their online presence, balancing openness with privacy and active engagement with cautious participation.



- **Education**

The use of the internet in education is very noticeable among Saudi adolescents girls, supporting both formal and informal learning. Survey data underscores the significance of the internet for academic tasks, with a majority across all age groups regularly use the internet for school-related activities. This pattern is particularly true for older girls, indicating that they increasingly rely on digital resources as they advance in their schooling. Interview insights provide a deeper understanding, showing that girls engage in a wide range of educational activities online. Beyond their formal education, they use the internet for self-directed learning, such as learning new languages and artistic skills through platforms like YouTube and specialised courses. This growing use of the internet for education aligns with global shifts, where digital platforms increasingly support learning and gaining knowledge (Castro & Tumibay, 2021; Radha et al., 2020). This shift became even more significant during the COVID-19 pandemic, as online classes and digital resources became the main way of continuing education.

A unique aspect of online education among Saudi adolescent girls is their engagement with religious studies, particularly those related to Islam. Using digital platforms for understanding and memorising the Quran and deepening their faith shows how traditional cultural values are integrated with modern technology in Saudi Arabia.

The extensive use of digital resources for both formal education and personal development among Saudi girls highlights the transformative potential of educational

technology. It emphasises the need to ensure access to digital platforms and resources, support the development of digital literacy skills, and create a safe and productive online environment for learners. By aligning with global trends in educational technology, the experiences of Saudi adolescent girls reflect the common challenges and opportunities of the digital age in enhancing educational outcomes.

- **Content Creation**

Content creation among Saudi girls shows a shift from just consuming media to actively participating in the digital world. Survey data reveal that some of these young individuals engage in creative activities online, such as blogging, web development, video production, and social media content. While this engagement in content creation is not as common as entertainment or socialisation, it highlights a growing aspect of their digital interactions. Interview narratives further highlight this trend, with participants sharing experiences of collaborative content creation and personal blogging. These stories show a growing interest in expressing creativity and sharing personal interests through digital platforms. This shift towards content creation mirrors a global trend, where young individuals are no longer just passive consumers but are also becoming creators and contributors to the digital world (Livingstone et al., 2019; Trucco et al., 2020).

Furthermore, the differences in content creation activities by age suggest that digital engagement evolves as girls grow older. Older adolescents tend to be more involved in content creation, likely due to increased confidence, better digital skills, and a desire

to contribute to online communities. This trend aligns with the 'Ladder of Opportunities' model proposed by Livingstone and Helsper (2007), which suggests that children and adolescents move through different stages of internet use, from basic to more advanced activities, as they age and gain more experience online. This trend of content creation among Saudi adolescent girls fits within the broader cultural and technological landscape of Saudi society. The increasing accessibility to digital tools and platforms provides these young individuals with the means to explore and express their creativity. Additionally, the focus on innovation and digital literacy in Saudi Arabia's Vision 2030 likely encourages an environment that supports digital creativity (GOV.SA, 2023).

- **Commercial Use**

The examination of commercial internet use among Saudi adolescent girls reveals a strong engagement with e-commerce. Survey data indicate that many girls regularly engage in online shopping or price comparison activities. This consumer behaviour aligns with wider global trends, where e-commerce has become a significant part of shopping habits, especially among younger people who prefer using digital platforms for shopping (Dharmesti et al., 2021; Mishra & Maity, 2021; Nayak et al., 2021). However, involvement in online selling is markedly lower, suggesting that while there is an emerging entrepreneurial spirit among Saudi girls, it has not yet fully moved into the digital space.

Interviews shed further light on this aspect, revealing individual stories of girls using social media to start their own businesses. These narratives highlight a growing interest among some Saudi girls in using digital spaces not only for consumption but also for economic participation. This emerging behaviour underscores the potential of digital platforms as gateways for young entrepreneurs, especially in contexts where traditional pathways to business might be less accessible. These stories often involve girls using social media to market handmade crafts, personalised products, and digital services, showcasing creativity and initiative. Although these ventures are often small-scale, their success indicates significant untapped potential for larger entrepreneurial activities among Saudi girls. This highlights the need for more targeted support and resources to help them expand their online businesses.

The age differences observed in commercial use, particularly in online selling, suggest an increased inclination towards business activities as girls grow older. This might be attributed to several factors, including greater autonomy, enhanced digital literacy, and a deeper understanding of how the online market works.

The engagement of Saudi girls in commercial activities online, particularly in the context of Saudi Arabia's rapid digital transformation and the emphasis on economic diversification in Vision 2030, points to the broader potential of e-commerce as a tool for empowerment and economic participation among young females. This trend reflects the evolving digital landscape in Saudi Arabia and underscores the need for supportive policies and educational initiatives that promote digital literacy and business skills among young females. Such measures would enable them to fully take

advantage of the opportunities presented by the digital economy. Additionally, creating a supportive environment for young entrepreneurs could encourage more girls to explore and succeed in online business activities, contributing to the overall economic growth and diversification goals of the country.

- **Community Participation**

Community participation emerges as a notable, though less frequent, activity among Saudi girls online. The survey findings indicate that a moderate number of girls use online resources to connect with their local communities. These activities range from searching for local events to sharing personal experiences on social issues. This engagement extends to cross-cultural exchanges, with a large number of participants engaging in conversations with people from different cultural backgrounds, thereby enhancing their social and cultural understanding.

Interviews provide more depth to this understanding by presenting instances where girls contribute to online discussions on social and cultural topics, reflecting an active engagement in digital citizenship. This engagement in community-oriented activities online is consistent with findings from global studies, which suggest that digital platforms can significantly boost civic participation and awareness among young people (Boulianne & Theocharis, 2020; Jurkevičienė & Butkevičienė, 2018). The survey indicates an age-related difference in community participation, with older girls more likely to engage in these activities. This trend could be attributed to a growing

awareness of societal issues and a sense of responsibility towards contributing to the community as these girls mature (Livingstone et al., 2019).

The active participation of Saudi girls in online communities, particularly in a context marked by rapid digitalisation and social transformation, highlights the importance of promoting digital literacy and critical thinking skills. By equipping young individuals with the abilities to responsibly navigate and contribute to online communities, the potential of the internet to foster a more engaged and informed generation of digital citizens can be achieved. In the broader context of Saudi Arabia's Vision 2030, which emphasises social, economic, and technological advancements, the engagement of young girls in community participation online aligns with the goals of fostering a vibrant society and promoting active citizenship. As Saudi society continues to evolve, the role of digital platforms in enabling young people, especially girls, to participate in and contribute to public discourse will become increasingly significant, reflecting the transformative power of the internet in shaping community engagement and social unity.

#### **7.2.5 Summary and Discrepancies in Perceptions**

When discussing the diverse digital lives of Saudi adolescent girls, it is crucial to acknowledge differences observed between the girls' self-reported internet use and their mothers' perceptions. This difference is particularly noticeable in the duration and nature of online activities, with girls reporting more extensive and varied internet use than their mothers are aware of. Such gaps highlight a generational divide in

understanding digital behaviours and underscore the private nature of young people's online activities. These discrepancies align with findings in other contexts where parents may not fully grasp the extent and depth of their children's digital engagement (Byrne et al., 2014; Livingstone & Blum-Ross, 2020; Page Jeffery, 2021). This highlights the need for open communication and digital literacy efforts to bridge the gap in understanding between generations, ensuring that parents are equipped to support and guide their children in navigating the digital world safely and responsibly.

In summary, the comprehensive exploration of internet usage among Saudi adolescent girls has revealed diverse patterns and behaviours. From the considerable amount of time spent online to their varied activities in entertainment, communication, content creation, learning, commercial engagement, and community participation, these insights provide a holistic view of their digital presence. These patterns reflect both the unique socio-cultural context of Saudi Arabia and broader global digital trends, emphasising the widespread influence of the digital age across cultures. This exploration underscores the importance of recognising the diverse and evolving digital landscapes that young people navigate and the need for supportive policies, education, and family engagement to foster positive digital experiences.

### **7.3 Discussion of Research Question 2: What are the Perceptions of Saudi Adolescent Girls and Their Mothers Regarding Internet Risks?**

The examination of perceptions related to internet risks and safety among Saudi adolescent girls and their mothers reveals a varied understanding and attitudes

towards online environments. This section explores their awareness of internet risks, their confidence in managing these risks, and the differences in risk perceptions between daughters and their mothers.

### **7.3.1 Awareness and Attitudes Towards Internet Risks**

Saudi girls and their mothers show a significant awareness of internet risks, though their understanding varies in depth. Girls are highly aware of risks such as cyberbullying, exposure to inappropriate content, and privacy breaches, with older girls having a more comprehensive grasp of these dangers. On the other hand, mothers express concerns about various online risks, especially the potential dangers of interactions with strangers online. This shared concern highlights the need for ongoing dialogue and education about online safety within the family. This aligns with research that emphasises the importance of parental involvement in children's digital lives (Koch et al., 2024; Livingstone & Byrne, 2018; Mascheroni et al., 2018; Young & Tully, 2022).

Both girls and their mothers take a proactive approach to online safety. Girls employ strategies like managing privacy settings and being cautious about sharing personal information, indicating a responsible approach to digital engagement. Mothers' involvement in setting internet use guidelines further underscores a collective family effort to navigate online spaces safely. This combined effort is crucial for fostering a safe and secure online environment for young users.



### **7.3.2 Confidence in Managing Online Risks**

A key finding from the study is the high level of confidence among the girls in their ability to navigate potential online risks. This confidence is built on personal experience, digital literacy, and guidance from their parents. These girls often view themselves as less vulnerable to the typical risks faced by adolescents online, reflecting a wider trend of adolescents' perceived invulnerability and optimistic bias towards online risks (Betts et al., 2019; Chapin, 2016; Chapin & Coleman, 2017). Despite this confidence, there remains a crucial need for continuous vigilance and education about safe online practices, considering the ever-changing landscape of online risks. The mothers' mixed feelings of trust in their daughters' capabilities and concern for their safety illustrates how they strive to balance supporting their children while ensuring their online safety.

Mothers display varying levels of confidence in their ability to assist their daughters in navigating online challenges. While some feel well-equipped, attributed either to personal technical knowledge or the presence of support from online safety organisations, others express a sense of helplessness. This lack of confidence highlights the digital divide between generations, with older individuals feeling less capable of navigating the digital landscape. This aligns with literature suggesting a generational gap in digital fluency, where adolescents' ease with technology contrasts with their parents' understanding (Akter et al., 2022; Romero, 2014; Tomczyk & Potyrała, 2021).

### **7.3.3 Discrepancies in Risk Perceptions**

A notable discrepancy exists between girls' self-perceptions and their mothers' views regarding internet safety. Mothers tend to perceive the internet as less safe for their daughters than the girls themselves do, highlighting a perceptual gap likely rooted in the generational divide in digital fluency and risk awareness. This gap in perceptions emphasise the need for better digital literacy and open communication. Bridging this digital divide requires mutual learning, where parents can gain insights from their daughters' digital experiences, and vice versa, promoting a comprehensive approach to online safety (Livingstone & Byrne, 2018; Romero, 2014).

In summary, the perceptions of internet risks and safety among Saudi girls and their mothers are characterised by a mix of awareness, confidence, and perceptual discrepancies. Both groups are well aware of potential online dangers, yet they differ in their confidence and approaches to managing these risks. The preventive steps taken by the girls, coupled with the guiding role of their mothers, reflect a collaborative effort towards fostering a safe online environment. However, the discrepancies in risk perceptions highlight the need for better communication and shared educational initiatives. Bridging this gap is essential for aligning their understandings of digital safety and strengthening the collective resilience of families navigating the complexities of the digital age.

#### **7.4 Discussion of Research Question 3: What potential risks might Saudi adolescents girls encounter online?**

In exploring the potential risks faced by Saudi adolescents girls in the digital world, this study focuses on three primary categories: contact, content, and conduct risks. These categories cover the diverse range of challenges and threats that young girls may encounter while navigating the online world. This discussion combines findings from interviews and surveys to provide a comprehensive understanding of these risks within the cultural and social context of Saudi Arabia.

##### **7.4.1 Contact Risks**

In the context of contact risks, the research findings highlighted various threats linked to online interactions and communication between individuals. These risks include unwanted contact from strangers, cyberbullying, and financial fraud, which present significant challenges to digital safety. Understanding these risks is crucial for developing effective strategies to protect young users in the evolving digital landscape.

###### **7.4.1.1 Engaging with Online Strangers**

Engaging with strangers online is a significant concern for the safety of Saudi adolescent girls, reflecting broader challenges worldwide in ensuring digital safety. Interviews with participants revealed the disturbing frequency with which girls encounter unwanted communications from strangers, primarily through social media and gaming platforms. This concern is substantiated by the survey findings indicating

that 66% of the girls have reported experiencing unwanted contact from strangers online, highlighting the prevalence of such encounters.

This issue aligns with the broader body of global research, which consistently underscores the vulnerability of young individuals to risks posed by online interactions with potentially harmful strangers (Livingstone, Davidson, et al., 2017; Livingstone, Mascheroni, et al., 2014; Smahel et al., 2020). Young people often lack the experience and judgment needed to deal with such interactions, increasing the potential for negative outcomes. The risk of cyber grooming and other forms of predatory behaviour is particularly alarming. Global research indicates that children and adolescents are at risk of significant emotional, psychological, and even physical harm from such encounters (Greene-Colozzi et al., 2020; Mýlek et al., 2020; Staksrud et al., 2013; Stoilova et al., 2021).

Mothers and teachers expressed great anxiety about safeguarding young girls from these unseen online dangers. The data strongly support the need to enhance digital literacy and implement strong protective measures. These initiatives are crucial for equipping young individuals with the knowledge and skills to navigate the online world safely, thereby reducing the risks associated with unwanted interactions with strangers. Furthermore, fostering open communication between parents, teachers, and adolescents about the dangers of online interactions can help build a supportive environment where girls feel comfortable discussing their online experiences and seeking guidance.

#### **7.4.1.2 Hacking, Financial Fraud, and Identity Theft**

Exploring further into contact risks, hacking, financial fraud, and identity theft present significant threats to the digital well-being of Saudi adolescent girls. The survey results revealed a concerning scenario, with 15% of the girls who participated in the survey reporting experiences of hacking. This unauthorised access not only compromises the privacy and security of young users but also poses a threat to their emotional and financial safety. The narratives from the interviews add depth to these statistics, recounting instances where personal and sensitive information was illegally accessed, leading to feelings of violation and distress among the victims.

Financial fraud, though less prevalent compared to other risks, emerged as a notable concern. The survey indicated that 9% of the surveyed girls had encountered financial scams online. While this risk may seem infrequent, it carries significant consequences. These deceptive practices often exploit the trust and naivety of young users, leading to financial losses and, in some cases, long-term effects on their understanding of financial matters and their trust in online transactions. The stories from the interviews highlight how these scams can shake the confidence of victims in using online financial services, emphasising the need for better education on recognising and avoiding such threats.

Identity theft, encountered by 8% of the girls according to the survey, further complicates the landscape of online risks. This form of exploitation can have far-reaching effects, impacting the immediate security of the victims and potentially

leading to more extensive issues of fraud and misuse of personal data. The impact of such experiences is significant, creating a sense of insecurity and vulnerability in young users and their families. These findings, placed within the broader research on digital risks for adolescents (Global Kids Online, 2019; Paat & Markham, 2021; Smahel et al., 2020), highlight the urgent need for comprehensive digital education. Such education should empower users with the knowledge and tools to protect themselves against these threats. This need is especially important for young users, who are at a formative stage and may be more easily attracted to online interactions that seem harmless but could actually be dangerous.

#### **7.4.1.3 Cyberbullying**

Cyberbullying stands out as a particularly widespread and damaging contact risk, posing serious psychological and emotional challenges for Saudi adolescent girls. The survey findings reveal a concerning landscape, with 32% of the girls experiencing cyberbullying, which aligns with global trends showing a rising prevalence of online harassment among youth (Balas et al., 2023; Lobe et al., 2021; Ofcom, 2023a; Pew Research Center, 2022; Smahel et al., 2020). This form of bullying, facilitated and increased by digital platforms, extends the reach and impact of traditional bullying into the virtual spaces where adolescents spend a significant portion of their time.

The qualitative insights from the interviews shed light on the personal stories behind the statistics, revealing the emotional and psychological impact of cyberbullying. The girls recounted instances of receiving hurtful comments, or being the subject of online

rumours and harassment. These experiences often lead to feelings of isolation, anxiety, and in severe cases, can contribute to the development of mental health issues (Balas et al., 2023; Pew Research Center, 2022). The mothers and teachers involved in the study shared these concerns, highlighting the challenges in protecting girls from online bullying. The widespread nature of the internet means that bullying can follow adolescents from school to home, leaving them with no escape from the harassment. This constant exposure can increase the impact of bullying, making it more damaging than traditional face-to-face bullying.

Addressing cyberbullying among Saudi adolescent girls requires a comprehensive strategy involving educators, parents, policymakers, and the girls themselves to create a supportive and respectful online environment. This collaborative effort is essential for reducing the prevalence of cyberbullying and ensuring a safer digital landscape for all users. Promoting digital literacy, encouraging open communication, and implementing strict policies against online harassment are key components of this approach. By working together, the community can help foster a positive and secure online experience for young people.

#### **7.4.2 Content Risks**

Exploring content risks, this section looks at the different types of harmful material that Saudi adolescent girls might encounter online. The vast and unregulated digital landscape exposes users to a wide range of content that can affect the psychological, emotional, and social well-being of young individuals. From exposure to explicit

material to the influence of unrealistic beauty standards and harmful ideas, the risks are varied and significant. Understanding these challenges is crucial for developing effective strategies to safeguard children and adolescents in this ever-evolving digital age.

#### **7.4.2.1 Exposure to Self-Harm or Suicide-Related Content**

The issue of adolescents encountering content related to self-harm or suicide on the internet is particularly concerning given the potential for such material to influence vulnerable individuals. Insights from this study reveal that a significant portion, 36% of the surveyed girls, had come across such distressing content over the previous year. The exposure to these materials is not merely incidental but is often facilitated by the algorithms of social media platforms and other online spaces that can inadvertently promote such harmful content based on user interactions (Dyson et al., 2016; Riemer & Peter, 2021). The ease with which this content can be accessed raises serious concerns about its impact on adolescents' mental health, particularly for those who may already be struggling with emotional or psychological issues (Dyson et al., 2016; Popat & Tarrant, 2023).

Parents and teachers share significant concerns about this trend, highlighting the challenges in monitoring and controlling the vast amount of online content. They worry that frequent exposure to self-harm or suicide-related material could make these serious issues seem normal or acceptable as ways to cope with distress. This constant exposure might reduce the sensitivity to the severity of these acts,



potentially leading to harmful consequences (Dyson et al., 2016; Mars et al., 2015; Mitchell et al., 2014). Studies like those by Mitchell et al. (2014) and Arendt et al. (2019) show the global challenge of online content related to self-harm and suicide. These studies, among others, have documented the direct link between exposure to harmful content and an increase in suicidal thoughts and self-harm behaviours among young people. This highlights the need for a universal effort to protect young internet users from these dangers.

Addressing this issue requires a worldwide response, with strategies to reduce access to and influence of such content on digital platforms. Creating a safer online environment for children and adolescents involves cooperation across cultures and countries. It is important for internet service providers and social media platforms to enforce stricter content moderation policies and offer tools for reporting and avoiding harmful material. Educational programs are also essential to help adolescents develop the critical thinking skills needed to safely navigate online content.

#### **7.4.2.2 Exposure to Hate Speech**

Exposure to hate speech online is a growing concern that affects adolescents globally, including Saudi girls. Hate speech, which includes content that insults or promotes violence against people based on their race, religion, ethnicity, gender, or sexual orientation, is a serious issue in the digital age (Kansok-Dusche et al., 2023; Wachs et al., 2022). The rise of social media platforms and online forums has facilitated the rapid spread of such content, making it more accessible to young audiences.

Findings from this study indicate that a significant 58% of the participating girls have encountered hate speech, with instances specifically targeting their religious beliefs. Experiencing Islamophobia, in particular, can worsen the negative effects of hate speech, putting Muslim girls at higher risk. Encountering hate speech can cause significant emotional distress, leading to feelings of fear, anger, and isolation. The global digital landscape echoes this concern, with studies consistently highlighting the widespread exposure of young internet users to hate speech and its negative effects on them (Castellanos et al., 2023; Kansok-Dusche et al., 2023; Lobe et al., 2021; Oksanen et al., 2014; Wachs et al., 2022). In Saudi Arabia, where values like respect, tolerance, and community are highly valued, the impact of hate speech, especially when it targets personal beliefs, is very troubling. Such experiences could cause emotional pain and make the girls feel unsafe and unwelcome online (Wachs et al., 2022).

Addressing the issue of hate speech requires a joint effort from multiple stakeholders, including tech companies, educators, parents, and policymakers. Effective ways to tackle this issue include stronger content moderation policies, educational programs on digital literacy and empathy, and platforms for reporting and dealing with hate speech. By working together, these efforts can help create a safer and more respectful online environment for young people.

#### **7.4.2.3 Exposure to Violent Material**

The exposure of Saudi adolescent girls to violent material online is a serious concern. The survey revealed that 60% of the surveyed girls have seen violence against humans or animals in digital content. This significant exposure to violent imagery can have far-reaching consequences, potentially making young viewers more accustomed to aggression and affecting their emotional and psychological well-being (Kirsh, 2011; Ybarra et al., 2022). The prevalence of violent content online is a global issue, affecting young people across different cultures and regions (Global Kids Online, 2019; Livingstone, Mascheroni, et al., 2014; Smahel et al., 2020). Research indicates that repeated exposure to such material can influence attitudes towards violence, increasing acceptance and potentially influencing behaviour (Kirsh, 2011; Makarova & Makarova, 2019; Ybarra et al., 2011; Ybarra et al., 2022). For young individuals in Saudi Arabia, a society that values peace and compassion, the impact of such content is particularly troubling. It conflicts with the cultural norms and teachings that emphasise non-violence and respect for others.

Addressing this issue requires a comprehensive approach involving policymakers, digital platforms, educators, and parents. Policymakers need to implement and enforce regulations that limit the accessibility of violent content to young users. Digital platforms should enhance content moderation practices and develop strong age-appropriate filters to prevent exposure to harmful material. Educators and parents play a crucial role in fostering digital literacy, helping young users understand the

potential impact of violent content and teaching them how to navigate online spaces safely.

#### **7.4.2.4 Exposure to Sexually Explicit Content**

Within the digital landscape, encountering sexually explicit content stands as a significant concern for Saudi adolescent girls, reflecting a broader global challenge in digital safety. The study findings indicate a concerning level of exposure among the participants, with 31% reporting encounters with such material, often unintentionally. This aligns with global observations, as research like the EU Kids Online (2020) and Global Kids Online (2019) projects have documented the widespread nature of this exposure across various countries, pointing out the ease with which young individuals can come across inappropriate content online. This accidental exposure highlights the need for vigilant monitoring of digital spaces used by children and adolescents and the development of protective measures to safeguard them from such content.

The implications of encountering sexually explicit material extend beyond immediate shock or discomfort. Such exposure can influence adolescents' perceptions of relationships, sexuality, and self-image (Braun-Courville & Rojas, 2009; Lin et al., 2020; Massey et al., 2021). In Saudi society, these encounters carry additional cultural and religious implications. Given that discussions around sexuality are often taboo and sexual education is limited, encountering such content can cause significant confusion and anxiety among young individuals (Alomair et al., 2021). It challenges the deeply ingrained values of modesty and may result in internal conflicts as these young girls

navigate their cultural and religious identities. The widespread nature of this content on various digital platforms, from social media to video-sharing sites, complicates the efforts of parents and educators to maintain a safe online space for children and adolescents.

Interview narratives highlight the emotional and psychological impact of this exposure, with participants expressing feelings of discomfort and violation. These experiences highlight the need for enhanced digital literacy, including critical media consumption skills and an understanding of personal digital boundaries. Furthermore, they emphasise the importance of culturally sensitive approaches to online safety in Muslim societies, advocating for open channels of communication where children and young people can discuss their online experiences without fear of judgment or punishment.

#### **7.4.2.5 Exposure to Health-Damaging Content**

While navigating the online world, adolescents frequently encounter content that can negatively impact their physical and mental health. This is a common concern globally, as digital exposure increasingly affects young people's well-being. This includes content that promotes extreme diets, unrealistic body standards, and dangerous physical challenges. The current study found that 57% of the surveyed Saudi girls had encountered online content advocating extreme diets. This exposure poses a significant risk to their health perceptions and body image, especially during this critical stage of their development.

The issue of exposure to content promoting extreme diets and unhealthy body ideals is a global concern. Platforms like Instagram and TikTok are known for featuring a high prevalence of such content (Cuoco, 2022; Dane & Bhatia, 2023; Papageorgiou et al., 2022; Tiggemann & Slater, 2013). Influencers on these platforms often display 'ideal' body types and promote diet or fitness routines that may be unrealistic or harmful, affecting young viewers' body image and self-esteem. The pressure to meet these standards can lead to harmful behaviours, including disordered eating patterns (Kleemans et al., 2018; Verrastro et al., 2020).

In Saudi Arabia, the challenge of exposure to such health-damaging content is similar to global concerns, with equally profound impacts. Saudi adolescents, like their peers worldwide, are influenced by media representations of idealised body images. This can lead to skewed self-perceptions, body dissatisfaction, and potentially unhealthy eating behaviours (Alanazi et al., 2019; Dharmarajlu et al., 2023). This points to the need for comprehensive educational programs that address body image and health in a balanced way. These programs should aim to develop critical thinking skills among young people, enabling them to critically evaluate the content they encounter online. Promoting positive body image and healthy lifestyle choices in a manner that resonates with young audiences is crucial in mitigating the impact of such content.

#### **7.4.2.6 Exposure to Diverse Cultures, Customs, and Religions**

The exposure of Saudi adolescent girls to a wide range of cultures, customs, and religions online presents both challenges and opportunities. The internet's global

reach allows them to access perspectives and ways of life that are very different from those in Saudi society. For these young girls, this often means encountering ideas and values that are quite different from the traditional Islamic principles that guide their daily lives.

This mix of global digital culture with local traditions and religious norms is especially significant in Saudi society. The Kingdom, with its rich Islamic heritage and conservative cultural values, strongly emphasises adherence to Islamic teachings and customs. The internet, with its borderless exchange of information, introduces Saudi adolescents to a wide range of beliefs and practices that may contrast with or challenge these local norms and values. Exposure to such diverse content can influence Saudi girls in various ways. On one hand, it can broaden their perspective, fostering a more inclusive worldview that aligns with the goals of Saudi Vision 2030, which seeks to create a more open and engaged society. On the other hand, it raises concerns among parents and teachers about the potential for such exposure to cause confusion or conflict in the minds of young girls regarding their cultural and personal identities.

The issue extends beyond just seeing different lifestyles or beliefs. It is about the potential impact of such content on young girls' perceptions, beliefs, and behaviours, potentially leading to feelings of confusion about their cultural identity. For instance, online representations of gender roles and relationships that differ from the conservative values in Saudi society can cause significant inner conflict. The clash between traditional expectations of modesty and the more liberal views of femininity

and sexuality online can be particularly challenging to navigate. This is compounded by social media influencers who often promote lifestyles and values that may not align with those of the Saudi culture. Additionally, encountering content that challenges religious beliefs, like atheistic views or different interpretations of Islam, adds another layer of complexity. For young girls still figuring out their faith and cultural identity, this can be both confusing and impactful.

Parents and teachers in the study echoed these concerns, highlighting the challenges of protecting young girls from the influence of diverse online content. Research by Al-Anzi (2009) and Hamdan (2014) reflects broader societal worries about the internet's impact on young people's behaviour, ethics, and beliefs. These studies emphasize the protective role of religion in managing online risks and highlight the tension between global digital culture and local traditions. The work of Abu-Khalil (2018) also documents the influence of foreign cultures on Saudi adolescent girls, aligning with this research's findings. Unlike Western studies that often focus on universal risks like cyberbullying and privacy concerns, these studies underscore the need to consider cultural and regional factors when discussing online risks in Saudi Arabia.

Addressing these concerns requires a balanced approach that respects Saudi Arabia's cultural and religious values while also recognising the global nature of the internet. Strategies might include promoting digital literacy that encourages young people to think critically about what they see online, fostering open conversations within families and schools about the content encountered, and creating support systems to help them navigate the digital world in a way that aligns with their cultural and



religious beliefs. By respecting local traditions and equipping young people with the skills to critically engage with global content, they can benefit from the digital age while minimising its risks.

#### **7.4.2.7 Common Sources of Risky Online Content**

In exploring the digital environments where Saudi adolescent girls encounter risky content, social media platforms stand out as major sources. Specifically, 44% of the girls identified TikTok and Snapchat as common places for exposure to potentially harmful material. These platforms play a substantial role in the daily digital interactions of young people, serving both as spaces for socialisation and as places where risky content can spread. Similarly, 35% of the girls cited video-sharing sites like YouTube as another significant source of risky content. The vast and diverse content on YouTube, combined with algorithm-driven recommendations, can sometimes lead young viewers to unintentionally encounter inappropriate material. This highlights the need for better content moderation and parental controls to protect young users.

Additionally, 30% of the girls reported encountering risky content through pop-up windows during regular internet use, highlighting the disruptive nature of online advertising and the potential for such ads to deliver inappropriate content. This issue points to the broader challenge within the digital ecosystem related to ad targeting and the necessity for stricter regulations to safeguard young internet users. Gaming sites, although less frequently mentioned, were noted by 11% of the adolescent girls as sources of risky content. This indicates that while gaming environments might be

seen as entertainment spaces, they also have the potential to expose players to content that may not be age-appropriate. Moreover, 8% of the girls reported receiving inappropriate material directly from strangers, adding another layer of concern regarding direct interactions with unknown individuals online. The fact that 6% of the girls actively sought out risky content highlights the challenges of adolescent curiosity and the critical need for education on safe online practices.

In summary, Saudi adolescent girls encounter risky online content across various digital platforms, with social media and video-sharing sites being the most significant sources. This underscores the importance of implementing comprehensive digital literacy programmes to empower young girls to navigate the online world safely. Engaging in open discussions about online safety with parents, educators, and peers can further support their resilience against the potential harms of risky online content. Additionally, advocating for stricter content moderation policies across these platforms can help create a safer online environment for all users, especially young individuals navigating their digital lives.

### **7.4.3 Conduct Risks**

Examining conduct risks involves understanding the online activities and behaviours that Saudi adolescent girls may engage in, which could potentially endanger themselves or others. The digital environment, characterised by anonymity and extensive social networks, can sometimes promote risky behaviours that might not occur in offline contexts. These risks include sharing personal information with

strangers and participating in online challenges with potentially serious real-world consequences. Addressing these risks necessitates a comprehensive understanding of the potential dangers and a commitment to promoting a safe and respectful online culture. Ensuring the mitigation of conduct risks is crucial for creating a secure online environment for adolescents, thereby empowering them to make wise decisions in their digital interactions.

#### **7.4.3.1 Interactions with Online Strangers**

Interacting with unknown individuals online has become a fundamental part of adolescent social life in the digital age. This behaviour includes initiating conversations with strangers on social media, accepting follow requests from users with unknown identities, and sometimes transitioning these online interactions into real-life encounters. The appeal of making new connections can hide the significant risks involved in interacting with unknown individuals. Such interactions can expose adolescents to inappropriate content, manipulation, online grooming, and exploitation. The risks are increased when online interactions lead to in-person meetings, removing the veil of digital anonymity and increasing exposure to potential threats.

The findings of the survey in this study reveal a worrying trend, with 53% of the surveyed girls admitting to engaging in online conversations with strangers for entertainment. This high level of engagement is alarming given the potential dangers of such interactions. Even more concerning is that 18% of these young girls have met

someone in person whom they initially encountered online. Furthermore, 32% of them did not inform a responsible adult about their plans, highlighting a significant gap in communication and supervision.

Another aspect of this risky digital behaviour is accepting follow requests from unknown individuals on social media platforms, which blurs the line between private and public spheres. Although 54% of the surveyed girls choose private social media settings, allowing strangers access to their digital lives undermines these privacy measures. This decision, often motivated by the desire to increase one's follower count and social media presence, inadvertently exposes adolescents to the risks they sought to avoid. This situation highlights a significant gap in digital knowledge among Saudi adolescents. Even with privacy settings available, engaging with or accepting strangers online can weaken these safety measures. The appeal of online anonymity provides a sense of freedom to explore and interact, but it also hides the true intentions of others, making it difficult to distinguish between safe and harmful interactions. This challenge is exacerbated by the fact that while adolescents are generally proficient in the technical aspects of digital usage, they often lack a deep understanding of online safety and the critical assessment of digital relationships (Staksrud et al., 2013).

Research from various parts of the world, including the noteworthy EU Kids 2020 study and the Global Kids 2019 comparative research, has shed light on the widespread nature of these risky behaviours among children and adolescents. These studies reveal a troubling increase in young people's exposure to such dangers, emphasising the

global relevance of this issue. While these behaviours reflect global digital engagement trends, they carry specific implications within the Saudi context, deeply influenced by the kingdom's cultural and social norms. In Saudi Arabia, interacting with strangers online has significant implications due to the deeply rooted cultural and religious values that shape social behaviour. These activities not only pose risks to individual safety but also challenge traditional social boundaries, impacting personal and family reputation within the community. Consequently, the issue of online engagement with strangers among Saudi adolescents goes beyond personal safety, encompassing broader social and cultural considerations. Addressing these risks requires a collaborative effort involving families, educators, policymakers, and the adolescents themselves to foster a digital environment that is safe, respectful, and aligned with cultural values, thereby promoting responsible digital citizenship.

#### **7.4.3.2 Sharing Personal Information and Images Online**

The practice of sharing personal information and images online by Saudi adolescent girls highlights a significant digital safety concern, reflecting broader trends observed across various cultures (e.g., Global Kids Online, 2019; Ofcom, 2023a; Smahel et al., 2020). Approximately 27% of girls in this study admitted to sharing personal photos online, while 25% shared personal details with strangers, often motivated by the promise of potential rewards. This behaviour, which includes sharing sensitive information such as full names and addresses, exposes them to the risk of exploitation by online predators and scammers. This situation highlights how difficult it is for adolescents to weigh the risks and benefits of their actions in digital environments.

The cultural implications of sharing personal information and images online are particularly significant in Saudi society, where traditional values and Islamic principles strongly emphasise privacy and modesty. The practice of hijab, intended to protect women from exposure to non-family males, illustrates the importance of these values. Sharing personal images online deviates from these cultural expectations, creating potential conflicts with deeply held societal norms. This behaviour not only risks individual safety and mental well-being but also affects social reputation and family honour. It is essential to acknowledge that while these risks are present globally, they carry heightened consequences in the Saudi context due to the strong cultural and religious emphasis on modesty and privacy. Parents in this study expressed concerns rooted in these norms, fearing that sharing personal photos online might attract unwanted attention and lead to exploitation or harm. These concerns extend beyond immediate safety risks to broader issues of reputation and adherence to cultural and religious practices. This emphasis on the unique risks within Saudi society is necessary to fully understand the implications and address them effectively, recognising the profound impact of cultural and religious values on the behaviour and well-being of adolescents.

The tension between the global digital culture of openness and traditional Saudi values presents a critical challenge for the younger generation, especially girls who might not fully grasp the consequences of their online activities. This gap highlights the urgent need for culturally sensitive digital literacy education. Such education should help young individuals navigate the online world safely while respecting their cultural and religious heritage. It should address the specific risks associated with

sharing personal information and images online, emphasising the importance of maintaining privacy and modesty in line with cultural and religious norms. By fostering an understanding of these issues, adolescents can be better equipped to make informed decisions that protect their safety and honour their cultural values.

#### **7.4.3.3 Online Harmful Behaviour Towards Others**

The engagement of adolescents in online behaviours that are harmful to others is a well-documented issue across diverse international contexts. These activities include bullying, spreading hateful content, hacking, and trolling. The findings of this study, which examined harmful online behaviours among Saudi adolescent girls, reveal a relatively low occurrence of these actions. Only 7% of the participants admitted to engaging in online activities that could harm others. This result stands in contrast to the broader digital landscape, particularly when compared with studies conducted among adolescents in Western countries. For example, a comprehensive study involving 8,000 adolescents from nine European countries found that approximately one in four admitted to trolling someone online, one in eight confessed to online harassment, and many were involved in hate speech, hacking, and digital piracy (Davidson et al., 2022). Similarly, another survey of 6,195 adolescents across 11 European countries revealed significant portions of youths admitting to bullying others online; notably, 49% in Germany, 45% in Romania, and 43% in Switzerland (Lobe et al., 2021). These statistics highlight a significant disparity in the prevalence of harmful online behaviour among adolescents in different cultural and geographical settings.

This discrepancy invites a deeper investigation into the factors contributing to the markedly lower rates of harmful online behaviour among Saudi adolescent girls. One possible explanation lies in the strong influence of societal values deeply rooted in religious faith, which may play a crucial role in shaping online conduct. The adherence to Islamic teachings and the belief in divine accountability might act as powerful deterrents against engaging in negative online behaviours, even when cloaked in the anonymity of the digital world. This cultural context, which emphasises respect, community values, and ethical behaviour, could explain why fewer Saudi adolescents engage in harmful online activities compared to adolescents in other countries.

This observation underscores the potential impact of aligning digital ethics education with cultural and religious values. In the Saudi context, integrating Islamic principles with guidelines for digital conduct could effectively promote positive online interactions among adolescents. Such an approach supports adherence to cultural norms and also enhances the relevance and acceptance of digital literacy programs. This strategy could offer valuable insights for other societies where cultural and religious norms significantly influence behaviour, suggesting that a culturally tailored approach to digital citizenship education may be more effective in fostering responsible online behaviour. By aligning educational initiatives with the values and beliefs of the community, it becomes possible to address the unique challenges faced by adolescents in the digital age, thereby promoting safer and more respectful online environments.



#### **7.4.4 Age-Related Trends in Online Risk Exposure**

The relationship between age and exposure to online risks is a critical area of study, and this research highlights significant trends in the experiences of Saudi adolescent girls. The survey findings reveal a clear pattern. As girls grow older, their exposure to the three main categories of online risks – contact, content, and conduct – increases. This trend is consistent with existing literature, which often points to age as a significant factor in determining the extent of online risk exposure (Duerager & Livingstone, 2012; Livingstone, Ólafsson, et al., 2017; Smahel et al., 2020; Steinberg, 2010). The findings indicate that older girls, those in the 14-15 and 16-17 age groups, are more likely to engage in online interactions with strangers, encounter harmful content, and participate in risky behaviours such as sharing personal information or photos. This pattern can be attributed to several factors, including increased independence and autonomy as they grow older, greater access to the internet and social media, and a growing curiosity about the digital world. These factors collectively contribute to a higher likelihood of encountering online risks as they age.

Previous studies have consistently shown that as children and teenagers progress through adolescence, they tend to take more risks in their online activities. This aligns with the findings presented here and underscores the need for age-appropriate online safety education. Ensuring that educational programs are tailored to the specific needs and maturity levels of different age groups is crucial. Additionally, vigilant parental guidance becomes increasingly important as girls enter these more vulnerable age groups, where online risks become more prevalent and potentially

harmful. By addressing these risks through targeted education and supportive parenting, it is possible to mitigate the dangers and promote safer online experiences for adolescents.

#### **7.4.5 Mothers' Awareness of Online Risks Faced by Their Daughters**

The study's exploration into mothers' perceptions versus the actual experiences of their daughters regarding online risks presents insightful contrasts. The survey and interview findings reveal a significant gap between what mothers perceive and what their daughters actually experience when it comes to online risks related to contact, content, and conduct. Many girls reported encountering these risks more frequently than their mothers believed. For example, girls reported more frequent interactions with strangers online and a higher likelihood of risky meet-ups, while their mothers often underestimated these interactions. Similarly, girls acknowledged greater exposure to potentially harmful content, such as discussions about self-harm or explicit material, compared to their mothers' perceptions. Regarding conduct risks, girls admitted to more engagement in risky behaviours like sharing personal information or photos online and accepting social media requests from strangers than their mothers recognised. This trend of parental underestimation is a global issue, highlighted by studies like those from EU Kids Online and Global Kids Online, which show a common lack of parental awareness regarding the extent of children's exposure to online risks (Geržičáková et al., 2023; Global Kids Online, 2019; Hasebrink et al., 2011; Livingstone & Byrne, 2018; Livingstone & Helsper, 2008; Logar et al., 2016; Pacheco & Melhuish, 2020; Smahel et al., 2020; Stoilova et al., 2021).

The literature suggests that this awareness gap often stems from a generational divide in digital literacy. Parents are generally less familiar with modern online platforms than their children, leading to an underestimation of the risks involved (Akter et al., 2022; Alqahtani et al., 2017; Fix et al., 2021; Liao et al., 2008; Livingstone & Byrne, 2018; Spiteri, 2014). Communication barriers further exacerbate this issue, as children might not fully disclose their online experiences, either due to fear of punishment or a belief that their parents will not understand (Byrne et al., 2014; Geržičáková et al., 2023; Livingstone & Byrne, 2018).

Additionally, a misplaced trust in their children's ability to safely navigate online spaces can lead to a lack of vigilance from parents (Livingstone & Byrne, 2018; Quayyum et al., 2021). Parents might also not fully appreciate the range and severity of online risks, or they may choose to respect their children's privacy by avoiding close monitoring of their online activities (Akter et al., 2022; Quayyum et al., 2021). Cultural and social norms, which sometimes discourage open discussion about sensitive topics, including online behaviours, also contribute to this discrepancy in awareness (Alqahtani et al., 2017; Livingstone & Byrne, 2018). This combination of factors highlights the need for better digital literacy and communication strategies to bridge this understanding gap between parents and children.

## **7.5 Discussion of Research Question 4: How is the online safety of Saudi adolescents girls supported at home and at school, as perceived by the girls, their mothers, and female teachers?**

As discussed earlier, the internet, while offering numerous benefits, also exposes young users to various risks. Therefore, understanding and enhancing the safety measures provided by both families and schools is crucial. The fourth research question of this study explores how the online safety of Saudi adolescent girls is perceived and supported at home and in schools, through the perspectives of the girls themselves, their mothers, and female teachers.

This section aims to discuss the findings related to this question, shedding light on the strategies, challenges, and perceptions surrounding digital safety in the Saudi context. By examining the roles of family and schools, the discussion seeks to gain a better understanding of the support systems in place and identify areas for improvement. Through this analysis, the goal is to find more effective ways to protect the digital wellbeing of young people.

### **7.5.1 Home Environment: Girls and Mothers' Perspectives**

Exploring the home environment uncovers how Saudi adolescent girls and their mothers manage and perceive online activities, offering insights into how families approach online safety. This understanding helps to highlight the strategies used by families to keep girls safe online.

#### **7.5.1.1 Parental Mediation Strategies**

Parental mediation includes various strategies parents use to monitor and guide their children's internet use, aiming to ensure balanced and safe digital engagement. In Saudi households, these strategies are influenced by culture, religion, and the fast-paced digital evolution. The interviews and survey responses from this study highlight the different tactics parents use to guide and protect their adolescent girls online.

- **Active Mediation**

Active mediation involves parents directly engaging with their daughters about their online activities. This includes discussions about internet content, its potential impact, and strategies for safe navigation. Global research emphasises the importance of open communication in fostering an environment where young users are both protected and educated about the digital world (Alkan et al., 2021; Cricchio et al., 2021; Livingstone & Helsper, 2008). The findings from the current study reveal that a large number of mothers actively engage in conversations with their daughters about online content, reflecting the academic view that dialogue enhances digital literacy (Cricchio et al., 2021; Livingstone & Byrne, 2018; Livingstone, Ólafsson, et al., 2017).

However, the success of active mediation depends on parents staying informed about the rapidly evolving digital world. The challenge is not only in keeping pace with new platforms and trends but also in understanding the risks they may pose (Chen & Chng, 2016; Livingstone & Byrne, 2018; Shin & Lwin, 2017). This difficulty is highlighted in the interviews, where mothers express concerns about their ability to provide relevant

and timely guidance in an ever-changing digital environment. The situation is further complicated by the adolescents' developmental stage, marked by a desire for autonomy and exploration beyond parental oversight.

Academic literature supports the idea that active mediation enhances digital resilience among adolescents, helping them critically assess online content and interactions (Livingstone & Byrne, 2018; Shin & Lwin, 2017). Additionally, this strategy fosters a supportive family environment, encouraging adolescents to share their online experiences and concerns, thus reducing the likelihood of exposure to harmful content (Chen & Chng, 2016; Nielsen et al., 2019; Shin & Lwin, 2017).

Despite its benefits, active mediation must be implemented with care. Overemphasis on guidance and discussion can lead to resistance from adolescents, particularly as they seek more independence in their digital interactions. Therefore, the approach must be adaptive, evolving with the child's age, maturity level, and changing digital habits. This adaptability ensures that active mediation remains a relevant and effective tool for navigating the challenges of the digital world (Livingstone & Byrne, 2018).

- **Restrictive Mediation**

Restrictive mediation, which involves setting strict boundaries on internet use, is a common approach among Saudi parents to protect their adolescent girls from online risks. This strategy includes clear rules about the duration of internet use, the types of content allowed, and acceptable online activities. According to the survey data, many

families rely on restrictive measures, reflecting the cultural emphasis on supervision and protective oversight, particularly for adolescent girls.

Academic research suggests that restrictive mediation can effectively reduce exposure to online risks by limiting digital engagement (Lee, 2013; Livingstone, Ólafsson, et al., 2017). However, this approach has its challenges. Over-reliance on restrictions may prevent the development of critical digital skills necessary for safe and independent internet use (Livingstone, Ólafsson, et al., 2017; Mendoza, 2009; Shin & Ismail, 2014). Additionally, as adolescents seek greater independence, overly restrictive measures may lead to resistance or secretive online behaviours, counteracting the intended protective effects. Interviews with mothers in this study reveal a clear understanding of these issues. Many mothers express a desire to protect their daughters from potential online harms but also recognise the importance of encouraging independence and responsible digital citizenship. This balancing act is made more challenging by the constantly changing digital landscape, where new platforms and trends create ongoing difficulties for parental supervision.

The literature highlights the need for a balanced approach, combining restrictive measures with active mediation and open discussions (Livingstone & Blum-Ross, 2020; Livingstone & Byrne, 2018; Shin & Ismail, 2014; Shin & Lwin, 2017; Young & Tully, 2022). This integrated strategy ensures that while certain boundaries are maintained to protect young users, they are also encouraged to engage critically with digital content and develop the skills necessary for safe online navigation.

In the Saudi home environment, the use of strict internet rules tends to decrease as girls grow older. This change can be attributed to several factors, including the increasing desire for independence among adolescents and their growing digital skills. As girls become more proficient in using the internet safely, parents may feel less need to enforce strict controls and instead adopt a more advisory role. This shift reflects a natural progression towards empowering young users to handle online risks on their own, highlighting how parental mediation adapts as adolescents' digital competencies develop.

- **Technical Mediation**

Technical mediation, which involves using digital tools and software to monitor or restrict online activities, presents a modern approach to parental mediation within the digital world. The findings from the survey indicate a varied adoption of technical mediation strategies among Saudi families, with a notable portion of parents using these tools to a varying degree. This approach reflects a global trend where technological solutions are increasingly used to enhance children's online safety (Hasan, 2018; Livingstone & Blum-Ross, 2020; Nagy et al., 2023; Stoilova et al., 2021; Warren & Aloia, 2019).

The use of technical mediation tools, such as parental control software, allows parents to set boundaries around internet access, filter inappropriate content, and monitor online interactions. However, the effectiveness of technical mediation depends on several factors, including parents' technical skills and the constantly changing digital platforms. Interviews with mothers highlight recurring technological challenges,



where a lack of familiarity with digital tools and the ongoing evolution of online platforms pose significant barriers to effective implementation. This observation aligns with scholarly discussions emphasising the need for digital literacy among parents to fully use the potential of technical mediation in safeguarding children's online experiences (Livingstone & Byrne, 2018).

Moreover, the use of technical mediation tools must be balanced with active engagement and dialogue between parents and children. The literature suggests that while technical mediation can provide a layer of protection, they are most effective when complemented by open communication and guidance, fostering a comprehensive approach to online safety. This strategy ensures that children are shielded from potential risks and are also equipped with the critical thinking skills necessary to navigate the online world independently (Livingstone & Byrne, 2018; Livingstone & Helsper, 2008; Shin & Lwin, 2017).

- **Monitoring**

Monitoring as a parental mediation strategy involves parents overseeing their children's online activities. This includes checking the websites they visit, monitoring social media interactions, and reviewing online communications. According to the findings from this study, a significant number of Saudi parents use monitoring practices to varying degrees to safeguard their daughters' online experiences. This approach aligns with the broader literature that highlights monitoring as crucial for protecting children from online risks while promoting responsible internet use (Bleakley et al., 2016; Khurana et al., 2015).

The use of monitoring practices among Saudi families appears to be influenced by several factors, such as the parental digital literacy, the child's age, and the perceived level of online risk. This variability in monitoring approaches, ranging from occasional checks to regular oversight, reflects the challenges parents face in finding a balance between granting autonomy and ensuring safety in the digital space.

Furthermore, the effectiveness of monitoring depends on combining it with other forms of mediation, such as active mediation and technical controls. Research suggests that while monitoring can give parents insights into their children's online behaviour, it works best when paired with open communication and guidance (Auxier et al., 2020; Khurana et al., 2015; Livingstone & Byrne, 2018; Shin & Lwin, 2017). This holistic approach ensures that monitoring is part of a broader strategy to build digital literacy and resilience among young internet users.

- **Reverse Mediation**

Reverse mediation occurs when children and adolescents assist their parents in navigating the digital world. The findings from the interviews and surveys show this role reversal, highlighting the digital proficiency of the younger generation and its impact on family digital literacy. In this setting, adolescent girls often become the primary digital guides for their parents, helping them understand complex online platforms and digital safety measures. This trend is not unique to Saudi Arabia but is seen globally, as younger generations transfer digital knowledge to older ones (Keeley & Little, 2017; Livingstone, Ólafsson, et al., 2017). Such interactions can create a

collaborative learning environment within the family, where digital knowledge and safety practices are openly shared and discussed.

However, while reverse mediation can improve parents' digital skills and create a more balanced approach to internet use within the family, it also raises questions about traditional parental roles. When children become the digital experts, it can change the usual parent-child relationships, potentially affecting how other forms of parental guidance are perceived. Additionally, relying too much on reverse mediation might highlight the gaps in parents' digital literacy, showing the need for more comprehensive digital education for adults. Research suggests that empowering parents with the necessary digital skills is crucial for them to effectively guide their children's online activities (Hasan, 2018; Livingstone & Byrne, 2018; Wisniewski, Jia, Xu, et al., 2015).

In considering the broader range of parental mediation strategies, including active mediation, restrictive mediation, technical mediation, and monitoring, it becomes clear that each approach has its own impact on the digital wellbeing of Saudi adolescent girls. The data suggests a complex interaction between these strategies, with parents adjusting their methods based on their child's age, the perceived level of online risk, and the evolving digital landscape. This comprehensive view underscores the need for a balanced approach to parental mediation, one that combines the protective measures of monitoring and restrictions with the empowering strategies of active mediation and technical guidance. Such an approach aims to shield adolescents from immediate online harms and also equips them with the critical thinking and

adaptive skills necessary for navigating the difficulties of the digital world with confidence and responsibility. By fostering an environment where digital literacy is continuously developed and open communication is encouraged, parents can better support their children's online safety and help them become more resilient digital citizens.

#### **7.5.1.2 Perception Discrepancies in Parental Internet Mediation**

The differences between girls' and their mothers' perceptions regarding internet supervision and guidance highlight a significant communication gap within families. The data shows a consistent pattern where mothers perceive themselves as more actively involved and restrictive in their daughters' internet use than the daughters acknowledge. This gap appears not only in active mediation practices but also in restrictive and technical mediation strategies, revealing a potential mismatch between what parents intend and what children perceive.

In active mediation, the gap is especially noticeable in discussions about safe internet use and coping with negative online content. While the majority of mothers believe they frequently engage in such important conversations, a lower percentage of daughters recognise these discussions, suggesting a difference in how effective or meaningful these interactions are perceived. This points to the need for clearer and more impactful parental guidance to ensure that messages are understood and remembered by daughters.

The difference is even more pronounced in restrictive mediation, where a large number of mothers report setting rules for internet use, yet a significant portion of daughters perceive these controls to be less strict or even absent. This discrepancy could be due to different views on what counts as restrictions or because daughters seeking more independence downplay the controls. This highlights the tricky balance parents face between setting boundaries to protect their children and allowing them sufficient freedom to foster independence and self-regulation. With technical mediation tools, there is also a clear gap, with mothers reporting higher use of monitoring software and time-limiting tools than what daughters acknowledge. This gap may reflect a lack of transparency or discussion about the use of such tools within the family, or it could indicate that girls find ways to bypass these controls, making them less effective.

These perception gaps show the challenge of parental mediation in the digital age, where intentions and perceptions can differ greatly between parents and children. They highlight the need for open, ongoing, and clear communication about online safety practices and the rationale behind them. Encouraging a mutual understanding and collaborative approach to internet use can help bridge these gaps, aligning parental guidance with children's needs and improving online safety at home.

#### **7.5.1.3 Awareness Gap: Mothers Knowledge of Daughters' Online Experiences**

In the context of online safety, the awareness gap between mothers and daughters regarding digital experiences is a critical area of concern. The discrepancy in

communication and understanding about online interactions, content consumption, and overall internet use highlights the challenges of digital parenting today. The study shows a significant divergence in perceptions, where a significant proportion of daughters feel their mothers are not fully aware of their online activities. This is contrasted by a large number of mothers who believe they have a high or complete understanding of their daughters' digital interactions. This gap highlights a communication issue and also raises questions about the effectiveness of parental mediation strategies in the digital world.

The findings suggest that while mothers perceive themselves as highly involved and informed about their daughters' online lives, many girls report a lack of discussion about negative online experiences with their parents. This lack of communication on critical issues can result in missed opportunities for guidance, support, and intervention, which are essential for creating a safe online environment for adolescents. Moreover, the disparity in openness between girls and their parents, particularly in discussing internet-related issues, indicates a need for better communication channels within families. The higher level of openness with mothers compared to fathers suggests that maternal roles in digital mediation are more significant. However, there remains a significant room for improvement in terms of engaging in meaningful and open conversations about online safety.

The underestimation of online risks by parents, as indicated by their limited awareness of their daughters' online interactions and content consumption, highlights the need for enhanced digital literacy and awareness programs targeted at parents. Such

initiatives could bridge the knowledge gap, enabling parents to more effectively support and protect their daughters in the digital age. This awareness gap and the associated challenges in parental mediation underscore the need for a comprehensive approach to online safety, incorporating education, open communication, and collaborative learning between parents and children. By acknowledging and addressing these discrepancies, families can create a more informed, supportive, and secure online environment for adolescents, ensuring their digital wellbeing and resilience against online risks.

#### **7.5.1.4 Challenges in Parental Supervision and the Role of Mothers**

The landscape of parental challenges in ensuring online safety for adolescent girls in Saudi Arabia includes a variety of complex issues. These challenges involve not only the rapid development of technology but also cultural, generational, and practical barriers that impact how well parents can supervise and guide their children online. One of the major challenges that mothers face is keeping pace with the fast-changing digital world. The emergence of new applications and online trends at a dizzying speed often leaves parents overwhelmed and struggling to provide relevant guidance (Davis et al., 2021; Fix et al., 2021). This challenge is compounded by a significant generational gap in technological fluency. Daughters, as digital natives, can use new technologies with far greater ease than their mothers. This gap can lead parents to feel inadequate and less confident in their ability to offer useful and timely advice (Livingstone & Byrne, 2018; Page Jeffery, 2021).

The search for independence and privacy among adolescent girls introduces another layer of difficulty. As girls mature, their desire for private online interactions increases, creating a challenging situation for mothers who must balance keeping their daughters safe and respecting their need for autonomy (Livingstone et al., 2011; Savoia et al., 2021; Young & Tully, 2022). This challenge is further amplified in instances where girls choose to use the internet in private areas of the home, such as their bedrooms, limiting the potential for supervision and open conversation (Livingstone & Bober, 2006; Livingstone et al., 2011). Additionally, the practical challenges of monitoring, such as the small screens of mobile devices and the use of them make it harder for mothers to oversee their daughters' online activities effectively (Auxier et al., 2020; Livingstone & Byrne, 2018; Page Jeffery, 2021). The unwillingness of daughters to share their online experiences or device contents with their parents worsens this issue, creating a significant barrier to open communication and awareness.

A critical aspect that makes these challenges worse is the lack of resources and support available to mothers in terms of digital literacy and safe internet use. With the absence of comprehensive guidance and tools, mothers often feel unprepared to handle the complexities of the digital world effectively (Livingstone & Byrne, 2018; Livingstone & Smith, 2014). Adding to these difficulties is the notable absence of fathers in the digital mediation process. The survey results indicate that a significant portion of Saudi girls identify their mothers as the sole supervisors of their online activities. This trend underscores a broader societal pattern in Saudi Arabia, where the responsibility of mediating children's technology use mostly falls on mothers, possibly



due to cultural norms and expectations regarding gender roles and parental responsibilities (Hasan, 2018).

The literature review supports these findings, emphasising the multitude of challenges that make effective parental mediation difficult. The private nature of internet use, the setup of physical spaces where online activities occur, and the rapid pace of technological advancements create significant barriers to parental oversight (Auxier et al., 2020; Page Jeffery, 2021). Furthermore, the prevalent lack of awareness among parents about their children's online activities, partly due to generational differences in digital literacy and the tendency of children to seek advice from peers, greatly reduces the effectiveness of parental guidance and protection (Byrne et al., 2014; Savoia et al., 2021).

Given these multifaceted challenges, it is evident that ensuring the online safety of children and adolescents extends beyond the capacity of parents alone. The role of schools, teachers, and peers is crucial in creating supportive and secure online environments, highlighting the need for a united approach to digital safety. This collaborative effort is essential in addressing the challenges faced by parents, particularly mothers, in navigating the complexities of the digital landscape and ensuring the well-being of their daughters in the online world. This holistic strategy enhances protective measures while empowering adolescent girls with the knowledge and skills they need to navigate the digital world safely and responsibly.

#### **7.5.1.5 Perceived Protective Factors by Mothers**

In navigating the digital landscape, mothers identify several key factors they believe effectively shield their daughters from online risks. These protective measures, underpinned by the findings from this study, offer a glimpse into the multi-layered approach adopted by families to ensure online safety, with religious faith taking precedence as a significant deterrent.

- **Religious Faith as a Deterrent:**

A significant 87% of mothers in this study highlighted the crucial role of religious faith in protecting their daughters online. This belief in the protective power of faith resonates with the broader cultural context of Saudi Arabia, where religion is a central aspect of daily life. Mothers advocate for instilling a deep awareness of God's presence in their daughters, trusting this spiritual foundation to guide them away from engaging in risky online behaviours that contravene Islamic teachings. This reliance on religious faith as a protective shield is somewhat unique to the Saudi context and is rarely mentioned in Western research, highlighting a cultural difference in approaches to online safety. Previous Saudi studies have noted this aspect (Abu-Khalil, 2018; Hamdan, 2014), with both female teachers and the girls themselves recognising the importance of this factor, illustrating its widespread recognition across different perspectives within the community.

- **Discussion on Internet Safety**

Conversations about the potential dangers of the internet and necessary safety measures are considered crucial by 83% of the mothers. This emphasis on open and clear communication aligns with the literature's support for transparent communication between parents and children as a means to foster digital literacy and a safe online environment (Andrews et al., 2020; Faltýnková et al., 2020; Livingstone & Smith, 2014). These discussions raise awareness about potential online threats and equip children with the tools to navigate these challenges effectively. The mothers believe that regular, honest conversations can help build trust and encourage children to share their online experiences without fear of judgement or punishment.

- **Importance of Parental Supervision**

Vigilant monitoring of online activities by parents is highlighted by 76% of the mothers as essential for online safety. This includes oversight of the websites visited, content consumed, and online interactions, underscoring the effectiveness of parental supervision in mitigating online risks. By maintaining an active role in their children's digital lives, parents can better protect them from exposure to online risks (Auxier et al., 2020; Hasan, 2018; Lukavská et al., 2020; Niu et al., 2023; Ofcom, 2023b; Sela et al., 2020).

- **Encouraging Offline Activities:**

The significance of engaging in offline activities is stressed by 73% of the mothers, advocating for a balanced approach to digital engagement. This protective factor,

supported by research, indicates the benefits of a diversified and goal-oriented lifestyle in reducing online risks (Ofcom, 2023b). The mothers believe that by promoting a variety of interests and activities, girls are less likely to become overly dependent on digital devices for entertainment and social interaction. This approach also reduces the time spent online, thereby minimising exposure to potential online dangers. Engaging in offline activities can also strengthen family bonds, as shared experiences and quality time together create a supportive and nurturing environment (Pomfret & Varley, 2019).

- **Limiting Online Time**

Limiting the duration of internet use is considered important by 58% of the mothers. They believe that setting clear time limits helps prevent excessive screen time, which can cause issues like eye strain, sleep disturbances, and decreased physical activity. By controlling the amount of time spent online, parents can encourage children to engage in other activities, thereby reducing their exposure to potential online dangers (Livingstone, Ólafsson, et al., 2017; Savoia et al., 2021; Steinfeld, 2021; Teimouri et al., 2016). Additionally, structured online time can be used to teach valuable digital skills, ensuring children become responsible users while balancing online risks with the benefits of digital learning and connectivity (Livingstone & Byrne, 2018).

- **Schools' Role in Online Safety**

The pivotal role of schools in educating girls about online risks and safety measures is acknowledged by more than half of the mothers. These mothers believe that schools

can provide structured programs and workshops that focus on teaching students about the potential dangers they may encounter online and how to handle them responsibly. The literature supports this view, emphasising that regular communication between teachers and parents is crucial in creating a cohesive approach to online safety. Collaborative efforts between schools and parents are essential in promoting digital literacy and safe online practices, aligning with what the mothers in the study advocate (Casas et al., 2013; Hayixibayi et al., 2021; Schultze-Krumbholz et al., 2020).

In summary, the findings from this study, supported by the literature, show a comprehensive strategy employed by mothers to protect their daughters in the digital world. This strategy involves a combination of religious guidance, open communication, vigilant supervision, and encouraging offline activities, all strengthened by the collaborative role of schools in digital education. The emphasis on religious faith as a key protective factor, particularly noted in the Saudi context, highlights the unique cultural aspects in the broader discussion on online safety for adolescents. This varied approach not only addresses immediate online risks but also fosters a supportive environment that promotes digital literacy and responsible online behaviour, ensuring the well-being and resilience of young girls in an increasingly digital age.

## **7.5.2 School Environment**

This section addresses the essential role of the school environment in shaping safe online practices among Saudi adolescent girls, focusing on curriculum activities and the combined influence of teachers and peers.

### **7.5.2.1 School Activities and Curriculum**

Exploring school activities and curriculum in the context of online safety education reveals significant challenges and opportunities within the Saudi educational system. The survey and interview data indicate a notable gap in current educational practices, where the delivery of content often lacks interactivity and fails to relate to the students' real-life online experiences. Teachers and students report that the curriculum heavily focuses on the technical aspects of information and communication technology, such as mastering software applications and understanding basic programming. While these technical skills are valuable, they overshadow the equally important need for education on navigating the digital world safely and responsibly. This imbalance reflects a broader trend identified in previous research, highlighting a gap in educational strategies that should prioritise comprehensive digital fluency, including ethical and safe technology use (Ilomäki et al., 2023; Porat et al., 2018).

Students also report infrequent and non-interactive educational sessions on online safety, which indicates a missed opportunity to engage them in meaningful discussions about the real-world implications of their digital actions. The current

pedagogical approach to digital safety education needs to move away from mostly lecture-based methods and adopt more student-centred learning experiences. These could include interactive workshops, simulations, and real-life case studies that inform and empower students to apply safe online practices in their daily interactions (Ilomäki et al., 2023; Tomczyk, 2020).

Teachers and mothers agree on the importance of integrating digital safety into the school curriculum, recognising the school's crucial role in fostering a safer online environment for students. They advocate for a curriculum that goes beyond technical proficiency to include comprehensive education on the various risks associated with internet use. However, this contrasts with some students' views, who see online safety as primarily a parental responsibility. This divergence highlights the complexity of addressing digital safety education, which requires a comprehensive approach involving schools, educators, parents, and the broader community. By addressing these gaps and enhancing the curriculum to include more interactive and relevant online safety education, schools can play a pivotal role in equipping students with the knowledge and skills they need to navigate the digital world safely and responsibly.

#### **7.5.2.2 Role of Teachers**

The role of teachers in promoting online safety is crucial, yet the data from this study reveals that they often find themselves on the sidelines when addressing these concerns. Despite their awareness of the importance of their role, teachers face several significant challenges, as highlighted in the interviews conducted for this

research. One major issue is balancing the regular curriculum with internet safety education. The already packed curriculum leaves little room for additional lessons on digital safety, making it difficult for teachers to effectively cover this important topic. This finding is echoed in broader educational research, which also identifies the struggle to integrate digital safety into an already crowded curriculum (Kralj, 2016).

The technological divide between teachers and students emerges as a significant barrier, with teachers struggling to keep pace with the digital savvy of their students. The rapid evolution of technology and the constant emergence of new social media platforms further complicate this task. Teachers find it challenging to keep up with these changes and provide relevant, up-to-date guidance. The fast-paced nature of the digital world means that new apps and trends frequently appear, requiring teachers to continually update their knowledge to educate students about the latest online risks. This divide is part of a broader issue of tech fluency, where both teachers and parents may feel outpaced by the rapidly changing digital landscape. While it may not be necessary for teachers and parents to have the same level of digital skills as their students, a fundamental understanding of digital tools and platforms is essential. General issues, such as understanding privacy settings, recognising online risks, and knowing how to report inappropriate content, cut across all technologies. Therefore, rather than focusing on mastering each new platform or app, it may be more beneficial for teachers and parents to develop a robust foundational knowledge of digital safety principles. This approach would enable them to guide students effectively, regardless of the specific technology in use.



Moreover, the teachers in this study often feel they lack adequate training and support in digital literacy and online safety education. There is a clear need for more comprehensive professional development programmes that equip teachers with the necessary skills to handle the challenges of the digital world effectively. This lack of training and support is also noted in existing research, which highlights the necessity for ongoing professional development in this area (Bacak et al., 2022; Martin et al., 2022; Montero-Mesa et al., 2023).

In addition to these issues, the fixed structure of school curriculums presents another challenge. The strict nature of these schedules offers little flexibility for integrating essential life skills such as digital literacy and online safety. This inflexibility calls for changes in the educational system to broaden the curriculum and include these critical competencies, ensuring students are well-prepared for the complexities of the digital world (Ilomäki et al., 2023; Jones & Mitchell, 2016; Martin et al., 2019). The general agreement among teachers and the literature underscores the importance of these changes. Addressing these issues through enhanced training, curricular adjustments, and better support systems is essential for empowering teachers to become key players in promoting a safe online environment for their students.

#### **7.5.2.3 Peer Influence in Shaping Digital Behaviours**

Peers, as highlighted by the data, have a strong influence over adolescent girls' attitudes and behaviours towards online safety. This influence, while significant, is not fully used within formal educational settings. The survey's findings indicate that half

of the surveyed girls view friends as a source of guidance, revealing an opportunity to make better use of this peer influence. Peer-led initiatives, such as mentorship programs or digital safety clubs, could serve as effective platforms for promoting a culture of online safety, using the natural friendships and influence among students (Atkinson et al., 2009; Unicef, 2011).

Such initiatives would empower adolescents to take responsibility for their digital well-being while also creating a supportive community where they can share experiences, strategies, and advice on handling online challenges. This peer-to-peer approach could significantly enhance the relevance and impact of digital safety education, making it more relatable to the students' real-life experiences. By incorporating peer influence into the formal curriculum, schools can create a more engaging framework for online safety, ensuring that students are both informed and supported in their digital interactions.

#### **7.5.2.4 Collaborative Digital Safety Approach**

To address the challenges of digital safety education effectively, a unified approach involving teachers, students, parents, technology companies, government bodies, and civil society is essential. Schools must focus on continuous teacher training in digital literacy and safety through workshops and regular updates on digital trends. By integrating digital safety education across subjects, students can develop practical skills needed for today's digital world. Beyond schools, parents play a crucial role by supervising online activities and discussing potential risks with their children.

Technology companies must also contribute by ensuring their platforms are safe, with strong privacy settings and content moderation. They must address the role of algorithms in promoting harmful content, thereby reducing risks and fostering a safer digital environment. Government bodies are critical in enforcing regulations and providing resources to enhance digital literacy in schools. By setting national standards and supporting educational programmes, governments can help protect young people in the digital age.

Civil society organisations add value by raising awareness and promoting responsible digital behaviour. Through community programmes and public campaigns, they empower families to use technology safely. Together, these stakeholders can create a more informed and resilient society, where students navigate the digital world with confidence. This collaborative effort is essential to overcoming the complex challenges of online safety in the 21st century.

## **7.6 Applying Bio-Ecological Systems Theory to Understand Online Safety for Adolescent Girls**

This section explores how the Bio-Ecological Systems Theory, enriched by the addition of the Techno-Subsystem, provides a comprehensive framework for understanding online safety for adolescent girls. By considering influences from individual characteristics to broad societal norms, this approach offers a detailed view of the factors shaping adolescent girls' digital interactions.

### **7.6.1 Microsystem and Techno-Subsystem Interactions**

- **Home Environment**

The role of mothers in supervising and guiding their daughters' online activities is a key aspect of the microsystem. The study's findings show the significant involvement of mothers in digital supervision, highlighting a gendered aspect within the family structure. Strategies such as active mediation, where mothers directly engage with their daughters' online content, restrictive approaches involving setting limits, and technical mediation through the use of tools and software collectively shape the digital landscape for these adolescent girls. The integration of the Techno-Subsystem within this microsystem adds a layer of complexity, highlighting how technology influences family interactions and contributes to the nature of digital mediation. This variety of strategies underscores the adaptability and responsiveness of parental roles in the face of evolving online challenges. Moreover, the disparity in views between mothers and daughters on mediation methods, further complicated by the generational divide and differing digital norms, points to hidden issues and the need for open conversations. While mothers may prioritise safety and oversight, daughters might perceive these measures as overly restrictive or disconnected from their digital experiences. This contrast not only reflects diverse understandings of online safety but also underscores the communication gaps and potential areas for discussion within the family microsystem, suggesting a critical need for collaborative learning and mutual understanding in navigating the digital world.

- **School Environment**

The findings regarding online safety education in schools reveal a gap in current educational practices. The need for more interactive, engaging, and relatable methods of teaching online safety is apparent. Schools, as a critical microsystem, have the potential to significantly influence students' digital literacy and safety awareness, however, the study shows that current efforts may be inadequate or misaligned with students' needs and perspectives. Furthermore, teachers' struggles with technological divides and the constraints of a packed curriculum highlight the complexities in the school microsystem. These challenges suggest a need for professional development for educators, to equip them with the necessary skills and knowledge to navigate and teach in the increasingly digital-centric world. Moreover, the curriculum limitations point to broader systemic issues within educational policy and resource allocation that need to be addressed to create a better environment for comprehensive online safety education.

The influence of peers within the school setting further complicates the digital safety landscape. The study reveals that peers can serve as both a potential source of risk and a valuable support system, enhancing awareness of online safety among students. This dual role of peer influence necessitates the incorporation of peer-led initiatives and discussions in promoting online safety, using the positive aspects of peer interactions to foster a supportive digital environment. Addressing the peer influence in online safety education within schools could significantly increase the effectiveness

of existing efforts, ensuring a more comprehensive approach to digital literacy and safety.

### **7.6.2 Mesosystem and Cross-Contextual Influences**

The mesosystem, as part of Bronfenbrenner's Bio-Ecological Systems Theory, refers to the interactions between different microsystems in an individual's life. For adolescent girls' online safety, the mesosystem involves the interaction between the home and school environments, which are the two primary microsystems. The study highlights a noticeable lack of coherence in online safety strategies between these two settings. This disconnection can lead to inconsistencies in messages and approaches to online safety, potentially confusing girls and reducing the effectiveness of safety measures. For example, strict parental controls at home might be contrasted with more relaxed access at school, or vice versa, creating a disjointed experience for girls navigating their online world. The gaps in supporting adolescent girls' online safety across these microsystems suggest an urgent need for better coordination and communication. A more unified approach, where parents and teachers collaborate and share strategies, could significantly improve the effectiveness of online safety measures. This could include joint initiatives, consistent messaging, and shared resources that bridge the gap between home and school, ensuring that girls receive a cohesive and comprehensive education about the risks and safe practices of internet use.

### **7.6.3 Exosystem and Wider Societal Factors**

The exosystem, as defined in the Bio-Ecological Systems Theory, includes the broader societal and community factors that indirectly influence an individual's development. In this study, the exosystem plays a crucial role in shaping the online safety environment for Saudi adolescent girls. One key factor identified is the societal attitude towards gender roles, especially the limited involvement of fathers in digital supervision. This reflects a societal norm where childcare and online safety management are often seen as primarily the mother's responsibility. Such gendered expectations can lead to an unbalanced approach to online safety, where mothers carry most of the responsibility, potentially overlooking the valuable role fathers can play.

Additionally, the study highlights the lack of comprehensive support for parents and schools in managing online safety. This gap signifies a broader societal issue, where support structures such as educational policies, community programs, and governmental initiatives, are not adequately developed or implemented to address online safety. Moreover, technology companies, government bodies, and civil society each play a crucial role in shaping a safer digital environment. Technology companies should focus on developing strong privacy settings and content moderation to reduce the spread of harmful content, while governments must ensure these measures are backed by effective regulations that protect users. Civil society organisations contribute by promoting awareness and fostering better online practices within the community, helping parents and schools navigate the complexities of the digital world.

Without these combined efforts, parents and schools may remain under-resourced and unprepared to tackle the evolving challenges of the digital world effectively. These exosystemic factors highlight the need for a societal shift in attitudes and the development of strong support structures. By addressing these wider societal and community influences, it becomes possible to create a more supportive environment for ensuring the online safety of adolescent girls, involving and supporting all stakeholders, including both parents and teachers.

#### **7.6.4 Macrosystem and Overarching Cultural Beliefs**

The macrosystem refers to the overarching cultural and societal values, ideologies, and belief systems that shape an individual's environment. In this study, the macrosystem significantly influences the online safety experiences of adolescent girls in Saudi Arabia.

A key aspect of the macrosystem in this study is the influence of cultural beliefs and values, particularly those stemming from Islamic teachings. The study reveals that religious and ethical guidance serves as a protective factor against online risks. Mothers often stress the importance of instilling religious values in their daughters to discourage them from engaging in risky online behaviours that are prohibited in Islam. This includes activities such as viewing or sharing inappropriate content or engaging in relationships that contradict Islamic teachings. This reliance on religious faith as a guiding principle for online behaviour reflects the broader cultural ethos that exists in Saudi society. These norms and religious beliefs play a crucial role in shaping attitudes



and behaviours, especially regarding internet use and safety. In a society where religious teachings are deeply integrated into daily life, these beliefs naturally extend into the digital world, influencing how adolescent girls interact online and how they perceive and manage potential risks.

Additionally, the study highlights mothers' concerns about their daughters' exposure to different cultures, customs, and religions through the internet. These concerns reflect a broader apprehension about the potential influence of global cultural trends on local traditions and values. Mothers fear that unfiltered access to diverse online content may lead to the adoption of beliefs and practices that conflict with established Saudi customs and Islamic principles. These deeply rooted cultural beliefs and the dominant religious framework influence individual behaviours and guide the strategies that parents and teachers use to protect girls in the digital landscape.

Overall, the macrosystem in Saudi Arabia is characterised by a strong emphasis on religious and cultural values, which significantly shape how online safety is perceived and managed. By acknowledging these broader cultural and societal influences, it becomes clear how vital it is to consider the macrosystem when developing effective online safety measures for adolescent girls in Saudi Arabia. These cultural norms and religious principles not only influence personal behaviours but also dictate the methods used by parents and educators to ensure a secure digital environment. Understanding and integrating these elements is essential for creating comprehensive and culturally sensitive online safety strategies.

### **7.6.5 Chronosystem and Evolving Technological Landscape**

The chronosystem refers to the dimension of time and its influence on an individual's experiences and development. In this study, focusing on online safety for adolescent girls in Saudi Arabia, the chronosystem is particularly important given the rapidly changing nature of digital technology. Understanding how changes over time, such as technological advancements and shifting online trends, affect the experiences and behaviours of young internet users is crucial. In Saudi Arabia, as in many other parts of the world, there has been a swift and significant change in how technology is used and the types of online platforms that are popular among young people. This constant evolution presents both challenges and opportunities for ensuring online safety.

The study highlights how new social media platforms, communication tools, and digital technologies emerge and quickly become popular among young girls. This continuous change requires a flexible approach to online safety education and supervision. What was considered a risk a few years ago may no longer be as relevant, while new risks emerge with the advent of new technologies and platforms. Additionally, the chronosystem encompasses not just technological changes but also shifts in cultural attitudes and practices over time. In Saudi society, which has traditionally been more conservative, there has been a gradual but noticeable shift in attitudes towards technology and internet use. This change is especially evident in the increasing digital engagement of girls and the evolving role of technology in education and social interaction.

Furthermore, the chronosystem perspective acknowledges that the experiences and challenges of internet use and safety evolve as girls grow older and as societal attitudes towards technology and gender roles continue to change. The study indicates that as girls age, their online activities, the risks they face, and their need for autonomy in internet use change. This evolution underscores the importance of adaptable online safety strategies that can meet the changing needs and experiences of girls as they grow.

#### **7.6.6 Using the Bio-Ecological Systems Theory for Online Safety Analysis**

Integrating the Bio-Ecological Systems Theory, along with the Techno-Subsystem, provides a detailed framework for understanding online safety for adolescent girls. This approach highlights how individual, family, school, and societal factors work together to influence the digital well-being of young girls.

At the individual level, the theory emphasises the importance of personal characteristics, such as age, in shaping digital experiences. It suggests that interventions and educational efforts should be customised to address the unique needs and developmental stages of each girl, recognising that their interactions with technology and their vulnerability to online risks evolve over time.

Within the family, or the microsystem, the role of parents, particularly mothers, is crucial. The study shows how various parental mediation strategies, including active engagement, setting boundaries, and the use of technical tools, form the foundation

of a girl's online safety. This highlights the importance of equipping parents with the knowledge and skills needed to navigate the digital world with their children, fostering an atmosphere of open communication and mutual understanding.

The school environment, another critical microsystem, plays an essential role in enhancing digital literacy and safety awareness among adolescents. The research identifies a gap in current educational practices, pointing to the need for more engaging, relevant, and interactive teaching methods. Addressing this gap requires a curriculum that incorporates comprehensive online safety education along with professional development for educators to bridge the technological divide and effectively guide students in the digital age. Peer influence, another important part of the microsystem, also significantly shapes adolescent girls' online experiences. The study indicates that peers can be both a source of risk and a resource for learning and support. This dual role suggests the potential effectiveness of peer-led initiatives and the importance of fostering positive peer cultures around internet use.

The mesosystem, which represents the interaction between the home and school environments, underscores the importance of coherence and collaboration in online safety strategies. The study advocates for a unified approach where parents and teachers work together to provide consistent messaging and support, ensuring that girls receive a comprehensive and clear understanding of online risks and safety practices. At the exosystem level, societal attitudes towards gender roles and the limited involvement of fathers in digital supervision are highlighted as areas needing attention. Addressing these broader societal norms and improving institutional

support for online safety initiatives can contribute to a more balanced and inclusive approach to digital parenting and education.

The macrosystem, with its broad cultural and religious values, significantly shapes the digital experiences of adolescent girls in Saudi Arabia. The protective role of religious and ethical guidance highlights the need to integrate cultural sensitivities into online safety education, ensuring that it resonates with the local context and values. Finally, the chronosystem focuses on the evolving nature of the digital landscape, with technological advancements and cultural shifts continually affecting the online experiences of young users. This calls for flexible online safety strategies that adapt to these evolving trends and challenges, ensuring that girls are equipped with the skills and knowledge to navigate the digital world safely and confidently.

In applying the Bio-Ecological Systems Theory to the study of online safety for adolescents girls, it becomes clear that a comprehensive and collaborative approach is essential. By addressing the various interconnected factors that influence girls' digital interactions, stakeholders can create more effective strategies to protect their online well-being. This approach ensures that girls are equipped to navigate the digital world safely and confidently throughout their developmental stages.

## **7.7 Conclusion**

This chapter offered a detailed analysis of the research findings within the framework of the Bio-Ecological Systems Theory and broader academic perspective. The primary

focus was on understanding the digital engagement patterns of adolescent girls in Saudi Arabia, the online risks they encounter, and the efforts made by their families and schools to mediate these risks. By using a mixed-methods approach, the study provided a comprehensive understanding of the girls' online behaviours, their perceptions of digital dangers, and the protective measures in place. The discussion addressed each research question separately, revealing the in-depth insights they provide.

The insights from this analysis highlight the crucial role of both family and school environments in shaping adolescents' digital experiences. They also emphasise the need for a collaborative approach to ensure online safety. Using the Bio-Ecological Systems Theory, this study provided a detailed understanding of how various factors, from individual characteristics to broader societal influences, affect the digital well-being of adolescent girls.

As this chapter concludes, it prepares the groundwork for the final part of this thesis. The next chapter will summarise the key findings, discuss the study's contributions, and outline its practical implications. It will also identify the limitations encountered during the study and propose directions for future research, thereby completing the discussion initiated in this comprehensive exploration of online safety for adolescent girls in Saudi Arabia.

## **CHAPTER 8:**

### **CONCLUSION AND RECOMMENDATIONS**

#### **8.1 Introduction**

This research undertook a thorough investigation into the online safety and digital literacy of adolescent girls in Saudi Arabia, specifically targeting the age group of 12 to 17. In an era where digital engagement is increasingly prevalent, ensuring a secure and informed online environment for young users is crucial. The primary aim of this study was to explore the internet usage patterns of these adolescent girls as well as their perceptions and awareness of online risks and safety. By identifying the potential online risks they face and examining the support systems available at home and in schools, this research aimed to create a comprehensive picture of the digital landscape that these girls navigate.

The study was guided by several objectives, including understanding the digital engagement of girls within their socio-cultural context, addressing gaps in online safety awareness, informing policy and educational practices for better digital safeguards, and empowering these young individuals with the skills and resilience needed for safe and responsible internet use.

The significance of this research extends beyond academic contributions; it has practical implications for educators, parents, and policymakers. By providing these stakeholders with the necessary tools and knowledge, this study aims to help Saudi

adolescent girls harness the benefits of the digital world, enabling them to navigate the internet with confidence and responsibility. This conclusion chapter aims to summarise these findings comprehensively, reflect on their significance, and outline future research directions in this critical area.

## **8.2 Summary of Key Findings**

The research into the digital world of Saudi adolescent girls has uncovered valuable insights, providing a comprehensive view of their online activities, the challenges they encounter, and the support available to them. Drawing from data collected through surveys and interviews, the following summary presents the key findings.

### **8.2.1 Patterns of Internet Use**

The exploration into the patterns of internet use among Saudi adolescent girls revealed a broad engagement with digital platforms, which played a crucial role in their daily interactions and learning processes. The study's findings indicated that a significant number of these young individuals spend a considerable part of their day online, with those aged 16 to 17 years notably increasing their usage during weekends and holidays. This trend suggests a rise in internet engagement with age, likely due to a wider range of online activities available to them.

In terms of access locations, the home was the primary setting for internet use. However, older adolescents showed a tendency to access the internet in various locations, such as public spaces. This shift was likely related to their increasing



autonomy and social interactions. Regarding device preference, smartphones emerged as the most favoured, highlighting their convenience and personal relevance. The majority of the girls own personal smartphones, which serve as their main gateway to the internet. While smartphones were the leading devices, other devices like tablets and computers also played a role in their digital engagement.

The range of online activities included a diverse range, from entertainment like video streaming and gaming to educational activities. Social interaction through platforms such as social media and instant messaging applications also formed a significant part of their online engagement, along with creative expressions and explorations. This variety in online activities underscored the internet's essential role in many aspects of their lives, from education and social connectivity to entertainment and personal exploration.

### **8.2.2 Perceptions of Internet Risks and Safety**

The investigation into the digital experiences of adolescent girls in Saudi Arabia uncovered detailed perceptions of internet risks and safety, reflecting the viewpoints of both the adolescents and their mothers. These perceptions offered valuable insights into the concerns and confidence levels regarding online safety within these groups.

From the adolescents' perspective, there was a clear awareness of the potential dangers in the digital world. Concerns about encountering inappropriate content,

engaging in risky interactions with strangers, and the possibility of harmful online activities were commonly mentioned. Despite these fears, the girls displayed varying levels of confidence in handling these challenges, indicating a complex relationship with the digital world where awareness does not necessarily lead to fear or avoidance. On the other hand, mothers often viewed the online environment with greater caution, perceiving it as less secure for their daughters compared to the daughters' own assessments. Mothers were particularly concerned about exposure to inappropriate content and the risks of interacting with unknown individuals online. This difference in risk perception between mothers and daughters highlighted a generational divide, showcasing varying levels of familiarity and comfort with the digital landscape.

This contrast in perceptions emphasises the need for balanced communication between the two generations. Promoting mutual understanding and fostering an environment where concerns can be openly discussed and addressed is essential. These insights into perceptions enhance the understanding of the digital safety landscape for adolescent girls in Saudi Arabia, highlighting areas where educational interventions and supportive discussions could bridge gaps in understanding and perception, contributing to a safer online experience.

### **8.2.3 Potential Online Risks Encountered by Saudi Girls**

The research investigated the various online risks faced by adolescent girls in Saudi Arabia, categorising these risks into contact, content, and conduct. This

comprehensive analysis provided a detailed view of the potential dangers these young individuals encounter in their digital interactions. By examining these risks, the study highlights the critical areas where interventions and preventive measures are most needed, offering valuable insights for parents, educators, and policymakers to enhance the online safety of adolescent girls.

- **Contact Risks:**

The study revealed significant contact risks, including unsolicited interactions with strangers, which is a serious concern. A notable 66% of participants reported experiencing unwanted contact from strangers, highlighting the prevalence of this issue. Such interactions, often initiated through social media and gaming platforms, raise major safety concerns. These interactions can lead to uncomfortable or even dangerous situations if they develop into harassment or cyberbullying. The ease with which individuals can initiate contact online, often protected by anonymity, increases this risk, making it a significant area of concern for the safety of adolescent girls.

Additionally, the research shed light on the threats of hacking, financial fraud, and identity theft. With 15% of respondents having experienced hacking, the breach of personal privacy and security becomes a significant issue. Financial fraud, though less common, was reported by 9% of the girls, highlighting the potential for substantial financial loss and the exploitation of young users' lack of experience. The strategies employed by such individuals to build trust and manipulate young users underscore the urgent need for vigilance in monitoring online interactions. The hidden nature of these dangers, coupled with the convincing methods used by predators, can make it

challenging for young individuals to recognise and avoid these threats, further emphasising the need for comprehensive education on safe online communication practices.

- **Content Risks:**

The investigation into content risks faced by adolescent girls in Saudi Arabia revealed a concerning range of harmful and inappropriate material online. A significant finding from the study was the high incidence of exposure to content related to self-harm or suicide, reported by 36% of the participants. This type of content, often promoted by social media algorithms, poses a serious threat to the mental health and well-being of these young individuals. The potential for such content to affect vulnerable minds and normalise or romanticise self-harm behaviours calls for urgent attention and intervention. Furthermore, the study highlighted the prevalence of hate speech, with 58% of the girls encountering content that denigrates or encourages violence against specific groups based on religion, ethnicity, or other identifiers.

Additionally, exposure to violent content was another significant concern, with 60% of the participants witnessing violence against humans or animals online. This frequent exposure to graphic violence can desensitise young viewers, potentially altering their perceptions of aggression and empathy. The widespread nature of violent imagery across various platforms underscores the need for effective content moderation and digital literacy education to help young users navigate online spaces more safely. Furthermore, the issue of sexually explicit content was prevalent, with 31% of the adolescent girls reporting accidental exposure. Such encounters, especially

in a conservative society, can lead to confusion, anxiety, and conflict with cultural and religious values. The accidental consumption of sexually explicit material emphasises the challenges of navigating a digital landscape filled with diverse and, at times, unsuitable content.

The study also shed light on the exposure to content promoting unhealthy body images and extreme diets, experienced by 57% of the girls. This exposure can significantly impact young individuals' self-esteem and body image, contributing to unhealthy behaviours and attitudes towards body image and nutrition. Finally, the research explored the complex influence of exposure to diverse cultures, customs, and religions online. While this can be enriching, it can also present challenges in aligning these varied perspectives with the girls' own cultural and religious identities, potentially leading to confusion and a sense of cultural dislocation.

- **Conduct Risks:**

The investigation into conduct risks revealed behaviours and actions undertaken by adolescent girls in Saudi Arabia that could potentially endanger their online safety and privacy. This type of online risk is particularly concerning as it directly involves the choices and interactions of the girls within the digital space. A significant finding of this study is the interaction with online strangers, a common conduct risk. Approximately 53% of the girls admitted to engaging in conversations with strangers online primarily for entertainment, indicating a high level of participation in potentially dangerous interactions. More concerning is that 18% of these adolescent

girls proceeded to meet someone in person whom they initially met online, with 32% of these meetings occurring without informing a responsible adult.

Furthermore, the sharing of personal information and images online presented a significant risk, with approximately 27% of the participants admitting to sharing personal photos online, and 25% sharing personal details with strangers, potentially attracted by the promise of rewards or social acceptance. This conduct not only exposes them to risks of exploitation but also conflicts with the cultural and religious norms of privacy and modesty prevalent in Saudi society, raising concerns about the implications for the girls' safety and reputation.

Additionally, the study highlighted the girls' participation in online activities that could be considered risky or inappropriate, such as taking part in online challenges that may have negative health or safety consequences. These activities not only expose the girls to potential harm but also raise concerns about the peer pressure driving such behaviours. Lastly, involvement in online behaviours that harm others, such as cyberbullying, although less common, was still reported by 7% of the surveyed adolescent girls. This lower prevalence, compared to global trends, suggests a potential cultural influence on online conduct, highlighting the need for digital ethics education that integrates cultural and religious values.

#### **8.2.4 Support for Online Safety at Home and School**

In exploring protective measures within home and school environments, this research highlighted the factors that shaped the online safety of adolescent girls in Saudi Arabia. Insights from the girls, their mothers, and female teachers revealed a comprehensive approach to digital safety, combining cultural values, educational strategies, and family interactions.

**At home,** the strategies for online safety focused on parental mediation, which involved a variety of methods aimed at protecting girls from online risks. Active involvement, such as open discussions about online content and safety practices, was common, highlighting the importance of communication in fostering digital awareness. Restrictive measures, including setting limits on internet use and monitoring online activities, were also frequently used, reflecting parents' efforts to control and safeguard their daughters' digital engagement.

Technical mediation emerged as another crucial strategy, with parents using software tools to supervise and restrict internet access and content, thus adding a layer of protection. Another notable approach was direct monitoring, where parents reviewed their daughters' devices, emails, private messages, and friend lists, sometimes without the girls' knowledge. This could be done using monitoring software or manually. Additionally, the practice of reverse mediation, where adolescent girls assist their parents in understanding and navigating digital spaces, was also observed, highlighting the changing landscape of digital literacy within families.

A noteworthy aspect was the significant reliance on religious and cultural values as guiding principles for online behaviour, with a large number of mothers citing religious faith as a deterrent to risky online activities. This unique aspect, deeply embedded in the Saudi cultural context, underscored the role of core values in shaping digital conduct. Moreover, the findings highlighted the challenges mothers faced in supervising their daughters' online activities. In Saudi Arabia, mothers bear a significant burden, traditionally expected to manage not only their children's education but also their digital upbringing, often without substantial support from fathers. This responsibility has become increasingly complex with many Saudi women entering the workforce, balancing professional roles with family obligations. The growing number of working mothers, who contribute financially while managing household responsibilities, including overseeing their children's digital activities, underscores the substantial pressure they face. This added burden, combined with the rapid pace of technological change and adolescents' increasing desire for independence, significantly complicates the task of managing online risks. Despite these significant challenges, mothers continue to emphasise the importance of open communication, supervision, and encouraging a balanced lifestyle that includes offline activities as key protective measures.

**In the school environment,** the study emphasised the crucial role of educational institutions in promoting digital literacy and safe online practices among adolescent girls. However, there was a gap in the current curriculum, which often prioritised technical skills over essential internet safety education. Teachers, although recognised as pivotal figures in adolescents' educational journeys, faced challenges in addressing



digital safety due to curricular limitations and a technological gap between teachers and students. Furthermore, peer influence emerged as a significant factor in shaping digital behaviours, with many adolescent girls viewing their friends as sources of advice and support. This peer influence offered schools an opportunity to implement peer-led initiatives to foster a culture of online safety, making use of the natural influence and relatability among students.

### **8.3 Significance of the Findings in the Context of Existing Literature**

The findings of this study hold significant importance when viewed in the context of existing literature on adolescent internet use, especially within the unique socio-cultural landscape of Saudi Arabia. By examining the patterns of internet use, perceptions of online risks, and the support systems available to adolescent girls, this research contributes to a deeper understanding of digital engagement in a region that has often been underrepresented in global internet safety discourse.

#### **Broadening Cultural Perspectives in Internet Usage Research:**

Focusing on Saudi adolescent girls provided valuable insights into a demographic often underrepresented in global digital literacy research. This examination revealed internet usage patterns and safety perceptions within a unique socio-cultural context and highlighted the experiences of young people in a non-Western society. The data collected offers new insights into how socio-cultural factors in Saudi Arabia shape online behaviours, revealing distinct patterns that may not align with global trends. For instance, the strong influence of religious and cultural values on digital safety

practices highlights the need for tailored approaches that consider these unique factors. This approach served to diversify and enrich the understanding of internet usage among children and adolescents, which has mostly centred on Western populations. Consequently, the study's findings added an important cultural aspect to the broader discussions of digital literacy and internet safety, addressing a significant gap in the literature. Including diverse cultural contexts is essential for creating a more complete and globally representative understanding of the digital experiences of young people.

#### **Shedding Light on Cultural and Religious Influences:**

The research highlighted the profound impact of cultural and religious beliefs on online behaviour and safety strategies. These findings extended beyond the usual focus of internet safety research, which has typically centred on technical and educational interventions. By highlighting the role of ethical and moral education in shaping online experiences, the study provided a fresh perspective on how cultural and religious contexts can inform digital safety measures. In this context, the study raises the question of whether the strategies and steps taken in Western countries, such as the UK or Europe, are fully transferable to the Saudi context. Given the unique cultural and religious fabric of Saudi society, it may be necessary to adapt or develop entirely new frameworks that are culturally resonant and effective within this environment. The emphasis on religious faith as a guiding principle in online behaviour, for example, highlighted the unique cultural foundations that influence digital practices in the country.

**Bridging Awareness Gaps in Online Safety:**

The research emphasised the differences in perceptions between Saudi girls and their mothers regarding online risks and safety. This aspect of the study aligns with and adds to the wider discussion on internet safety awareness. It underscores the importance of family-based education and communication in improving digital literacy and safety, especially in cultures where family influence is strong. By pointing out these perception gaps, the study not only draws attention to the need for more open and effective communication within families about digital risks but also suggests that parents' understanding of the digital world is crucial for creating a safe online environment. Furthermore, this insight into the differing views within the household provides a valuable perspective for developing targeted interventions that address both the concerns of parents and the needs of adolescents. It emphasises the need for culturally appropriate educational programs that bridge the awareness gap, ensuring that online safety measures are relevant, comprehensive, and effectively communicated within the family setting.

**Enhancing Understanding of Online Risk Factors:**

The research highlighted a range of challenges faced by adolescent girls, from unwanted contact and exposure to inappropriate content to engagement in risky online behaviours. These findings contributed to a broader understanding of the digital risks landscape, providing a basis for comparative studies that can explore similarities and differences in online risk perceptions and experiences across different cultural contexts. By doing so, the study added depth to the global conversation on

internet safety, emphasising the need for culturally sensitive approaches to protecting young internet users.

### **Informing Policy and Educational Practices:**

The insights gained from this research also carried significant implications for educational curricula and policy-making. The identified gap in online safety education within schools, along with the challenges faced by teachers in integrating digital literacy effectively, emphasised the urgent need for curriculum reforms that incorporate comprehensive internet safety education. This is particularly important in the Saudi context, where existing policies may need to be revisited and adapted to better align with the digital realities faced by young people today. It is also essential to consider how international best practices can be adapted or reimaged to suit the Saudi cultural and educational landscape. This aligned with existing literature advocating for more interactive, engaging, and relevant online safety education, reinforcing the call for educational systems to adapt to the changing digital landscape.

In summary, this study's findings significantly enrich the existing body of literature on adolescent internet use, particularly within Saudi Arabia's unique socio-cultural environment. By addressing a demographic often underrepresented in global digital literacy research, the study provides a more comprehensive and inclusive understanding of digital engagement. The insights into cultural and religious influences on online behaviour, the discrepancies in risk perception between parents and adolescents, and the various online risk factors all contribute to a clearer and more globally relevant understanding of internet safety. These findings highlight the

diverse experiences and challenges faced by young internet users worldwide, emphasizing the need for culturally sensitive and inclusive approaches to digital safety.

## **8.4 Implications of the Research Findings**

The findings of this study have several important implications that extend to practical applications and policy formulation, impacting a range of stakeholders including parents, teachers, and policymakers.

### **8.4.1 For Parents and Guardians:**

The insights gained from this study offer valuable guidance for parents and guardians striving to navigate the challenges of their daughters' digital worlds. It becomes evident that an active and informed parental role is crucial in safeguarding adolescent girls from the numerous online dangers. To this end, several practical steps can be taken to foster a safer digital environment:

#### **1. Foster Open Communication**

Create an environment where discussions about online experiences, both positive and negative, are welcomed. This open line of communication can help parents gain a better understanding of their daughters' digital lives and offer appropriate guidance when they encounter online challenges.

## **2. Educate Themselves and Their Daughters**

Parents should actively educate themselves about the digital platforms and trends that interest their daughters. This understanding can form the basis for informed discussions about online safety, privacy settings, and the finer details of digital interactions. At the same time, teaching their daughters how to recognise and manage potential online risks is essential, empowering them to make safer choices independently.

## **3. Adopt Effective Parental Mediation Strategies**

Use a balanced approach to parental mediation by combining active involvement with appropriate restrictions. This can include setting agreed-upon limits for online time, monitoring content in a way that respects privacy, and using technical tools like parental controls thoughtfully.

## **4. Integrate Cultural and Religious Values**

In Saudi society, where cultural and religious values are highly influential, parents can incorporate these principles into conversations about digital conduct. This approach can strengthen ethical online behaviour and decision-making, aligning closely with the girls' personal and cultural identities.

## **5. Model Positive Digital Behaviour**

Parents and guardians should exemplify responsible and respectful online conduct themselves. By doing so, they can positively influence their daughters' behaviours and attitudes towards internet use.

By adopting these strategies, parents and guardians can significantly enhance the digital literacy and safety of their daughters. This proactive involvement ensures that the girls navigate the online world with greater confidence and caution.

#### **8.4.2 For Teachers and School Administrators:**

The findings of this research highlight the critical role that schools play in fostering adolescents' digital literacy and safety. Teachers and school administrators are uniquely placed to guide and educate adolescents on safely navigating the challenges of the online world. To support this, a set of targeted recommendations for educators is proposed, emphasising the need for practical application to ensure these measures are effective and impactful:

##### **1. Integrate Digital Safety into the Curriculum**

Digital literacy and online safety should be embedded into the school curriculum as core components. This integration ensures that adolescents receive structured and comprehensive education on recognising online risks, understanding the implications of their digital footprints, and practicing safe online behaviours. The curriculum should be regularly updated to keep pace with the evolving digital landscape, ensuring that the content remains relevant and effective.

##### **2. Promote Interactive Learning**

Adopt teaching methods that go beyond traditional lectures to include more interactive and engaging formats. Workshops, role-playing scenarios, and group

discussions can make the learning process more relatable and effective, helping students to internalise safe online behaviours.

### **3. Foster a Supportive Environment**

Create a school environment where students feel at ease discussing their online experiences and concerns without fear of punishment. Establishing clear channels for reporting cyberbullying or other online issues can encourage students to seek help when needed.

### **4. Collaborate with Parents**

Engage in regular communication with parents and guardians to align efforts in promoting online safety. Workshops, informational sessions, and resource sharing can empower parents to reinforce digital safety messages at home. This collaboration ensures a consistent approach to digital safety, providing a united effort in addressing online risks.

### **5. Use Peer Influence**

Recognise the powerful influence of peer relationships on adolescents' behaviours and attitudes. Encourage peer-led initiatives, such as digital safety leaders or peer mentoring programs, to build a culture of responsible online behaviour within the student community. This approach can make digital safety messages more relatable and effective, as adolescents often look to their peers for guidance.

### **6. Continual Professional Development**



Provide ongoing training and support for teachers. This training should focus on enhancing teachers' digital skills, enabling them to understand and engage with the latest online platforms and trends. Support systems should also be established, providing teachers with the resources and confidence needed to address digital safety topics effectively in the classroom.

By implementing these strategies, teachers and school administrators can significantly contribute to a safer and more informed digital experience for adolescents. This will equip them with the confidence, knowledge, and skills necessary to navigate the online world safely and make informed decisions.

#### **8.4.3 For Policymakers:**

The research outcomes indicate a critical need for comprehensive policies that address the digital safety and literacy of young internet users. Policymakers have a crucial role in shaping a digital environment that is safe, educational, and empowering for adolescents. Based on the findings, several recommendations for policymakers are proposed:

##### **1. Develop Supportive Legal Frameworks**

Develop and enforce legal frameworks that safeguard children and adolescents online. This includes laws protecting against cyberbullying, online exploitation, and access to harmful content. Implementing regulations that ensure age-appropriate digital

content and require social media platforms and internet service providers to adopt safety measures can significantly enhance online safety.

## **2. Integrate Digital Literacy into the Curriculum**

Policymakers should support the inclusion of digital literacy and online safety in national education curricula. This should encompass not only the risks and safe use of the internet but also the importance of ethical digital citizenship and responsible online behaviour. A comprehensive digital curriculum can equip students with the essential skills to safely navigate the digital world.

## **3. Promote Public Awareness Campaigns**

Launching nationwide awareness campaigns about the importance of online safety, targeting students, parents, and educators, can raise collective awareness about digital risks and best practices for internet use. These campaigns should use various media channels to reach a wider audience and be culturally sensitive and accessible to all segments of society.

## **4. Support Research and Development**

Encouraging and funding research on digital safety, particularly studies that explore culturally relevant solutions and innovative educational tools, can contribute to a deeper understanding of the digital challenges faced by young users. Investment in developing educational resources, apps, and platforms that promote safe internet use can significantly improve digital literacy and contribute to long-term positive outcomes.

## **5. Establish National Data Systems**

Given the current lack of comprehensive national data on how children and adolescents use the internet, the risks they encounter, and the safety measures in place, it is crucial for policymakers to focus on updating national data systems. Collecting baseline data is vital for understanding the digital environment that young users experience. This essential information will help develop targeted policies and programs that address the specific needs and challenges faced by this age group effectively.

## **6. Encourage Collaboration with Tech Companies**

Policymakers should encourage partnerships with technology companies to ensure that digital platforms are designed with young users' safety in mind. This can involve setting standards for content moderation, age verification, and parental control features. Additionally, tech companies should be encouraged to create and promote educational content that enhances digital literacy.

## **7. Enhance Technological Resources**

Ensuring that schools have the necessary technological resources to support digital education is crucial. This includes providing access to safe and reliable internet connections, digital devices, and educational software that facilitate interactive and engaging learning experiences about online safety.

By implementing these recommendations, policymakers can significantly contribute to creating a safer digital environment for adolescents. This will enable young users to

benefit from the vast opportunities offered by the internet while minimising the associated risks.

#### **8.4.4 For Broader Community Impact**

The research highlights the collective responsibility of the broader community in creating a safe digital environment for adolescents. Community leaders, religious institutions, and local organisations can play a significant role in raising awareness about digital safety and encouraging positive online behaviours.

##### **1. Community Awareness Campaigns**

Launching community-wide awareness campaigns that emphasise the importance of online safety, digital literacy, and responsible internet use is crucial. These campaigns can use various media platforms to reach a broad audience, ensuring that the message of digital safety resonates across different segments of society.

##### **2. Community Workshops and Seminars**

Organising workshops and seminars that provide practical advice, resources, and tools for safer internet use. These events can serve as platforms for open discussions, where community members can share experiences, concerns, and strategies related to navigating the digital world safely.

##### **3. Community Support Systems**

Creating support networks within communities to offer guidance and help to individuals facing online risks or challenges. These networks can facilitate access to expert advice, legal assistance, and psychological support for those affected by online harassment, cyberbullying, or other forms of digital harm.

#### **4. Engagement with Religious Institutions**

Collaborating with religious institutions to include online safety messages in their community outreach programs. Given their significant influence, these institutions can play a crucial role in promoting values-based guidance on digital conduct. Workshops, lectures, and educational materials developed with religious leaders can address online safety from a moral and ethical standpoint, reinforcing the importance of respectful and responsible online interactions.

By involving the broader community in these efforts, the impact of online safety initiatives can be significantly increased, creating a more informed, vigilant, and supportive environment for all internet users, especially adolescents. This collective approach ensures that the responsibility of fostering a safe digital landscape is shared, promoting a culture of awareness and proactive engagement across all societal levels.

#### **8.5 Limitations of the Study**

This research, while comprehensive in its exploration of online safety and digital literacy among adolescent girls in Saudi Arabia, has several limitations that need to be acknowledged:

## **1. Scope and Generalisability**

The study primarily focuses on a specific demographic, adolescent girls aged 12 to 17, within the Kingdom of Saudi Arabia. While this focus provides detailed insights into this particular age group, it also limits the broader applicability of the findings. Given the concentrated age range, the results may not be directly generalisable to other age groups, such as younger children or older teenagers. The unique developmental stages, online behaviours, and risks associated with different age groups necessitate separate investigations to understand their specific needs and challenges. However, some of the findings, particularly those related to the influence of cultural and religious values on digital behaviour and the importance of parental mediation, may be applicable to a wider audience, including other adolescents and possibly even different cultural contexts. Future research could benefit from examining these other age groups to provide a more comprehensive understanding of online safety and digital literacy across various stages of adolescence and childhood.

## **2. Methodological Constraints**

The research relied heavily on self-reported data from participants, which, although invaluable for capturing personal experiences and perceptions, includes biases such as the tendency to give socially acceptable answers and inaccuracies in recalling events. To mitigate these biases, the study carefully phrased questions and guaranteed anonymity and confidentiality to make participants feel comfortable sharing their true experiences. Special attention was also given to the sensitive nature of the subject, particularly for adolescents participants, by asking mothers to ensure privacy for their daughters during interviews and while completing questionnaires.

Despite these efforts, the subjective nature of self-reported data and the potential influence of parents or societal expectations on participants' responses remain limitations.

Another limitation of this study is the reliance on a relatively small sample size for qualitative data. While the in-depth insights provided by qualitative interviews were crucial for understanding the personal and detailed experiences of the participants, the limited sample size may restrict the generalisability of the findings. Future research could address this limitation by increasing the sample size, allowing for a more comprehensive analysis and potentially uncovering a broader range of experiences and perspectives.

### **3. Technological Changes and Evolving Online Risks**

A notable limitation of this study comes from the constantly changing digital world. The rapid pace of technological advancements and the continuous evolution of social media platforms introduce new online risks that may not have been fully captured at the time of this research. While the study provides a snapshot of the current online safety landscape for adolescent girls in Saudi Arabia, it acknowledges that new technologies and changing online behaviours could bring about new risks. This shifting aspect of digital engagement necessitates ongoing research efforts to monitor, understand, and address these evolving challenges, ensuring that protective measures and educational initiatives remain relevant and effective in safeguarding young users against emerging online threats.

#### **4. Limited Scope in Addressing Solutions**

While this study provides a detailed exploration of the internet use patterns among Saudi adolescent girls and identifies various online risks they face, its main focus is on outlining these challenges rather than offering detailed solutions. The research effectively highlights the need for intervention and suggests areas for parental and educational support; however, developing and evaluating specific, actionable solutions were beyond its scope. This limitation highlights a gap in the current research, pointing to the necessity for future studies dedicated to creating, implementing, and assessing targeted strategies and interventions that can reduce the identified risks and improve online safety for this group.

In summary, while these limitations highlight the challenges involved in researching the complex and constantly changing field of online safety among adolescents, they also emphasise the importance of ongoing, varied research efforts to build upon the foundational knowledge established by this study. Continued exploration and adaptation are crucial to effectively safeguarding young internet users in an ever-evolving digital landscape.

### **8.6 Recommendations for Future Research**

#### **1. In-depth Exploration of Solution-Based Interventions**

Future research should focus on designing, implementing, and evaluating targeted interventions that address the specific online risks identified in this study. Acknowledging the limited scope of the current research in offering solutions,



subsequent studies could develop comprehensive strategies involving parents, educators, and the broader community. These interventions might include digital literacy programs, parental education workshops, and school-based online safety curricula. Evaluating the effectiveness of these interventions would offer valuable insights into best practices for enhancing online safety for adolescent girls in Saudi Arabia and beyond.

## **2. In-depth Exploration of Parental Mediation Strategies**

There is a need for detailed research focusing on the effectiveness of various parental mediation strategies in protecting adolescents from online risks. This could include examining how active engagement, setting limits, and monitoring influence their online behaviours and exposure to digital risks. Understanding the role of different parental approaches in promoting safe internet use and mitigating risks can help in developing tailored guidelines for parents. Research could also explore how cultural and socio-economic factors affect the success of these mediation strategies, providing a clearer picture of how to support parents in fostering a safe digital environment for their children.

## **3. Expanding Demographic Scope for Comprehensive Insights**

Future research could greatly benefit from widening the demographic scope to include various age groups, socio-economic backgrounds, educational levels, and both genders. Including both male and female adolescents, as well as younger children and older teenagers, would provide a more complete picture of internet use, risks, and safety measures across the entire youth population. This broader approach would

offer a comprehensive understanding of the digital interactions and challenges faced by different social groups, and highlight gender-specific vulnerabilities and strengths. This, in turn, would help in developing more tailored and effective digital safety strategies.

#### **4. Integration of Technological Advances and Emerging Risks**

Given the rapid pace of technological change and the evolution of online platforms, future research should continuously adapt to include these changes within its scope. Studies should explore how new social media platforms, digital tools, and technologies impact adolescents' online experiences and safety. This includes investigating emerging online risks such as advanced cyberbullying techniques, deepfakes, which are highly realistic fake videos or audio created using artificial intelligence, as well as other digital threats that evolve with technological progress. Understanding these emerging risks is essential for creating timely and relevant safety strategies and educational content that can effectively address these evolving threats.

#### **5. Longitudinal Studies on Digital Behaviours and Risks**

To understand the changing nature of digital behaviours and associated risks over time, future research should consider adopting a longitudinal approach. This would enable the tracking of internet usage patterns, the emergence of new online risks, and the long-term effectiveness of safety measures. Longitudinal studies can offer valuable insights into how digital engagement and its safety implications evolve as children grow and as digital environments change. This approach is especially useful for

assessing the impact of interventions and educational programs on enhancing online safety and resilience among adolescents.

## **6. Cultural and Religious Influences on Digital Practices**

Further research should explore how cultural and religious beliefs shape digital practices and online safety measures among adolescents. This could involve examining how specific cultural norms and religious teachings influence adolescents' online behaviours, perceptions of risk, and coping strategies. Given the significant impact that cultural and religious contexts have on shaping the online behaviours and safety perceptions of adolescents in Saudi Arabia, future research should make these aspects more prominent. Understanding the intersection of culture, religion, and digital engagement is crucial for developing effective and culturally sensitive online safety strategies. These studies could explore deeper into how these factors interact to influence both protective measures and risk factors, providing a richer understanding that can be applied to similar contexts.

## **8.7 Final Thoughts and Reflections**

Reflecting on this research journey, I am deeply impressed by the complex and constantly changing nature of the digital world that today's youth navigate. Exploring the online experiences of Saudi adolescent girls has been both enlightening and challenging, offering valuable insights into how cultural norms, religious beliefs, and digital engagement influence each other. These findings extend beyond academic theory, providing practical guidance for parents, educators, and policymakers.

This research has reinforced my belief in the necessity of culturally sensitive approaches to internet safety and digital literacy. The unique cultural context of Saudi Arabia, particularly the strong influence of religious and ethical values, calls for digital safety strategies that respect and integrate these aspects. The study also highlights the importance of continuous learning and adapting in a field that is constantly evolving with technological advancements.

The findings of this study contribute significantly to the field by offering a focused perspective on a demographic that is often underrepresented in digital literacy research. By examining the digital lives of Saudi adolescent girls, this research highlights the importance of considering internet use within specific cultural contexts. It also highlights the critical role of support systems at home and in schools in shaping young people's online experiences. Additionally, this study brings societal benefits by stressing the need to equip young individuals with the knowledge and skills to navigate the digital world safely and responsibly. It calls for a collaborative effort involving families, educational institutions, and policymakers to create an environment where young people can benefit from the internet's vast opportunities while remaining aware of its risks.

As this research concludes, I am filled with hope and determination. The insights gained will contribute to academic discussions and provide practical ways to create a safer digital environment for our youth. Working together, we can ensure that young people worldwide can explore the digital world with confidence and care, paving the

way for a future where technology enhances their lives without compromising their safety.

## REFERENCES

- Abu-Khalil, A.-A. (2018). الآثار الاجتماعية السلبية على المراهقات في المجتمع السعودي [The negative social effects of the Internet on teenage girls Saudi society]. *Scientific Journal of Social Service*, 1(8).
- Ahmad, N., Arifin, A., Asma'Mokhtar, U., Hood, Z., Tiun, S., & Jambari, D. I. (2019). Parental awareness on cyber threats using social media. *Jurnal Komunikasi: Malaysian Journal of Communication*, 35(2), 485-498.
- Akter, M., Godfrey, A. J., Kropczynski, J., Lipford, H. R., & Wisniewski, P. J. (2022). From Parental Control to Joint Family Oversight: Can Parents and Teens Manage Mobile Online Safety and Privacy as Equals? *Proceedings of the ACM on Human-Computer Interaction*, 6(CSCW1), 1-28.
- Al-Anzi, S. (2009). الانترنت من وجهة نظر طلبة المرحلة الثانوية في المملكة لآثار التعليمية والاجتماعية لاستخدامات العربية السعودية [The educational and social effects of Internet use from the point of view of secondary school students in the Kingdom of Saudi Arabia]. *Journal of the Faculty of Education, Ain Shams University*, 33.
- Al-Khani, A. M., Saquib, J., Rajab, A. M., Khalifa, M. A., Almazrou, A., & Saquib, N. (2021). Internet addiction in Gulf countries: A systematic review and meta-analysis. *Journal of behavioral addictions*, 10(3), 601-610.
- Alanazi, A. S., Alotaibi, Y. M., Alojlan, J. S., Zaidi, U., & Rao, H. M. (2019). Effects of social media contents on the perception of body image. *International Journal of Innovation, Creativity and Change*, 9(7), 179-196.
- Alderson, P., & Morrow, V. (2020). *The ethics of research with children and young people: A practical handbook*. Sage.
- Alharthi, M. (2023). Parental involvement in children's online education during COVID-19; A phenomenological study in Saudi Arabia. *Early childhood education journal*, 51(2), 345-359.
- Alkan, R. Ü., Aslan, A., Turgut, Y. E., & Kursun, E. (2021). Factors affecting parental mediation strategies in children's technology use: a systematic review. *Journal of Computer and Education Research*, 9(18), 702-723.
- Alomair, N., Alageel, S., Davies, N., & Bailey, J. V. (2021). Barriers to sexual and reproductive wellbeing among Saudi women: A qualitative study. *Sexuality research and social policy*, 1-10.
- Alosaimy, F. R. R. (2023). Exploring Snapchat Use and Family Life in Saudi Arabia.
- Alqahtani, N., Furnell, S., Atkinson, S., & Stengel, I. (2017). Internet risks for children: Parents' perceptions and attitudes: An investigative study of the Saudi Context. 2017 internet technologies and applications (ITA),

- Anderson, M., Faverio, M., & Gottfried, J. (2023). Teens, social media and technology 2023. *Pew Research Center*.
- Andrews, J. C., Walker, K. L., & Kees, J. (2020). Children and online privacy protection: Empowerment from cognitive defense strategies. *Journal of Public Policy & Marketing*, 39(2), 205-219.
- Andrie, E. K., Sakou, I. I., Tzavela, E. C., Richardson, C., & Tsitsika, A. K. (2021). Adolescents' online pornography exposure and its relationship to sociodemographic and psychopathological correlates: A cross-sectional study in six European countries. *Children*, 8(10), 925.
- Annansingh, F., & Veli, T. (2016). An investigation into risks awareness and e-safety needs of children on the internet: a study of Devon, UK. *Interactive technology and smart education*, 13(2), 147-165.
- Arendt, F., Scherr, S., & Romer, D. (2019). Effects of exposure to self-harm on social media: Evidence from a two-wave panel study among young adults. *New Media & Society*, 21(11-12), 2422-2442.
- Astorri, E., Clerici, G., Gallo, G., Raina, P., & Pellai, A. (2022). Online extreme challenges putting children at risk: What we know to date. *Minerva pediatrics*.
- Atkinson, S., Furnell, S., & Phippen, A. (2009). Using Peer education to encourage safe online behaviour. Proceedings of the Conference EU Kids Online,
- Auxier, B., Anderson, M., Perrin, A., & Turner, E. (2020). Parenting children in the age of screens.
- Aydin, M. (2021). Does the digital divide matter? Factors and conditions that promote ICT literacy. *Telematics and Informatics*, 58, 101536.
- Bacak, J., Martin, F., Ahlgrim-Delzell, L., Polly, D., & Wang, W. (2022). Elementary educator perceptions of student digital safety based on technology use in the classroom. *Computers in the Schools*, 39(2), 186-202.
- Balas, R. B., Meliț, L. E., Sarkozi, D., Ghiga, D. V., & Mărginean, C. O. (2023). Cyberbullying in teenagers—a true burden in the era of online socialization. *Medicine*, 102(25).
- Barkin, S., Ip, E., Richardson, I., Klinepeter, S., Finch, S., & Krcmar, M. (2006). Parental media mediation styles for children aged 2 to 11 years. *Archives of pediatrics & adolescent medicine*, 160(4), 395-401.
- Baumann, S., Bernhard, A., Martinelli, A., Ackermann, K., Herpertz-Dahlmann, B., Freitag, C., Konrad, K., & Kohls, G. (2023). Perpetrators and victims of cyberbullying among youth with conduct disorder. *European Child & Adolescent Psychiatry*, 32(9), 1643-1653.
- BBFC. (2022). *Parents' Fact Sheet on Online Pornography and Age-verification*. Retrieved 27-09 from [bbfc-parents-guide-to-age-verification-and-online-pornography.pdf](#)

- Bennett, S., Maton, K., & Kervin, L. (2008). The 'digital natives' debate: A critical review of the evidence. *British Journal of Educational Technology*, 39(5), 775-786.
- Benvenuti, M., Wright, M., Naslund, J., & Miers, A. C. (2023). How technology use is changing adolescents' behaviors and their social, physical, and cognitive development. *Current psychology*, 42(19), 16466-16469.
- Berger, P., & Wolling, J. (2019). They need more than technology-equipped schools: Teachers' practice of fostering students' digital protective skills. *Media and Communication*, 7(2), 137-147.
- Berk, L. E. (2022). *Development through the lifespan*. Sage Publications.
- Betts, L. R., Metwally, S. H., & Gardner, S. E. (2019). We are safe but you are not: Exploring comparative optimism and cyber bullying. *Journal of Technology in Behavioral Science*, 4, 227-233.
- Bleakley, A., Ellithorpe, M., & Romer, D. (2016). The role of parents in problematic internet use among US adolescents. *Media and Communication*, 4(3), 24.
- Boer, S., Erdem, Ö., de Graaf, H., & Goetz, H. (2021). Prevalence and correlates of sext-sharing among a representative sample of youth in the Netherlands. *Frontiers in Psychology*, 12, 655796.
- Boholm, A. (1998). Comparative studies of risk perception: a review of twenty years of research. *Journal of risk research*, 1(2), 135-163.
- Boulianne, S., & Theocharis, Y. (2020). Young people, digital media, and engagement: A meta-analysis of research. *Social science computer review*, 38(2), 111-127.
- Braun-Courville, D. K., & Rojas, M. (2009). Exposure to sexually explicit web sites and adolescent sexual attitudes and behaviors. *Journal of Adolescent Health*, 45(2), 156-162.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- Brinkmann, S. (2013). *Qualitative interviewing*. Oxford university press.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard university press.
- Bronfenbrenner, U. (1989). Ecological systems theory. In R. Vasta (Ed.), *Six theories of child development: Revised formulations and current issues*. 187-249.
- Bronfenbrenner, U., & Morris, P. A. (1998). *The ecology of developmental processes*.
- Bryman, A. (2016). *Social research methods*. Oxford university press.



- Buchanan, R. (2021). How to build a positive digital footprint for your school and for your students. *The school leadership survival guide: What to do when things go wrong, how to learn from mistakes, and why you should prepare for the worst*, 169-186.
- Buckingham, D. (2013). *Beyond technology: Children's learning in the age of digital culture*. John Wiley & Sons.
- Buijzen, M., & Valkenburg, P. M. (2005). Parental mediation of undesired advertising effects. *Journal of broadcasting & electronic media*, 49(2), 153-165.
- Byrne, S., Katz, S. J., Lee, T., Linz, D., & McIlrath, M. (2014). Peers, predators, and porn: Predicting parental underestimation of children's risky online experiences. *Journal of Computer-Mediated Communication*, 19(2), 215-231.
- Cabello-Hutt, T., Cabello, P., & Claro, M. (2018). Online opportunities and risks for children and adolescents: The role of digital skills, age, gender and parental mediation in Brazil. *New Media & Society*, 20(7), 2411-2431.
- Carnevali, D., Cavazzana, L., Grimoldi, L., Magnoni, P., Principi, N., & Pellai, A. (2022). The use of online pornography among minors: epidemiological analysis of the phenomenon. *Minerva pediatrica*.
- Casas, J. A., Del Rey, R., & Ortega-Ruiz, R. (2013, 05/01). Bullying and cyberbullying: Convergent and divergent predictor variables. *Computers in Human Behavior*, 29, 580-587.
- Castellanos, M., Wettstein, A., Wachs, S., Kansok-Dusche, J., Ballaschk, C., Krause, N., & Bilz, L. (2023). Hate speech in adolescents: A binational study on prevalence and demographic differences. *Frontiers in Education*,
- Castro, M. D. B., & Tumibay, G. M. (2021). A literature review: efficacy of online learning courses for higher education institution using meta-analysis. *Education and Information Technologies*, 26, 1367-1385.
- Chan, K., & McNeal, J. U. (2003). Parent-child communications about consumption and advertising in China. *Journal of Consumer Marketing*, 20(4), 317-334.
- Chapin, J. (2016). Adolescents and cyber bullying: The precaution adoption process model. *Education and Information Technologies*, 21, 719-728.
- Chapin, J., & Coleman, G. (2017). The cycle of cyberbullying: Some experience required. *The Social Science Journal*, 54(3), 314-318.
- Chen, L., Liu, X., & Tang, H. (2023). The interactive effects of parental mediation strategies in preventing cyberbullying on social media. *Psychology Research and Behavior Management*, 1009-1022.
- Chen, L., & Shi, J. (2019). Reducing harm from media: A meta-analysis of parental mediation. *Journalism & Mass Communication Quarterly*, 96(1), 173-193.

- Chen, V. H. H., & Chng, G. S. (2016). Active and restrictive parental mediation over time: Effects on youths' self-regulatory competencies and impulsivity. *Computers & Education*, 98, 206-212.
- Choi, E. J., King, G., & Duerden, E. G. (2023). Screen Time in Children and Youth during the Pandemic: A Systematic Review and Meta-Analysis. *Global Pediatrics*, 100080.
- Choukas-Bradley, S., & Nesi, J. (2020). Applying developmental theory to adolescent peer influence processes in the social media context. In *Online peer engagement in adolescence* (pp. 140-162). Routledge.
- Clark, L. S. (2009). Digital media and the generation gap: Qualitative research on US teens and their parents. *Information, communication & society*, 12(3), 388-407.
- [Record #206 is using a reference type undefined in this output style.]
- Creswell, J. W. (2014). *Qualitative, quantitative and mixed methods approaches*. Sage.
- Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.
- Cricchio, M. G. L., Palladino, B. E., Eleftheriou, A., Nocentini, A., & Menesini, E. (2021). Parental Mediation Strategies and Their Role on Youths' Online Privacy Disclosure and Protection. *European Psychologist*.
- Cuoco, E. (2022). Examining the effects of Instagram on body image and eating disorders among adolescent girls.
- Dane, A., & Bhatia, K. (2023). The social media diet: A scoping review to investigate the association between social media, body image and eating disorders amongst young people. *PLOS Global Public Health*, 3(3), e0001091.
- Davidson, J., Aiken, M., Phillips, K., & Farr, R. (2022). European Youth Cybercrime, Online Harm and Online Risk Taking: 2022 Research Report.
- Davis, A. C., Wright, C., Curtis, M., Hellard, M., Lim, M., & Temple-Smith, M. (2021). 'Not my child': Parenting, pornography, and views on education. *Journal of Family Studies*, 27(4), 573-588.
- Denscombe, M. (2017). *EBOOK: The Good Research Guide: For Small-Scale Social Research Projects*. McGraw-Hill Education (UK).
- Desimpelaere, L., Hudders, L., & Van de Sompel, D. (2020). Knowledge as a strategy for privacy protection: How a privacy literacy training affects children's online disclosure behavior. *Computers in Human Behavior*, 110, 106382.
- Dev, P., Medina, J., Agha, Z., De Choudhury, M., Razi, A., & Wisniewski, P. J. (2022). From Ignoring Strangers' Solicitations to Mutual Sexting with Friends: Understanding Youth's Online Sexual Risks in Instagram Private Conversations. Companion Publication of the 2022 Conference on Computer Supported Cooperative Work and Social Computing,

- Dharmarajlu, S. M., Maqbul, S. A., Tihy, R. H., Aqili, S. E., Arbey, K. M., Yaqoub, R. U., Osaili, S. M., & Aljehani, M. S. (2023). THE IMPACT OF SOCIAL MEDIA AFFINITY ON EATING ATTITUDES AND BODY DISSATISFACTION AMONG SCHOOL-AGE CHILDREN AND ADOLESCENT GIRLS STUDYING IN FARASAN GOVERNORATE SCHOOL, KINGDOM OF SAUDI ARABIA. *International Journal of Contemporary Microbiology*, 9(1).
- Dharmesti, M., Dharmesti, T. R. S., Kuhne, S., & Thaichon, P. (2021). Understanding online shopping behaviours and purchase intentions amongst millennials. *Young Consumers*, 22(1), 152-167.
- Disrupting-Harm. (2022). *Child Sexual Exploitation and Abuse Online*. <https://www.end-violence.org/disrupting-harm>
- Dou, K., Wang, L. X., Cheng, D. L., Li, Y. Y., & Zhang, M. C. (2022). Longitudinal association between poor parental supervision and risk-taking behavior: The role of self-control and school climate. *Journal of adolescence*, 94(4), 525-537.
- Duell, N., & Steinberg, L. (2019). Positive risk taking in adolescence. *Child development perspectives*, 13(1), 48-52.
- Duerager, A., & Livingstone, S. (2012). How can parents support children's internet safety?
- Dulkadir Yaman, N., & Kabakçı Yurdakul, I. (2022). Exploring Parental Mediation of Internet Use Through Young Children's Perspective. *Education and Information Technologies*, 27(6), 7451-7469.
- Dyson, M. P., Hartling, L., Shulhan, J., Chisholm, A., Milne, A., Sundar, P., Scott, S. D., & Newton, A. S. (2016). A systematic review of social media use to discuss and view deliberate self-harm acts. *PLoS One*, 11(5), e0155813.
- Eastin, M. S., Greenberg, B. S., & Hofschire, L. (2006). Parenting the internet. *Journal of Communication*, 56(3), 486-504.
- Echemendía Tocabens, B. (2011). Definiciones acerca del riesgo y sus implicaciones. *Revista cubana de higiene y epidemiología*, 49(3), 470-481.
- Eder, D., & Fingerson, L. (2002). Interviewing children and adolescents. *Handbook of interview research: Context and method*, 1, 181-203.
- Elboj-Saso, C., Íñiguez-Berrozpe, T., Cebollero Salinas, A., & Bautista Alcaine, P. (2023). "Listen to me!" The role of family supervision and parental phubbing in youth cyberbullying. *Family Relations*.
- Eynon, R. (2009). Mapping the digital divide in Britain: implications for learning and education. *Learning, Media and technology*, 34(4), 277-290.
- Eynon, R., & Geniets, A. (2016). The digital skills paradox: how do digitally excluded youth develop skills to use the internet? *Learning, Media and technology*, 41(3), 463-479.

- Faltýnková, A., Blinka, L., Ševčíková, A., & Husarova, D. (2020). The Associations between Family-Related Factors and Excessive Internet Use in Adolescents. *International Journal of Environmental Research and Public Health*, 17(5), 1754. <https://www.mdpi.com/1660-4601/17/5/1754>
- Ferreira Deslandes, S., Coutinho, T., Ramos de Souza Costa Ferreira, T., & Matassoli Duran Flach, R. (2021). Online challenges among children and adolescents: Self-inflicted harm and social media strategies. *Salud colectiva*, 16, e3264.
- Fix, R. L., Assini-Meytin, L. C., Harris, A. J., & Letourneau, E. J. (2021). Caregivers' perceptions and responses to a new norm: The missing link in addressing adolescent sexting behaviors in the US. *Archives of Sexual Behavior*, 50, 575-588.
- Flanagin, A. J., & Metzger, M. J. (2008). *Digital media and youth: Unparalleled opportunity and unprecedented responsibility*. MacArthur Foundation Digital Media and Learning Initiative Cambridge, MA, USA.
- Gardner, M., & Steinberg, L. (2005). Peer influence on risk taking, risk preference, and risky decision making in adolescence and adulthood: an experimental study. *Developmental psychology*, 41(4), 625.
- Garmendia, M., Garitaonandia, C., Martínez, G., & Casado, M. Á. (2012). The effectiveness of parental mediation. *Children, risk and safety on the internet: Research and policy challenges in comparative perspective*, 231-244.
- Geržičáková, M., Dedkova, L., & Mýlek, V. (2023). What do parents know about children's risky online experiences? The role of parental mediation strategies. *Computers in Human Behavior*, 141, 107626.
- Giletta, M., Choukas-Bradley, S., Maes, M., Linthicum, K. P., Card, N. A., & Prinstein, M. J. (2021). A meta-analysis of longitudinal peer influence effects in childhood and adolescence. *Psychological Bulletin*, 147(7), 719.
- Gillham, B. (2000). *Research interview*. A&C Black.
- Global Kids Online, G. K. O. (2019). Global Kids Online: Comparative Report, UNICEF Office of Research – Innocenti.
- Gohal, G., Alqassim, A., Eltyeb, E., Rayyani, A., Hakami, B., Al Faqih, A., Hakami, A., Qadri, A., & Mahfouz, M. (2023). Prevalence and related risks of cyberbullying and its effects on adolescent. *BMC psychiatry*, 23(1), 39.
- GOV.SA. (2023). *Digital Inclusion Strategies, Saudi Vision 2030*. <https://www.my.gov.sa/wps/portal/snp/careaboutyou/digitalinclusion/?lang=en>
- GOV.SA, G. o. S. A. *Saudi\_vision 2030*. [https://www.vision2030.gov.sa/media/5ptbkbn/saudi\\_vision2030\\_ar.pdf](https://www.vision2030.gov.sa/media/5ptbkbn/saudi_vision2030_ar.pdf)

- Greene-Colozzi, E. A., Winters, G. M., Blasko, B., & Jeglic, E. L. (2020). Experiences and perceptions of online sexual solicitation and grooming of minors: A retrospective report. *Journal of child sexual abuse*, 29(7), 836-854.
- Greene, S., & Hogan, D. (2005). *Researching children's experience: Approaches and methods*. Sage.
- Grigutytė, N., Raižienė, S., & Pakalniškienė, V. (2020). The role of school teachers, parents and friends in supporting children online. ICERI2020 Proceedings,
- Gui, M., & Argentin, G. (2011). Digital skills of internet natives: Different forms of digital literacy in a random sample of northern Italian high school students. *New Media & Society*, 13(6), 963-980.
- Hamdan, S. (2014). Internet and its social effects among secondary school students in the Asir region in the Kingdom of Saudi Arabia. *King Khalid University Journal of Educational Sciences*, 22, 91-148.
- Hamilton, J. L., Nesi, J., & Choukas-Bradley, S. (2020). Teens and social media during the COVID-19 pandemic: Staying socially connected while physically distant.
- Hanna, P. (2012). Using internet technologies (such as Skype) as a research medium: A research note. *Qualitative research*, 12(2), 239-242.
- Hasan, M. M. (2018). Investigating Saudi parents' intention to adopt technical mediation tools to regulate children's internet usage. *International Journal of Advanced Computer Science and Applications*, 9(5).
- Hasebrink, U., Görzig, A., Haddon, L., Kalmus, V., & Livingstone, S. (2011). Patterns of risk and safety online: In-depth analyses from the EU Kids Online survey of 9-to 16-year-olds and their parents in 25 European countries.
- Hawdon, J., Oksanen, A., & Räsänen, P. (2015). Online extremism and online hate: Exposure among adolescents and young adults in four nations. *Nordicom-Information*, 37, 29-37.
- Hayixibayi, A., Strodl, E., Chen, W.-Q., & Kelly, A. B. (2021). School-based relationships and problematic internet use amongst Chinese students. *PLoS One*, 16(3), e0248600.
- Helsper, E. J., & Eynon, R. (2010). Digital natives: where is the evidence? *British Educational Research Journal*, 36(3), 503-520.
- Hinduja, S., & Patchin, J. W. (2013). Social influences on cyberbullying behaviors among middle and high school students. *Journal of youth and Adolescence*, 42, 711-722.
- Hornor, G. (2020). Child and adolescent pornography exposure. *Journal of Pediatric Health Care*, 34(2), 191-199.
- Ibrahim, A. M., & Vi, T. P. (2021). The Internet and adolescent safety: peer influence and gender difference as potential risk-factors of cyberbullying among Nigerian secondary

- school adolescents. *International Journal of Media and Information Literacy*, 6(1), 4-16.
- Ilomäki, L., Lakkala, M., Kallunki, V., Mundy, D., Romero, M., Romeu, T., & Gouseti, A. (2023). Critical digital literacies at school level: A systematic review. *Review of Education*, 11(3), e3425.
- Iqbal, S., Zakar, R., & Fischer, F. (2021). Predictors of parental mediation in teenagers' internet use: a cross-sectional study of female caregivers in Lahore, Pakistan. *BMC Public Health*, 21(1), 1-14.
- Johnson, G. (2010). Internet use and child development: The techno-microsystem. *Australian Journal of Educational and Developmental Psychology (AJEDP)*, 10, 32-43.
- Johnson, G. M. (2010a). Internet use and child development: Validation of the ecological techno-subsystem. *Journal of Educational Technology & Society*, 13(1), 176-185.
- Johnson, G. M. (2010b). Young children's Internet use at home and school: Patterns and profiles. *Journal of Early Childhood Research*, 8(3), 282-293.
- Johnson, G. M., & Ptoplampu, K. P. (2008). Internet use during childhood and the ecological techno-subsystem. *Canadian Journal of Learning and Technology*, 34(1), n1.
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, 33(7), 14-26.
- Jones, L. M., & Mitchell, K. J. (2016). Defining and measuring youth digital citizenship. *New Media & Society*, 18(9), 2063-2079.
- Jones, L. M., Mitchell, K. J., & Finkelhor, D. (2013). Online harassment in context: Trends from three youth internet safety surveys (2000, 2005, 2010). *Psychology of violence*, 3(1), 53.
- Jurkevičienė, J., & Butkevičienė, E. (2018). Civic participation and engagement in electronic social networks: trends in Lithuania. *Viešoji politika ir administravimas*, 17(1), 9-23.
- Kalmus, V., Blinka, L., & Ólafsson, K. (2015). Does it matter what mama says: Evaluating the role of parental mediation in European adolescents' excessive Internet use. *Children & Society*, 29(2), 122-133.
- Kansok-Dusche, J., Ballaschk, C., Krause, N., Zeißig, A., Seemann-Herz, L., Wachs, S., & Bilz, L. (2023). A systematic review on hate speech among children and adolescents: definitions, prevalence, and overlap with related phenomena. *Trauma, violence, & abuse*, 24(4), 2598-2615.
- Kasperson, R. E., Renn, O., Slovic, P., Brown, H. S., Emel, J., Goble, R., Kasperson, J. X., & Ratick, S. (1988). The social amplification of risk: A conceptual framework. *Risk analysis*, 8(2), 177-187.
- Keeley, B., & Little, C. (2017). *The State of the Worlds Children 2017: Children in a Digital World*. ERIC.

- Kerekes, N., Bador, K., Sfindla, A., Belaatar, M., Mzadi, A. E., Jovic, V., Damjanovic, R., Erlandsson, M., Nguyen, H. T. M., & Nguyen, N. T. A. (2021). Changes in adolescents' psychosocial functioning and well-being as a consequence of long-term covid-19 restrictions. *International Journal of Environmental Research and Public Health*, 18(16), 8755.
- Khurana, A., Bleakley, A., Jordan, A. B., & Romer, D. (2015). The protective effects of parental monitoring and internet restriction on adolescents' risk of online harassment. *Journal of youth and Adolescence*, 44(5), 1039-1047.
- Kim, S., Martin-Storey, A., Drossos, A., Barbosa, S., & Georgiades, K. (2020). Prevalence and correlates of sexting behaviors in a provincially representative sample of adolescents. *The Canadian Journal of Psychiatry*, 65(6), 401-408.
- King, N., Horrocks, C., & Brooks, J. (2018). *Interviews in qualitative research*. Sage.
- Kirsh, S. J. (2011). Children, adolescents, and media violence: A critical look at the research.
- Kite, S. L., Gable, R. K., & Filippelli, L. P. (2013). Cyber threats: a study of what middle and high school student know about threatening behaviours and internet safety. *International Journal of Social Media and Interactive Learning Environments*, 1(3), 240-254.
- Kleemans, M., Daalmans, S., Carbaat, I., & Anschütz, D. (2018). Picture perfect: The direct effect of manipulated Instagram photos on body image in adolescent girls. *Media Psychology*, 21(1), 93-110.
- Klinke, A., & Renn, O. (2002). A new approach to risk evaluation and management: Risk-based, precaution-based, and discourse-based strategies 1. *Risk Analysis: An International Journal*, 22(6), 1071-1094.
- Koch, T., Laaber, F., & Florack, A. (2024). Socioeconomic status and young people's digital maturity: The role of parental mediation. *Computers in Human Behavior*, 108157.
- Kralj, L. (2016). E-safety and digital skills as part of school curriculum. *Medijske studije*, 7(13), 59-75.
- Kuldas, S., Sargioti, A., Norman, J. O. H., & Staksrud, E. (2023). A transactional framework of parenting for children's Internet use: A narrative review of parental self-efficacy, mediation, and awareness of online risks. *International Journal of Communication*, 17, 20.
- Kvardova, N., Smahel, D., Machackova, H., & Subrahmanyam, K. (2021). Who is exposed to harmful online content? The role of risk and protective factors among Czech, Finnish, and Spanish adolescents. *Journal of youth and Adolescence*, 50(12), 2294-2310.
- Lee, S.-J. (2013). Parental restrictive mediation of children's internet use: Effective for what and for whom? *New Media & Society*, 15(4), 466-481.

- Lee, S.-J., & Chae, Y.-G. (2012). Balancing participation and risks in children's internet use: The role of internet literacy and parental mediation. *Cyberpsychology, Behavior, and Social Networking*, 15(5), 257-262.
- Len-Ríos, M. E., Hughes, H. E., McKee, L. G., & Young, H. N. (2016). Early adolescents as publics: A national survey of teens with social media accounts, their media use preferences, parental mediation, and perceived Internet literacy. *Public Relations Review*, 42(1), 101-108.
- Liau, A. K., Khoo, A., & Ang, P. H. (2008). Parental awareness and monitoring of adolescent Internet use. *Current psychology*, 27(4), 217-233.
- Lin, W.-H., Liu, C.-H., & Yi, C.-C. (2020). Exposure to sexually explicit media in early adolescence is related to risky sexual behavior in emerging adulthood. *PLoS One*, 15(4), e0230242.
- Liu, C., Ang, R. P., & Lwin, M. O. (2013). Cognitive, personality, and social factors associated with adolescents' online personal information disclosure. *Journal of adolescence*, 36(4), 629-638.
- Liu, S., Chang, F.-C., Chiu, C.-H., Li, F., Chen, P.-H., Chen, C.-Y., Lin, Y.-P., & Chiang, J.-T. (2021). Parent–Child Discrepancies in Reports of Exposure to Violence/Pornography on Mobile Devices and the Impact on Children's Psychosocial Adjustment. *Cyberpsychology, Behavior, and Social Networking*, 24(6), 390-398.
- Livingston, S., & Bober, M. (2005). UK children go online: Emerging opportunities and dangers. London, UK: London School of Economics. Retrieved August 1, 2007.
- Livingstone, S. (2010). Digital learning and participation among youth: Critical reflections on future research priorities. *International journal of learning and media*, 2(2-3), 1-13.
- Livingstone, S., & Blum-Ross, A. (2020). *Parenting for a digital future: How hopes and fears about technology shape children's lives*. Oxford University Press, USA.
- Livingstone, S., & Bober, M. (2006). Regulating the internet at home: contrasting the perspectives of children and parents. *Digital generations: Children, young people, and new media*, 93-113.
- Livingstone, S., & Byrne, J. (2018). Parenting in the digital age: The challenges of parental responsibility in comparative perspective.
- Livingstone, S., Davidson, J., Bryce, J., Batool, S., Haughton, C., & Nandi, A. (2017). Children's online activities, risks and safety: a literature review by the UKCCIS evidence group.
- Livingstone, S., & Görzig, A. (2014). When adolescents receive sexual messages on the internet: Explaining experiences of risk and harm. *Computers in Human Behavior*, 33, 8-15.
- Livingstone, S., Haddon, L., & Görzig, A. (2012). Children, risk and safety online: research and policy challenges in comparative perspective.



- Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). Risks and safety on the internet: the perspective of European children: full findings and policy implications from the EU Kids Online survey of 9-16 year olds and their parents in 25 countries.
- Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2014). EU Kids Online II: a large-scale quantitative approach to the study of European children's use of the internet and online risks and safety. *SAGE Research Methods*.
- Livingstone, S., & Helsper, E. (2007). Gradations in digital inclusion: Children, young people and the digital divide. *New Media & Society*, 9(4), 671-696.
- Livingstone, S., & Helsper, E. J. (2008). Parental mediation of children's internet use. *Journal of broadcasting & electronic media*, 52(4), 581-599.
- Livingstone, S., Kardefelt-Winther, D., Kanchev, P., Cabello, P., Claro, M., Burton, P., & Phyfer, J. (2019). Is there a Ladder of Children's Online Participation?: Findings from Three Global Kids Online Countries.
- Livingstone, S., Mascheroni, G., Ólafsson, K., & Haddon, L. (2014). Children's online risks and opportunities: Comparative findings from EU Kids Online and Net Children Go Mobile.
- Livingstone, S., Nandi, A., Banaji, S., & Stoilova, M. (2017). Young adolescents and digital media: uses, risks and opportunities in low-and middle-income countries: a rapid evidence review.
- Livingstone, S., Ólafsson, K., Helsper, E. J., Lupiáñez-Villanueva, F., Veltri, G. A., & Folkvord, F. (2017). Maximizing opportunities and minimizing risks for children online: The role of digital skills in emerging strategies of parental mediation. *Journal of Communication*, 67(1), 82-105.
- Livingstone, S., & Sefton-Green, J. (2016). Living and Learning in the Digital Age. In *The Class* (pp. 20-40). New York University Press.
- Livingstone, S., & Smith, P. K. (2014, 2014/06/01). Annual Research Review: Harms experienced by child users of online and mobile technologies: the nature, prevalence and management of sexual and aggressive risks in the digital age. *Journal of Child Psychology and Psychiatry*, 55(6), 635-654.
- Lobe, B., Livingstone, S., Olafsson, K., & Simões, J. A. (2008). *Best practice research guide: How to research children and online technologies in comparative perspective*. EU Kids Online.
- Lobe, B., Velicu, A., Staksrud, E., Chaudron, S., & Rosanna, D. G. (2021). How children (10-18) experienced online risks during the Covid-19 lockdown-Spring 2020: Key findings from surveying families in 11 European countries.
- Logar, S., Anzelm, D., Lazic, D., & Vujacic, V. (2016). Global kids online Montenegro: Opportunities, risks and safety.

- Lukavská, K., Vacek, J., & Gabhelík, R. (2020). The effects of parental control and warmth on problematic internet use in adolescents: A prospective cohort study. *Journal of behavioral addictions*, 9, 664 - 675.
- Madigan, S., Eirich, R., Pador, P., McArthur, B. A., & Neville, R. D. (2022). Assessment of Changes in Child and Adolescent Screen Time During the COVID-19 Pandemic: A Systematic Review and Meta-analysis. *JAMA Pediatrics*, 176(12), 1188-1198. <https://doi.org/10.1001/jamapediatrics.2022.4116>
- Maghsoudi, R., Shapka, J., & Wisniewski, P. (2020). Examining how online risk exposure and online social capital influence adolescent psychological stress. *Computers in Human Behavior*, 113, 106488.
- Mak, K.-K., Lai, C.-M., Watanabe, H., Kim, D.-I., Bahar, N., Ramos, M., Young, K. S., Ho, R. C., Aum, N.-R., & Cheng, C. (2014). Epidemiology of internet behaviors and addiction among adolescents in six Asian countries. *Cyberpsychology, Behavior, and Social Networking*, 17(11), 720-728.
- Makarova, E. A., & Makarova, E. L. (2019). Aggressive Behavior in Online Games and Cybervictimization of Teenagers and Adolescents. *International Electronic Journal of Elementary Education*, 12(2), 157-165.
- Manches, A., Duncan, P., Plowman, L., & Sabeti, S. (2015). Three questions about the Internet of things and children. *TechTrends*, 59, 76-83.
- Marciano, L., Viswanath, K., Morese, R., & Camerini, A.-L. (2022). Screen time and adolescents' mental health before and after the COVID-19 lockdown in Switzerland: A natural experiment. *Frontiers in psychiatry*, 13, 981881.
- Mark, L. K., & Nguyen, T. T. T. (2017). An Invitation to Internet Safety and Ethics: School and Family Collaboration. *Journal of Invitational Theory and Practice*, 23, 62-75.
- Mars, B., Heron, J., Biddle, L., Donovan, J. L., Holley, R., Piper, M., Potokar, J., Wyllie, C., & Gunnell, D. (2015). Exposure to, and searching for, information about suicide and self-harm on the Internet: Prevalence and predictors in a population based cohort of young adults. *Journal of affective disorders*, 185, 239-245.
- Martin, F., Gezer, T., & Wang, C. (2019). Educators' perceptions of student digital citizenship practices. *Computers in the Schools*, 36(4), 238-254.
- Martin, F., Gezer, T., Wang, W. C., Petty, T., & Wang, C. (2022). Examining K-12 educator experiences from digital citizenship professional development. *Journal of Research on Technology in Education*, 54(1), 143-160.
- Martínez-Bravo, M. C., Sádaba Chalezquer, C., & Serrano-Puche, J. (2022). Dimensions of digital literacy in the 21st century competency frameworks. *Sustainability*, 14(3), 1867.
- Masanet, M.-J., Guerrero-Pico, M., & Establés, M.-J. (2019). From digital native to digital apprentice. A case study of the transmedia skills and informal learning strategies of adolescents in Spain. *Learning, Media and technology*, 44(4), 400-413.

- Mascheroni, G., & Ólafsson, K. (2014). Net children go mobile: Risks and opportunities.
- Mascheroni, G., & Ólafsson, K. (2016). The mobile Internet: Access, use, opportunities and divides among European children. *New Media & Society*, 18(8), 1657-1679.
- Mascheroni, G., Ponte, C., & Jorge, A. (2018). Digital parenting: The challenges for families in the digital age.
- Massey, K., Burns, J., & Franz, A. (2021). Young people, sexuality and the age of pornography. *Sexuality & culture*, 25, 318-336.
- Mendoza, K. (2009). Surveying parental mediation: Connections, challenges and questions for media literacy. *Journal of Media Literacy Education*, 1(1), 3.
- Meyers, E. M., Erickson, I., & Small, R. V. (2013). Digital literacy and informal learning environments: an introduction. *Learning, Media and technology*, 38(4), 355-367.
- Mishra, A., & Maity, M. (2021). Influence of parents, peers, and media on adolescents' consumer knowledge, attitudes, and purchase behavior: A meta-analysis. *Journal of Consumer Behaviour*, 20(6), 1675-1689.
- Mitchell, K. J., Wells, M., Priebe, G., & Ybarra, M. L. (2014). Exposure to websites that encourage self-harm and suicide: Prevalence rates and association with actual thoughts of self-harm and thoughts of suicide in the United States. *Journal of adolescence*, 37(8), 1335-1344.
- Molla-Esparza, C., Losilla, J.-M., & López-González, E. (2023). Sexting prevalence in high-school students depends on the addressee, media format, explicitness of sexts, and gender. *Behaviour & information technology*, 42(16), 2852-2870.
- Montag, C., Demetrovics, Z., Elhai, J. D., Grant, D., Koning, I., Rumpf, H.-J., Spada, M. M., Throuvala, M., & van den Eijnden, R. (2024). Problematic social media use in childhood and adolescence. *Addictive Behaviors*, 107980.
- Montero-Mesa, L., Fraga-Varela, F., Vila-Couñago, E., & Rodríguez-Groba, A. (2023). Digital technology and teacher professional development: Challenges and contradictions in compulsory education. *Education Sciences*, 13(10), 1029.
- Morrison, K. (2013). Interviewing children in uncomfortable settings: 10 lessons for effective practice. *Educational Studies*, 39(3), 320-337.
- Mýlek, V., Dedkova, L., & Machackova, H. (2020). Factors influencing interactions between adolescents and unknown people from the internet: Findings from five European countries. *Children and Youth Services Review*, 114, 105038.
- Nagy, B., Kutrovátz, K., Király, G., & Rakovics, M. (2023). Parental mediation in the age of mobile technology. *Children & Society*, 37(2), 424-451.

- Nayak, K. M., Bhatt, V., & Nagvadia, J. (2021). Measuring impact of factors influencing to consumer buying intention with respect to online shopping. *International journal of Management (IJM)*, 12(1), 230-242.
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065-1078.
- Nielsen, P., Favez, N., Liddle, H., & Rigter, H. (2019). Linking parental mediation practices to adolescents' problematic online screen use: A systematic literature review. *Journal of behavioral addictions*, 8(4), 649-663.
- Nikken, P., & Jansz, J. (2014). Developing scales to measure parental mediation of young children's internet use. *Learning, Media and technology*, 39(2), 250-266.
- Nikken, P., & Schols, M. (2015). How and why parents guide the media use of young children. *Journal of child and family studies*, 24(11), 3423-3435.
- Niu, X., Li, J.-Y., King, D. L., Rost, D. H., Wang, H.-Z., & Wang, J.-L. (2023). The relationship between parenting styles and adolescent problematic Internet use: A three-level meta-analysis. *Journal of behavioral addictions*, 12, 652 - 669.
- Notten, N., & Nikken, P. (2016). Boys and girls taking risks online: A gendered perspective on social context and adolescents' risky online behavior. *New Media & Society*, 18(6), 966-988.
- Odgers, C. (2018). Smartphones are bad for some teens, not all. *Nature*, 554(7693), 432-434.
- [Record #222 is using a reference type undefined in this output style.]
- Ofcom. (2023a). *Children and Parents: Media Use and Attitudes*. [https://www.ofcom.org.uk/data/assets/pdf\\_file/0027/255852/childrens-media-use-and-attitudes-report-2023.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0027/255852/childrens-media-use-and-attitudes-report-2023.pdf)
- Ofcom. (2023b). *Research into risk factors that may lead children to harm online*. [https://www.ofcom.org.uk/data/assets/pdf\\_file/0021/245163/children-risk-factors-report.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0021/245163/children-risk-factors-report.pdf)
- Oksanen, A., Hawdon, J., Holkeri, E., Näsi, M., & Räsänen, P. (2014). Exposure to online hate among young social media users. In *Soul of society: A focus on the lives of children & youth* (pp. 253-273). Emerald Group Publishing Limited.
- Onwuegbuzie, A. J., Johnson, B., & Turner, L. (2007). Toward a definition of mixed methods research. *Journal of mixed methods research*, 1(2), 112-133.
- Onwuegbuzie, A. J., & Leech, N. L. (2004). Enhancing the interpretation of "significant" findings: The role of mixed methods research. *The qualitative report*, 9(4), 770-792.
- Paat, Y.-F., & Markham, C. (2021). Digital crime, trauma, and abuse: Internet safety and cyber risks for adolescents and emerging adults in the 21st century. *Social Work in Mental Health*, 19(1), 18-40.

- Pacheco, E., & Melhuish, N. (2020). Factsheet: Parental awareness of children's experiences of online risks and harm. Evidence from Ngā taiohi matihiko o Aotearoa–New Zealand Kids Online.
- Padilla-Walker, L. M., Coyne, S. M., Fraser, A. M., Dyer, W. J., & Yorgason, J. B. (2012). Parents and adolescents growing up in the digital age: Latent growth curve analysis of proactive media monitoring. *Journal of adolescence*, 35(5), 1153-1165.
- Paez, G. (2020). Assessing predictors of cyberbullying perpetration among adolescents: The influence of individual factors, attachments, and prior victimization. *International journal of bullying prevention*, 2, 149-159.
- Page Jeffery, C. (2021). "It's really difficult. We've only got each other to talk to." Monitoring, mediation, and good parenting in Australia in the digital age. *Journal of Children and Media*, 15(2), 202-217.
- Pangrazio, L., Godhe, A.-L., & Ledesma, A. G. L. (2020). What is digital literacy? A comparative review of publications across three language contexts. *E-learning and Digital Media*, 17(6), 442-459.
- Papageorgiou, A., Fisher, C., & Cross, D. (2022). "Why don't I look like her?" How adolescent girls view social media and its connection to body image. *BMC women's health*, 22(1), 261.
- Pasquier, D. (2008). From parental control to peer pressure: Cultural transmission and conformism. *The international handbook of children, media and culture*, 448-459.
- Paus-Hasebrink, I., Ponte, C., Dürager, A., & Bauwens, J. (2012). Understanding digital inequality: the interplay between parental socialisation and children's development. *Children, risk and safety on the internet: Research and policy challenges in comparative perspective*, 257-271.
- Payne, A. (2015). *The nature and impact of cyberbullying among South African youth: an explanatory analysis* [University of Cape Town].
- Pechmann, C., Levine, L., Loughlin, S., & Leslie, F. (2005). Impulsive and self-conscious: Adolescents' vulnerability to advertising and promotion. *Journal of Public Policy & Marketing*, 24(2), 202-221.
- Pew Research Center, P. (2022). *Teens and Cyberbullying 2022*.
- Piotrowski, J. T. (2017). The parental media mediation context of young children's media use. *Media exposure during infancy and early childhood: The effects of content and context on learning and development*, 205-219.
- Pomfret, G., & Varley, P. (2019). Families at leisure outdoors: well-being through adventure. *Leisure studies*, 38(4), 494-508.
- Pons-Salvador, G., Zubieta-Méndez, X., & Frias-Navarro, D. (2022). Parents' digital competence in guiding and supervising young children's use of the Internet. *European Journal of Communication*, 37, 443 - 459.

- Popat, A., & Tarrant, C. (2023). Exploring adolescents' perspectives on social media and mental health and well-being—A qualitative literature review. *Clinical child psychology and psychiatry*, 28(1), 323-337.
- Porat, E., Blau, I., & Barak, A. (2018). Measuring digital literacies: Junior high-school students' perceived competencies versus actual performance. *Computers & Education*, 126, 23-36.
- Prensky, M. (2001). Digital natives, digital immigrants. *On the horizon*, 9(5).
- Priebe, G., Mitchell, K. J., & Finkelhor, D. (2013). To tell or not to tell? Youth's responses to unwanted internet experiences. *Cyberpsychology*.
- Pujazon-Zazik, M., & Park, M. J. (2010). To tweet, or not to tweet: gender differences and potential positive and negative health outcomes of adolescents' social internet use. *American journal of men's health*, 4(1), 77-85.
- Qin, Y., Musetti, A., & Omar, B. (2023). Flow Experience Is a Key Factor in the Likelihood of Adolescents' Problematic TikTok Use: The Moderating Role of Active Parental Mediation. *International Journal of Environmental Research and Public Health*, 20(3), 2089.
- Quayyum, F., Bueie, J., Cruzes, D. S., Jaccheri, L., & Vidal, J. C. T. (2021). Understanding parents' perceptions of children's cybersecurity awareness in Norway. Proceedings of the Conference on Information Technology for Social Good,
- Radha, R., Mahalakshmi, K., Kumar, V. S., & Saravanakumar, A. (2020). E-Learning during lockdown of Covid-19 pandemic: A global perspective. *International journal of control and automation*, 13(4), 1088-1099.
- Riemer, K., & Peter, S. (2021). Algorithmic audiencing: Why we need to rethink free speech on social media. *Journal of Information Technology*, 36(4), 409-426.
- Robb, M., & Mann, S. (2023). Teens and Pornography. *San Francisco, CA: Common Sense*.
- Rodríguez-de-Dios, I., van Oosten, J. M., & Igartua, J.-J. (2018). A study of the relationship between parental mediation and adolescents' digital skills, online risks and online opportunities. *Computers in Human Behavior*, 82, 186-198.
- Romero, M. (2014). Digital literacy for parents of the 21st century children. *Elearning Papers*, 38, 32-40.
- Rosa, E. M., & Tudge, J. (2013). Urie Bronfenbrenner's theory of human development: Its evolution from ecology to bioecology. *Journal of family theory & review*, 5(4), 243-258.
- Rutkowski, T. L., Hartikainen, H., Richards, K. E., & Wisniewski, P. J. (2021). Family Communication: Examining the Differing Perceptions of Parents and Teens Regarding Online Safety Communication. *Proceedings of the ACM on Human-Computer Interaction*, 5, 1 - 23.

- Salmons, J. (2009). *Online interviews in real time*. Sage.
- SAUDI-CENSUS. (2022). التركيبة السكانية - السكان حسب الفئة العمرية [Demographics - population by age group] <https://portal.saudicensus.sa/portal/public/1/17/1360?type=DASHBOARD>
- SaudiData. (2024). *Technology and digital infrastructure*. <https://datasaudi.mep.gov.sa/ar>
- Savoia, E., Harriman, N. W., Su, M., Cote, T., & Shortland, N. (2021). Adolescents' exposure to online risks: Gender disparities and vulnerabilities related to online behaviors. *International Journal of Environmental Research and Public Health*, 18(11), 5786.
- Schmidt, S. C., Anedda, B., Burchartz, A., Eichsteller, A., Kolb, S., Nigg, C., Niessner, C., Oriwol, D., Worth, A., & Woll, A. (2020). Physical activity and screen time of children and adolescents before and during the COVID-19 lockdown in Germany: a natural experiment. *Scientific reports*, 10(1), 21780.
- Schultze-Krumbholz, A., Zagorscak, P., Hess, M., & Scheithauer, H. (2020). The influence of school climate and empathy on cyberbystanders' intention to assist or defend in cyberbullying. *International journal of bullying prevention*, 2, 16-28.
- Segatto, B., & Dal Ben, A. (2013). The family digital divide: self-taught adolescents and difficulties in parental control. *Italian Journal of Sociology of Education*, 5, 101-118.
- Seidman, I. (2006). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. Teachers college press.
- Sela, Y., Zach, M., Amichay-Hamburger, Y., Mishali, M., & Omer, H. (2020). Family environment and problematic internet use among adolescents: The mediating roles of depression and Fear of Missing Out. *Computers in Human Behavior*, 106, 106226.
- Selwyn, N. (2009). The digital native—myth and reality. *Aslib proceedings*,
- Serra, G., Lo Scalzo, L., Giuffrè, M., Ferrara, P., & Corsello, G. (2021). Smartphone use and addiction during the coronavirus disease 2019 (COVID-19) pandemic: cohort study on 184 Italian children and adolescents. *Italian Journal of Pediatrics*, 47(1), 1-10.
- SGS, S. G. S. (2023). *Kingdom of Saudi Arabia*. <https://sgs.ksu.edu.sa/en/node/3049>
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for information*, 22(2), 63-75.
- Shin, W., & Ismail, N. (2014). Exploring the role of parents and peers in young adolescents' risk taking on social networking sites. *Cyberpsychology, Behavior, and Social Networking*, 17(9), 578-583.
- Shin, W., & Lwin, M. O. (2017). How does “talking about the Internet with others” affect teenagers' experience of online risks? The role of active mediation by parents, peers, and school teachers. *New Media & Society*, 19(7), 1109-1126.

- Siste, K., Hanafi, E., Sen, L. T., Murtani, B. J., Christian, H., Limawan, A. P., & Siswidiani, L. P. (2021). Implications of COVID-19 and lockdown on internet addiction among adolescents: Data from a developing country. *Frontiers in psychiatry*, 12.
- Sjoberg, L. (2000, Feb). Factors in risk perception. *Risk Anal*, 20(1), 1-11.
- Škařupová, K., Ólafsson, K., & Blinka, L. (2016). The effect of smartphone use on trends in European adolescents' excessive Internet use. *Behaviour & information technology*, 35(1), 68-74.
- Smahel, D., Machackova, H., Mascheroni, G., Dedkova, L., Staksrud, E., Ólafsson, K., Livingstone, S., & Hasebrink, U. (2020). EU Kids Online 2020: Survey results from 19 countries.
- Smahel, D., & Wright, M. F. (2014). The meaning of online problematic situations for children: results of qualitative cross-cultural investigation in nine European countries.
- Soh, P. C.-H., Chew, K. W., Koay, K. Y., & Ang, P. H. (2018). Parents vs peers' influence on teenagers' Internet addiction and risky online activities. *Telematics and Informatics*, 35(1), 225-236.
- Sonck, N., & de Haan, J. (2013). How the internet skills of European 11-to 16-year-olds mediate between online risk and harm. *Journal of Children and Media*, 7(1), 79-95.
- Sonck, N., Nikken, P., & De Haan, J. (2013). Determinants of Internet mediation: A comparison of the reports by Dutch parents and children. *Journal of Children and Media*, 7(1), 96-113.
- Sorbring, E., & Lundin, L. (2012). Mothers' and fathers' insights into teenagers' use of the internet. *New Media & Society*, 14(7), 1181-1197.
- Spiteri, L. (2014). 'Mum, can I play on the internet?' Parents' understanding, perception and responses to online advertising designed for children. *International Journal of Advertising*, 33(3), 437-473.
- Staksrud, E., & Livingstone, S. (2009). Children and online risk: Powerless victims or resourceful participants? *Information, communication & society*, 12(3), 364-387.
- Staksrud, E., Ólafsson, K., & Livingstone, S. (2013). Does the use of social networking sites increase children's risk of harm? *Computers in Human Behavior*, 29(1), 40-50.
- Steinberg, L. (2007). Risk taking in adolescence: New perspectives from brain and behavioral science. *Current directions in psychological science*, 16(2), 55-59.
- Steinberg, L. (2010). A dual systems model of adolescent risk-taking. *Developmental Psychobiology: The Journal of the International Society for Developmental Psychobiology*, 52(3), 216-224.
- Steinfeld, N. (2021). Parental mediation of adolescent Internet use: Combining strategies to promote awareness, autonomy and self-regulation in preparing youth for life on the web. *Education and Information Technologies*, 26(2), 1897-1920.



- Steinfeld, N. (2023). Adolescent gender differences in internet safety education. *Feminist Media Studies*, 23(3), 1024-1041.
- Stoilova, M., Livingstone, S., & Kardefelt-Winther, D. (2016). Global Kids Online: Researching children's rights globally in the digital age. *Global Studies of Childhood*, 6(4), 455-466.
- Stoilova, M., Livingstone, S., & Khazbak, R. (2021). Investigating Risks and Opportunities for Children in a Digital World: A rapid review of the evidence on children's internet use and outcomes.
- Strasburger, V. C., Wilson, B. J., & Jordan, A. B. (2013). *Children, adolescents, and the media*. Sage Publications.
- Swick, K. J., & Williams, R. D. (2006). An analysis of Bronfenbrenner's bio-ecological perspective for early childhood educators: Implications for working with families experiencing stress. *Early childhood education journal*, 33, 371-378.
- Symons, K., Ponnet, K., Walrave, M., & Heirman, W. (2017). A qualitative study into parental mediation of adolescents' internet use. *Computers in Human Behavior*, 73, 423-432.
- Talves, K., & Kalmus, V. (2015). Gendered mediation of children's internet use: A keyhole for looking into changing socialization practices. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 9(1).
- Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Sage.
- Teimouri, M., Hassan, M. S., Griffiths, M., Benrazavi, S. R., Bolong, J., Daud, A., & Adzharuddin, N. A. (2016). Assessing the validity of western measurement of online risks to children in an Asian context. *Child Indicators Research*, 9, 407-428.
- Ten Velde, G., Lubrecht, J., Arayess, L., van Loo, C., Hesselink, M., Reijnders, D., & Vreugdenhil, A. (2021). Physical activity behaviour and screen time in Dutch children during the COVID-19 pandemic: Pre-, during-and post-school closures. *Pediatric Obesity*, 16(9), e12779.
- Tiggemann, M., & Slater, A. (2013). NetGirls: The Internet, Facebook, and body image concern in adolescent girls. *International Journal of Eating Disorders*, 46(6), 630-633.
- Tomczyk, Ł. (2020). Skills in the area of digital safety as a key component of digital literacy among teachers. *Education and Information Technologies*, 25(1), 471-486.
- Tomczyk, Ł., & Potyrała, K. (2021). Parents' knowledge and skills about the risks of the digital world. *South African Journal of Education*, 41(1).
- Tomczyk, Ł., & Szotkowski, R. (2023). Sexting, fear of missing out (FOMO), and problematic social network use among adolescents. *Human Technology*, 19(2), 283-301.

- Trier-Bieniek, A. (2012). Framing the telephone interview as a participant-centred tool for qualitative research: a methodological discussion. *Qualitative research*, 12(6), 630-644.
- Trucco, D., Palma, A., & UNICEF. (2020). Childhood and adolescence in the digital age: A comparative report of the Kids Online surveys on Brazil, Chile, Costa Rica and Uruguay.
- Tudge, J. R., Mokrova, I., Hatfield, B. E., & Karnik, R. B. (2009). Uses and misuses of Bronfenbrenner's bioecological theory of human development. *Journal of family theory & review*, 1(4), 198-210.
- Turner, K. H., Jolls, T., Hagerman, M. S., O'Byrne, W., Hicks, T., Eisenstock, B., & Pytash, K. E. (2017). Developing digital and media literacies in children and adolescents. *Pediatrics*, 140(Supplement\_2), S122-S126.
- Unicef. (2011). *Child safety online: Global challenges and strategies*.
- UNICEF. (2017). *THE STATE OF THE WORLD'S CHILDREN 2017 Children in a Digital World*. <https://www.unicef.org/media/48601/file#:~:text=Worldwide%2C%2071%20per%20cent%20are,internet%20at%20increasingly%20younger%20ages>.
- UNICEF. (2018). *More than 175,000 children go online for the first time every day*. <https://www.unicef.org/eap/press-releases/more-175000-children-go-online-first-time-every-day-tapping-great-opportunities>
- Uslu, N. A., & Durak, H. Y. (2022). Parental awareness and supervision to prevent cyberbullying: Scale adaptation and a review in terms of demographic variables. *Children and Youth Services Review*, 133, 106329.
- Van Leijenhorst, L., Zanolie, K., Van Meel, C. S., Westenberg, P. M., Rombouts, S. A., & Crone, E. A. (2010). What motivates the adolescent? Brain regions mediating reward sensitivity across adolescence. *Cerebral cortex*, 20(1), 61-69.
- Vanderhoven, E., Schellens, T., Valcke, M., & De Koning, E. (2014). Involving parents in school programs about safety on social network sites. *Procedia-Social and Behavioral Sciences*, 112, 428-436.
- Vente, T., Daley, M., Killmeyer, E., & Grubb, L. K. (2020). Association of social media use and high-risk behaviors in adolescents: cross-sectional study. *JMIR pediatrics and parenting*, 3(1), e18043.
- Verrastro, V., Liga, F., Cuzzocrea, F., & Gugliandolo, M. C. (2020). Fear the Instagram: beauty stereotypes, body image and Instagram use in a sample of male and female adolescents. *QWERTY-Interdisciplinary Journal of Technology, Culture and Education*, 15(1), 31-49.
- Wachs, S., Gámez-Guadix, M., & Wright, M. F. (2022). Online hate speech victimization and depressive symptoms among adolescents: The protective role of resilience. *Cyberpsychology, Behavior, and Social Networking*, 25(7), 416-423.

- Wang, M., Lwin, M. O., Cayabyab, Y. M. T. M., Hou, G., & You, Z. (2023). A Meta-Analysis of Factors Predicting Parental Mediation of Children's Media Use Based on Studies Published Between 1992–2019. *Journal of child and family studies*, 1-12.
- Warren, R. (2001). In words and deeds: Parental involvement and mediation of children's television viewing. *The Journal of Family Communication*, 1(4), 211-231.
- Warren, R., & Aloia, L. (2019). Parenting style, parental stress, and mediation of children's media use. *Western Journal of Communication*, 83(4), 483-500.
- We Protect Global Alliance, W. (2023). *Global Threat Assessment 2023 Assessing the scale and scope of child sexual exploitation and abuse online, to transform the response*. <https://www.weprotect.org/global-threat-assessment-23/#full-report>
- Wilkin, S., Davies, H., & Eynon, R. (2017). Addressing digital inequalities amongst young people: conflicting discourses and complex outcomes. *Oxford Review of Education*, 43(3), 332-347.
- Willig, C. (2013). *EBOOK: introducing qualitative research in psychology*. McGraw-hill education (UK).
- Wisniewski, P., Jia, H., Wang, N., Zheng, S., Xu, H., Rosson, M. B., & Carroll, J. M. (2015). Resilience mitigates the negative effects of adolescent internet addiction and online risk exposure. Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems,
- Wisniewski, P., Jia, H., Xu, H., Rosson, M. B., & Carroll, J. M. (2015). " Preventative" vs." Reactive" How Parental Mediation Influences Teens' Social Media Privacy Behaviors. Proceedings of the 18th ACM conference on computer supported cooperative work & social computing,
- Ybarra, M. L., Mitchell, K. J., & Korchmaros, J. D. (2011). National trends in exposure to and experiences of violence on the Internet among children. *Pediatrics*, 128(6), e1376-e1386.
- Ybarra, M. L., Mitchell, K. J., & Oppenheim, J. K. (2022). Violent media in childhood and seriously violent behavior in adolescence and young adulthood. *Journal of Adolescent Health*, 71(3), 285-292.
- Youn, S. (2005). Teenagers' perceptions of online privacy and coping behaviors: a risk–benefit appraisal approach. *Journal of broadcasting & electronic media*, 49(1), 86-110.
- Youn, S. (2008). Parental influence and teens' attitude toward online privacy protection. *Journal of Consumer Affairs*, 42(3), 362-388.
- Young, R., & Tully, M. (2022). Autonomy vs. control: Associations among parental mediation, perceived parenting styles, and US adolescents' risky online experiences. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 16(2).

- Yudes, C., Rey, L., & Extremera, N. (2020). Predictive factors of cyberbullying perpetration amongst Spanish adolescents. *International Journal of Environmental Research and Public Health*, 17(11), 3967.
- Zhao, L., Lu, Y., Wang, B., & Huang, W. (2011). What makes them happy and curious online? An empirical study on high school students' Internet use from a self-determination theory perspective. *Computers & Education*, 56(2), 346-356.
- Zych, I., Farrington, D. P., & Ttofi, M. M. (2019). Protective factors against bullying and cyberbullying: A systematic review of meta-analyses. *Aggression and violent behavior*, 45, 4-19.

## APPENDIX A

### INTERVIEW PARTICIPANT INFORMATION SHEETS AND CONSENT FORMS

#### MOTHERS AND GIRLS

##### Participant Information Sheet for Mothers and Daughters Engaged in Online Interview Research

###### Dear participant

I am Maha Jabali, a PhD student at the University of York, UK. I invite you and your daughter to participate in a research project exploring girls' online activities, risks, and safety. This sheet provides important information about the study. Please read it carefully and discuss it with your daughter before deciding to participate.

###### Purpose of the Study:

This study aims to delve into the online experiences of girls aged 13 to 17 in Saudi Arabia, focusing on encountered risks and parents' roles in online safety.

###### Voluntary Participation:

Your and your daughter's participation is entirely voluntary. You can withdraw from the study at any time during data collection and up to 2 weeks after data collection without providing a reason. To withdraw, please email me with "Withdrawing Data" as the subject line.

###### Interview Process:

If you choose to participate, I will conduct separate interviews with each of you, lasting about 30 to 40 minutes. These can be done via Zoom, Google Meets, or telephone at your convenience.

- As a mother, I'll ask about your strategies in ensuring your daughter's safety online.
- As a daughter, the focus will be on your internet usage and experiences, both positive and negative.

The interviews will be audio-recorded. You'll both have the chance to review your interview transcripts for any modifications or approvals.

Please be aware that talking about online risks may cause discomfort or distress to you or your daughter, especially those who have had unpleasant experiences. Before we begin the interview, we will talk about how you would like me to support you during and after our conversation to make sure you feel as comfortable as possible.

**Confidentiality and Anonymity:**

All information that I collect about you and your daughter will be kept strictly confidential (subject to legal limitations—I cannot keep information confidential if it raises concerns about your safety or the safety of others, as I will have to report that to the authorities, e.g. Saudi Child Protection Center). I will ensure your privacy and anonymity in the following way:

Prior to our conversation, I will give you a number (like Mother2 or Girl2) and you will choose a fake name or have me assign you one. I will keep a list detailing who the pseudonyms refer to on my password-protected laptop for the duration of my PhD research project. Only I as the researcher will have access to this encoded identity data, and in all of my notes and on the recording, I will only refer to you by pseudonyms.

I will use the pseudonymised data from this study in my PhD thesis, conference talks, and journal articles. All data referenced will additionally be anonymised and will not have any information included which could potentially identify you.

Data including audio recordings will be kept in a password-protected file on my password-protected laptop and backed up onto my university Google Drive account. The University has data protection compliant arrangements in place with Google. For further information see,

<https://www.york.ac.uk/it-services/google/policy/privacy/>

Audio recordings will be destroyed at the end of my degree, and I will keep the anonymised transcripts for 10 years, which is standard practice, and may use it for other projects and future analysis during that time period.

**Participation Steps:**

If you wish to participate, please email me with “Interview Participation Request” within one month from receiving this information.

**Research Outcomes:**

The findings will contribute to my PhD thesis and may be published. You can access the completed study via the White Rose eTheses Online (WREO) Repository. I can provide access details upon request.

**Your rights in relation to your data:**

Under the GDPR, you have a general right of access to your data, a right to rectification, erasure, restriction, objection or portability. You also have a right to withdrawal. Please note, not all rights apply where data is processed purely for research purposes. For information see,

<https://www.york.ac.uk/records-management/generaldataprotectionregulation/individualrights/>

**Contact Information:**

If you have any questions or concerns, please feel free to contact me, Maha Jabali at [mamj502@york.ac.uk](mailto:mamj502@york.ac.uk), or the Chair of Ethics Committee via email [education-research-admin@york.ac.uk](mailto:education-research-admin@york.ac.uk). If you are still dissatisfied, please contact the University's Data Protection Officer at [dataprotection@york.ac.uk](mailto:dataprotection@york.ac.uk)

**Thank you for considering this research opportunity. Your participation is invaluable.**

**Yours sincerely,  
Maha Jabali**

## **Consent Form for Mother-Daughter Participation in the Online Interviews**

Please read and sign this form to indicate your consent to participate in this research.

### **Statement of Consent:**

- We confirm that we have read and understood the information about this research project, and we understand that this will involve both of us taking part as described above.
- We understand that participation in this study is voluntary.
- We understand that our data will be non-identifiable, and the anonymous data will be used for a PhD thesis, conference talks, and journal articles.
- We understand that data confidentiality is subject to legal limitations, and information may be disclosed if it raises safety concerns.

### **Mother's Information:**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

### **Daughter's Information:**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



## TEACHERS

### Participant Information Sheet for Teachers Engaged in Online Interview Research

#### Dear Participant

I am Maha Jabali, a PhD student at the University of York, UK. I am conducting research into the online activities, risks, and safety of female children aged 12 to 17 in Saudi Arabia. This research particularly focuses on the roles of parents and teachers in ensuring online safety. I would like to invite you to participate in this project.

#### Understanding the Study:

This study aims to gain insights into the online experiences of Saudi girls and explore how teachers contribute to their online safety. Your participation is vital in providing a comprehensive view of these dynamics.

#### Your Participation is Voluntary:

Participation is entirely optional. If you choose to take part, you will complete a consent form. You can withdraw from the study at any stage during data collection and up to 2 weeks after data collection without any repercussions. To withdraw, please email me with "Withdrawing Data" as the subject line.

#### Interview Process:

Should you choose to participate, I will conduct an online interview with you via Zoom, Google Meets, or telephone at a convenient time. The interview will last approximately 30 to 40 minutes. Our discussion will focus on your perspectives on internet safety and how you support your students in navigating online spaces. The interview will be audio-recorded, and you will have the opportunity to review and comment on the transcription of your interview.

#### Confidentiality and Data Protection:

Your confidentiality is paramount. All information will be kept strictly confidential, except where disclosure is required for safety concerns. To protect your identity:

You will be assigned a pseudonym for the duration of the research. Only I, as the researcher, will have access to the list linking pseudonyms to actual identities. All public references to the data will use pseudonyms, ensuring your anonymity. Your data, including audio recordings, will be securely stored and treated in accordance with the University's data protection policy, which can be reviewed [here](#). Audio

recordings will be destroyed post-degree completion, and anonymised transcripts will be retained for 10 years for potential future research.

**How to Participate:**

If you are interested in participating, please respond with “Interview Participation Request” as the subject line within 2 weeks of receiving this information.

**Research Outcomes:**

The findings will contribute to my PhD thesis and may be published. You can access the completed study via the White Rose eTheses Online (WREO) Repository. I can provide access details upon request.

**Your rights in relation to your data:**

Under the GDPR, you have a general right of access to your data, a right to rectification, erasure, restriction, objection or portability. You also have a right to withdrawal. Please note, not all rights apply where data is processed purely for research purposes. For information see,

<https://www.york.ac.uk/records-management/generaldataprotectionregulation/individualrights/>

**Contact Information:**

If you have any questions or concerns, please feel free to contact me, Maha Jabali at [mamj502@york.ac.uk](mailto:mamj502@york.ac.uk), or the Chair of Ethics Committee via email [education-research-admin@york.ac.uk](mailto:education-research-admin@york.ac.uk). If you are still dissatisfied, please contact the University’s Data Protection Officer at [dataprotection@york.ac.uk](mailto:dataprotection@york.ac.uk)

**Thank you for considering this research opportunity. Your participation is invaluable.**

**Yours sincerely,  
Maha Jabali**

## Teacher Consent Form for Participation in Online Interview Research

Please tick each box if you are happy to take part in this research.

### Statement of Consent:

- I confirm that I have read and understood the information given to me about the above-named research project and I understand that this will involve me taking part as described above.
- I understand that participation in this study is voluntary.
- I understand that my data will not be identifiable, and the anonymous data will be used in PhD thesis, conference talks, and journal articles.

Name .....

Signature .....

Date.....

## APPENDIX B

### INTERVIEW SCHEDULES

#### Interview Schedule 1: Girls

##### (A) Introduction (First 5 Minutes Approximately):

- **Welcome and Introduction:** "Hi, I am Maha, and I am researching how girls your age experience the internet. I am curious about what you like, dislike, and any challenges you have faced online. Remember, there are no right or wrong answers; I just want to hear your genuine experiences."
- **Ethics and Comfort:** "Before we start, I want to assure you that your privacy is important. Everything we discuss will be kept confidential. If there is anything you are not comfortable discussing, feel free to skip it. Do you have any questions before we begin?"

##### (B) Online Behaviour (Next 20 Minutes Approximately):

- Could you describe a typical day for you on the internet? Who are you usually with, and what activities do you engage in?
- How often do you go online during school days compared to weekends? How long do you typically spend online on these days
- Where do you usually access the internet? And when you are at home, do you have a favourite spot where you prefer to go online?
- What devices do you use most often for accessing the internet? Are these shared with family members or friends?
- Let us talk about the activities you do online. What are your favourites? (prompts: games, videos, music, chat, messaging, photos, creating a profile, searching for information, uploading/downloading things, reading, buying things, discussing social problems)
- Do you use social networking sites? Which ones do you prefer, and are your profiles private or public?

##### (C) Discussion of Online Risks (Next 25 Minutes Approximately):

- How safe do you feel when using the internet? Are there things that worry you?

- Have you ever faced any unpleasant experiences online? It is okay if you prefer not to talk about them.
- [If an unpleasant experience is mentioned] "Would you be comfortable sharing how you dealt with it? What would you do differently if it happened again?"
- [If no unpleasant experiences] "If something uncomfortable happened online, how do you think you would handle it? Who would you talk to?"
- Can you think of different situations or experiences on the internet that might be bothersome or upsetting for girls around your age? Please feel free to list as many as you can think of.

#### **(D) Mediation (Family, Teachers, Peers) (Next 25 Minutes Approximately):**

- Do you discuss your online activities with someone? Who and why?
- Have you ever sought help for something that happened online? Who did you approach, and was it helpful?
- Have you had conversations about staying safe online? What did you discuss?
- Do you think your parents are aware of what you do online? How do they monitor your internet use, if at all?
- Are there rules about internet use at home or school? What are they? How do you perceive them?
- Does your school teach you how to be safe online and what to do about online dangers?
- Do your friends help you become more aware of internet risks and stay safe online? Can you share any specific ways they have supported you in this area?

#### **(E) Conclusion (Last 5 Minutes Approximately):**

- Thank you for sharing your thoughts. Your insights are incredibly valuable for my research. Before we conclude, is there anything else you would like to add or ask about the study or our discussion?
- **Summary of Insights:** "Let me briefly summarise what I have learned from our conversation today..." [Provide a short summary of key points discussed].
- **Offer for Future Engagement:** "If you are interested, I would be happy to share a summary of my research findings once the study is complete. This could give you an idea of how your input contributed to the broader understanding of this topic."
- For more information about staying safe online, this website from the Ministry of Communications and Information Technology has great resources: <https://cyberbullying.attaa.sa>

## Interview Schedule 2: Mothers

### Introduction (First 5 Minutes Approximately):

- **Welcome and Introduction:** "Hello and thank you for participating in this interview. I'm [Your Name], and I'm conducting research about children's internet use. Your insights as a mother are invaluable to this project."
- **Ethical Considerations:** "I want to assure you of the confidentiality of our discussion. You're not obligated to discuss anything that makes you uncomfortable, and you're welcome to ask any questions before we start."

### (D) Online Behaviour (Next 20 Minutes Approximately):

- How much time does your daughter typically spend online each day, including school days, weekends, and holidays?
- In terms of internet knowledge, would you say you or your daughter has more expertise?
- Where does your daughter mostly access the internet – at home, school, a friend's house, or elsewhere?
- What devices does your daughter frequently use to go online? Are these personal or shared devices?
- Can you describe the activities your daughter usually does on the internet? (e.g., games, social media, information searching)
- Does she use social networking sites? If so, which ones, and which does she use most frequently? Are her accounts private or public?

### (E) Discussion of Online Risks (Next 25 Minutes Approximately):

- When thinking about your daughter's internet use, what are your primary concerns or worries?
- Do you talk with your daughter about these worries and other internet safety issues?
- Has your daughter ever experienced anything online that bothered or upset her? If you prefer not to discuss this, that's completely fine.
- [If a risk is mentioned] "Can you share what happened after that incident? How did you and your daughter handle it?"

- [If no risks are mentioned] "If your daughter encounters something uncomfortable or potentially harmful online, how confident are you that she knows how to respond? And do you feel prepared to assist her?"

#### **(D) Parental Mediation (Next 25 Minutes Approximately):**

- How clear is your understanding of your daughter's online activities? What helps or hinders this understanding?
- Do you have any specific internet-related rules at home? Could you tell me about them?
- What are the consequences for breaking these rules?
- How do you monitor your daughter's internet usage? What is your approach and reasoning?
- As a parent, how challenging do you find it to set and enforce internet rules? Can you share any difficulties you have encountered?
- Are you aware of any internet-related rules at your daughter's school? What are they? Does the school provide education on internet safety?

#### **(E) Conclusion (Last 5 Minutes Approximately):**

- Thank you for sharing your thoughts. Your insights are incredibly valuable for my research. Before we conclude, is there anything else you would like to add or ask about the study or our discussion?
- **Summary of Insights:** "Let me briefly summarise what I have learned from our conversation today..." [Provide a short summary of key points discussed].
- **Offer for Future Engagement:** "If you are interested, I would be happy to share a summary of my research findings once the study is complete. This could give you an idea of how your input contributed to the broader understanding of this topic."
- For further information on internet safety for children, this website from the Ministry of Communications and Information Technology has great resources: <https://cyberbullying.attaa.sa>

### Interview Schedule 3: Teachers

#### **(F) Introduction (First 5 Minutes Approximately):**

- **Welcome and Introduction:** "Hello, and thank you for agreeing to participate in this interview. My name is Maha, and I am conducting research about children's internet use. Your perspective as a teacher is essential for this study."
- **Ethical Considerations:** "Please know that all responses will be kept confidential. Feel free to skip any question that you are uncomfortable with, and do not hesitate to ask any questions."

#### **(G) Online Behaviour (Next 10 Minutes Approximately):**

- In terms of understanding the internet, how would you compare your knowledge with that of your students?
- How frequently do you assign tasks that require your students to use the internet, either in class or as homework?

#### **(H) Discussion of Online Risks (Next 25 Minutes Approximately):**

- What are your main concerns regarding your students' internet use?
- Have any of your students approached you with issues they have encountered online? Could you share how you addressed these situations?
- What measures have you taken to help your students avoid or cope with negative experiences online?
- Do you think your students are adequately prepared to handle online risks? What informs your opinion?
- Are there resources at your school for students needing help with internet-related issues? What are they, and are there any challenges in accessing this help?
- Do you believe that professional development in internet literacy for teachers would enhance awareness and student guidance regarding internet safety?

#### **(D) Mediation (Next 25 Minutes Approximately):**

- What internet-related rules does your school enforce? What consequences do students face if they do not adhere to these rules?
- Does your school actively educate students about internet risks and safety? Could you give examples?
- Do students receive formal education on safe internet use? If so, at what age or grade level, and in which subjects?



- If there is no formal education on this topic, do you think introducing a subject on internet safety in the school curriculum would be beneficial?

#### **(E) Conclusion (Last 5 Minutes Approximately):**

- Thank you for sharing your thoughts. Your insights are incredibly valuable for my research. Before we conclude, is there anything else you would like to add or ask about the study or our discussion?
- **Summary of Insights:** "Let me briefly summarise what I have learned from our conversation today..." [Provide a short summary of key points discussed].
- **Offer for Future Engagement:** "If you are interested, I would be happy to share a summary of my research findings once the study is complete. This could give you an idea of how your input contributed to the broader understanding of this topic."
- For further information on internet safety for children, you might find this resource from the Ministry of Communications and Information Technology helpful: <https://cyberbullying.atta.sa>

## **APPENDIX C**

### **Parents' Information Sheet for Online Questionnaire**

#### **(Involving Both Mother and Daughter)**

**Dear Parent/Guardian,**

My name is Maha Jabali, a PhD student at the University of York, UK. I am conducting a research project on female children's online activities, risks, and safety. I would like to invite both you and your daughter to participate in this research.

#### **Purpose of the Study:**

This study aims to gain insights into the online activities and risks encountered by girls aged 13 to 17 in Saudi Arabia and to understand the role of parents, particularly mothers, in ensuring online safety.

#### **Your and Your Daughter's Participation:**

Your participation would involve completing a questionnaire about your perspectives on your daughter's internet usage and safety. Simultaneously, we seek your consent for your daughter to participate in a separate but related questionnaire, focusing on her online experiences.

#### **Voluntary Participation:**

Participation for both you and your daughter is entirely voluntary. If you consent, both of you can leave any question unanswered or stop at any point. Once submitted, the data cannot be withdrawn due to anonymity.

**Anonymity and Confidentiality:**

All data provided will be anonymous. Neither you nor your daughter will be asked for any identifying information.

**Data Storage and Usage:**

Data will be stored securely and used in my PhD thesis and potentially other academic outputs. For detailed information on data handling, please visit [University's Data Protection Policy](#). The data will be retained for 10 years for possible future analysis.

**Contact for Queries:**

For any questions or concerns, feel free to contact me at [mami502@york.ac.uk](mailto:mami502@york.ac.uk), or the Ethics Committee at [education-research-admin@york.ac.uk](mailto:education-research-admin@york.ac.uk). For unresolved issues, contact the University's Data Protection Officer at [dataprotection@york.ac.uk](mailto:dataprotection@york.ac.uk).

**Agreeing to Participate:**

If you agree to participate and consent for your daughter's involvement, please complete the attached consent form and return it via email. The questionnaire link will be sent only to those whose parents have consented.

**Thank You for Your Consideration,**

**Your involvement is greatly appreciated and will contribute significantly to this important research.**

**Yours sincerely,**

**Maha Jabali**

## APPENDIX D

### Approval from the Ministry of Education

رقم المعاملة: ٤٧٧٣٣٥٠٠٤٣٠٠ تاريخ الإجابة: ١٧-٤-١٤٤٣

الملكة العربية السعودية  
وزارة التعليم  
الإدارة العامة للتعليم بمنطقة مكة المكرمة  
إدارة التخطيط والتطوير

الرقم: .....  
التاريخ: .....  
المشروع: .....

الموضوع: بشأن الموافقة على تسهيل مهمة باحثة

سعادة الملحق الثقافي بالمملكة المتحدة ببريطانيا  
السلام عليكم ورحمة الله وبركاته  
إشارة إلى الخطاب المقدم من المبتعثة للدراسات العليا/ مها أحمد محمد جبلي بجامعة يورك  
ببريطانيا رقم (بدون) وتاريخ ١١/٤/١٤٤٣هـ، والتي تعد دراسة للحصول على درجة الدكتوراه بقسم  
التربية بعنوان:  
"السلامة الرقمية للفتيات ودور الأمهات والمعلمات في الدعم والتوعية"

عليه نفيديكم بأنه لا مانع من تطبيق الباحثة لأدوات دراستها على عينة من طالبات المرحلة  
المتوسطة والثانوية والمعلمات والأمهات، على أن يتم إرسال الأدوات بعد اعتمادها لاستكمال  
الإجراءات اللازمة لفحص وتدقيق الدراسة.

وبناءً على طلبها أعطيت هذا الخطاب دون أدنى مسؤولية على الإدارة.  
وتقبلوا تحياتنا،

مدير عام التعليم بمنطقة  
مكة المكرمة  
د. أحمد بن محمد الزائدي

٤١٢٢

## APPENDIX E

### Mothers' Online Questionnaire

#### A. Introductory Page

##### Dear Participant

Thank you for considering participation in this research project. Before you proceed, please take a moment to read the following information carefully.

##### Purpose of the Study:

This study aims to understand the online activities and associated risks for girls aged 13 to 17 in Saudi Arabia. Additionally, it seeks to explore the role of parents in ensuring their children's online safety.

##### Your Participation:

We invite you to participate by completing a questionnaire, which should take approximately 20 to 25 minutes. Please note that the questionnaire needs to be completed in one session. Rest assured, all data collected will be anonymous; we will not request any personal identifying information.

##### Voluntary Participation:

Your involvement in this study is entirely voluntary. You are free to skip any questions you prefer not to answer or to discontinue the questionnaire at any point. However, once the questionnaire is submitted, the data cannot be withdrawn, as it is collected anonymously.

##### Data Storage and Usage:

The collected data will be securely stored in a password-protected file on my laptop and backed up on my university Google Drive, which adheres to stringent data protection standards. For more information, please visit: [University's Data Protection Policy](#)

The anonymized data will contribute to my PhD thesis in Education at the University of York and may be used in future academic publications. The data will be kept for 10 years, in line with standard research practices, and may be utilized for subsequent projects and analysis.

**Questions or Concerns**

This research has received approval from the Department of Education Ethics Committee at the University of York. Should you have any questions or concerns about this study, please feel free to contact me, Maha Jabali, at [mamj502@york.ac.uk](mailto:mamj502@york.ac.uk), or reach out to the Chair of the Ethics Committee at [education-research-admin@york.ac.uk](mailto:education-research-admin@york.ac.uk). If you have further queries, you may contact the University's Data Protection Officer at [dataprotection@york.ac.uk](mailto:dataprotection@york.ac.uk).

**Thank You for Your Contribution:**

Your participation is highly valuable and greatly appreciated. It will significantly contribute to the understanding of this important topic.

**Next Steps:**

If you agree to the above terms and wish to participate, please proceed by clicking on the 'Next' button to begin the questionnaire.

## B. Demographic Information

**How old are you?**

- |  |  |  |
|--|--|--|
| <input type="radio"/> Younger than 26  | <input type="radio"/> Between 36 to 45 | <input type="radio"/> Between 56 to 65 |
| <input type="radio"/> Between 26 to 35 | <input type="radio"/> Between 46 to 55 | <input type="radio"/> over 65          |

**What is your relationship to the girl participating in this study, whom you are caring for?**

- |                                     |                                   |  |
|-------------------------------------|-----------------------------------|--|
| <input type="radio"/> Mother        | <input type="radio"/> Old sister  | <input type="radio"/> Other relative               |
| <input type="radio"/> Foster mother | <input type="radio"/> Aunt        | <input type="radio"/> Unrelated guardian/caregiver |
| <input type="radio"/> Stepmother    | <input type="radio"/> Grandmother |  |

**How old is your daughter or the girl you are caring for?**

- |                                |                          |                                  |
|--------------------------------|--------------------------|----------------------------------|
| <input type="radio"/> Under 12 | <input type="radio"/> 14 | <input type="radio"/> 17         |
| <input type="radio"/> 12       | <input type="radio"/> 15 | <input type="radio"/> 18 or over |
| <input type="radio"/> 13       | <input type="radio"/> 16 |                                  |

**What is your highest level of education?**

- |  |  |  |
|--|--|--|
| <input type="radio"/> Never been to school | <input type="radio"/> High school              | <input type="radio"/> Other: please state_____ |
| <input type="radio"/> Primary              | <input type="radio"/> university or college    |  |
| <input type="radio"/> Secondary            | <input type="radio"/> Further/Higher education |  |

**Are you employed?**

- |                           |                          |
|---------------------------|--------------------------|
| <input type="radio"/> Yes | <input type="radio"/> No |
|---------------------------|--------------------------|

## A. Internet Access and Behaviours

### PLEASE READ:

People use the internet differently. The next questions are about how your daughter use it. Remember that when you are asked about “the Internet” this includes her use of any device connected to the Internet in any place. This could include using a mobile phone, tablet or computer to send or receive messages, using apps like WhatsApp, Snapchat, or Instagram, sending emails, searching on Google, chatting with friends and family, uploading or downloading files, or anything else that people usually do on the internet

**Please note:** When asked about ‘your daughter’, the term refers to the girl under your care, regardless of the nature of your relationship with her.

### To what extent do you think you are skilled in using the Internet?

Please select the statement that generally describes your skill level, and then compare it to that of your daughter

	Very poor	Poor	Fair	Good	Very Good
In general	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compared to your daughter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### As far as you are aware, how often has your daughter engaged in these activities while using the Internet in the past 12 months?

Response Options: Never (1), Just once or twice (2), At least every month (3), At least every week (4), Daily or almost daily (5), Several times each day (6), Almost all the time (7), I don't know

- Watching videos for entertainment (e.g. on YouTube)
- Playing video games online
- Listening to music online
- Watching series or movies online
- Using the Internet for homework and school activities
- Attending educational online courses and workshops unrelated to the school
- Watching educational videos or reading science topics to develop your knowledge and skills
- Using the Internet to talk to people from different places or nationalities than you
- Using the Internet to keep track of new events in the area in which you live
- Participating in dialogues to discuss social problems with other people online
- Using a social networking site (for example: Twitter, Instagram, or Snapchat)
- Communicating with friends and family online
- Sending or receiving instant messages
- Creating video or audio clips and uploading them online to share with others
- Creating a blog, story or website
- Taking a picture or creating an image and sharing it with others online
- Participating in a site where people share your interests or hobbies
- Browsing the internet for things to buy or find out how much things cost
- Trying to sell some stuff online



### C. Internet Access and Behaviours

**PLEASE READ:**

Now I would like to ask you about social media usage. Social media includes platforms like Facebook and Instagram, where your daughter can create a profile to share information about herself and interact with others.

**Does your daughter use any social media platforms? (e.g., Twitter, Snapchat, Facebook, others)**

- ☐ Yes ☐ No ☐ I do not know

**Are her social media profiles set to private or public?**

- ☐ Public: Anyone can see her profiles.  
☐ Private: Only approved people can see her profiles.  
☐ Mixed: Some profiles are public, and some are private.

### D. Perception of Risks

**Based on your experience, how much do you agree or disagree with the following statements?**

Response Options: Strongly agree (1), Agree (2), Not sure (3), Disagree (4), Strongly disagree (5)

- Chatting with strangers online is often safe.
- Most people who use the internet are honest about their real identities.
- Social networking sites are safe for girls my daughter's age.
- I am concerned about my daughter's safety on the internet.
- I am confident that my daughter can handle unpleasant situations online effectively.
- I feel prepared to help my daughter if she encounters unpleasant situations online.
- The advantages of using the Internet outweigh the risks for girls my daughter's age.
- It is crucial for parents to monitor their daughters' Internet use to ensure their safety.

## E. Internet Risks

### PLEASE READ:

The internet offers a vast array of engaging activities that many young people find enjoyable. However, it also contains elements that may not be beneficial or safe. We aim to identify the challenges that girls may encounter online to help develop effective strategies that could assist them in avoiding or better handling these issues in the future.

**How often, if at all, has your daughter experienced something online that bothered or upset her in the past 12 months? (e.g., made her feel uncomfortable, scared, or that she should not have seen it)**

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| <input type="radio"/> Never       | <input type="radio"/> Many times    |
| <input type="radio"/> Only once   | <input type="radio"/> I do not know |
| <input type="radio"/> A few times |                                     |

**What concerns, if any, do you have when your daughter uses the Internet?**

You may choose to skip this question if you prefer not to answer.

**In the past 12 months, as far as you are aware, has your daughter been contacted by a stranger on the Internet?**

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| <input type="radio"/> Never       | <input type="radio"/> Many times    |
| <input type="radio"/> Only once   | <input type="radio"/> I do not know |
| <input type="radio"/> A few times |                                     |

**In the past 12 months, as far as you are aware, has your daughter met anyone (female or male) in person whom she first encountered online?**

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| <input type="radio"/> Never       | <input type="radio"/> Many times    |
| <input type="radio"/> Only once   | <input type="radio"/> I do not know |
| <input type="radio"/> A few times |                                     |

## E. Internet Risks

**How often, if ever, has your daughter encountered any of these situations while using the internet in the past 12 months?**

Response Options: never (1), only once (2), a few times (3), many times (4), I do not know (5)

- One of her devices or accounts has been hacked (i.e., someone accessed the contents of her device or her account without her permission).
- She lost money due to being deceived on the internet.
- Somebody pretend to be her online using her name, photo, or other personal information.
- She was treated in a hurtful or nasty way online.

**In the past 12 months, as far as you are aware, has your daughter encountered websites or online discussions where people talk about or display any of the following?**

Response Options: never (1), only once (2), a few times (3), many times (4), I do not know (5)

- Ways of committing suicide or causing self-harm.
- Hate messages targeting specific groups or individuals (e.g., based on colour, religion, or nationality).
- Images or videos showing violence directed at humans or animals
- Images or videos containing sexual content.
- Content promoting extreme diets or unhealthy lifestyle choices.

**In the past 12 months, as far as you are aware, how often has your daughter engaged in any of these online activities?**

Response Options: never (1), only once (2), a few times (3), many times (4), I do not know (5)

- Chatted with strangers on the internet for fun.
- Sent her personal information (e.g., full name, address or phone number) to someone she has never met in person.
- Sent a photo of herself to someone she has never met face-to-face.
- Accepted friend or follow requests from strangers on social networking sites.
- Shared personal information online in exchange for a chance to win a prize.
- Treated someone else online in a hurtful or nasty way

## F. Digital Safety Mediation

### PLEASE READ:

The following questions aim to understand how your daughter's Internet use is supervised. Your responses are confidential and will be protected, so please answer as honestly as possible.

#### Who supervises your daughter's use of the Internet?

- |  |  |
|--|--|
| <input type="radio"/> You                              | <input type="radio"/> Mostly her father, sometimes you |
| <input type="radio"/> Her father                       | <input type="radio"/> Someone else                     |
| <input type="radio"/> Both parents equally             | <input type="radio"/> No supervision                   |
| <input type="radio"/> Mostly you, sometimes her father |  |

#### To what extent are you aware of the following? (Please rate each item)

Response Options: Nothing (1), Just a little (2), Quite a bit (3), A lot (4), Everything (5)

- The people your daughter communicates with online
- The content she watches or reads online
- Her general Internet usage

#### What makes it difficult for you to know what your daughter is doing, watching, or who communicating with online? (Select all that apply)

- ☐ No obstacles, I am fully aware of her online activities
- ☐ Lack of sufficient Internet knowledge
- ☐ Insufficient time to monitor her usage continually
- ☐ She uses the Internet in her private space
- ☐ She uses headphones, making it hard to hear her interactions
- ☐ The small size of her device's screen
- ☐ She prefers privacy over her device content
- ☐ She has reached an age that doesn't require supervision
- ☐ Other (please specify):

## F. Digital Safety Mediation

**How often have you engaged in the following with your daughter? (Please rate each item)**

Response Options: Never (1), Hardly ever (2), Sometimes (3), Often (4), Very often (5)

- Encouraged her to learn and improve skills via the internet
- Participated in online activities with her (e.g., watching videos, playing games)
- Discussed how to avoid online dangers
- Advised her on what to do if she encounters something upsetting online
- Assisted her with challenging online tasks
- Asked for her help with difficult online tasks

**Do you (or other parent/carer) set rules regarding when or how long your daughter can use the Internet?**

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| <input type="radio"/> Never       | <input type="radio"/> Often      |
| <input type="radio"/> Hardly ever | <input type="radio"/> Very often |
| <input type="radio"/> Sometimes   |                                  |

**Do you allow your daughter to perform the following activities online? If yes, does she need your permission?**

Response: Allowed anytime (1), Allowed with permission or supervision (2), Not allowed (3)

- Using a webcam (e.g., for Skype or video chat)
- Downloading music or films
- Visiting social networking sites (e.g., Twitter, Snapchat, TikTok)
- Sharing multimedia with others on social networking sites
- Watching video clips (e.g., on YouTube)
- Playing games with other people online
- Sharing photos of herself with friends and family on the internet
- Sharing photos of herself on social media

**Do you (or other parent/carer) make use of any of the following**

Answer for each option: No (1), Yes (2)

- Parental controls or other means of blocking or filtering some types of websites
- Parental controls or other means of keeping track of the websites or apps she visits
- A service or contract that limits the time she spends on the internet
- Parental controls that filter the apps she can download
- Program or app to block advertisements

## F. Digital Safety Mediation

**How often do you (or other parent/carer) check the following things?**

Answer for each option: Never (1), Hardly ever (2), Sometimes (3), Often (4), Very often (5)

- Which websites she visited
- The apps she downloaded
- Her profiles on social networking sites
- New friends or contacts added to her social networking profiles/ instant messaging services
- Messages in her email or other messaging apps

**In your opinion, what measures can help protect girls from the various risks of the internet?**

Please list all the measures you believe are effective in safeguarding girls.

**Thank you for your valuable time spent on this survey.**

For more information on internet safety for children, visit the Saudi Ministry of Communications and Information Technology's website: <https://cyberbullying.attaq.sa>

## APPENDIX F

### Girls' Online Questionnaire

#### A. Introductory Page

##### **Dear Participant**

Thank you for considering participation in this research project. Please read the following information carefully before you proceed.

##### **Purpose of the Study:**

This study seeks to understand the online activities and risks faced by girls aged 13 to 17 in Saudi Arabia. Additionally, it aims to explore the role of parents in ensuring the online safety of their children.

##### **Your Participation:**

We invite you to participate by completing the following questionnaire. It should take about 20 to 25 minutes to complete and needs to be done in one session. Please note that all data collected will be anonymous, and no personal identifying information will be requested.

##### **Is Participation Voluntary?**

Yes, your involvement is completely optional. If you choose to participate, you are free to skip any questions or stop at any point during the questionnaire. Once submitted, however, your responses cannot be withdrawn due to the anonymity of the data.

##### **Data Storage and Usage:**

The collected data will be securely stored on a password-protected laptop and backed up on my university Google Drive account. This data will be retained for 10 years, in line with standard research practices, and may be used for future projects and analysis.

The findings of this research will contribute to my PhD thesis in Education at the University of York. The completed study will be published in the White Rose eTheses Online (WREO) Repository, and access information can be provided via email upon request.

**Completing the Questionnaire:**

- Please read each question carefully and take your time to answer.
- You are not required to answer all questions. If you are unsure or uncomfortable with a question, you can select "I don't know", "Prefer not to say", or simply move on to the next question.
- Pay attention to the instructions before each section, as they provide important guidance for understanding the questions.
- Remember, this is not a test. There are no right or wrong answers. Your honest experiences are what matter most in this study.

**Questions or Concerns:**

If you have any queries or need further clarification, please do not hesitate to contact me at [mamj502@york.ac.uk](mailto:mamj502@york.ac.uk).

**Thank You for Your Assistance:**

Your contribution to this research is greatly appreciated and will significantly enhance our understanding of this important topic.

**Next Steps:**

If you agree to the above terms and wish to participate, please proceed by clicking on the 'Next' button to begin the questionnaire.



## B. Demographic Information

### How old are you?

- ☐ under 12
- ☐ 13
- ☐ 14
- ☐ 15
- ☐ 16
- ☐ 17
- ☐ 18 or over

**Thinking about the home where you live most of the time, please select all the people who live there with you from the list below**

- ☐ Both parents
- ☐ Mother
- ☐ Father
- ☐ Step or foster mother
- ☐ Step or foster father
- ☐ Grandparent(s)
- ☐ Siblings
- ☐ I live in a foster home or children's home
- ☐ Someone or somewhere else: please state .....[\\_\\_\\_\\_\\_](#)

## A. Internet Access and Behaviours

### PLEASE READ:

People use the internet differently. The following questions are about how you use it. Remember, "the Internet" includes using any device connected to the Internet, such as mobile phones, tablets, or computers, whether you're messaging, using apps, sending emails, browsing, or any other activities.

To what extent do you think you are skilled in using the Internet?

	Very poor	Poor	Fair	Good	Very Good
In general	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compared to your parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compared to other girls your age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you use any of these devices to connect to the Internet?

	Yes	No
Mobile phone/smartphone	<input type="radio"/>	<input type="radio"/>
Computer (desktop, laptop or notebook)	<input type="radio"/>	<input type="radio"/>
Tablet	<input type="radio"/>	<input type="radio"/>
Game console	<input type="radio"/>	<input type="radio"/>
Connected TV	<input type="radio"/>	<input type="radio"/>

Do you have a mobile phone just for your own use that you can go online with?

- ☐ Yes
- ☐ No

Which of these devices do you prefer to use the most to connect to the Internet?

- ☐ Mobile phone/smartphone
- ☐ Computer (desktop, laptop or notebook)
- ☐ Tablet
- ☐ Other, Please specify: \_\_\_\_\_

### C. Internet Access and Behaviours

How often do you go online at the following places?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	Hardly ever	Sometimes	Often	Almost all the time
At home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In a public place (e.g., cafés, libraries)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the home of relatives or neighbours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On friends' devices (smart phone, tablet or computer)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Where in the house do you usually use the Internet?

- ☐ In a common area of the house, such as the living room
- ☐ In a quiet area, such as a study room or home library
- ☐ In my own bedroom
- ☐ I do not use the internet at home

How much time do you normally spend on the internet?

PLEASE TICK ONE BOX FOR WEEKDAYS AND ONE FOR WEEKENDS

a) During a regular weekday ( schooldays)    b) During a regular weekend-day:

- |  |  |
|--|--|
| <input type="radio"/> Little or no time            | <input type="radio"/> Little or no time            |
| <input type="radio"/> About half an hour to 1 hour | <input type="radio"/> About half an hour to 1 hour |
| <input type="radio"/> About 2 to 3 hours           | <input type="radio"/> About 2 to 3 hours           |
| <input type="radio"/> About 4 to 5 hours           | <input type="radio"/> About 4 to 5 hours           |
| <input type="radio"/> About 6 to 7 hours           | <input type="radio"/> About 6 to 7 hours           |
| <input type="radio"/> About 8 hours or more        | <input type="radio"/> About 8 hours or more        |
| <input type="radio"/> I don't know                 | <input type="radio"/> I don't know                 |
| <input type="radio"/> Prefer not to say            | <input type="radio"/> Prefer not to say            |

### C. Internet Access and Behaviours

#### How often have you done these activities while using the Internet over the past 12 months?

Answer for each option: Never (1), Just once or twice (2), At least every month (3), At least every week (4), Daily or almost daily (5), Several times each day (6), Almost all the time (7)

- Watching videos for entertainment and fun (e.g. on YouTube)
- Playing video games online
- Listening to music online
- Watching series or movies online
  
- Using the Internet for homework and school activities
- Attending educational online courses and workshops unrelated to the school
- Watching educational videos or reading science topics to develop your knowledge and skills
  
- Using the Internet to talk to people from different places or nationalities than you
- Using the Internet to keep track of new events in your area
  
- Participating in dialogues to discuss social problems with other people online
  
- Using a social networking site (e.g., Twitter, Instagram, or Snapchat)
- Communicating with friends and family online
- Sending or receiving instant messages
  
- Creating video or audio clips and uploading them online to share with others
- Creating a blog, story or website
- Taking a picture or creating an image and sharing it with others online
  
- Participating in a site where people share your interests or hobbies
  
- Browsing the internet for things to buy or find out how much things cost
- Trying to sell some stuff online

#### PLEASE READ:

Now I would like to ask you about social networking. By this I mean sites like [Facebook or Instagram] where you can have a profile (i.e., a page or place where you put things about yourself that others see) and where you can keep in touch with people and share things with them.

#### Which social networking or social media platforms do you use?

- |                                |                                 |   |
|--------------------------------|---------------------------------|---|
| <input type="radio"/> Facebook | <input type="radio"/> Instagram | <input type="radio"/> WhatsApp                      |
| <input type="radio"/> Twitter  | <input type="radio"/> TikTok    | <input type="radio"/> Others, please specify: _____ |
| <input type="radio"/> Snapchat | <input type="radio"/> YouTube   | <input type="radio"/> I do not use social media     |

### C. Internet Access and Behaviours

Which is your favourite and most time-consuming social media platform?

- |                                |                                 |  |
|--------------------------------|---------------------------------|--|
| <input type="radio"/> Facebook | <input type="radio"/> Instagram | <input type="radio"/> WhatsApp                   |
| <input type="radio"/> Twitter  | <input type="radio"/> TikTok    | <input type="radio"/> Others, please state ..... |
| <input type="radio"/> Snapchat | <input type="radio"/> YouTube   | <input type="radio"/> I do not use social media  |

Are your social media profiles set to private or public?

- ☐ **Public:** Anyone can see your profiles.
- ☐ **Private:** Only approved people can see your profiles.
- ☐ **Mixed:** Some of your social media profiles are public, and some are private.

### D. Perception of Risks

Based on your experience, how much do you agree or disagree with the following statements?

Response option: Strongly agree (1), Agree (2), Not sure (3), Disagree (4), Strongly disagree (5)

- Chatting with strangers online is often safe.
- Most people who use the internet are honest about their real identities.
- Social networking sites are safe for girls my age.
- Sometimes I feel concerned about my safety on the internet.
- I am confident that I can handle unpleasant situations online effectively.
- I am confident that if something unpleasant happens to me online, my parents\ carers will assist me.
- The advantages of using the Internet outweigh the risks for girls my age.
- Parents' regular supervision of their daughters' Internet use is important to keep them safe.

#### E. Internet Risks

**PLEASE READ:**

The internet is full of exciting opportunities and experiences, but it can also present challenges that might upset or worry you. We want to understand these experiences to help make the internet a safer and more enjoyable space for all girls. Please answer the questions below as honestly as possible. Your responses are completely confidential and will contribute to valuable insights for improving online safety.

**In the past 12 months, have you experienced anything on the Internet that made you feel upset or uncomfortable? For example, something that made you feel scared, sad, or regretful.**

- |                                   |   |
|-----------------------------------|---|
| <input type="radio"/> Never       | <input type="radio"/> Many times        |
| <input type="radio"/> Only once   | <input type="radio"/> Prefer not to say |
| <input type="radio"/> A few times |   |

**When using the Internet, what concerns or worries you? Please describe any specific situations or content that make you feel uneasy.**

If you prefer not to answer, you may skip to the next question

**In the past 12 months, have you been contacted by a stranger online (male or female)?**

- |                                   |   |
|-----------------------------------|---|
| <input type="radio"/> Never       | <input type="radio"/> Many times        |
| <input type="radio"/> Only once   | <input type="radio"/> Prefer not to say |
| <input type="radio"/> A few times |   |

**In the past 12 months, have you met someone in person that you first got to know online?**

- |                                   |   |
|-----------------------------------|---|
| <input type="radio"/> Never       | <input type="radio"/> Many times        |
| <input type="radio"/> Only once   | <input type="radio"/> Prefer not to say |
| <input type="radio"/> A few times |   |

**Thinking about the last time you met someone from the internet, did you tell an adult where you were going and who you were meeting?**

- |                           |   |
|---------------------------|---|
| <input type="radio"/> Yes | <input type="radio"/> Prefer not to say |
| <input type="radio"/> No  |   |

#### E. Internet Risks

**PLEASE READ:**

The internet is full of exciting opportunities and experiences, but it can also present challenges that might upset or worry you. We want to understand these experiences to help make the internet a safer and more enjoyable space for all girls. Please answer the questions below as honestly as possible. Your responses are completely confidential and will contribute to valuable insights for improving online safety.

**In the past 12 months, have you experienced anything on the Internet that made you feel upset or uncomfortable? For example, something that made you feel scared, sad, or regretful.**

- |                                   |   |
|-----------------------------------|---|
| <input type="radio"/> Never       | <input type="radio"/> Many times        |
| <input type="radio"/> Only once   | <input type="radio"/> Prefer not to say |
| <input type="radio"/> A few times |   |

**When using the Internet, what concerns or worries you? Please describe any specific situations or content that make you feel uneasy.**

If you prefer not to answer, you may skip to the next question

**In the past 12 months, have you been contacted by a stranger online (male or female)?**

- |                                   |   |
|-----------------------------------|---|
| <input type="radio"/> Never       | <input type="radio"/> Many times        |
| <input type="radio"/> Only once   | <input type="radio"/> Prefer not to say |
| <input type="radio"/> A few times |   |

**In the past 12 months, have you met someone in person that you first got to know online?**

- |                                   |   |
|-----------------------------------|---|
| <input type="radio"/> Never       | <input type="radio"/> Many times        |
| <input type="radio"/> Only once   | <input type="radio"/> Prefer not to say |
| <input type="radio"/> A few times |   |

**Thinking about the last time you met someone from the internet, did you tell an adult where you were going and who you were meeting?**

- |                           |   |
|---------------------------|---|
| <input type="radio"/> Yes | <input type="radio"/> Prefer not to say |
| <input type="radio"/> No  |   |

## E. Internet Risks

### PLEASE READ:

When referring to 'the internet' or 'online' activities in this survey, please consider all the ways you use any device, such as your smartphone, tablet, or computer. This includes sending or receiving messages, emailing, browsing, communicating with friends and family, and uploading or downloading files, among other activities.

**In the past 12 months, have you encountered any of these situations while using the internet?  
Please select how often you have experienced each of the following:**

Response option: never (1), only once (2), a few times (3), many times (4), prefer not to say (5)

- One of your devices or accounts has been hacked (Someone accessed your device or account on social media site without your permission)
- You lost money due to a scam or fraud online
- Someone pretended to be you online using your name, photo, or other personal information
- You were treated in a hurtful or nasty way online

**in the past 12 months, have you seen websites or online discussions involving any of the following topics?**

Response option: never (1), only once (2), a few times (3), many times (4), prefer not to say (5)

- Ways of committing suicide or physically hurting themselves
- Hate messages targeting specific groups or individuals (based on race, religion, nationality, etc.)
- Violent images or videos against humans or animals
- Sexual content in images or videos
- Content promoting extreme diets

**Where on the internet have you seen these kinds of photos, videos, or information that was mentioned in the previous question?**

Please select all applicable sources:

- On video sharing platform (e.g., YouTube)
- On social networking sites (e.g. Tik Tok, Twitter, Instagram)
- Through instant messaging (e.g., MSN, WhatsApp)
- Via pop-ups during web surfing
- In online games
- On websites specifically related to these topics
- Received from Online Strangers
- Received from Friends or Family
- Prefer not to say
- Other, please specify: \_\_\_\_\_



### E. Internet Risks

How often, if ever, have you engaged in the following activities on the internet over the past 12 months? Please select the most appropriate response for each activity

Response option: never (1), only once (2), a few times (3), many times (4), prefer not to say (5)

- Talked to strangers on the internet for fun.
- Sent your personal information (e.g., your full name, address or phone number) to someone you have never met face-to-face.
- Sent a photo of yourself to someone you have never met in person.
- Accepted strangers' requests to follow you and see your posts on social networking sites.
- Shared personal information about yourself online in order to win a prize.
- Treat someone else online in a hurtful or nasty way

### F. Digital Safety Mediation

#### PLEASE READ:

Consider the interest your parents or carers have in your internet usage. When you answer these questions, remember to think about how you use the internet on any device and any place.

Who among the following is most interested in supervising your online activities?

You may select more than one option

- |   |  |
|---|--|
| <input type="radio"/> Mother              | <input type="radio"/> Both parents to a similar extent |
| <input type="radio"/> Step/ foster mother | <input type="radio"/> Someone else                     |
| <input type="radio"/> Father              | <input type="radio"/> No one                           |
| <input type="radio"/> Step/ foster father | <input type="radio"/> Prefer not to say                |

How open are you with your parents or carers about what you do or see on the internet?

Response option: Not at all (1), A little (2), Fairly open (3), Very open (4), Completely open (5)

- With your mother
- With your father

Do you tell your parents or carer about things that bother or upset you on the internet?

Choose one answer

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| <input type="radio"/> Never       | <input type="radio"/> Often      |
| <input type="radio"/> Hardly ever | <input type="radio"/> Very often |
| <input type="radio"/> Sometimes   |                                  |

## F. Digital Safety Mediation

**To what extent do you think your mothers are aware of the following:**

Please rate for each item: Nothing (1), Just a little (2), Quite a bit (3), A lot (4), Everything (5)

- People you communicate with online
- What you watch or read online
- Your general use of the Internet

**To what extent do you think your fathers are aware of the following:**

Please rate for each item: Nothing (1), Just a little (2), Quite a bit (3), A lot (4), Everything (5)

- People you communicate with online
- What you watch or read online
- Your general use of the Internet

**How often do your parents or carers engage in the following activities related to your internet use? Please select the appropriate frequency for each activity:**

Response option: Never (1), Hardly ever (2), Sometimes (3), Often (4), Very often (5)

- Encourage you to learn and improve skills using the internet.
- Share online activities with you, for example, watching videos, playing online games, searching for information.
- Talk to you about how to avoid the dangers of the Internet.
- Discuss what to do if you encounter something online that makes you feel scared, upset, or worried.
- Help you with difficult tasks on the Internet.
- Ask for your help with online tasks that are difficult for them.

**Do your parents/carers set rules regarding when or how long you can use the Internet?**

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| <input type="radio"/> Never       | <input type="radio"/> Often      |
| <input type="radio"/> Hardly ever | <input type="radio"/> Very often |
| <input type="radio"/> Sometimes   |                                  |

## F. Digital Safety Mediation

**Are you allowed to do the following things on the Internet? If so, do you need permission or supervision? Please select the appropriate response for each activity**

Response Options: I am allowed to do this anytime (1), I am allowed to do this with permission or supervision (2), I am not allowed to do this (3), I do not know if I am allowed to do this (4)

- Use a web or phone camera (e.g., for Skype or video chat)
- Download music or films
- Visit social networking sites (e.g., Twitter, Snapchat, TikTok)
- Share photos, videos or audios with others on social networking sites
- Watch video clips (e.g., on YouTube)
- Play games with other people online
- Share photos of yourself with friends and family on the internet
- Share photos of yourself with others on social media

**Do your parents/carers use any of the following methods to supervise your Internet usage?**

Response Options: No (1), Yes (2), I don't know (3)

- Parental controls or other means of blocking or filtering websites
- Parental controls or other means of keeping track of the websites or apps you visit
- A service or contract that limits your Internet time
- Parental controls that filter the apps you can download
- Program or app to block advertisements

**How often do your parents/carers check the following?**

Response Options: Never (1), Hardly ever (2), Sometimes (3), Often (4), Very often (5), I don't Know (6)

- Websites you visited
- Apps you downloaded
- Your social networking profiles
- New friends or contacts you add
- Messages you send or receive online

**Do you ever break your parents/carers' rules or ignore their advises when you are online?**

- |                                   |   |
|-----------------------------------|---|
| <input type="radio"/> Never       | <input type="radio"/> Many times        |
| <input type="radio"/> Only once   | <input type="radio"/> Prefer not to say |
| <input type="radio"/> A few times |   |

## F. Digital Safety Mediation

**Have you ever hidden what you do online from your parents or the people who take care of you?**

For example, have you ever cleared your browsing history or quickly closed a window when they walked by?

- |                                   |   |
|-----------------------------------|---|
| <input type="radio"/> Never       | <input type="radio"/> Many times        |
| <input type="radio"/> Only once   | <input type="radio"/> Prefer not to say |
| <input type="radio"/> A few times |   |

**Has your school taught you how to be safe online and what to do about online dangers?**

- |                           |                          |                                     |
|---------------------------|--------------------------|-------------------------------------|
| <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> I am not sure |
|---------------------------|--------------------------|-------------------------------------|

**Do you think your school teaches you well about how to be safe online?**

- |                           |                          |                                     |
|---------------------------|--------------------------|-------------------------------------|
| <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> I am not sure |
|---------------------------|--------------------------|-------------------------------------|

**Have any of your teachers ever done any of the following? Tell us how often**

Response Options: Never (1), Only once (2), A few times (3), Many times (4)

- Suggested ways to use the internet safely
- Talked to you about what you would do if something on the internet ever bothered you
- Helped you when something online made you uncomfortable or worried

**Have any of your friends ever done any of the following? Tell us how often**

Response Options: Never (1), Only once (2), A few times (3), Many times (4)

- Suggested ways to use the internet safely
- Helped you when something online made you uncomfortable or worried

**Thank you for your time spent taking this survey.**

If you would like to find out about internet safety advice for children, you can visit this website, which is supervised by the Saudi Ministry of Communications and Information Technology.

<https://cyberbullying.ataa.sa>