

## **Examining Parents' Awareness About Children's Accidental Exposure to Online Indecent Content: A Micro-Level Qualitative Study in Rawalpindi City**

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Internet usage among Pakistani children is increasing. Despite the internet being a vital source providing different, it also contains some concerns regarding their safety, physical and psychological growth, and well-being. This article also analyzed the parents' awareness regarding accidental exposure to indecent online content among Pakistani children and its potential effects. The researchers applied the qualitative interpretative method and gathered data from  $n = 26$  individuals having children under eighteen years of age. Results showed that children prefer using the internet for educational and entertainment purposes. Participants also expressed their understanding of accidental exposure to online pornographic content among children. However, in questions about the parents' potential reaction to children's accidental exposure to indecent online content, most of the parents responded that they would prefer to remain silent over the issue or tell the children to forget. Another primary reaction would be educating the children about the inappropriateness of the content. Finally, parents indicated their understanding of the physical and psychological consequences of accidental exposure to online pornographic content among children, i.e., sexual violence, guilt, shame, isolation, and others.

*Keywords.* Online indecent content, accidental exposure, Pakistan; children, internet usage, parents' awareness

Existing data indicate that internet usage is increasing among children worldwide. For instance, in April 2021, audio and video content on different platforms were visited mainly by youngsters under eighteen (Gómez-Galán et al., 2020; Statista, 2022). These children were mainly from Egypt, Russia, and Mexico (respectively),

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indicating a countrywide ranking of internet usage (Statista, 2022). Notably, the lockdown and social distancing in different countries further accelerated internet usage and dependency among children during Covid-19 (Fernandes et al., 2020). This increased usage indicates several purposes, including online gaming, video watching, education, and communication. As noted by Lagger et al. (2017), due to a wide variety and greater accessibility to digital platforms, children not only prefer access to these platforms but also watch and share the content they find attractive or considerable. However, according to OECD (2011), an increased number of children using internet, using different devices, and spend more time in virtual cyberspace. Despite it is a major channel of communication and education them, there is a spectrum of risks to which children are comparatively more susceptible than adults. Livingstone and Ólafsson (2017) further specified these risks into four categories including content, contact, conduct, and contract risks further specifying their types and nature accordingly (p. 5).

Talking specifically about the content risk, Livingstone and Stoilova (2021) consider it as where a child experiences exposure to unwanted, and accidental exposure to indecent, obscene content. The relevant content may include pornographic, sexual, and violent content, some types of marketing messages, hate speech or discriminatory material and digital platforms advocating dangerous or unhealthy behaviors i.e., suicide, anorexia, self-harm, violence, and others (p. 6). As noted by Daud et al. (2017), the availability of online indecent content is a challenging phenomenon. Access to illegal, age inappropriate, harmful, obscene content fall under the content risks. Pacheco and Melhuish (2018) consider parents as the key players to ensure safe digital environment for their children (p. 2). However, Byrne et al. (2014) witnessed that despite adolescents in New Zealand consider their as a basic support system, parents are unaware and underestimate these online risks. Notably, internet technology is widely available both in urban and rural areas of Pakistan. 4.7 billion people of the total population daily use the internet for different purposes. Although the world internet usage statistics indicate that most users are between 18 to 29 years old, Pakistan's statistics indicate that most users are below 18 years (Zaman, 2022). Thus, an increased internet usage among children in Pakistan further magnifies the importance of investigating digital literacy about the potential risks regarding internet usage among their children. As Fisher and Barak (2001) argued, increased exposure to indecent, sexualized content among children questions the internet as a significant source of information, communication, and education. This increased usage,

leading to increased chances of accidental exposure to online indecent content, further magnifies the parents' responsibility to ensure safe internet usage among children. Ensuring safe internet usage is possible when parents are aware of their children's internet usage, risks, and effects and take influential steps to alleviate the potential chances of exposure to adult content in a better possible manner ([Çankaya & Odabaşı, 2009](#)).

### **Study Aims**

Existing data on the children in digital society primarily investigated and highlighted cyber-rimes against Pakistan children ([Habes et al., 2022](#); [Pasha et al., 2022](#)), there are yet no studies focused on investigating parents awareness to provide a baseline for ensuring children's online safety.. Besides, the reports represented by international organizations, including UNICEF, and Digital Rights Foundation ([Digital Rights Foundation, 2021](#); [UNICEF, 2017](#)) have focused on child abuse as a social issue in Pakistan. However, none of these have addressed parent's awareness and literacy as an important indicator to ensure child privacy and safety in cyberspace ([Ali et al., 2021](#)). Besides, focusing on Pakistan for this research provides a good research setting as much of the research have investigated internet usage among the adolescents ([Azeez et al., 2014](#); [Bashir et al., 2014](#)). Yet the primary attention of the existing literature remained on examining the internet usage patterns and their effects on the young generation's academic performance. As a result, this study will fill these three empirical gaps in Pakistani context. This study also provided a baseline to future researchers and practical implications that add to its contribution, highlighting and emphasizing children's safety in cyberspace as a primary responsibility of parents and other caretakers.

### **Online Risks and Parents' Awareness**

According to [Dorasamy et al. \(2021\)](#), an increased access to internet also enhanced parents' concerns regarding online risks against children. However, these parents also facilitate the internet usage among children by providing them with remote devices including mobile phones that further increase the relevant concern (p. 3684). According to [Alqahtani et al. \(2017\)](#), if parents are aware of online risks against children they are more to take steps to counteract them. However, lack of digital knowledge, social barriers, and time constraints are some factors that halt their awareness and behavior to ensure online safety of their children (p. 4). A study conducted by

Ktoridou et al. (2012) examined the effect of parents' awareness regarding the online risks among children and prenatal interest to raise their relevant awareness in Nicosia, Cyprus. Data gathered from the mixed-method approach revealed that, parents indicated a lower level of digital literacy, yet they indicated strong concerns about online risks such as exposure to indecent pornographic content, vulnerability to online sexual abuse, exposure to violence, and money frauds. However, some respondents were also unable to recognize online risks and their severity against children. Consequently, it was found that the respondents had a primary level of awareness as they gathered the relevant information from advertisements or word of mouth, lacking their digital literacy skills. Additionally, the respondents also indicated protective measures at home and school (Ali et al., 2024). Some of them indicated that they frequently talk to children about online risks, restrict the internet usage, and some also revealed frightening children about the internet (p. 139). Another study by Arifin et al. (2019) indicated that parents having a moderate level of awareness further declines their concerns towards online threats against children and their susceptibility. This is due to the lack of digital literacy, making it difficult to ensure online safety among them. Thus, with a higher digital literacy and awareness regarding online threats, parents can effectively ensure online safety for their children. Besides, this awareness and digital literacy also helps them to adopt the suitable mediation strategies (Mustaqim et al., 2021) (p. 34).

### **Parental Digital Literacy**

Historically, decoding and interpreting the standardized form of print media-based information was considered as "media literacy". The relevant concept has evolved and currently considered as "new media" or "digital literacy" (Olmanson & Falls, 2016) (p. 2). As noted by Livingstone (2003), today the major shift from traditional to Information Communication Technology (ICT) a new type of media literacy has emerged also known as "cyber literacy", "digital literacy", "computer literacy" and "internet literacy" (p. 3). Notably, internet provides a new participatory culture have distinct characteristics i.e., low barriers to access information, increased online engagement, strong support for creating and sharing content, and an atmosphere that ensures a sense of contribution, and opportunities for the social connections (Graber & Mendoza, 2012). Talking specifically about the parents, their digital literacy involves different competencies and skills that are important to approach, examine, and evaluate information in media, interact with others, and ensure safe online

media usage among children (MELI Parents, 2021). However, the concept of literacy among parents is further magnified due to wider access to the internet for different purposes. According to Romero (2014), parenting in the digital age is comparatively complex and poses new challenges for the parents to ensure child wellbeing and development. When parents allow their children to play online games, their decision reflects their existing knowledge about the online opportunities, risks, and benefits (p. 38). According to Eleá and Mikos (2017), today children are living the mediatized world and their social and cognitive development is not possible without considering the role of media in their lives. Especially, the role and importance of digital media cannot be denied. Consequently, Ciboci and Labaš (2019) consider access to the internet as impacting regarding children's lives, further indicating the importance of parental digital literacy and their mediating role as crucial concerns (p. 84). As noted by Daneels and Vanwynsberghe (2017) complex and multipurpose internet usage among children highlights the importance of parents' digital competency and awareness about the online environment. However, lack of digital literacy creates more difficulties for the parents to identify and counteract any online risks faced by children. Thus, Barnes and Potter (2021) emphasize parents as important factors that may mediate internet usage among children by adopting different approaches. However, adopting relevant approaches further depends on digital literacy and awareness as a critical phenomenon.

## Method

### Study Design and Themes

The researchers applied an Interpretative Phenomenological Analysis (IPA) to examine the parents' awareness about accidental exposure to online indecent content among children. Notably, qualitative studies provide in-depth detail about, i.e., respondents' awareness, emotions, feelings, and experiences that are interpreted accordingly (Rahman, 2016). Furthermore, the researchers designed the gathering tool and sent it for approval to four subject experts (including senior professors from sociology and communication studies). The subject experts suggested some revisions and approached the questionnaire in the revised form. The final draft of the questionnaire was based on the 4 themes that further helped to identify the sub-themes are responses. The main themes in the current study are summarized in Table 1 below:

**Table 1***Themes for the Qualitative Research Instrument*

S.No.	Themes
1.	Parents' general awareness regarding internet usage among children.
2.	Parents' awareness of internet usage and accidental exposure to online indecent content among children.
3.	Parents' awareness about the effects of accidental exposure to online indecent content among children.
4.	Parents' perceived reaction to their children's exposure to online indecent content.

**Sample**

The population of current research is based on parents living across Rawalpindi city. Notably, Rawalpindi is the fourth most populous city after Karachi, Lahore, and Faisalabad, having a population of 33,77000 individuals (MacroTrends, 2023). However, considering the basic study limitations and requirements, the researchers applied sampling method and selected  $N$  30 participants.

The selected sample size was suitable as 12 to 50 participants in the qualitative studies is considered ideal (Tryfos, 1996). The researchers selected individuals with children under eighteen years of age, an active internet connection in their homes, and children using it for different purposes. However, there were no other selection criteria based on the gender, age, locality, or qualification of the participants. Notably, the small sample size further raises questions about the generalizability of qualitative research. However, Saunders et al. (2018) stated that the aim of qualitative studies is to examine and understand the complex phenomenon under study rather than generalizing the results to the large-scale population. Qualitative studies ensure that the study problem is highlighted so that the comprehensive understanding may be enhanced. Thus, the response rate of 86.6% was acquired as 4 participants could not join us due to personal reasons. The calculation of the participants' demographics revealed that most study participants were females (77.0%), while 33.0% were males. According to the qualification, 61.5% had graduation, 19.2% had Doctorate, 11.5% had Post Graduation, and 7.6% had a Bachelor's (specifically Medicine). Finally, 96.1% of participants were living in urban areas, while 3.9% were from rural areas.

### **Data Gathering**

The researcher conducted semi-structured qualitative telephonic interviews for data gathering purposes. The researchers asked the questions and carefully noted down the responses. According to [Fox \(2009\)](#), interviews are one of the most preferred approaches in qualitative research. They are based on verbal communication and provide direct detail about the participants' sentiments about a particular phenomenon. After the data gathering, the researchers merged the responses to ensure consistency. The questions were kept around the root questions focused on their general awareness regarding children's internet usage, accidental exposure to online indecent content, perceived solutions to counteract any relevant exposure, and overall effects. Notably, every root question/theme was further followed by sub-questions.

### **Ethical Considerations**

This study is ethically approved by Board of Advanced Studies, Allama Iqbal Open University Islamabad Pakistan. Further, the participants provided us with their written consent to participate. Additionally, we provided them with the necessary details about the study, its purposes, and applicability of the outcomes. The participants were also assured that their data would be kept confidential, and the researchers would not use it for any commercial purposes.

### **Data Analysis**

This study is based on the Interpretative Phenomenological Analysis (IPA) to examine the parents' awareness of online risks, particularly accidental exposure to indecent online content. According to [Priyadarshini et al. \(2020\)](#), IPA enhances understanding of the participants' perceptions and experiences about a situation or phenomenon ([Priyadarshini et al., 2020](#)). Following the formal approach in IPA suggested by [Smith and Nizza \(2022\)](#), we followed the formal steps involved in the relevant techniques including data familiarization, initial coding of the identified themes, further we re-identified the emergent themes from the data, Finally, we interpreted the data and stated the results accordingly.

Thus, we transcribed each interview and extracted significant verbatims and statements from them. Further, we acquired the meaning of the statements by carefully reading and re-reading the interview transcriptions. Later, we categorized them into the relevant themes that emerged from the responses and common among the

interviews. We also take the transcriptions and their interpretations back to the participants to ensure they agree and verify the interpretations. The stepwise data analysis process involved transcribing the interview transcripts of the parents' awareness about internet usage and potential risks concerning exposure to indecent online content among children. Further, we began data analysis by repeatedly reading the transcripts to understand the attained responses. We further divided the data into main and sub-themes to establish the connection between them. The themes were clustered by using the sub-themes created in the earlier steps. The clustering of the themes was important as they further helped to reduce the number of sub-themes and constitute the main themes. Then we coded the rest of the transcript by using the main list of themes used as the guidelines for the subsequent transcripts. Finally, we composed a summary of the interviews by integrating the themes extracted from the data.

## Results

### **Theme 1: Parents' general awareness regarding internet usage among children**

First, the current research concerns **parents' awareness about their children's social media usage**.  $N = 3$  root questions further followed this theme. Most study participants revealed that their children use the internet for different purposes, including cartoons, education, and to alleviate their boredom. Some participants also revealed online gaming as the primary reason behind their children's internet usage. As noted by [Rachmayani \(2017\)](#), internet usage has increased as it offers communication and entertainment to young users. Searching for new people to communicate with leads them to depend even more on digital platforms for communication and time-killing purposes. According to the participants (P6, P19, P3, P23-26):

*"Children mostly use the internet for entertainment purposes. Sometimes, their academic institutions give them assignments they prepare through different websites. However, using a website like Facebook or watching cartoons and movies are comparatively more prevalent."*

According to some other participants (P4, P11)

*"Children use internet for miscellaneous purpose. However, today its use is not limited to games and entertainment, education is also available through online platforms. We cannot describe a single reason behind its use, there can be multiple reasons."*



Moreover, participants shared their responses regarding **the perceived impacts of internet usage on their children**, revealing that it has both negative and positive impacts on them. Among the positive impacts, they indicated getting educational help and learning arts and crafts from the online tutorial videos. On the other hand, adverse effects mainly involved physical activities such as playing outside the home, disturbed sleeping habits, exposure to unwanted content, social isolation, and rigidity. One of the participants responded that: (P6)

*“They are becoming hyper daily, and they don't participate in other physical or family activities. Internet usage is also causing stress and anxiety, dissatisfaction with their daily life”.*

According to participants P12, 17, 18, 21,

*“Children do not engage in physical activities, rather they are likelier to stay online. Umm... obviously at this stage, they need physical activities, games, and socialization. But they pay more time to use internet.”*

On the other side, some participants also agreed that internet usage is helping them in learning new things. According to some participants (P2, P5, P13),

*“The Internet offers learning opportunities to children. They spend their time in communication, gaining knowledge, and even their formal education is also available. Ummm... online learning and information gathering is a positive aspect that cannot be denied.”*

The third main question of the relevant theme asked parents **how their children use the internet**. In other words, the question was about the device's children use that could be personal or owned by parents themselves. Participants indicated that parents' and personal mobile phones remained the most frequent devices their children use to access the internet. Besides, personal tablets, laptops, and Wi-Fi-enabled televisions were also some other important devices facilitating internet connectivity and usage. According to the participants (P11, P18, P23),

*“Children have internet access through mobile phones and laptops. Some children use the internet through their parents' mobile devices.”*

According to two participants (P5, P1)

*“Umm my children own these gadgets, including tablet devices and iPad, which are further facilitated by the internet”*

*connection at home. As a result, their access to the virtual environment is not difficult, but rather facilitated by their current remote devices."*

*Another participant revealed that (P14)*

*"Internet is available at home. We have personal laptop, mobile phones, and tablet devices. Children are allowed to use any as per their needs."*

These responses show consistency with the arguments given by [Shimray and Ramaiah \(2019\)](#). As noted, the evolving mobile technology has changed our daily life patterns. Primarily, young girls and boys use smart, portable mobile devices for communication and entertainment purposes. Further, the dropping cost of handsets having faster internet connectivity also adds to the rapid adoption of mobile phones and other relevant devices among the young generation. As [EECERA \(2019\)](#) stated internet availability has become increasingly common in today's digital age, and its impact on society is particularly evident among children who widely utilize it for various purposes. From educational resources to entertainment venues, children have adopted the internet as a valuable tool for learning, communication, and exploration. With the extensive collection of information and services, they can effortlessly access educational materials, communicate with peers, and probe diverse cultures and perspectives.

## **Theme 2: Parents' awareness of internet usage and accidental exposure to online indecent content among children**

Theme 2 of the current research contained 3 main questions. First, the participants were asked about **their awareness regarding "indecent online content"**. [Alexandraki et al. \(2018\)](#) define indecent online content as digital content, mainly videos, photos, and written messages having sexually explicit content such as sexual behaviours, nudity, and images of male/female genitals. However, definitions of indecent online content are based on normative beliefs primarily based on the social and cultural system's varying perceptions about the content considered "indecent content." Thus, participants in this research indicated their awareness about indecent online content as nudity, adult content, or even written content against social and cultural values. However, a participant further attributed indecent online content to deliberately watching the sexual content, arousing sexual desires among the children. According to one of the participants (P22)

*"I define indecent online content as undesirable content with nudity and obscene material. It can be sexually explicit content*

*that may be available in images, videos, and video games, considered age-inappropriate for the kids”.*

*Some participants argued that (P14, P6, P7, P22),*

*“For me, indecent content can be anything that a child might see regardless of its age appropriateness to them. Umm... indecent content can be in any forum even a picture found in magazine. However, I cannot exactly identify but for children, this type of content is not okay.”*

*Participants 2 argued that,*

*“Indecent content is based on nudity or acts that are objectionable and not appropriate to watch. Talking specifically about, children are more likely to experience such content anywhere”.*

The participants were asked about **their awareness about "accidental exposure"** to indecent online content. The participants' awareness of the term “accidental exposure” to indecent online content revealed that it is mainly a sudden appearance of nude and unethical websites, videos when someone is viewing other websites, etc. Such content can be an adult advertisement, a song containing adult material, or a scene from a movie. Additionally, many participants indicated this accidental exposure due to sudden pop up advertisements that may appear anytime while using the internet. According to the participants (P2, P13, P25)

*“It's just as ads come up and pop up just like this indecent online content come in front of children leading to exposure of videos images or information shown on the internet with the required information or videos. For example, suppose you search for a certain piece of information. In that case, you get a list that leads to other inappropriate or useless information that has nothing to do with that specific result or information.”*

*Another participant argued that (P10),*

*“There are many platforms where you can experience accidentally watching indecent content. For example, YouTube is a popular site, here the recommendation system is fragile. It can suggest anything even if the user is not intending to watch.”*

*Some participants also expressed (P4, P9, P11, P15, P23)*

*“Indecent content is available on platforms, even blogs. The sidebars that are dedicated to advertisers contain indecent content.”*

The next question was, "**what is their opinion regarding the children's accidental exposure to indecent online content?**" Some participants revealed that accidental exposure to online advertisements could happen even while using YouTube. Relevant content appears on the page anytime and attracts the users' attention; even in the form of URLs, accidental exposure to indecent online content is possible. Some also indicated online games and even music videos for entertainment containing pornographic content. According to the participants (P6, P10, P13)

*“Accidental exposure to indecent online content among children can be extremely harmful, especially for their mental health and growth. Consequently, a child can get addicted to watching the relevant content or may feel sadness and fear. However, it is more common when my children to download and play video games, so some objectionable things appear.*

*Some participants argued (P3, P4, P5),*

*“It happens more when they use YouTube and there is variety of content there that can appear anytime. Umm sometimes there are thumbnails of content and even captions and titles that a child may see.”*

*Participant 20, 26 argued that,*

*“Indecent content is a major threat to children’s online usage. I am concerned but don’t know any effective ways to mitigate this issue for my children. Um... indecent content can be available on any platform, I cannot specify any website, yet it is common.”*

As noted [Torres-Hernández et al. \(2022\)](#) vulnerability to online indecent content remains a significant concern in today's digital landscape. With the widespread availability and accessibility of the internet, children are increasingly at risk of encountering inappropriate material that can harm their emotional and psychological well-being. Consequently, the third important source of accidental exposure to indecent online content involves obscene content available on social networking sites (SNS). These sites not only contain advertisements but also deliberately made and regulated personal accounts that display pornographic images and videos. Children's exposure to these accounts, posts, and details further increases their accidental exposure to indecent online content, which is highly thought-provoking ([Ali et al., 2021](#)).

**Theme 3: Parents' awareness about the effects of accidental exposure to online indecent content among children**

The third theme of the current study involved the parents' awareness about the potential impacts of accidental exposure to indecent online content among children and potential responses to the relevant exposure. 5 root questions followed this theme, first investigating **parents' knowledge and perceptions about the possible physical and psychological impacts of accidental exposure to indecent online content**. First, the participants responded about the perceived physical outcomes and found that they consider physical outcomes as showing interest in more pornographic material, leading them to explore more relevant content. Additionally, violent sexual behaviours due to imitating sexual content, self-pleasure, and risk of porn addiction also remained dominant in parents' responses. One of the participants responded that (P24):

*“Early puberty, arousal, negative means to gratify the sexual desires. Other adverse effects can lead them to adopt anti-social behaviors such as rape, drug addiction, SCTs, and other negative habits”. Imitating the sexual behaviors, as shown, can also happen anytime.”*

According to some participants (P7, P8, P9),

*“A deviant sexual behavior or immature sexual activities, however, I think every child has their own ways of expression.”*

Another participant (P12) said,

*“Umm hostility, anger, and violence can be common. I am not sure, but I believe the physical impacts can be lethal, adversely affecting the child's health”.*

The study participants also indicated their **awareness and understanding about children's perceived psychological impacts of accidental exposure to indecent online content**. These responses revealed that there could be different impacts, such as mental distress, considering sex as a regular activity at their age, fantasies about sexual scenarios, and their involvement in them. Participants also indicated that these psychological impacts could also result in sudden mood shifts, fear, sadness, a state of shock, social isolation, and intense sexual desires to watch more indecent online content leading to sexual frustration. According to one of the participants (P13),

*“Maybe embarrassment or fear. But in my case, I don't see any fear or embarrassment in my kids as whenever they accidentally watch something like this, they tell in a normal mood.”*

Some of the other participants responded (P16, P18, P26):

*"They might think more about adult content, try to find out more about it and get addicted to porn. Sometimes they would be mentally disturbed and focus on anything that is going on in their life, whether it's good or bad".*

*Two of the participants revealed that (P1, P7)*

*"Psychological ailments due to indifferent attitude, isolation from social interaction due to disturbed mental condition and mood shifts. Besides, there can be hesitation or fear from the opposite sex. "*

These responses indicate that exposure to adult content at a young age may have different psychological effects on children. At the same time, one participant noted that their children did not fear or embarrassment when accidentally exposed to such content; others expressed concerns about possible negative outcomes. Some participants indicated that children might become inquisitive about adult content, leading to an increased focus on it and a potential risk of addiction. Also, there were concerns about mental disturbance and its impact on children's emotional well-being and behavior. These responses also indicated possible psychological ailments, i.e., mood shifts, isolation from social interaction, and hesitation or fear in interactions with the opposite sex. Overall, the responses emphasize the complex and potentially detrimental effects of early exposure to adult content on children's mental health and social development.

#### **Theme 4: Parents' perceived reaction to their children's exposure to online indecent content**

Finally, the last theme of current research focused on scrutinizing parents' **awareness about identifying their children's accidental exposure to indecent online content**. The relevant theme was based on 3 root questions. First, regarding the parents' identification of child's accidental exposure to indecent content, our study participants indicated that they could identify by observing the child's behaviour. Sudden mood changes, isolation, and any potential act of touching their genitals can signal the relevant exposure among them. However, some participants also indicated that their children are sufficiently confident that they would come and directly talk about their experiences. As one of the participants (P13) said:

*"I have given much confidence to my children. I believe that my child will come and tell on his own about his experience."*

Further, checking the internet search history also remained prominent in some responses. Yet, participants also expressed uncertainty about any chances their child might show after accidental exposure to online indecent online content. According to some of the participants (P21, P5, P22)

*"It would be difficult to know about it as the activities could be hidden. Their accidental exposure to indecent online content may be identified when they spend more time on the internet, avoid contact with parents and prefer staying alone and disturbed. Or maybe through sudden reaction or the way they turn off the screen. Besides, mood swings, emotional instability can be visible"*

*Some participants revealed (P3, P14, 15, P16),*

*"A disturbed routine may be. A child may hesitate to go to school and prefer to stay in isolated environments or be depressed as well. I believe that some children might be hesitant or feel mentally disturbed, but it varies from child to child, so I am not much sure."*

The acquired responses further suggest that some participants view accidental exposure to inappropriate content on the internet as a common occurrence and part of modern life. They express a sense of normalization around such incidents, indicating that it is not unusual for children to encounter such content while using the internet. The participants share a calm and nonchalant attitude towards the situation, emphasizing no need for panic or overreaction. Rather, they support silently ignoring the incident or redirecting the conversation to more positive topics. Also, they perceive children as resilient and capable of moving on from such experiences, viewing them as a natural part of their learning process. Thus, these responses reflect a belief that accidental exposure to inappropriate content is a relatively minor issue that does not warrant significant concern or intervention.

According to the one of the participants (P13),

*"I do not think that I will react. It happens especially when using the internet; it happens a lot. It's normal now. No need to panic or react; silently ignore or change the conversation topic into something vibrant, better, optimistic."*

*According to some more participants (P11, P12, P19),*

*"It's normal and children often forget what they have seen. They have other activities, so ummm... I am not worried, nor I will show any specific reaction. It's a part of their learning process I suppose".*



Additionally, telling the children to stay away from such content in the future and sharing the essential details about the inappropriateness of indecent online content also remained dominant in some responses. According to some of our participants (P5, P6, P7, P8),

*"I will discuss the issue in detail with them and try to answer their questions openly and patiently. Besides, I would listen to them carefully and address it with patience as it is part of their hormonal changes and curiosity. Ummm... I would also advise other parents not to shout or scold their children. Patience comforts a child, and they prefer to share everything with their parents."*

Another participant respondent (P24),

*"I think guiding children to forget any potential exposure is comparatively better. Ummm... even if they do not forget, at least they would consider it irrelevant and something not to talk about".*

According to the participants P23, 24, 26,

*"Cyberspace is full of indecent content and children can watch it. If I react badly, the child will be scared and will lose his confidence. It is better to guide and help them".*

## Discussion

The current study indicated parents' awareness about online risks, particularly exposure to indecent content among children. The results indicated that parents understand the internet usage among children for different purposes. The purposes ranged from entertainment, communication, and education. Notably, these reasons were consistent with the propositions about the role of internet as an important source of social and cognitive development for children by [Aladwan \(2020\)](#) and [Froment et al. \(2017\)](#). Both studies also witnessed the role of the internet as providing the children with opportunities to communicate and attain help regarding their academic activities.

Further, regarding the basic understanding about the exposure to indecent content, participants showed that they are aware about the relevant phenomenon, and it can happen anytime while using the internet. The primary resources involve advertisements, content recommendation systems, and others. These concerns are compatible with the argumentation by [Alqahtani et al. \(2017\)](#) as they witnessed the of parents' awareness as a potential pathway to the child's online



safety. Study participants showed a moderate level of awareness about the perceived response to accidental exposure to indecent online content among children. As despite they indicated violence, aggression, curiosity to watch more relevant content, and others, they did not specify any specific reaction matching each category (physical/psychological) or response relevant to child's gender. Finally, regarding the parents' perceived evaluation approached to identify any unusual indecent exposure, monitoring the child's internet search history remained the most frequent among all the responses. However, very few parents revealed that they will discuss the issue with their children, and most parents indicated their perceived reaction as "silence" about their child's accidental exposure to online indecent content. Although, these findings showed the parents' awareness about the online risks but their response to the relevant phenomenon is consistent with the argumentation by [Byrne et al. \(2014\)](#) where they consider parents as underestimating the online risks against children. However, some parents also emphasized the role and impact of guiding children can be beneficial. As noted by [Pacheco and Melhuish \(2018\)](#) guiding children regarding safe internet usage, particularly concerning content risks, is important because it empowers them with the knowledge and skills to navigate the online world responsibly. Educating children about the probable dangers and how to identify and evade inappropriate or harmful content can help fend their well-being and maintain their integrity. Also, guidance regarding safe internet usage promotes critical thinking, digital literacy, and liable online behavior, providing children with the tools to make informed decisions, guard their privacy, and establish positive online relationships.

### **Study Limitations**

Although this study attempts to fill certain empirical gaps and provides practical implications, it also contains some primary limitations. First, this study is focused only on Pakistan. The generalizability of results cannot be ensured in other geographical regions. Second, the researchers adopted convenience sampling techniques that have received much criticism due to researchers' bias, further limiting the scope of current research. The third limitation involves the selection of only 4 themes. While accidental exposure to online indecent content among children and its effects is a broad field that can be extensively scrutinized by adding more themes to the research projects. Finally, the fourth limitation involves that this study works as a baseline study to further initiate more research on children's cybersecurity in Pakistan. The focus is providing an

overview of the parents' perceptions, attitudes, and awareness regarding children's online media usage. As a qualitative approach, this study did not come up with hypothetical assumptions, rather the aim was to highlight the relevant issue with subjective details.

### **Practical Implications**

Thus, rapid internet adoption and usage among the young generation is common today. However, the easily accessible adult content and its exposure among children is thought-provoking as it is also a source of communication, information, education, and entertainment. Mainly its effects on children's cognitive well-being and development is a crucial phenomenon (Fisher & Barak, 2001). Consequently, parents and guardians can play an important role in ensuring children's safety in the virtual environment (Livingstone, 2007). However, parents' low consideration to observe and monitor children's everyday internet usage is one of the root causes of increased accidental online indecent content among children as also witnessed by Byrne et al. (2014). Consequently, access to online content remains unfiltered, further increasing children's vulnerability to accidentally experiencing online indecent content (Çankaya & Odabaşı, 2009). Although participants in this study indicated their understanding of the term online indecent content as a growing concern, they did not indicate any measures to ensure safe internet usage among their children. Thus, there are some practical implications for Pakistan parents to ensure safe internet usage among children, including:

1. Parents should improve their internet literacy and awareness about online risks in the best possible manner. Using different parental mediation strategies can help them to ensure safe internet usage among their children.
2. Parents should employ the most suitable tactics to filter internet usage among children. In other words, parents should provide their children with internet usage rules about time, connectivity, websites they may visit, and content they may watch. Monitoring the children's daily internet activities can further help to ensure children's internet usage (Quinn, 2016).
3. Parents should ensure healthy physical and psychological development of children, by ensuring safe internet usage. Adopting mediation strategies can further help them to secure cyber space for their children (Livingstone & Ólafsson, 2017).

4. Parents should understand the severity of the risks and their effects on both psychological and physical health of a child. A basic understanding might not be sufficient to counteract their risks. Besides, understanding without implementing the effective strategies would also not ensure safer internet usage for children.
5. Parents should consider taking help from the service providers to execute an Artificial Intelligence-based system that may identify and block any suspicious content. Such software not only helps to identify and block the content but also helps to identify the URLs to take practical actions against the responsible entities.
6. Sometimes, adding "family control systems" and website blockers can reduce potential chances of online indecent content exposure among children (Ojagverdiyeva, 2018).
7. The content filtration system should be based on four principles that provide a "bet protection shield" and complete safety against unwanted content. Besides, it also helps to avoid malware and spyware (Faesen et al., 2019).

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