

PRIMARY RESEARCH

The challenges of the family in the digital age on a global level

Fatemeh Ghasemi^{1*}, Mohammad Saeed Zakaei²¹Department of Sociology, Ilam University, Ilam, Iran² Full Professor, Department of Cultural Studies, Allameh Tabatabaie University, Tehran, Iran**Keywords**

Family Challenges
Digital Technology
Family Relationships
Mental Health
Cyber Security

Received: 12 April 2025**Accepted:** 19 July 2025**Published:** 25 October 2025**Abstract**

In today's world, digital technology has become an integral part of daily life and has had profound effects on family relationships and the quality of life of family members around the world. This study aims to identify the challenges and opportunities of families in the digital age, examine the positive and negative effects of technology on family interactions, educational processes, mental health, and social values. The present study was conducted using a mixed method: in the systematic review section, scientific articles published between 2021 and 2023 were analyzed, and in the qualitative section, semi-structured interviews were conducted with 30 families from six geographical regions (North America, Europe, Asia, Africa, Latin America, and the Middle East). The findings showed that globally, 72% of households reported a decrease in face-to-face interactions due to dependence on technology, 68% referred to a strong dependence on digital tools that reduced the quality of emotional and social relationships, and 62% of parents were concerned about the negative effects of technology on their children's education and concentration. Also, 47% reported negative effects on mental health, 54% were concerned about the security of personal information, and 58% said that there is a generation gap. In addition, 66% believed that technology has affected family values and led to a decrease in joint activities. The results of this study show that families, regardless of geographical location, face a similar set of challenges, although the intensity and form of their occurrence vary depending on the cultural and economic context. This emphasizes the need to develop localized strategies, purposefully manage the use of technology, and raise the awareness of families about the consequences of digitalization.

© 2025 The Author(s). Published by TAF Publishing.

INTRODUCTION

The digital age has had a wide impact on human societies and has transformed communication, economic, and cultural patterns. The emergence of technologies such as the internet, social networks, and digital tools has challenged traditional social and family structures and caused fundamental changes in daily life patterns (Boh et al., 2023). The family, as one of the main social institutions, has been the most affected. Digital technology has changed family relationships and reduced the amount of face-to-face interactions (Kumar, 2025). This is most evident in urban

households with greater access to technology. Tools such as smartphones and social networks have become an integral part of daily life, and in some cases, dependence on them has led to a decline in the quality of relationships. In addition to economic effects, digital technology has also brought about cultural changes, including changes in educational patterns, time management, intergenerational communication, and the creation of cultural conflicts between different generations (Ghali et al., 2023). Also, families face challenges such as misinformation, cyber threats, and cyberbullying (Boh et al., 2023; ZOHAIR & AIT NASSER,

*corresponding author: Fatemeh Ghasemi

†email:ghasemiifatemeh611@gmail.com

2024).

Managing children's access to cyberspace, teaching them to use technology correctly, and dealing with cyber threats are among the important educational challenges of the digital age. These situations need innovative approaches in the domain of online education. Younger generations, having been born and raised around technology, think and behave differently compared to previous generations, which occasionally results in communication gaps.

Notwithstanding the predicament, the digital era has also brought in facilities like convenient access to information, e-learning, and bonding in families (Pokrovskaja et al., 2021; Türe et al., 2025). Negative effects can be countered by governments with facilitating policies like digital education, infrastructure, and personal data protection (Mansoor et al., 2025; Selwyn, 2022).

Earlier research has revealed that digital technology has had mixed implications for families and highlighted that there is a need to balance the use of digital technologies with human interaction (Kahil, 2025; Mesch, 2006). Because of the technological pace, further research needs to examine novel challenges, workable solutions, and lasting effects on families (Katsamba, 2025; Van Dijk et al., 2023).

The novelty of this study lies in the integration of new research approaches and multi-dimensional approaches to the analysis of the problems of families in the digital age. In particular, this study integrates systematic review approaches and qualitative studies in order to identify not only problems, but also offer practical solutions for the most effective control of digital technologies within families. In this sense, the comparative analysis within cultures and world regions is also one of the innovative emphases of this research, which can potentially be used to translate general results into family-specific solutions for families in various circumstances.

The aim of this study is to present an overall model for handling issues and applying digital technology to enhance family relationships and quality of life. The primary purpose of the study is to establish the impacts of digital technologies on family relations, mental health, and learning processes. Through the examination of cultural, so-

cial, economic, and educational issues at the international level, this study aims to offer practical recommendations for minimizing the adverse implications of technology and maximizing its opportunities in order to consolidate the family pillar.

The aim of this research is to examine and analyze the impact of digital technology on family relationships and structure. In this study, an attempt is made to present a complete image of the outcomes of digitalization on family life by probing the dynamics of changes in face-to-face interactions, the role and responsibilities of family members, and the size of the generation gap. Apart from this, the study also reveals the primary difficulties of families in the digital age, Difficulties that extend to psychological, social, economic, security, and cultural dimensions and directly influence the quality of family members' lives.

Another objective of this research is to analyze the positive and negative effects of reliance on digital technologies on factors like the quality of emotional relations, learning processes, and mental well-being of family members. Also, the research seeks to discover and analyze practical, educational, and policy solutions for managing challenges and optimal use of digital technology in order to be able to provide a model that is Practical and localizable for diverse cultural and social conditions.

Finally, the basic question arises: How can families in different parts of the world reduce the negative effects of digital technology by using scientific strategies and supportive questions, and have a positive and constructive use of it in order to strengthen the foundation of the family?

Research Questions

Main Question

- How have digital technologies affected the social structure and relationships between family members?

Sub-questions

- What are the most important psychological, social, economic, and cultural challenges of families in the face of digital technology?
- What are the positive and negative consequences

of dependence on digital technologies on the quality of family relationships, education, and mental health?

- What strategies can families in different parts of the world use to manage the challenges caused by digital technology?

Despite numerous studies in the field of the effects of digital technology on the family, most of the existing studies are limited to a specific geographical area or culture, and a multi-dimensional and comparative approach has been less employed. Many of these studies have only identified the challenges and have less simultaneous analysis of cultural, social, economic, and educational issues. Also, previous research has mostly lacked a comprehensive model or practical strategy for managing family challenges in the digital age and has paid less attention to comparing the experiences of families in different regions of the world. This research, by combining two methods of systematic review of scientific literature and a qualitative international study, fills the existing gap. First, by reviewing studies from 2015 to 2025, it provides an up-to-date picture of challenges and opportunities, and then, by conducting in-depth interviews with families in six regions of the world, it is possible to analyze and extract common and distinct patterns. The main innovation of this research is the integration of theoretical and field data, and the presentation of localizable strategies for diverse cultural conditions. Therefore, the contribution of this research goes beyond the repetition of previous findings, and in response to this theoretical gap, it tries to answer this key question: "What patterns and strategies can reduce the negative effects of digital technology on the family and strengthen its positive use globally, given cultural diversity?"

Theoretical Foundations of Research

With the evolution of digital technologies over the past few decades, societies have been confronted with inherent transformations in social structures, relations, and behaviors. These transformations are not just at the macro level of society but also at the micro level, i.e., families have been witnessed. Digital technology, by making communication easy and offering sophisticated instruments,

has enhanced the accessibility of information and interactions in a manner unprecedented before. On the other hand, the dependency on cyberspace and cyber tools has brought problems such as reducing face-to-face interaction, changing the traditional family members' roles, and intergenerational conflict. It has become one of the most serious topics to research in today's digital age.

The family, as one of the most fundamental social institutions, has traditionally been at the center of the passing on of society's culture, norms, and values. In today's digital era, these roles have been associated with new challenges and possibilities. On the one hand, there are digital resources that have provided a range of education and communication facilities to families. Help improve the quality of life. On the other hand, these technologies have generated issues such as reducing time shared between family members, excessive dependence on technology, and learning issues in managing children's access to the internet. These changes require the redefinition of members' roles and responsibilities and adaptation to new circumstances.

This research will offer an evidence-based and multi-dimensional examination of the impact of digital technology on families. Multidimensionality is understood to mean the concomitant investigation of cultural, social, economic, educational, and psychological dimensions within the context of a mixed study (systematic review and qualitative validation). In addition to identifying challenges, common behavioral patterns and cultural differences between different regions of the world should also be identified, and accordingly, feasible and eco-friendly solutions should be presented to manage the effects of technology on families.

Digital technology

Digital technology refers to a set of tools and systems that use advanced technologies to process, store, and transmit information. These technologies include the internet, social networks, artificial intelligence, and smart devices that have changed the way humans interact with the world around them (Boh et al., 2023). The spread of digital technology has had significant impacts on various

aspects of life, including in the social, economic, and cultural fields. The rise of digital technology dates back to the last decades of the 20th century, when personal computers and the internet were widely used. Since then, rapid advancements in the field, including the development of social networks and smart gadgets, have led to the digital revolution (Knell, 2021). This development ushered in a new era of communication and access to information.

Digital technology has features such as high speed, wide reach, information storage, and the possibility of online interactions. These features have made digital technology an integral part of daily life (Hilbert & López, 2011). These technologies play an important role not only in the field of communication but also in areas such as education, health, and business. Digital technology has several advantages, including increased access to information, facilitating interpersonal communication, and improving the quality of life. For example, digital tools have enabled online learning and global communication (Vahed, 2022). These technologies can also help boost the economy and create new job opportunities.

Along with the benefits, digital technology has brought challenges such as reduced face-to-face interactions, dependence on smart tools, and cyber threats (Kumar, 2025). These challenges can negatively impact social and family relationships and require careful management. Digital technology has revolutionized the field of education. Online platforms and digital learning tools have made it possible for people around the world to access educational resources. These technologies can help reduce the educational gap between different regions.

Digital technology has changed the way social interactions are conducted. Social networks and online communication tools have made it possible to communicate quickly and extensively, but at the same time, they can lead to a reduction in face-to-face interactions between people (Kroencke et al., 2023; Kumar, 2025). These changes require careful consideration. Digital technology has also affected family relationships. On the one hand, these technologies have allowed for easier communication between family members. On the other hand, dependence on digital tools can lead to a reduction in quality time among

family members (Arundell et al., 2022).

As one of the main groups of digital technology users, children have been widely affected. These include access to educational content, increased digital skills, and challenges such as cyber threats. Digital technology has played an important role in the transfer and transformation of cultures. These technologies have provided access to global cultural content, but at the same time, they can lead to the loss of local cultural identities (Van Dijck et al., 2023). With the spread of digital technology, cybersecurity has become one of the most important challenges. Cyber threats can compromise users' privacy and require strong policy protections.

Digital technology continues to evolve and is expected to play a more important role in human lives in the future. Among future advancements are the development of artificial intelligence, the Internet of Things, and virtual reality technologies (Horváth et al., 2024). Given the widespread impacts of digital technology on various aspects of life, it is essential to properly manage these technologies. This management should include educating users, protecting data, and creating supportive policies. Such measures can help mitigate the negative impacts and make the best use of technology opportunities.

TABLE 1. Demographic Profile of Respondents

Advantages	Challenges
Increasing Access to Information	Reduced in-person interactions
Facilitating global communication	Dependence on digital tools
Improving Quality of Life	Cyber threats
New Educational and Career Opportunities	Economic and cultural inequalities

Challenges of the digital age family

Information and communication technology has become integrated into family life during the digital technology era. These technologies have presented new opportunities and channels for family member communications and interactions, but at the same time, numerous challenges have been brought along with them. Among these challenges is the erosion of face-to-face interactions, overdependence on electronic equipment, and intrusion into

privacy. Among the major concerns of the family during the digital age is the diminishing face-to-face interaction between family members. Excessive usage of digital platforms such as mobile phones and social media might lead to compromised quality time between family members and degrade their emotional connections (Ali et al., 2024). Dependence on technology is among the psychological illnesses of the virtual age. Children and teenagers are particularly vulnerable to dependence on virtual games, social media, and digital content. Dependence on technology may lead to poor concentration, increased stress, and poor academic performance. Another significant challenge is cyber threats and invasions of the privacy of families. The use of smart devices and the internet can put the personal information of family members at risk. This issue leads to security and ethical concerns (Knell, 2021). Digital technology has also changed the way children are raised. Many parents face challenges such as managing children's time using digital tools and preventing access to inappropriate content. This issue requires careful management policies.

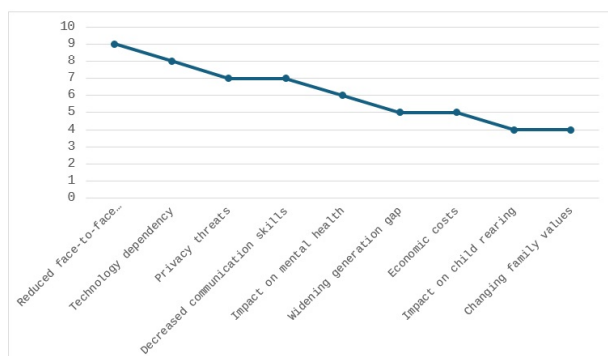


FIGURE 1. The important challenges of the family in the digital age and the impact of each one

Dependence on digital technology can reduce the communication skills of family members. The use of text messages and social networks instead of face-to-face communication may lead to weaknesses in speech and social skills. Overuse of digital technology can negatively impact the mental health of family members. Such effects involve heightened anxiety, depression, as well as feelings of loneliness, particularly among adolescents and children (Hemberg et al., 2021). Digital technology has the potential to widen the generation gap between parents and children. Cultural and communication differences between

generations are created by differences in familiarity with technology and how it is used (Silverstone, 2017).

The emergence of digital technology can influence family norms and values. Specifically, shifts in activities of time and leisure can contribute to changes in family relations and less emphasis on joint activities. Families experience economic pressure as well during the digital era. The expenses involved in buying digital equipment and accessing online services can economically burden families (Mesch, 2006). Digital technology has influenced the family lifestyle. Some of the changes are a reduction in physical activity, growing online time, and altered sleep patterns (Clark, 2012). Digital-age parents have challenges like children's online schooling and oversight of digital learning activities. Awareness and management of this problem are needed.

Exposure to indecent material online is among the ethical dangers of the digital era. Parents must employ proper monitoring and teaching mechanisms to keep children away from such content. Marital relationships can also be impacted by digital technology. Overuse of digital instruments may result in reduced interactions and communication among couples (Hertlein & Twist, 2019).

With so many issues of digital technology, there is a need to manage these issues appropriately. Families must maximize the utilization of technology and minimize its negative effects through learning and awareness.

TABLE 2. Psychological and social challenges of the family in the digital age

Challenge	Explain
Reduced in-person interactions	Lack of quality time between family members and weakness in emotional communication
Dependence on technology	Increasing psychological dependence on digital tools and decreasing academic performance
Decreased communication skills	Using text messages instead of face-to-face communication and reducing social skills
Widening generation gap	Cultural and communication differences between generations are due to differences in the use of technology.

TABLE 3. Economic and ethical challenges of the family in the digital age

Challenge	Explain
Economic Costs	Financial Pressure Caused by Buying Digital Tools and Sharing Online Services
Moral Threats	Children's access to inappropriate content in cyberspace
Changing family values	Changes in the way we spend time and reduce joint family activities
Impact on Marital Relationships	Reduced interactions between couples due to excessive use of digital tools

Research background

A study by Kumar (2025) has shown that the widespread use of digital tools such as mobile phones and social networks has led to a decrease in face-to-face interactions between family members. This research emphasizes that dependence on technology reduces quality time between family members and may lead to emotional distance between them. Collaborative activities without digital tools. Ghali et al. (2023) have examined children's dependence on digital tools in a comprehensive study. This research shows that children face decreased concentration and decreased academic performance due to excessive use of online games and social networks. Also, this dependence negatively affects children's mental health, increasing anxiety and social isolation. Researchers suggest that parents should monitor and regulate children's use of digital tools, which can reduce these negative effects.

In her research, Haddon (2016) examines the cyber threats and privacy violations of families in the digital age. This study shows that the use of smart devices and the internet puts families' personal information at risk. In addition, cyberattacks can lead to misuse of personal information and psychological damage. This research emphasizes the importance of educating families about cybersecurity and the use of protective tools.

In his research, Van Dijck et al. (2023) has addressed the changes in family values caused by the advent of digital

technology. This research shows that the widespread use of digital technology has changed the way family spends time and entertainment, and may lead to a decrease in joint activities among family members. Also, changes in family priorities, especially among different generations, have caused cultural tensions. The research suggests that Families need to maintain family values by managing time and digital activities.

A review of the studies conducted shows that previous research has mainly focused on identifying the negative effects of digital technology, such as reduced face-to-face interactions (Kumar, 2025), children's dependence on digital tools (Van Dijck et al., 2023), security threats (Haddon, 2016), and changing family values (Van Dijck et al., 2023). Also, some research has raised positive aspects of technology, such as facilitating communication and access to educational resources (Scanlon et al., 2015). However, these cases have been less accompanied by practical and localized solutions.

However, a critical review of these studies shows that:

- Most of the research is limited to a specific geographical area or culture and lacks a comparative approach between cultures.
- Most of the studies are not multi-dimensional (cultural, social, economic, educational, and psychological) and focus on a specific dimension.
- A large part of the research has only identified the challenges, and less has been done to provide models or operational solutions that can be tested.
- Assessing the positive effects of technology along with the negative consequences has been less comprehensively studied.

Accordingly, the present study seeks to fill these gaps by combining a systematic review method and an international qualitative study. In addition to identifying the challenges, this research compares patterns in six regions of the world, simultaneously analyzing multiple dimensions, and provides practical, policy, and localizable solutions to manage family challenges in the digital age.

TABLE 4. Other and real background research on family challenges in the digital age

Research Title	Authors	Year of publication	Main results
The Impact of Technology on Family Social Relations	Turkle	2022	Reducing face-to-face interactions and creating emotional distance between family members
Children's Dependence on Digital Technology	Livingstone & Helsper	2022	Decreased concentration, decreased academic performance, and negative effects on children's mental health.
Cyber threats and the security of families	Haddon	2023	Increased risk of cyberattacks and misuse of families' personal information
Changing Family Values in the Digital Age	Van Dijck	2023	Reducing joint family activities and creating cultural tensions between different generations
The Impact of Online Games on Adolescents	Boyd	2021	Heavy dependence on online games and reduced social skills
The Role of Parents in Technology Management in the Family	Silverstone	2021	The Importance of Parental Supervision of When and How Children Use Digital Tools
The Impact of Cyberspace on Marital Relationships	Rainie & Wellman	2023	Decline in the quality of marital relationships due to excessive use of digital tools

RESEARCH METHODOLOGY

This article examines social changes and family challenges in the digital age and uses a combination of qualitative research methodology and literature review to achieve comprehensive results. In the following, the research methodology is explained separately, and the tables related to each section are presented.

Part One: Method of Examining Texts

In this section, the Systematic Literature Review method has been used. The purpose of this section is to review previous research in the field of social changes and family challenges in the digital age at the global level. This method helps to identify research gaps and extract an appropriate theoretical framework for the qualitative part.

TABLE 5. Stages of textual review

Step	Activities Carried Out
Defining Research Questions	Identify key questions related to the research topic
Selection of Bases	Determining Valid Databases to Search for Articles
Selection criteria	Selection of articles based on year of publication, scientific quality, and thematic relevance
Search for Articles	Using Related Keywords to Find the Right Articles
Quality Assessment	Review of Citations, Research Methodology, and Scientific Quality of Articles
Text Analysis	Extracting key topics and categorizing findings

The stages of reviewing the texts included the following:

Definition of research questions: Key questions included:

- How has digital technology affected the social structure of the family?
- What are the main challenges for families in using digital technology?
- What strategies have been proposed in previous research to manage the challenges?

- Selection of databases: Reputable databases such as Google Scholar, PubMed, Scopus, and Springer were used to search for articles.
- Selection criteria: Articles published between 2015 and 2025, relevant to the research topic, and of high academic quality.
- Search Articles: The main keywords were "Digital Era and Family Challenges", "Social Changes in the

Digital Age”, and “Global Perspective on Family Dynamics”.

- **Quality Assessment:** Articles were selected based on criteria such as citations, quality of research method, and relevance to the topic.
- **Text analysis:** Using content analysis of the texts, key topics were extracted.

The purpose of the systematic review in this study is not merely to repeat the previous results, but it has had three new achievements:

Integrating and classifying challenges and opportunities in a multi-dimensional framework

The review integrated findings from the cultural, social, economic, and psychological domains into a single analytical model. Previously, most studies focused on only one dimension (e.g., psychological or social).

Identifying research gaps on an international scale

Unlike previous reviews, which were largely limited to Western societies, this review focused on articles from 2015 to 2025 from different regions of the world and found that patterns of challenges differ across different cultures and levels of economic development.

Establishing research questions and designing the qualitative part

The output of the review has been directly used in the design of interview questions and the selection of cultural, social, and economic indicators for the field section; therefore, the review has not only been a theoretical background but has played a practical role in the research path.

The systematic review conducted in this study is not only a reflection of the results of previous studies but also provides an analytical and multi-dimensional framework for the study of families in the digital age by integrating the scattered effects in the cultural, social, economic, and psychological fields. This review also revealed common patterns and regional differences by covering articles published between 2015 and 2025 from different regions of the world, which were less addressed in previous reviews. Another important point is that the results of this review have been directly used in the design of the qualitative part of the research, including the selection of cultural and social indicators and the formulation of interview questions, and have been used as the basis for comparative analysis between different regions of the world. In this way, the present review has not only formed the theoretical basis of the research but also guided the path of collecting and analyzing field data, and in this regard, it has applied innovation.

To analyze the data extracted from the articles, the thematic analysis method has been used. The main themes extracted are:

The effects of technology on family interactions: Decreasing In-Person Communication and Increasing Dependence on Virtual Communication.

Economic and social challenges: Rising Costs Associated with Technology and Cultural Change.

Suggested solutions: educating families, creating supportive policies, and developing digital infrastructure.

TABLE 6. Main themes extracted from the articles

Axis	Main article	Description
Effects of Technology on the Family	Reduced in-person interactions	Dependence on Technology in Communication
Economic and Social Challenges	Rising costs and cultural changes	Negative Effects on Family Dynamics
Suggested Solutions	Training and Infrastructure Development	Improving the status of the family in the digital age

Part Two: Qualitative Research Method

In the qualitative part, semi-structured interviews and qualitative content analysis have been used. The aim of

this section is to explore the deep perspectives of families and better understand the challenges posed by digitalization.

Statistical population: Families living in different parts of the world who have been affected by digital technology.

Sampling: Purposeful sampling method based on cultural and geographical diversity.

Sample size: 30 families (3 families from each geographical area).

The qualitative part of this study was conducted in the period from January to June 2024. The samples included 30 families from six geographical regions (North America, Europe, Asia, Africa, Latin America, and the Middle East) who were selected using a purposive sampling method to maximize cultural, economic, and social diversity.

How to invite cooperation:

The initial communication with the families was done through three routes:

Sending an official email from the principal researcher to the identified families in the academic networks and related organizations.

Publication of the call for cooperation on social networks and local professional associations.

Inviting families who had previously participated in similar projects.

In all cases, before the start of the cooperation, an official letter of introduction was received, including the purpose of the research, the method of implementation, the approximate response time, the commitment to confidentiality of the information, and the right to withdraw at any time, sending and confirming in writing or by email.

How to implement and ask questions:

The interviews were designed in a semi-structured manner, and the questions were extracted based on the findings of a systematic review. The questions included topics such as the impact of digital technology on family interactions, psychological and social challenges, cultural changes, and suggested solutions. To ensure data coherence, an interview guide was sent to all participants.

Method of holding and registration tools:

Out of a total of 30 interviews, 6 were conducted through online video meetings (Zoom or Microsoft Teams) and

24 were conducted through structured email correspondence. In online interviews, with the consent of the participants, the conversation was recorded by audio or video and then transcribed. In email interviews, the responses were received in writing and in full, and supplementary correspondence was conducted to remove the ambiguity.

Data recording and analysis process:

Audio/text data were stored encrypted in a secure cloud. Transcription and data preparation for analysis were performed using NVivo 12 software. To increase the validity of the data, each interview text was reviewed by two researchers to confirm its accuracy.

The semi-structured interview is designed with the following axes:

- The Effects of Digital Technology on Family Relationships.
- Family-specific challenges in the use of technology.
- Suggested solutions to deal with the challenges.

TABLE 7. Sample interview questions

Axis	Sample Questions
Impacts of Digital Technology Challenges	How has digital technology affected your family relationships? What is your family's biggest challenge in the digital age?
Solutions	How do you think these challenges can be managed?

The analysis of qualitative data in this research has been done using the thematic analysis method. This method is one of the standard approaches to extract the patterns, main themes, and meaning of qualitative data. The purpose of this analysis is to identify key issues and the relationships between them to better understand the effects of digital technology on families and their related challenges at the global level.

Steps of Qualitative Data Analysis

Familiarity with data

In this stage, the data obtained from the interviews were carefully reviewed, and the texts were read several times so that the researcher could become familiar with the content of the data. This step includes:

- Listen to audio files of interviews (if recording interviews).
- Implement transcripts of interviews.
- Initial review of texts to identify general concepts.

Basic coding

In this stage, important and relevant parts of the interview text were identified, and the initial codes were assigned to them. Each code represented a core concept or theme.

The primary codes were categorized based on similarities and differences, and the main and secondary themes were extracted from them. The themes included key topics that answered the research questions. The extracted themes were examined to ensure that they corresponded to the data and fully covered the main research topics. The main themes were defined and named. In this stage, each theme was accurately explained and its relationship with the research questions was determined.

TABLE 8. Stages of qualitative data analysis

Step	Activities Carried Out	Output
Introduction to Data	Read interviews, listen to audio files	Basic understanding of data content
Basic Coding	Identify key concepts and assign codes to relevant departments	Basic List of Codes
Identifying Themes	Categorizing codes and extracting main and secondary themes	Table of Contents
Subject Review	Explore themes to match the data	Final Themes
Definition of Subjects	Detailed explanation of the themes and their relationship to the research questions	Subject Description
Preparation of the Final Report	Combining themes with backup data and reporting	Final Research Report

TABLE 9. Sample initial coding and theme identification

Direct Sample Quotation	Basic Code	Main article
"We spend most of our time on the phone instead of talking to each other."	Reduced in-person interactions	The Effects of Technology on Family Relationships
"The cost of the internet and the purchase of digital equipment is too heavy for us."	Technology-related economic problems	Family Economic Challenges
"My children spend most of their time online and spend less time with us."	Dependence on virtual communication	The Effects of Technology on Family Relationships
"We don't know how to deal with the challenges of cyberspace for kids."	The Need for Digital Education	Suggested Solutions

TABLE 10. Main and sub-themes extracted from qualitative data

Main article	Sub-Articles	Description
The Effects of Technology on Family Relationships	Reduced in-person interactions	Dependence on virtual communication
	Increasing the use of phones and cyberspace	Reducing quality family time

Cont...

Main article	Sub-Articles	Description
Family Economic Challenges	Internet and digital equipment costs	Economic Pressure on Families
	Inequality in access to technology	Economic Constraints
Suggested Solutions	Educating families in the field of digital technology	Manage challenges and make the most of it
	Supportive policies of governments	Infrastructure development and better accessibility

TABLE 11. Sample themes and backup data

Main article	Sub-article	Samples Quotation
The Effects of Technology on Family Relationships	Reduced in-person interactions	"We spend most of our time on the phone instead of talking to each other."
	Increasing the use of phones and cyberspace	"My children spend most of their time online and spend less time with us."
Family Economic Challenges	Internet and digital equipment costs	"The cost of the internet and the purchase of digital equipment is too heavy for us."
	Inequality in access to technology	"We can't use technology like everyone else because of financial problems."
Suggested Solutions	Educating families in the field of digital technology	"We need to be more educated so that we can make better use of cyberspace."
	Supportive policies of governments	"The government needs to help so that all families can access technology."

Qualitative data analysis using the thematic analysis method has helped to identify the main patterns and issues related to the effects of digital technology on families and their challenges. This method has made it possible to extract the main themes, and backup data (quotes from examples) has been provided to amplify the results. This analysis has provided a comprehensive basis for providing practical and theoretical solutions.

Part Three: Synthesis of the Results of Qualitative Research

To combine the results of the review section and the qualitative section, a comparative method has been used. The findings of the review section have helped to identify research gaps and key topics, and qualitative findings have been used to understand these issues more deeply.

TABLE 12. Combined results

Axis	Review Findings	Qualitative Findings	General conclusion
Effects of Technology on the Family	Reduced in-person interactions	Dependence on virtual communication	The Necessity of Managing the Use of Technology
Economic and Social Challenges	Rising costs and cultural changes	Economic problems and cultural differences	The Importance of Education and Supportive Policies
Suggested Solutions	Training and Infrastructure Development	Suggestions for families to manage challenges	Combining education and policies

RESEARCH FINDINGS

The present study investigated the challenges of the family in the digital age. This study collected a variety of data using questionnaires and in-depth interviews with 30 families of different ages. The findings show that most families face major challenges that affect the quality of family life and their relationships. The most important findings are discussed below. One of the main results of this study is the reduction of face-to-face interactions between family members. About 72% of respondents reported that the time spent on face-to-face communication was reduced and devoted to digital activities. This can lead to a decrease in the quality of emotional relationships and social connections. In fact, this change in communication patterns has been observed more severely, especially in families with adolescent children.

About 68% of households reported a significant dependence on digital technologies. Most people at a younger age spend more time on digital tools due to the use of social media and online games. This dependence on technology has not only affected family relationships but has also led to a decrease in attention to outdoor activities and social opportunities. 55% of parents expressed that, because of this dependence, their children have been deprived of other activities outside the home.

The study also found that 62% of parents have concerns about the impact of technology on their children's education. Especially in the context of online education, many

parents reported that their children face concentration and learning difficulties. 58% of parents believed that they need to monitor their children's educational activities more. This result suggests that parents need to make improvements in time management and the use of technology to provide learning. The results show that 47% of families reported a negative impact of technology on mental health. This includes increased anxiety, depression, and feelings of isolation, especially among adolescents. Also, 36% of adults reported symptoms of stress caused by online activities, such as negative news and social pressures. These findings indicate the need to pay attention to the mental health of family members, especially in digital situations.

The findings indicate that 54% of parents are concerned about the security of their children's personal information on the internet. This concern includes cyber harm and access to inappropriate content. 45% of parents reported that their children have been affected by inappropriate content online. This indicates the need to increase awareness and education of families in the field of digital security. The results of the research show that 58% of parents felt that the generation gap was created by their children's different use of technology. This gap may lead to misunderstandings and disagreements in families. Also, 41% of teens reported feeling that their parents are unable to understand their digital challenges. This indicates the need for an open and honest dialogue between generations.

TABLE 13. Qualitative results of the research

Subject	Qualitative Findings
Reduced in-Person Interactions	72% of respondents mentioned that they spend less time on face-to-face communication.
Dependence on Technology	68% of households had a significant dependence on technologies, which led to a reduction in outdoor activities.
Educational Challenges	62% of parents were concerned about the negative effects of technology on their children's learning and concentration.
Impact on Mental Health	47% of families reported a negative impact of technology on mental health, especially among adolescents.
Security Threats	54% of parents were concerned about the security of their children's personal information, and 45% of them experienced security problems.

TABLE 14. Qualitative results in the field of family relations

Subject	Qualitative Findings
Widening generation gap	58% of parents felt that the generation gap was caused by their children's different use of technology.
Changing family values	66% of respondents believed that technology has influenced family values.
Impact on Marital Relationships	43% of couples indicated that excessive use of digital devices has led to a decrease in emotional interactions and connections.
Decreased communication skills	52% of families, especially children and adolescents, face the challenges of reduced communication skills.

TABLE 15. Qualitative results in the field of technology education and management

Subject	Qualitative Findings
Challenges in raising children	61% of parents were concerned about the educational challenges caused by digital technologies.
The Necessity of Time Management	70% of households acknowledge the importance of time management in the use of digital technologies.
The need for education and awareness	67% of parents wanted to receive more training on managing the use of technology.

In the introductory part of the research, based on a review of the literature and public experiences, challenges such as reducing face-to-face interactions, dependence on technology, security concerns, and changes in family values were proposed as possible axes of the effects of the digital age on families. These cases formed the initial theoretical framework of the research.

However, data from 30 online and email interviews and their comparative analysis across six geographic regions showed that the intensity, pattern, and composition of these challenges differed significantly depending on the cultural, economic, and social context, differences that were not foreseen in the initial assumptions.

Specifically, there were three new key findings:

The link between emotional dependence on technology and the sense of social security in some cultures, contrary

to the earlier conception that dependence was merely a factor in weakening face-to-face relationships.

The digital generation gap with the identity dimension – that is, the difference in understanding the meaning of technology and its role in personal and family identity, not just at the level of skill in use.

The Impact of Aligning Technology Management Policies with Cultural Values – Households that aligned the rules of technology use with their native culture experienced fewer negative impacts.

These findings not only provide a more accurate and multi-dimensional picture of the issue, but also show that the international field analysis has been able to reveal unknown or less studied dimensions that were discussed in the introduction section only in general.

TABLE 16. Review results

Subject	Review Findings
Positive Effects of Technology	Some families enjoy the benefits of technology, such as facilitating communication and access to information.
The Need for Balance	The need to strike a balance between the use of technology and non-digital activities to maintain the quality of family relationships.
The importance of family education	Training parents and children on the optimal use of technology and its challenges to improve the psychological and social situation.
The role of policymakers	Policymakers should develop educational and information programs for families in the field of technology management.

One of the most notable results of the research was the change in family values and norms due to the advent of digital technology. About 66% of respondents believed that technology has affected family values and led to a decrease in shared activities. For example, 53% of households expressed that they devote less time to group activities such as family dinners. These changes may have negative effects on him. He should have family cohesion. About 40% of households reported economic pressures caused by digital-related spending. The cost of buying new devices, online subscriptions, and the internet can affect families' financial plans. Also, 32% of households mentioned that these expenses may lead to a decrease in savings and investment in other areas of life. This economic situation can affect the quality of family life. It has a negative effect. The study also looked at the impact of digital technology on marital relationships. About 43% of couples said that excessive use of digital devices led to a decrease in emotional interactions and connections. Also, 29% of them mentioned problems in the relationship due to the interference of technology. This situation indicates the need for more dialogue and emotional interactions between couples.

The study also found that 52% of families, especially children and adolescents, face the challenges of reduced communication skills. 48% of parents reported that their children have lost their social abilities due to dependence on technology. This reduction in skills can negatively affect their social and academic achievement and lead to problems in interpersonal relationships. The results of the research show that 61% of parents are concerned about the educational challenges caused by digital technologies. These challenges include managing the time of internet use and monitoring digital content. 55% of parents stated that they do not know how to effectively monitor their children's online activities. This issue shows the need to increase education and awareness of parents in the field of raising children in the digital age.

The findings show that 70% of families acknowledge the importance of time management in the use of digital technologies. This means the need for more careful planning for allocating time to non-digital and family activities. 62%

of families stated that they have been able to prevent excessive dependence on technology by setting time limits. This approach can improve the quality of family life and Interpersonal relationships. The results of the research indicate that 67% of parents want to receive more training on how to manage the use of technology in their families. 54% of families believe that they need to hold workshops and training courses in this field. These findings indicate the need to develop educational programs for families in the field of digital challenges and how to manage them.

The present study showed that families face multiple and serious challenges in the digital age. These challenges include reduced interactions, dependence on technology, security concerns, and changes in family values. To improve the situation, it is suggested that families devote more time to collective activities, become aware of digital technologies, and pay special attention to emotional interactions. Policymakers and Teachers should also raise awareness about the optimal use of technology and its consequences.

CONCLUSION

This research investigates the challenges of families in the digital age and has obtained significant results regarding the negative and positive effects of technology on family life. According to the findings, it was found that families face problems such as reduced face-to-face interactions and dependence on technology. These challenges can affect the quality of family relationships and lead to negative consequences, psychological and social. One of the important findings of the study was the reduction of face-to-face interactions between family members. About 72% of the respondents emphasized that the time spent on face-to-face communication has been reduced and dedicated to digital activities. This change in communication patterns can lead to emotional distancing and a decrease in the quality of family relationships. Therefore, it is essential that families spend more time in face-to-face interactions. Also, 68% of households reported a significant dependence on digital technologies. This dependence was particularly pronounced among children and adolescents and led to a reduction in time spent on outdoor activities and

social interactions. Pay more attention to managing the time spent using digital tools to avoid their negative consequences. The research showed that 62% of parents are concerned about the impact of technology on their children's education. These concerns are especially heightened in the context of online adoption, and parents are looking for ways to better manage their educational time and content. These findings indicate the necessity of educating parents about the optimal use of technology for children's learning.

According to the data in Table 15, 72% of the respondents stated that they spend less time on face-to-face communication. This finding is also reflected in Table 16, where 66% of households admit that technology has changed family values and reduced shared activities. The decrease in face-to-face interactions has not only created a behavioral change, but also a value change. In developed regions, this decrease has been mostly due to the replacement of face-to-face communication with social networks, while in developing countries, in addition to this factor, economic pressure and lack of face-to-face recreation opportunities have also played a role.

According to Table 15, 68% of households have a high dependence on technology. This dependence has been associated with a decrease in outdoor activities and has been mentioned in the qualitative data (Table 11) as "increasing the use of ears and cyberspace". In industrialized countries, this dependence is mostly in the form of continuous use of social networking platforms. While in low-income countries, dependence on digital tools is associated with the problem of "access inequality", meaning that households continue to face resource and infrastructure constraints despite their high use.

Table 15 shows that 62% of parents are concerned about the negative impact of technology on their children's learning and concentration. This concern is also reinforced in Table 15, where 61% of parents have raised the "challenge in raising children" and 70% have emphasized the need to manage their time using technology. In developing countries, the main challenge is the low quality of online education infrastructure and the limited access to educational resources.

In Table 15, 54% of parents have serious concerns about the security of their children's personal information, and 45% have reported direct experience of cyber threats. This statistic is in line with the data from Table 3, which identifies moral threats and children's access to inappropriate content as a key challenge. It is focused on data misuse and targeted cyberattacks, but in developing countries, the problem is exacerbated by the lack of parental awareness and the lack of effective filtering tools.

According to Table 16, 58% of parents feel that the different use of technology by generations has increased the generation gap. This problem is more severe in traditional cultural regions and manifests itself in the form of conflict of values and lifestyles between parents and children. Qualitative data (Table 11) show that Many parents in these regions do not have the tools and skills to create dialogue and mutual understanding, while in more open cultures, there is a greater divide in the form of disagreements over privacy and the extent to which technology is used.

According to Table 16, 43% of couples reported that excessive use of digital tools led to a decrease in emotional interactions and connections. This finding shows that digital dependence affects not only parent-child relationships but also marital relationships. In qualitative data (Table 11), cases of "reduced back-to-back time" Common", and "Replacing Emotional Connection with Digital Entertainment" are mentioned, which indicate the psychological dimension of this challenge.

Comparison of quantitative and qualitative data shows that:

Similarities: Reduced in-person interactions, secure Yeti concerns, and dependence on technology are common to all regions.

Differences: In developed countries, psychological and communication problems are a higher priority, while in developing countries, economic, infrastructural, and access inequality issues are more pronounced.

In more traditional cultures, changing family values and resistance to new communication styles are more common than in more liberal regions.

The findings of the research indicate that 47% of families

reported the negative impact of technology on mental health. These effects included increased anxiety, depression, and feelings of isolation, especially among adolescents. For this reason, it is essential that families pay special attention to the issue of mental health and provide solutions to reduce the stress caused by the use of technology. 54% of parents were concerned about the security of their children's personal information online. This concern includes cyber risks and access to inappropriate content, which can have negative effects on children's psychology and behavior. These findings clearly show the need to educate families about digital security and monitor their children's online activities.

The study found that 58% of parents felt that the generation gap was created by their children's different use of technology. This gap can lead to misunderstandings and communication tensions. Therefore, it is essential to have open and honest conversations between generations to better understand each other's needs. 66% of respondents said that technology has affected family values and led to a decrease in joint activities. These changes can lead to a decrease in family cohesion and an increase in internal tensions.

About 40% of households reported economic pressures caused by digital technology-related costs. These costs can negatively affect families' financial plans. Therefore, families should pay more attention to managing costs and prioritizing digital needs. The results of the study showed that 43% of couples pointed to the negative impact of technology on marital relationships, which indicates the need for more dialogue and emotional interactions between couples. For this reason, couples should dedicate time to establishing emotional connections and reducing their dependence on technology.

52% of families, especially children and adolescents, face the challenges of reduced communication skills. This reduction in skills can negatively affect their social and academic success. Therefore, teaching communication and social skills along with the use of technology is essential. 61% of parents cited the educational challenges posed by digital technologies, including managing the time spent using the internet and monitoring digital content. Parents

should use management and educational tools to educate their children in this field.

Research found that 70% of households acknowledge the importance of time management in the use of digital technologies. This means that there is a need for more careful planning for non-digital and family activities. Time management can help improve the quality of family life and interpersonal relationships. 67% of parents wanted to receive more education on how to manage the use of technology in their families. This needs to raise awareness and education about digital challenges, especially for parents and children, indicating the need for workshops and training courses.

Ultimately, this research showed that families in the digital age face several challenges, including reduced interactions, dependence on technology, security concerns, and changes in family values. These challenges need attention and management to improve the quality of family life. With awareness and education, avoid the negative consequences of technology and strengthen family relationships.

Challenge: Reducing in-person interactions due to dependence on technology and increasing time spent on digital activities.

Solutions: Families should dedicate time during the week to non-tech activities, such as family dinners or fun days. Encourage participation in joint activities such as sports, tourism, and group games that require face-to-face interaction.

Challenge: Dependence on digital technologies leads to a reduction in outdoor activities and social interactions.

Solutions: Setting specific times for the use of technology and observing it seriously. Parents should encourage their children to participate in outdoor activities and non-digital entertainment.

Challenge: The negative impact of technology on children's learning and concentration, especially in the context of online education.

Solutions: Parents need to monitor their children's educational activities and digital content. Introducing and using digital educational tools that help learn and make them more engaging.

Challenge: Increased anxiety, depression, and feelings of isolation, especially among adolescents.

Solutions: Create an atmosphere in the family where members can talk about their feelings and problems. If necessary, use psychological counseling services for family members, especially teenagers.

Challenge: Parents are concerned about the security of their children's personal information in cyberspace.

Solutions: Educate families on cybersecurity and how to protect personal information. Installing security software and content filters on digital devices to prevent access to inappropriate content.

REFERENCES

- Ali, U. A., Faraz, M., Memon, J. A., Salman, S. M., & Aziz, A. (2024). The influence of social media usage on quality time spent with family members: Moderating role of family cohesion. *International Research Journal of Social Sciences and Humanities*, 3(1), 930–955.
- Arundell, L., Gould, L., Ridgers, N. D., Ayala, A. M. C., Downing, K. L., Salmon, J., Timperio, A., & Veitch, J. (2022). "Everything kind of revolves around technology": A qualitative exploration of families' screen use experiences, and intervention suggestions. *BMC Public Health*, 22(1), 1606.
- Boh, K., Bak, M., Clason, C., Pankratova, M., Qvortrup, J., Sgritta, G. B., & Waerness, K. (2023). *Changing patterns of european family life: A comparative analysis of 14 countries*. Taylor & Francis.
- Clark, L. S. (2012). *The parent app: Understanding families in the digital age*. Oxford University Press.
- Ghali, S., Afifi, S., Suryadevara, V., Habab, Y., Hutcheson, A., Panjiyar, B. K., Davydov, G. G., Nashat, H., & Nath, T. S. (2023). A systematic review of the association of Internet gaming disorder and excessive social media use with psychiatric comorbidities in children and adolescents: Is it a curse or a blessing? *Cureus*, 15(8).
- Haddon, L. (2016). Parental mediation of internet use: Evaluating family relationships. In *Generational use of new media* (pp. 13–30). Routledge.
- Hemberg, J., Korzhina, Y., Groundstroem, H., Östman, L., Nyström, L., & Nyman-Kurkiala, P. (2021). Loneliness-two sides to the story: Adolescents' lived experiences. *International Journal of Adolescence and Youth*, 26(1), 41–56.
- Hertlein, K. M., & Twist, M. L. (2019). *The internet family: Technology in couple and family relationships*. Routledge.
- Hilbert, M., & López, P. (2011). The world's technological capacity to store, communicate, and compute information. *Science*, 332(6025), 60–65.
- Horváth, I., Berki, B., Sudár, A., Csapó, Á., & Baranyi, P. (2024). Internet of digital reality. In *Cognitive aspects of virtual reality* (pp. 33–47). Springer.
- Kahil, B. (2025). Pathways to success: Exploring the mediating roles of affective learning and intellectual engagement in academic achievement. *Journal of Advanced Research in Social Sciences and Humanities*, 10(2), 27–38.
- Katsamba, D. (2025). Digital readiness and big data analytics: Moderating roles in achieving social sustainability through AI-CRM and competitive advantage. *Journal of Management Practices, Humanities and Social Sciences*, 9(1), 1–18.
- Knell, M. (2021). The digital revolution and digitalized network society. *Review of Evolutionary Political Economy*, 2(1), 9–25.
- Kroencke, L., Harari, G. M., Back, M. D., & Wagner, J. (2023). Well-being in social interactions: Examining personality-situation dynamics in face-to-face and computer-mediated communication. *Journal of Personality and Social Psychology*, 124(2), 437.
- Kumar, A. (2025). Decline of face-to-face communication in modern society. *Knowledgeable Research A Multidisciplinary Journal*, 4(09), 1–11.
- Mansoor, M., Khan, T. I., Jam, F. A., & Alasmari, M. (2025). From donations to devotion: How cause-related marketing frames drive brand evangelism through cognitive and social pathways in hospitality. *International Journal of Contemporary Hospitality Management*.
- Mesch, G. S. (2006). Family relations and the Internet: Exploring a family boundaries approach. *The Journal of Family Communication*, 6(2), 119–138.
- Pokrovskaya, N. N., Leontyeva, V. L., Ababkova, M. Y., Cappelli, L., & D'Ascenzo, F. (2021). Digital communication tools and knowledge creation processes for enriched intellectual outcome—experience of short-term e-learning courses during pandemic. *Future internet*, 13(2), 43.

- Scanlon, E., McAndrew, P., & O'Shea, T. (2015). Designing for educational technology to enhance the experience of learners in distance education: How open educational resources, learning design and MOOCs are influencing learning. *Journal of interactive Media in Education*, 2015(1).
- Selwyn, N. (2022). The future of AI and education: Some cautionary notes. *European Journal of Education*, 57(4), 620–631.
- Silverstone, R. (2017). *Media, technology and everyday life in Europe: From information to communication*. Routledge.
- Türe, Z., Akdeniz, A. S., Acar, G. E. A., Aşır, F., Korak, T., & Ege, S. (2025). HOXA1 Expression in preeclampsia: Immunohistochemical and bioinformatic analyses. *Perinatal Journal*, 33(1), 11–17.
- Vahed, A. (2022). Factors enabling and constraining students' collaborative online international learning experiences. *Learning Environments Research*, 25(3), 895–915.
- Van Dijck, J., de Winkel, T., & Schäfer, M. T. (2023). Deplatformization and the governance of the platform ecosystem. *New Media & Society*, 25(12), 3438–3454.
- ZOHAIR, H., & AIT NASSER, M. (2024). Communication in the digital age: Challenges and transformation. *Journal of Advances in Humanities and Social Sciences*, 10(2), 33–39.