
Cyberspace Harms for Children

Hamaseh Naderi ¹

1. MA degree in general psychology, Islamic Azad University, Tafresh, Iran

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ABSTRACT

The Internet was initially designed for military and academic purposes. However, with its growth and development, it gradually became available to more people and provided different levels of access to information, culture, communication, education, entertainment, etc. The purpose of this study was to identify the challenges faced by children online, future harms, and their safety in cyberspace. The type of research is practical in terms of purpose, and the research method is qualitative and through interviews. In this study, the challenges of children online, future harm, and their safety in cyberspace were first identified through the analysis of data obtained from interviews with experts from sociology, psychology, and Law, and then these challenges were prioritized. The classification of these challenges was discussed. According to the results, these challenges have eight dimensions: easy access to unethical resources, induction of intellectual doubts, conflict of values, addiction to cyberspace, social isolation, time-waste, reduction of family communication, and generation gap. It was also found that the dimensions of addiction to cyberspace, easy access to unethical resources, and time-waste have the highest importance among the challenges, and the dimensions of reduction of family communication, social isolation, and generation gap are the next priority in terms of importance. Finally, the dimensions of induction of intellectual doubts and conflict of values are less important among the challenges.

1. Introduction

The current century can be called the era of unlimited access to information and removing communication barriers. The development and prosperity of ICT in recent decades and the effects it has had on the world stage have progressed to the point that its use for humans today is called the right to access information and communication. With the establishment of the international human rights system, this right has been recognized. Implementing this right can provide the ground for the cultivation of thinking, the flourishing of talent, the increase of personal and social skills, etc., for human beings. But today, Information and Communication Technology (ICT) has penetrated into the most private layers of human life, and the scope of its inclusion and influence is increasing every day (Gutheil et al., 2017). The benefits of this advanced and technological tool are not hidden from anyone. However, various shreds of evidence support the fact that if human societies do not comply with the necessary standards in using it, it will produce harmful and irreparable effects because ICT has direct and indirect effects on all age groups of society due to its close connection with human life today. If these effects are not properly guided and controlled, they will take on a negative and anti-value aspect. Among the various classes exposed to this phenomenon's effects, children are of special importance (Sameni Davijani, 2021) because they are both the capital of the future of human societies. They do not have the necessary abilities to benefit from this human achievement healthily and positively. They are easily exposed to its bad effects, which will determine their fate in the future life. In today's world, with the widespread use of the Internet and the widespread use of smartphones by children, this useful tool has become a source of concern and has made children's safety in cyberspace the topic of the day for scientific and cultural institutions. Virtual networks, e-mails, chat rooms (online chats), and so on with contents including bullying, the spread of violence based on children's gender, sexual abuse, online exploitation, cyber harassment, abnormal education and etc., have also made the threat against the child's safety more tangible. The phenomenon of children online, beyond geographical, racial, class, religious, and cultural limits and boundaries, has become a danger to children, and its pervasiveness is such that it covers all aspects of the child's life, and this makes it clear the need to pay serious attention to this problem and appropriate legislation with a guarantee of strong implementation to support them. The study aims to identify children's online challenges, future harm, and safety in cyberspace (Drozdiak and Bloomberg, 2020).

2. Problem Statement

The rapid evolution of ICT and the spread of cyberspace are the main features of today's world. Due to the extent of such developments, changes and transformations have occurred in human life;

these transformations have many positive aspects, which sometimes cause neglect of their harms. Among the harms that have not received much attention is the condition of the user's children, in other words, the unprincipled exposure of the child to this technology. The Internet, as a global information network and the main highway of communication, can put all the information in conflict with the child's best interests in front of him as soon as he connects. In other words, in cyberspace, audiences with different characteristics and abilities receive the same product. For example, sex education before marriage is available to an immature child as it is available to an adult couple. This disproportion between the need and the supply of information has caused the new world, and especially the innocent and sensitive environment of children, to face countless challenges, the most important of which is the traumatic and extreme use of the Internet and the creation of conflict and tension in the family and relationships between people. Especially, sexual issues on the Internet, which are easily and widely available to all people of different ages, may have destructive effects, first of all, on people's psyche and then on their family and social relationships. The indicators of technology in today's age are the Internet, so this phenomenon should be introduced, and proper communication between the Internet and the main institution of society, namely the family, should be established so that while enjoying its benefits, its negative effects are minimized (Murotmusaev et al., 2021).

Cyberspace, in any interpretation and with any definition, is a vast, novel, and pristine territory that brings new possibilities, freedoms, opportunities, fears, harms, and limitations to its inhabitants. Cyberspace has removed time and geographical limitations. Today, almost all people do activities in this space, such as virtual economy, virtual business, virtual banking, virtual education, virtual government, virtual offices, etc., parallel to the expansion of activities and communication in cyberspace, some criminals have transferred their criminal activities to cyberspace or commit a crime or crimes through such space. Therefore, cyberspace is considered one of the fields that strongly needs to set up guaranteed and regular mechanisms in order to protect the rights of human beings because it is not necessarily limited to working with the Internet and also includes social relations in which information and communication technologies are used (Iqbali, Ibid, p. 204). In an age where it is impossible to be safe from the effects of new technologies, it is better to know exactly the result of encountering them and learn how to use them. In the light of identifying barriers and strategies for using social networks in education, such as lack of appropriate technical facilities, lack of educational infrastructure, and insufficient knowledge of teachers, it is possible to improve teaching and learning skills (Saemi et al. 2015). Now, according to what has been said and the fact that in the research literature, the subject of children's cyberspace harms has been less discussed; therefore, this study aims to answer the question that what are the challenges of children online, future harms, and their safety in

cyberspace? What is their priority?

Therefore, in order to answer the above questions and to discover the concepts and challenges, the research questions are presented as follows:

- What are the challenges of children online, future harms, and their safety in cyberspace?
- What is the prioritization of challenges of children online, future harms, and their safety in cyberspace?

3. Theoretical Foundations

Today, the Internet can be introduced as a global source of information, known as the backbone of information and communication worldwide. The Internet is a global information communication system consisting of software and hardware infrastructures and connects computers worldwide (Rezaei et al., 2014). In the international human rights system and from the point of view of legal schools, the child is considered a complete human being with all fundamental human rights, and concerning him; the principle is to implement these rights unless there is a barrier. In the discussion of implementing the right to ICT, some other rights are considered to be the practical expression of this right, which are mentioned below (Gilad et al., 2023). The right to freedom of expression is one of the most important human rights and is one of his civil and political rights. This right is mentioned in the Declaration of Human Rights and the International Covenant on Civil and Political Rights. Article 19 of the Declaration of Human Rights states: Everyone has the right to freedom of opinion and expression, and everyone has the right to express their opinions and thoughts without any fear or anxiety and by any means and without frontier considerations; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers. Also, Article 13 of the Convention on the Rights of the Child states in this regard: The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice (Juriah, 2015). As it can be seen, according to the mentioned documents, the use of cyberspace or any other method to obtain and express information and facilitate the access of human beings, regardless of age, gender and etc., to freedom of expression has been identified and emphasized. Also, in the mentioned documents, the exchange of information by any means and regardless of political frontiers, has been considered. Nowadays, cyberspace, as a passage without restrictions in the direction of information exchange, is very effective in transmitting people's thoughts and opinions regardless of geographical boundaries. Children from any social class are exposed to all kinds of harm related to new

technologies. Various factors will increase the harm caused to children in cyberspace. Among them, the social and economic factors, gender, lack of awareness, etc., can be mentioned (Trudy, 2016). Since the launch of cyberspace until now, the issue of the culture of using this place and how to interact with it has been the concern of families, the government, and human society in general. Concerning the social dimension, factors such as culture and attitude towards life, lifestyle, etc., are very effective on this issue.

Regarding the economic conditions, the most important issue in this regard is the income generation and the financial situation of the families, in such a way that the parents of a child may sell or allow their child for sexual exploitation due to the financial crisis of the family or abuse him. In the daily news of different nations, Siri shows many anomalies in this field (Boltaeva and Ortikov, 2020). In the research literature, several topics related to the challenges of children online, future harms, and their safety in cyberspace have been examined. A summary of these studies is presented in Table 1.

Table 1. Summary of research background

Research purpose	Authors	Year of publication
The process of victimization of children in cyberspace with emphasis on economic factors	Mousavi et al.	2021
Examining opportunities and harms in cyberspace for children and teenagers	Sameni Davijani	2021
Pathology of Cyberspace in Children's Education	Shojaei and Mohammadnazari	2019
Pathology of Cyberspace in children and adolescents education	Askari	2019
The research entitled the effect of cyberspace on the Morality and Identity of Children	Nekofar and Ghalavand	2018
Your child and technology, what parents can do to keep children safe in cyberspace	Baloyi	2023
Science for child protection policy in cyberspace	Gilad et al.	2023
A comparative study of the protection of children's image rights in cyberspace	Ganjizadeh Bafghi and Chaji	2022
Protection of children in cyberspace, new types of threats against sexual freedom and integrity	Stănilă et al.	2022
Exposure to pornography and harmful content against children: an analysis	Kumar et al.	2022

4. Research Methodology

The type of research is practical in terms of purpose and descriptive-survey type in terms of data collection. The research method is qualitative and through interviews. The present study used experts in cyberspace harms as the statistical population. The sampling method was judgment sampling. According to the strategy used, the data collection tool is a semi-structured interview, the questions of which are designed based on the research subject. A semi-structured or guided interview is between the two extremes of structured and unstructured, in which all interviewees are asked the same questions and are free to express their opinions in any way they wish. The relevant challenges were obtained after collecting interviews taken from experts and analyzing their content using open, axial, and selective coding of children's online safety challenges in cyberspace. Then their priority was determined using experts' opinions. In the present study, twelve professors from the universities of Karaj, including six professors of sociology, five professors of psychology, and one professor of Law, were used as research experts to identify the challenges. The judgment sampling method was also used.

5. Research Findings

First step: open coding

After the end of the interviews, coding began, the data was reviewed, and the important points of each interview were extracted in the form of an open code. A number of 152 open codes were identified, and due to their many details, examples of them are given. The figure below shows an example of open coding of a part of the interview of one of the sociology professors at Kharazmi University.

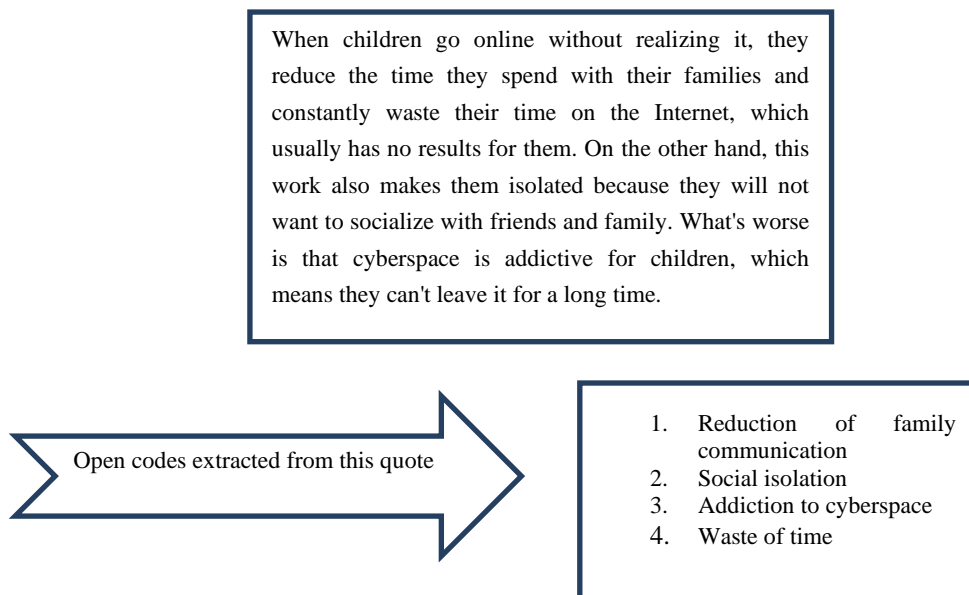


Fig. 1. An example of open coding according to a part of the interview

Second step: axial coding

Axial coding is the rejoining of data that was broken during recoding. In this stage, the common codes, along with the important codes, were determined from the perspective of the research team, and 45 concepts were extracted from 152 open codes in the interviews and interviews of 12 professors from the Department of Sociology, psychology, and Law were examined, and the feedback that was obtained made some revisions in the items in terms of concept and writing, and their number was reduced to 26, which were categorized into eight dimensions.

Axial coding aims to create a relationship between the categories produced in the open coding stage. Categories are generated through the same analytical process of comparing to highlight similarities and differences used at a lower level to generate concepts. The challenges of children online, future harms, and their safety in the cyberspace of the game are in the form of eight dimensions, which include easy access to unethical resources, induction of intellectual doubts, conflict of values, addiction to cyberspace, social isolation, time-waste, reduction of family communication and generation gap. Below is the table related to the dimensions and concepts related to each of them.

Table 2. Dimensions and concepts related to the challenges of children online regarding their harm and safety in cyberspace

Purpose	Dimension	Concepts
Challenges of children online regarding their harm and safety in cyberspace	Easy access to unethical resources	Easy access to sexual content such as videos and photos, etc.
		Selling sex tools and accessories through the Internet
		Desire to visit unethical sites
	Induction of intellectual doubts	Attacking the beliefs of users
		Communication with groups to shake the beliefs of users
		Types of intellectual doubts and children's belief in Nihilism
	Conflict of values	The entry of Western values through cyberspace
		Western cultural conflict and traditional Iranian culture through cyberspace

		Being affected by inappropriate clothing and appearance of children in cyberspace
		Challenging religious values by Western culture through cyberspace
	Addiction to cyberspace	Addiction to useless searching on the Internet
		Addiction to online games
		Addiction to being in chat rooms in the late hours of the night
		Addiction to the Internet and staying away from all academic and work activities
	Social isolation	Replacing the Internet and cyberspace instead of friends and relatives
		Harm to social communications
		Replacing cyberspace and the Internet with family and family communication
	Time-waste	Time waste in searching aimlessly on the Internet
		Time waste on online chat sites
		Time waste through online games
		Time waste watching online movies and listening to music
		Time waste in searching for fun and often sexual cases
	Reduction of family communication	Lack of time allocation of communication with family
		Loss of emotional relationships among family members, especially parents
Reduction of interaction between children and parents		
Loss of balance of power in the family		
Generation gap	Lack of a common language between the new generation and previous generations	
	Failure to participate in family gatherings and meetings	
	Not bringing up physical and mental	

		problems in the family.
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Third step: selective coding

Selective coding is the process of choosing the main category, improving and integrating the categories, systematically relating it to other categories, and completing the categories that need further development. According to the obtained results, the challenges of children online regarding their harm and safety in cyberspace have eight dimensions: easy access to unethical resources, induction of intellectual doubts, conflict of values, addiction to cyberspace, social isolation, time-waste, reduction of family communication and generation gap, and therefore, the first question of the research was answered in this way.

6. Prioritizing the dimensions of the research model

After identifying the challenges of children online, their future harm, and safety in cyberspace, in order to determine the importance of the dimensions of the presented research from the experts' point of view, another questionnaire was used in this study; the scale of this questionnaire is in the 5-point Likert (very much, much, to some extent, little, very little). Then, using the group of experts who were interviewed earlier, the importance of the dimensions and concepts of the research was determined. In the table below, the average percentage of the answers that are related to the dimensions of the research is presented.

Table 3. The importance of the presented dimensions, according to experts

No.	Dimensions of challenges of children online, future harms, and their safety in cyberspace	Percentage of answers				
		Very much	Much	To some extent	Little	Very little
1	Induction of intellectual doubts	10	15	75	0	0
2	Addiction to cyberspace	80	15	5	0	0
3	Social isolation	11	79	10	0	0
4	Reduction of family communication	20	80	0	0	0
5	Conflict of values	5	15	70	10	0
6	Easy access to unethical resources	75	15	10	0	0
7	Time-waste	70	20	10	0	0
8	Generation gap	15	70	10	5	0

As can be seen, the dimensions of addiction to cyberspace, easy access to unethical resources, and

time-wasting have the highest importance among the challenges of children concerning cyberspace harm. Also, the dimensions of reduction of family communication, social isolation, and generation gap are the next priority in terms of importance. Finally, the dimensions of induction of intellectual doubts and conflict of values are less important among the challenges. In the figure below, the importance of the presented research dimensions can be seen.

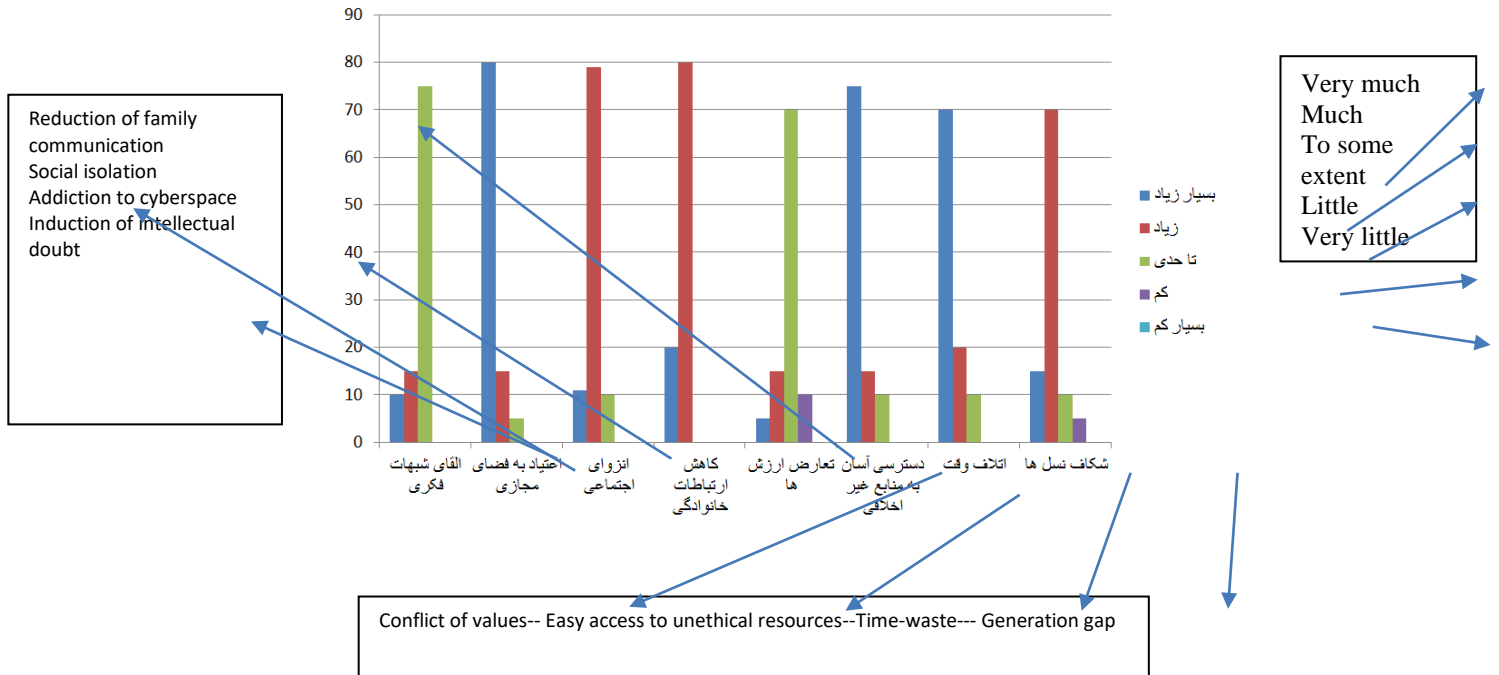


Fig. 2. The importance of the presented dimensions according to experts

In the table below, the priority of the dimensions of the research model is presented in order and in three groups.

Table 4. The priority of the dimensions of the research model in terms of importance

First priority	Second priority	Third priority
Addiction to cyberspace	Reduction of family communication	Induction of intellectual doubts
Easy access to unethical resources	Social isolation	Conflict of values
Time-wasting	Generation gap	

7. Discussion and Conclusion

In this study, first, 12 experts are interviewed to identify the challenges of children online, future harms, and their safety in cyberspace. After the interview and by categorizing the data, the challenges are identified and prioritized based on their importance. According to the obtained

results, the challenges of children online regarding their harm and safety in cyberspace have eight dimensions: easy access to unethical resources, induction of intellectual doubts, conflict of values, addiction to cyberspace, social isolation, time-waste, reduction of family communication, and generation gap. Therefore, the first question of the research was answered in this way. It was also found that the dimensions of addiction to cyberspace, easy access to unethical resources, and time waste are most important among children's challenges related to cyberspace harm. Also, the dimensions of reduction of family communication, social isolation, and generation gap are the next priority in terms of importance. Finally, the dimensions of induction of intellectual doubts and conflict of values are less important among the challenges, and thus the second question of the research was also answered. In explaining these results, it can be said that technology and its numerous branches are the most important result of human scientific effort in the present era. In the meantime, ICT is of special importance due to its unbridled growth and wide scope. This achievement has brought with it positive effects such as the removal of frontiers, universality, economic efficiency, time efficiency, etc. However, it suffers from disadvantages such as irregular access, lack of purpose, conflict with safety, ethics, domestic and international laws, the spread of prostitution, etc. Among the most important features of this phenomenon is the maximum audience. This problem raises the threat to children's safety in the space created by ICT, and it must be acknowledged that children are the most defenseless victims of the destructive disadvantages of this phenomenon. According to field research conducted in many countries, children have suffered from its disadvantages instead of benefiting from the advantages of this achievement, and their rights have been widely violated. Virtual child abuse, child pornography, influencing them through various internet programs, making them dependent on virtual games, violating their right to health, etc., are among the defects that unrestricted access to ICT has brought to children. The challenges of children online today are such that all countries, from post-industrial societies to third-world societies, consider it a serious threat to the future of the human race and the childhood of the human, and based on this, using internal regional, international, and global mechanisms, they try to control the technologies related to the dissemination of information and positive limitation of communication. Developed countries have been trying to manage the regular use of ICT with programs such as informing families, training teachers, establishing digital literacy, setting up monitoring systems, and passing various laws and examples. Due to its cultural and religious context, Iran may appear less involved with these defects. However, it is a fact that the effect of cyberspace and modern ICT on Iranian children is not less, if not more, than that of developed countries. The solutions that can be provided to support the child against ICT are educational, legal, supervisory, executive, control, and self-control solutions. Further, the results showed that cyberspace reduces the time children spend with their families. The results of this

study are consistent with the results of Mousavi et al. (2021), Sameni Davijani (2021), Shojaei and Mohammadnazari (2019), Askari (2019), Nekofar and Ghalavand (2018), Baloyi (2023), Gilad et al. (2023), Ganjizadeh Bafghi and Chaji (2022), Stănilă et al. (2022) and Kumar et al. (2022). This study also faced limitations; one of these limitations was the selection of a sample of experts, and other results may have been obtained by changing the community of experts. Another limitation that can be mentioned is that the data and information obtained from the interviews may not have been answered correctly and therefore affect the results. According to the results of this study, it is suggested that parents help children to attend friendship sites related to cultural and scientific activities, which ultimately lead to activities in real space and human communication. It is also suggested that parents familiarise themselves with cyberspaces, social networks, and working with the Internet and its capacities to help control their children's behaviour in cyberspace. Also, they make children aware of the dangers and harms of cyberspace, schools, and media. It is also suggested that future researchers design a model of children's online challenges, future harms, and their safety in cyberspace and how the components affect each other.

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