CHILDREN ONLINE RESEARCH AND EVIDENCE IN TURKEY: A
CONTENT ANALYSIS OF LITERATURE FROM 2014 TO 2020

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ABSTRACT

CHILDREN ONLINE RESEARCH AND EVIDENCE IN TURKEY: A CONTENT ANALYSIS OF LITERATURE FROM 2014 TO 2020

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The goal of this study is to review and analyze literature about online children research published by Turkish scholars, between 2014 and 2020. This study was carried out as a part of Europe-wide project entitled Children Online: Research and Evidence (CO:RE Project). In the scope of this study, literature was systematically reviewed according to the inclusion and priority criteria set by CO:RE Project. In the context of the current study, inclusion criteria listed as are topic relevance, age group, publication year, the language of publication, national scope, reliability of studies according to scientific base, publication type, and scientific discipline. To include studies for analysis, publications were selected by recency and relevance. In this study, descriptive analysis method was deployed. In total 177 publications were found, and 68 of them were included in this study according to the inclusion criteria. The results showed that the most frequently studied topic was wellbeing; followed by Internet usage, practices, and engagement; online safety and policy regulation; social mediation; and risks and harm. The most researched group is children between 10-18 years old. Children's Internet usage styles show a variety of factors such as, place being accessed to the Internet, social mediation, purpose of Internet use. The

common finding of studies which examined risks and harms with family status was children coming from a family with low education and low-income level were more likely to face online risks. The way to reduce online risks is to educate children and parents on safe Internet use. Researchers should conduct studies on 'Researching children online: methodology and ethics'. More emphasis should be placed on ethical issues in graduate education. Alternative research methods other than quantitative/survey could be encouraged.

Keywords: Children's Internet Use, Safe Internet, CO:RE Project Content Analysis

ÖZ

TÜRKİYE'DE ÇEVRİMİÇİ ÇOCUKLAR ARAŞTIRMA VE BULGULARI: 2014-2020 LİTERATÜR İÇERİK ANALİZİ

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Bu çalışmanın amacı, 2014-2020 yılları arasında Türk bilim insanları tarafından yayınlanan, çevrimiçi çocukları konu eden çalışmaların incelenmesi ve analiz edilmesidir. Bu çalışma, Avrupa genelinde 30'dan fazla ülkenin dahil olduğu Children Online: Research and Evidence projesi (CO:RE Project) kapsamında yapılmıştır. Literatür, CO:RE proje ekibi tarafından belirlenen dahil etme ve öncelik kriterleri dikkate alınarak taranmıştır. Mevcut çalışma kapsamında dahil edilme kriterleri konu uygunluğu, yaş grubu, yayın yılı, yayın dili, ulusal kapsam, çalışmaların bilimsel temele göre güvenilirliği, yayın türü ve bilim dalıdır. Bu çalışma kapsamına dahil edilen yayınların, veri tabanına kodlama ve analiz için güncellik ve alaka düzeyleri gözetilerek veri girişi yapıldı. Bu çalışmada betimsel yöntem kullanılmıştır. Toplamda 177 yayın bulundu ve dahil etme kriterlerine göre bunlardan 68'i çalışmaya dahil edildi. Sonuçlar en çok çalışılan konunun iyi hissetme olduğunu gösterdi; bu konunun ardından İnternet kullanımı, uygulamalar ve katılım; çevrimiçi güvenlik ve politika düzenlemesi, sosyal aracılık ve riskler ve zararlar konuları takip etti. En çok araştırılan grup 10-18 yaş arası çocuklardır. Çocukların İnternet kullanım tarzları ve riskle karşılaşma durumları, İnternete girilen yer, sosyal aracılık, İnternet kullanım amacı gibi faktörlere göre değişiklik göstermektedir.

Risk/zarar ve aile demografiklerini araştıran çalışmaların ortak bulgusu, düşük eğitimli ve düşük gelirli aileden gelen çocukların çevrimiçi risklerle karşılaşma olasılıklarının daha yüksek olmasıdır. Çevrimiçi riskleri azaltmanın yolu çocuklara ve ebeveynlere güvenli İnternet kullanımı eğitimi vermekten geçmektedir. Araştırmacılar 'Çevrimiçi çocukların araştırılması: metodoloji ve etik' üzerine çalışmalar yapmalıdır. Lisansüstü eğitimde etik konularına daha fazla önem verilmelidir. Nicel yöntem-anket metodu dışında alternatif araştırma yöntemleri kullanılmalıdır.

Anahtar Kelimeler: Çocukların İnternet Kullanımı, Güvenli İnternet, CO:RE Projesi, İçerik Analizi

To my husband and my family

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATIONS

BTK: Information Technology and Communication Agency (Bilgi Teknolojileri ve İletişim Kurumu)

CO:RE: Children Online: Research and Evidence

EIN (EBA): Education Information Network (Eğitim Bilişim Ağı)

RQ: Research Question

TÜİK: Turkish Statistical Institute (Türkiye İstatistik Kurumu)

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter presents the background of the study, problem statement based on this background, the purpose of the study and research questions, the significance of the study, definitions and abbreviations used in this study, and the organization of the study.

1.2 Background of the Study

The Internet is the new 'sky' in the saying 'sky is the limit' for those who can access it. What people can do online is only limited to what the Internet offers, that is to say, with endless options from learning to gaming or from socializing to online gambling. Furthermore, people can access the Internet not only at home or school/work but also on the go as smart mobile technologies (e.g., smart wearables, smartphones/tablets) provide easy and placeless access to the Internet (Ólafsson, Livingstone & Haddon, 2013). Having easy access to the Internet can be advantageous and, at the same time, risky for the user. As a result, people both have many opportunities to improve for the better and face risks that threaten mental and physical health.

To have a positive or negative consequence, people could first access and then use the Internet. With all advancements in technology, it has become an integral part of our daily and professional lives; therefore, it is inevitable to use the Internet. Over

the years, Internet usage has increased dramatically in the world, as presented in the following figure.
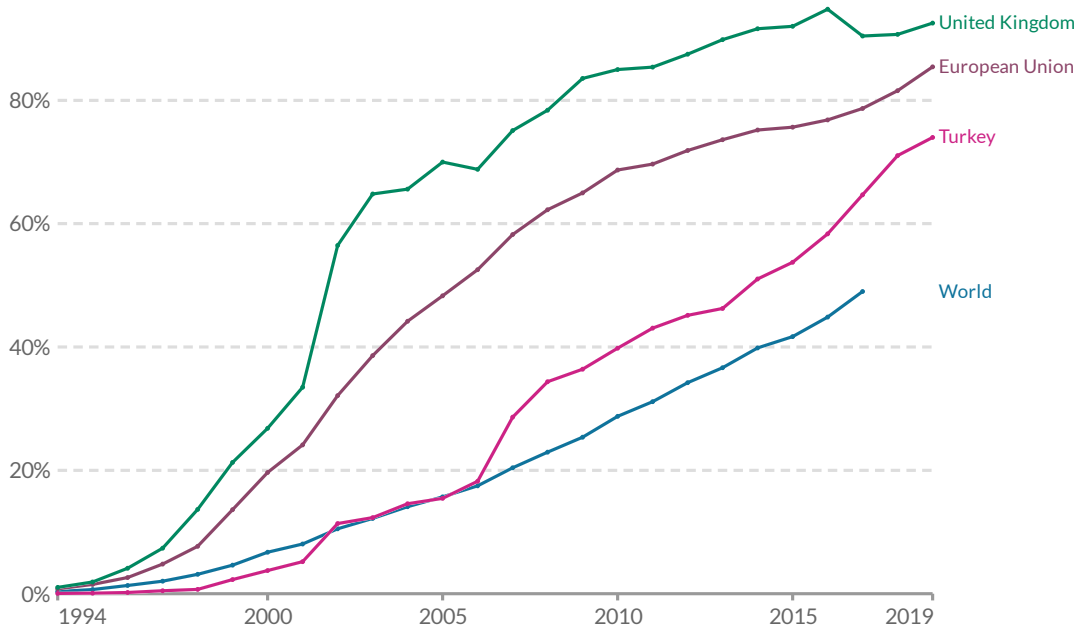
Figure 1.1 Line graph for Internet usage over the years in the UK, the EU, Turkey, and the world

Note. This figure was created using an interactive line graph widget by International Telecommunication Union (via World Bank). "Technology Adoption" H. Ritchie & M. Roser, 2017. Retrieved from: "https://ourworldindata.org/technology-adoption"

Internet usage in Turkey is not high as compared in European Union or the United Kingdom. Yet, it is higher than the world average. Internet usage is highest in Turkey at ages 16-35 (16-24 ages by 95.7% and 25-34 ages by 95.8%). These proportions drop significantly with an increase in age. That is, Internet usage percentage is 90.9% at ages 35-44, 80.1% at ages 45-54, 58.6% at ages 55-64, and 32.5% at ages 65-74 (TÜİK, 2021a). Another report by TÜİK (2021b) reveals that 82.7% of the 6-15-year-old children in Turkey have Internet access. It is stated that the more time children spend online, the higher risks they will face (UNICEF, 2019; Hasebrink, Livingstone & Haddon, 2008; Kaşıkçı, Çağıltay, Karakuş, Kurşun & Ogan, 2014). Kaşıkçı et al. (2014) express that without guidance or mediation, children might be

at even higher risks on the Internet. Orhan and Akkoyunlu (2004) support this statement by addressing the issue of children needing guidance against risks while adults can handle online risks by themselves.

Over the years, regular Internet use among 6-15-year-old children increased to 98.6%, while this rate was 91.8% in 2013 (TÜİK, 2021b). During the Covid-19 lockdown, children under 18 were not allowed to go out for some time. During that time, some of the children attended online classes. Attending online classes may be a reason for increased Internet usage. Even without Covid-19, an increase in Internet usage was presented by different resources (TÜİK, 2021a; TÜİK, 2021b; Ritchie & Roser, 2017). The average time spent by children on the Internet in and out of the classroom is given In Table 1.1.

Table 1.1 Average weekly Internet usage times

	6-10 years old	11-15 years old
In-class	11:33	13:13
Out-class	05:31	08:19

Note. Reprinted from "Çocuklarda Bilişim Teknolojileri Kullanım Araştırması, 2021" by TÜİK, 2021. Time in this table is given in hh:mm format.

Children between 6-10 years old spend approximately 17 hours a week on the Internet. This duration is even higher for 11-15-year-old children, slightly over 21.5 hours. The percentage of children who regularly use the Internet for attending online classes is 86.2% and for homework or learning is 83.6% (TÜİK, 2021b). Due to the pandemic, the reason the duration of in-class Internet use is high might be the transition to online education in Turkey on March 23, 2020. Children attended online classes through Education Information Network (EIN) during the Covid-19 lockdown.

While children in Europe used the Internet mostly at home (34%) and at school (33%) (Hasebrink et al., 2008; Livingstone, Haddon, Görzig & Ólafsson. 2011); children in Turkey accessed the Internet mostly at school (60.1%), and Internet café

(51.1%) (Kaşıkçı et al., 2014). The places of using the Internet have changed recently for children in Turkey. Recently, the primary place of Internet use is home (Turgut & Kurşun, 2019; TÜİK, 2021b).

It is also essential to have digital literacy skills to filter the big pile of information on the Internet and minimize the risks with a deliberate attitude when using the Internet. Pala and Başıbüyük (2021) stated that digital literacy skills have a positive effect on academic success. On the other hand, a finding from several studies showed that children's digital literacy was lower in Turkey than in any other country in Europe (Livingston et al., 2011; Kaşıkçı et al., 2014). In contrast to the digital literacy level of children in Turkey, their confidence level regarding Internet usage was high. Kaşıkçı et al. (2014) revealed that children's claims concerning Internet usage skills was inaccurate in a comprehensive examination, which, in the end, leaves children more open to exposure to possible risks. Even though risks do not always result in harm (Hasebrink et al., 2008), they still stand as a risk. The risks depend on many factors such as social mediation, awareness, the purpose of Internet usage, digital literacy etc.

Information Technology and Communication Agency (BTK) created the legal framework regarding Internet safety in 2008 and took an active role in public awareness seminars held in 2009 (BTK, 2008; BTK, 2009). Therefore, for Turkey, which started using the Internet in growing numbers at the beginning of the early 2000s, the fact that the concept of Internet security was a new topic in 2008 is a late move. The low digital literacy level of children in Turkey, reflected in the EU Kids Online 2010 project results, may be related to belated safe Internet services. BTK (2008; 2009) and the Ministry of Family and Social Services (2017) in Turkey carry out services in different areas to provide a safe Internet experience to children. According to a service report by BTK published in 2020, over 132-thousand illegal or harmful contents reported to the notification center were examined in 2020.

On the other hand, BTK, the Ministry of Family and Social Services, and the Ministry of National Education organize seminars for children and parents on safe

Internet usage and provide educational content on digital literacy and Internet safety. Services by BTK and the Ministry are promising in terms of teaching children safe Internet use. It is necessary to conduct a large-scale study because researching children online is challenging due to factors affecting children's Internet usage styles (Brikše, Freibergs & Spurava, 2014). Therefore, examining the topic from a broad perspective is needed to see children's Internet use and activities in Turkey. However, there has not been such a comprehensive study regarding subject and field in Turkey after the EU Kids Online 2010 project. EU Kids Online project team conducted extensive research across Europe about children who use the Internet and the risks and opportunities by considering the ethical issues and creating a public dataset (Livingstone, Cagiltay & Ólafsson, 2015). Hasebrink et al. (2008) explained the three reasons for public policy concerning children online being framed coincidentally as: (1) challenge to adjusting rapid growth and diffusion pace of the Internet; (2) fear of the new as media picture the Internet as unfeasible to regulate; and (3) children's being more practical than social mediators, such as parents or teachers, about using the technology. This explanation coincides with the example of Turkey in the EU Kids Online II 2010 project, as Kaşıkçı et al. (2014) stated that children are more active users than their parents. Both parents and children have baseless self-confidence about Internet usage and safety since they are unaware of their ignorance. An up-to-date and elaborate study is needed on this topic in order to understand and analyze the current situation.

1.3   Purpose of the Study

This descriptive study aims to analyze and evaluate the content of the publications authored by Turkish scholars and provide a holistic overview of the current research concerning children and their experiences in the digital era in Turkey. To guide kids for a safer Internet experience and to protect them against possible harm, scholars in different fields study children in the digital age. In this regard, this study aims to investigate the current state of the research studies and then explore the gap in the

literature between 2014 and 2020 and raise critical issues in the reviewed literature. For this purpose, by following the instructions and guidelines of the roof project, CO:RE Research and Evidence, publications were filtered according to publication year, publication type, research topic, age of the research group, scientific discipline, national scope, and language of publication.

1.4   Research Questions

1. What are the research topics that Turkish scholars study about "children online"?
2. What is the ratio for publications:
    2.1. obtained consent from children?
    2.2. considered ethical issues before doing the research?
3. What are the:
    3.1. research methods Turkish scholars used in their publications?
    3.2. scopes of the target group in the research area?
    3.3. sample sizes of studies?
4. What are the implications Turkish scholars provided for different social groups related to "children online"?

1.5   Significance of the Study

This study is a part of the Children Online: Research and Evidence project. CO:RE is a comprehensive, Europe-wide project, including more than 30 countries. Almost 40 members contributed to creating, executing, and managing this project. Besides this, there are national teams for over 30 countries. Each national team is responsible for the data for their own country. Therefore, this study will insight Turkey's current issues about children in the digital age, among other Europe countries.

Furthermore, this study aims to reveal the current issues about children accessing and using the Internet in Turkey. It aims to carry out a comprehensive study by collecting and analyzing studies in many fields such as medicine, social sciences,

information technologies, and education. It aims to provide a basis for further research studies in Turkey by approaching the studies in these fields with a holistic perspective. CO:RE project guidelines determined the research fields and the research scope. Analyzing children's Internet usage is complicated since (i) technology grows fast and (ii) children's technology use depends on parental mediation, social background, and political/economic status in the community. (Brikše et al., 2014).

Moreover, during the Covid-19 lockdown in 2020 and 2021, children in Turkey attended classes online. As a result, the number of the children in online environment increased to 98.6% (TÜİK, 2021b). Furthermore, the Internet usage habits of children have changed over time. Therefore, researching children who use the Internet is of great importance more than ever. In this aspect, studying children online in various subject fields from different geographical locations in Turkey with diverse social and economic backgrounds provided a broad perspective on the situation in Turkey. As a result, researchers can find the researched topics in this study and focus on missing or less studied topics in the literature. Policymakers, educational professionals, and other stakeholders from different fields can benefit from this research to take action so that children can have a more positive and safer Internet usage experience. Policymakers can read about the risks and implications and take action depending on the risks of the Internet. Educational professionals can identify the incompetence of children or parents by and take steps such as developing a curriculum, providing education, and engaging in educational activities for these inadequacies. Parents can see the relationship between social mediation and Internet usage habits and their results. They guide/support children and encourage them to be open throughout the Internet usage experience.

1.6   Limitations

Limitations to this research are as follows:

1. Studies published between 2014-2020 were included.
2. Publications authored by Turkish scholars and studies conducted partially or fully in Turkey were included.
3. Publications with publicly open access were included.

1.7 Definition of Terms

Publication is defined by Children Online: Research and Evidence project as a document in different formats, such as book chapters, and journal articles, to be used as a unit for analyzing online children (https://core-evidence.eu).

Study is "a piece of research that examines a subject or question in detail" (https://www.oxfordlearnersdictionaries.com). CO:RE project defined study as a broader context in which a publication is involved (https://core-evidence.eu).

Online children or children online are 0-18-year-old children who have access to the Internet and use it.

Mediation is a third-party intervention between two parties to facilitate resolution (https://www.oxfordreference.com). Social mediation in this study is parent, teacher, or caretakers as a third-party intervening (such as supporting, guiding, and restricting) between the Internet and children.

CHAPTER 2

LITERATURE REVIEW

2.1   Theoretical Framework

The present study has its base rooted in EU Kids Online Project. EU Kids Online was a Europe-wide project financially supported by European Union about children who use the Internet and the Internet's risks and opportunities (Livingstone et al., 2015). Therefore, in this study, the resources of the EU Kids Online project have been used extensively. Literature in this study was classified as Internet access, usage, and risks and opportunities. Hasebrink et al. (2008), in the EU Kids Online project, stated that children first need access to the Internet for negative or positive consequences Given the access, they should, secondly, use it. Later, children will either have a positive or negative experience on the Internet according to their use (Hasebrink et al., 2008; Staksrud, Livingstone, Haddon & Ólafsson, 2009). Therefore, by taking the EU Kids Online project as a model, the literature review in the present study was organized as in **Figure 2.1** below.

Figure 2.1 Theoretical framework diagram

2.1.1   Access

Children access the Internet at various places (school, home) with or without guidance (social mediation). In this section, literature related to Internet access and social mediation was covered.

The majority of 9-16-year old children in Turkey reported that they started to use the Internet at the age of 7-10 (Kaşıkçı et al., 2014). TÜİK (2021b) presents similar results for the average age of children starting to use the Internet in 2013 and 2021, 8.6 and 8.4, respectively. Nevertheless, the study conducted with 422 children aged 0-60 months old by Kılıç et al. (2019) revealed that nearly half of the children start to use mobile devices before 25 months old. In the same study, most parents whose education level was lower than higher education (e.g university, master's), reported that doctors did not inform them about how mobile device use would affect children. By examining the study of Kılıç et al. (2019), it is possible to say that children are exposed to technological devices at very early ages even before becoming literate. The most frequent reason why parents allowed their children to use mobile devices was to keep children busy when parents do housework (Kılıç et al., 2019).

In another study conducted by Erişti and Avcı (2018) with kindergarten children aged between 5-6 years old, half of the kids stated that children should not go online because the Internet is harmful, excessive use is unhealthy, and their parents might get angry at them. The other half, on the contrary, expressed that children should go online because they could play games and have fun (Erişti & Avcı, 2018).

A study was conducted with parents (Kılıç et., 2019), and another study was conducted with children (Erişti & Avcı, 2018) with two different points of view. On one side, parents claim not to be informed by pediatricians. On the other, side children express Internet usage as being unhealthy because parents may get angry. The common point in these two studies is the socioeconomic status of parents. Parents in both studies have a low level of income and education.

Turgut and Kurşun (2019) revealed that children between 9-12 years old mostly go online by using tablets, and children between 13-16 years old most frequently use a smartphone to go online. Moreover, those children mostly prefer to go online at home, either in or out of their own bedroom. 42.2% of 9-16 children went to Internet cafés for Internet usage. It was reported that nearly half of the children preferred to go online at Internet cafés, and children who use the Internet at home were about the

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same (52%) (Haddon et al., 2012). Comparing the results stated by Turgut and Kurşun (2019) and Haddon et al. (2012), it can be said that children who went to Internet cafés dropped gradually over the years. Even though there is no statistical evidence, due to the Covid-19 lockdown in 2020 and 2021, this percentage is expected to be decreased even more. To conclude, as the advancement of technology proceeds and the world agenda changes, Children's habits of accessing the Internet will be shaped as well.

2.1.2   Usage

Accessing the Internet comes with a purpose of use. In Turkey, children's purpose for Internet usage is highest for participating in online classes and for homework and learning. Children between 11-15 years old often use the Internet for messaging, making voice/video calls, playing/downloading games, spending time on social media, and downloading/listening to music (TÜİK, 2021b). These purposes differ for children 6-10 years old. In **Table 2.1**, the purposes of Internet use were presented for children between the ages of 6-15 years old.

Table 2.1 Children's purpose for Internet usage

	6-10 years old	*11-15 years old*
Participating in online classes	85.6%	86.7%
For homework or learning	79.3%	87.4%
Social media	9.5%	51.0%
Sending/receiving e-mails	5.1%	26.7%
Messaging	35.2%	73.1%
Making voice/video calls	42.7%	67.1%
Playing/downloading games	66.3%	66.0%
Uploading content (text, photo, music, software)	10.8%	27.2%
Listening to/downloading music	37.7%	63.1%

Table 2.2 Children's purpose for Internet usage (Continued)

	6-10 years old	*11-15 years old*
Watching TV over the Internet	13.4%	25.3%
Searching for health information	7.1%	33.3%

Note. Adapted from "Çocuklarda Bilişim Teknolojileri Kullanım Araştırması, 2021" by TÜİK, 2021.

Even if these rates are low, 9.5% of children between 6-10 years old use social media (TÜİK, 2021b). Most social media platforms, such as Facebook, Twitter, and Instagram, have age restrictions. Furthermore, in a study, children under 13-year-old were found to have a Facebook account by 53%, and most parents stated that they did not know the appropriate age to have a Facebook account (Dinleyici, Carman, Ozturk & Sahin-Dagli, 2016) even though age restriction for each social media platform was written on Terms and Policies page. This indicates a lack of digital literacy among parents. Kaşıkçı et al. (2014) support this claim by stating that parents' self-confidence concerning their digital literacy is higher than it really is by comparing online risks faced stated by children and the perception of these risks by parents'. Similar results regarding children under 13-year-old using social media were found in other studies (Kaşıkçı et al., 2014; Turgut & Kurşun, 2019). The study by Turgut and Kurşun (2019) revealed that children between 9-10-year-old use Facebook at 62.8%, and children between 11-12-year-old use Facebook at 79.6%.

Children's Internet usage purposes may differ according to their academic success. It was found out children with low GPAs were more likely to use the Internet as a spare time activity and children with higher GPA scores were more likely to go online to seek information (Demirer & Bozoglan, 2016). Furthermore, Özgür (2016) expressed that there was a relationship between parenting style and children's Internet usage. The results of his research showed that parenting styles differ by children's gender and age. Parents were authoritative with girls and younger children. Parents were concerned more about the content on the Internet; therefore,

they monitor their children's activities by mostly checking web browser history and being physically around the room (Özgür, 2016).

To conclude, children's purpose of Internet use depends on many factors such as child's age, academic success and parenting styles. Internet access, usage, and consequences are linked to each other. Accessing conditions may affect Internet usage style, and therefore, Internet usage styles may affect consequences. In a study, children's information disclosure tendencies were examined (Islim, Cagiltay, Kaşıkcı, Kursun & Karakus Yılmaz, 2017). Most of the children shared their personal information on their social media accounts. They reported accepting contact invites from strangers, and most of them did not read privacy guides. Every unaware action of children may have a domino effect in the next phase of going online, which is consequences.

2.1.3 Consequences

Using the Internet leads to some consequences naturally. It can be both beneficial and risky depending on the context in which access to the Internet, digital literacy skills, and purpose of use. Parents and children admit that children can benefit from the Internet as a provider of global information and educational resources (Hasebrink et al., 2008). In Turkey, children expressed that they use Internet for school or homework (Kaşıkçı et al., 2014, TÜİK, 2021b). However, in a different research study by Turgut and Kurşun (2019), it is found that children use the Internet for fun more than for school and homework.

Moreover, in a survey by TÜİK (2021b), 6-15-year-old children in Turkey were asked about situations caused by their time spent on a screen. Over one-third of the children (35.9%) thought they read books les. One-third of the children (33.5%) thought they studied less. Slightly over one quarter thought they spend less time socializing, that is, spending less time with their family (27.7%) and with their friends (25.4%). Lastly, 17.2% of the children thought they slept less. In the same

survey, children's opinions were asked about playing digital games. Almost half of the children (47.3%) said that they play digital games more than they plan to. 42.6% of the children expressed that playing digital games causes them to neglect their responsibilities. Slightly under one-third of the children (28.0%) feel restless and unhappy when they do not play digital games. Children may seem to be aware of the consequences of going online. Yet, the question arises; "are they, though?". If they are aware of the results of using the Internet, why do children spend time on the Internet and not avoid health problems, socialize with parents and friends face-to-face, or take their responsibilities seriously? Unfortunately, these consequences revealed by the Turkish Statistical Institute are what children can observe in their daily life, and are not afraid of talking about, which are more like the tip of an iceberg. The Internet can bear greater risks without guidance and in lack of awareness, or it can be a bridge to learning and self-improvement. In the following two sections, these possible consequences, referred to as risks and opportunities, were discussed.

2.1.3.1 Risks and Harm

Online risks are associated with many factors such as digital literacy level, social mediation, the purpose of Internet usage, and the place that is being connected to the Internet. Those factors were discussed above in 2.1.1 Access and 2.1.2 Usage. Risks do not always result in harm (Hasebrink et al., 2008; Livingstone et al., 2011; Kaşıkçı et al., 2014). The risk level depends on the person's perception. That is, risks will always exist; however, it is important how children react to risks. In the EU Kids Online project, risk incidence in Turkey was found to be lower than in other countries in Europe (Haddon et al., 2012). Recalling the service report by BTK (2020), the report number for harmful and illegal content was over 132.000 in the year 2020. Here, a conflict arises. There may be several reasons for the conflict. First, for a risk occurrence, there should be first Internet access and usage. The Internet access rate in Turkey in 2012 was lower than in 2020. Furthermore, the conflict may still be

present regardless of the years. It should not be forgotten that risk factors and incidents were assessed according to declarations by children. Therefore, the reliability of these declarations is questionable for two reasons: (1) children may not be informed about the risks and, therefore, may not be aware of the risks, and (2) children may be refrained from talking about their negative experiences on the Internet because of peer pressure, threats, or fear.

Risks on the Internet can be encountered in various forms, yet, they do not necessarily turn out to be harmful to children (Hasebrink et al., 2018; Livingstone & Haddon, 2012). In the EU Kids Online project, Hasebrink et al. (2008) classify risks as content, contact, and conduct. The table below summarizes the classification.

Table 2.3 Online risks classification

	commercial	aggressive	sexual	values
Content – child as recipient	Advertising, spam, sponsorship	Violent/hateful content	Pornographic or unwelcome sexual content	Racism, biased or misleading info/advice (e.g. drugs)
Contact – child as participant	Tracking/ harvesting personal info	Being bullied, stalked or harassed	Meeting strangers, being groomed	Self-harm, unwelcome persuasion
Conduct – child as actor	Gambling, hacking, illegal downloads	Bullying or harassing another	Creating and uploading porn material	Providing advice e.g. suicide/ pro-anorexic chat

Note. Reprinted from "EU Kids Online - Comparing children's online opportunities and risks across Europe: Cross-national comparisons for EU Kids Online" by U. Hasebrink, S. Livingstone, & L. Haddon, 2008, p.9.

As seen in the table above, content on the Internet or misconduct against/by children may cause harm to mental or physical health. Literature about risks in this study was organized according to **Table 2.3** since risk, in general, is a broad term.

A content-related risk occurs basically when a child is exposed to content on the Internet, such as, disturbing images, videos, and ads (Hasebrink et al., 2008; Staksrud et al., 2009). Children reported being bothered mostly by pornographic images/videos (22%) and violent content (18%) (Livingstone, Kirwil, Ponte & Staksrud, 2013). In the EU Kids Online Turkey report by Haddon et al. (2012), children in Turkey, 15% (average for Europe, 18%) were found to have visited websites with harmful content such as suicide and anorexia. Another finding written in this report is that children who were exposed to pornographic images by 13% percent. Even though this percentage was higher in Europe, children in Turkey were more bothered than the Europe average. For this reason, Haddon et al. (2012), considering the Internet usage and risk incidents regarding content-related problems, classified Turkey as 'lower use, some risk'. Since 2012, the Internet usage level by young children has increased in Turkey (TÜİK, 2021b). Therefore, the risk level is expected to be increased.

Contact-related risks arise when someone contacts a child maliciously, for example, cyberbullying, sexual abuse, and persuasion for self-harm (Hasebrink et al., 2008; Staksrud et al., 2009). Koçtürk and Yüksel (2018) conducted a study on sexually abused children who met their abusers online in which victims of online abusers conspicuously came from low-level income families. Findings from this study show that online flirtation or online sexual abuse may proceed to face-to-face meetings, which, as a result, unfortunately, abuse may be carried over to the physical dimension. Regrettably, a substantial number (11.1%) of victims were found to be pregnant (Kocturk & Yuksel, 2018). In a case report about grooming, two 13-year-old girls shared their experiences of being abused with each other (Çıkman, Salman & Çalışkan, 2017). After the victims told their families about the incident, the abuser was caught, and it was later learned that the number of victims was, in fact, 8. These victims were 'lucky' enough to have each other to share their stories because children

are more likely to talk to their peers when bothered by something on the Internet (Hasebrink, Görzig, Haddon, Kalmus & Livingstone, 2011).

Another contact-related risk is being cyberbullied. Cyberbullying is similar to offline bullying and is the act of harming someone with the intention of using technology as the medium (Burgess-Proctor, Patchin & Hinduja, 2010; Erdur-Baker & Kavşut, 2007). Disrespecting, name-calling, insulting, threatening, or revealing one's secret online is considered cyberbullying. Children may have different motives for cyberbullying someone. They reported mostly interpersonal reasons for cyberbullying, such as holding a grudge at someone (Erdur-Baker & Kavşut, 2007) andgetting back at the person who bullied them (Görzig, 2011). Uludasdemir and Kucuk (2019) stated that access to the Internet, social media use and family's socioeconomic demographics have an effect on cyberbullying experiences of children.

Conduct-related risks are similar to contact-related risks, as discussed above, cyberbullying, harassing, or abusing someone. Children are not always the victims; cyberbullied children tend to bully others (Görzig, 2011; Erdur-Baker & Kavşut, 2007). Children reported that they bullied others by 3%, sent hurtful messages to others by 3%, and sent sexual messages/images to others by 3%. (Livingstone et al., 2011).

Regardless of the type of risks, parents are not always aware of the incidents (Uludasdemir & Kucyk, 2019; Kaçıkçı et al., 2014; Livingstone et al., 2011). The reason for that is that children prefer to share their experiences with their peers rather than with their parents (Hasebrink et al., 2011). Communication is one way to cope with online risks. Facing the risks, children in Europe reported coping with the online risks in three ways; (1) staying passive, (2) sharing with others, and (3) proactively trying to solve the problem (d'Haenens, Vandoninck & Donoso, 2013). The most used coping strategies among children were to delete unwanted content/messages and block the sender.

Internet does not always lead to a dark path, as mentioned above in 2.1.3.1 Risks and Harm. It should not be forgotten that children use the Internet for schoolwork (TÜİK, 2021b; Gökçearslan & Seferoğlu, 2016; Haddon, 2012).

2.2   Summary

Connecting to the Internet may seem to be risky, as it was explained in this section. However, it is essential to understand that it is a natural outcome of having access to and using the Internet. The answer to the questions "what is the advantage of the Internet?" and "what is the disadvantage of the Internet" is the same, which is "you can find anything on the Internet." Having a positive or negative experience on the Internet is up to the person who makes use of it.

In the reviewed literature, the geographical research scope of most studies was local or regional. This study aims to cover children from different regions of Turkey. As a result of this, the results of this study can be an umbrella covering children from different regions to point out the issues in Turkey.

The aim of this study is to analyze the reviewed literature and publications collected for this research. Rather than just analyzing the literature, it is also important to make a connection between them from a broad perspective. Therefore, the results of this study can be a guide for researchers by pointing out the less researched topics in the field.

CHAPTER 3

METHODOLOGY

3.1   Research Design

The current study aims to analyze and evaluate the content of the publications authored by Turkish scholars and provide a holistic overview of the current research concerning children and their experiences in Turkey. This study originated as a part of CO:RE project. CO:RE project is a Europe-wide study financially supported by European Union. The aim of this project is to collect publications across Europe in order to form a knowledge database about the studies which researched children who go online in the digital age. Every country involved in this project is responsible for collecting and coding the data within the national scope. Turkey took place in CO:RE project with Middle East Technical University in the lead of Prof. Dr. Kürşat Çağıltay. The Turkish national team coders were Dr. Ayşe Gül Kara Aydemir and Ayşe Şeyma Kaymak. National coders were responsible for collecting publications and coding them into CO:RE database. In order to code the data into CO:RE database, it was required to review through the text and extract necessary information from the text. Most of the semantically inferable areas in the coding forms were selectable and classifiable. Therefore, as a part of the CO:RE project, this study naturally led to being analyzed by frequencies and percentiles. For basic text analysis -such as keywords, research topic, and implications, content analysis technique was conducted. Krippendorff (2004) defines content analysis as an empirically grounded research method that takes meanings seriously and intends to predict or infer within their own context. Krippendorff (2004) states that content analysis should produce replicable and valid inferences from a text by unitizing sampling, coding, and context. CO:RE project team organized and formed sampling instructions, coding schemes, and the context in a very well comprehensive manner in order to unify all

the data across Europe countries. To conclude, this present study is a descriptive study that uses content analysis as a supportive methodology.

3.2   Collecting Data

Literature was reviewed in Web of Science, Scopus, PubMed, and Dergi Park databases, and ResearchGate and Academia.edu academic platforms. Web of Science, Scopus, and Dergi Park databases cover all the project topics. PubMed database was used to review literature, especially for wellbeing and risk and harms topics authored by pediatricians. Searching was made by using topics and subtopics shared by EU Kids Online Project as keywords. Publications were searched with following keywords 'children', 'adolescent', 'kid', 'young adult', 'digital', 'digital literacy', 'digital content' 'Internet', 'Internet safety', 'Internet usage', 'social network', 'parental mediation, 'online', 'cyberbullying', 'online sexual abuse', 'e-learning', 'online learning', 'online education'. 177 publications were found with these keywords. Within the scope of the CO:RE project, publications between 2014 and 2020 were included. 2 of the included studies were published in 2021. Since the coding process took place in 2021, studies published in 2021 with a strong scientific base were allowed by CO:RE project guidelines. The reselection process was applied to publications by reviewing abstracts and keywords. As suggested in the project guideline, coders of the national teams should select the best studies, not everything. 'The best' here is the publications that meet the criteria given in the guideline and have a strong scientific background. For this purpose, publications related to the project were saved for a detailed elimination process. The elimination process was explained in the Data Selection Criteria section.

3.3   Data Selection Criteria

Publications were evaluated according to CO:RE project guideline (https://core-evidence.eu). In the guideline, detailed information is given about searching,

collecting, and selecting. As stated in the CO:RE project guideline, publications must be available to public access cost-free. Inclusion criteria are listed below.

1.   Topic: Publications should be about children in the digital age that is related to children directly or indirectly on online platforms. Eleven main topic categories branch into subtopics. The detailed topic list provided by the project is given in the appendix (see Appendix A Topics and Subtopics).

2.   Children's age: Preferably, children's age in the research should be between 0 and 18. Research aiming at individuals between 19-24 years old is accepted as in young adult classification. If children and young adults are included in the research group, individuals of all ages can be included in the research group.

3.   Year range: Research published between the years 2014 and 2020 is selected as project data. Nevertheless, research published back in the years 2010-2013 and 2021 is also accepted if it lays on a strong scientific framework. Here, a strong scientific framework' means a study:

a)   With a clearly stated research goal,

b)   Having a strong methodology,

c)   Written with formal academic language,

d)   Published in a peer-reviewed journal.

4.   National Scope: For a study to be considered national, three criteria apply. Research should be conducted fully or partially in Turkey. The main responsible author should be Turkish, and the language of publication can be either Turkish or English -in order for the national project data coders to contribute more effectively and to make a fair decision.

5.   Publication types: Journal articles, books, book chapters, conference proceedings, reports/working papers, short reports, and published Ph.D. theses are accepted in the project.

Despite meeting the criteria explained above, a publication might have been excluded for the criteria given below. Data exclusion criteria are as follows:

1.   For journal articles being published in a non-peer-reviewed journal

2.   Been published in a journal with questionable reliability:

   a.   Having a web interface with ads

   b.   Not disclosing publication policy

   c.   Being newly founded.

3.   Been written with a non-academic language (deducing especially from adverbs and adjectives used in the publications, e.g. 'tiny difference'/'ufak fark')

3.4   Coding Data

Each selected data was coded in two separate forms called 'publication' and 'study' into the database of the CO:RE project. In the project guideline, it is stated that a publication has a one-to-one relation with a study; however, a study can have one-to-many relation with publications. That is, more than one publication can be attached to one study, and a publication can only have originated from a study. Therefore, studies and publications are coded separately. Coding fields for publication are given in Appendix B, and coding fields for study are given in Appendix C. Publications were skimmed through to extract information to fill related areas in the forms.

3.5   Reliability

Stemler (2000) states that in a content analysis method, there are two reliability issues which are (1) coding instructions should be written explicitly so that different coders should (2) code the data in the same way. In this study, data were coded in the CO:RE project database. Coding areas were created by the project team,

including professors Europe wide, regardless of this study. The instructions for coding were clear and organized.

Reliability for this study is an issue that may be mainly caused by the coders of data. However, collected publications were filtered as the following: (1) main list, (2) backup list-1, (3) backup list-2, and (4) not accepted list. Publications to be coded were selected from the first list, the main list. These categories were created with an expert who holds PhD degree in the field of Instructional Technology, and all publications were filtered with the same expert again. Publications that met all the criteria of the CO:RE project and did not have any of the exclusion criteria were added to the main list. Publications that met all the inclusion criteria but have low relevancy to the research topic were added to the backup list-1. Publications that met all the inclusion criteria but did not have a strong scientific background were added to the backup list-2. Publications that did not meet one or more of the inclusion criteria were added to the not accepted list. Since the number of collected publications in the main list was 68 -a number that the CO:RE project team advised to keep in between 30-100, publications from backup lists were not used in this study. Publications were read before coding in order to understand content in the context of CO:RE project and this study. Later, data were coded to the database via the project forms (see appendices B and C). The coding process was as the following:

1. If the information to be entered in the field to be filled was uncertain, the data fields were coded by consulting with the instructor doctor.
2. When there were more than two ambiguous data fields to code, these fields were taken over by the instructor doctor to be coded into forms.
3. For the publications where the instructor doctor was uncertain about the coding process, the communication author of the publications was reached for information.

Before analysis, data were copied to an Excel sheet manually. After the copying process, each row was compared with the coded form on the project database. Errors, typos, and suspicious entries were checked during this phase. Irrelevant and/or

incorrect data coding was meant by suspicious entry. For instance, '11. Main research focus and goals of the study' area for two studies were incorrectly coded. Instead of entering the study purpose, the results of the studies were written. Such coding errors caused by the coder were corrected by reviewing the Excel sheet before analysis. Furthermore, when coders had difficulties identifying and/or extracting the necessary information, they contacted the authors of publications for accurate and correct information.

Another issue for reliability may be deploying irrelevant analysis methods. To avoid this issue, analyses were conducted under the supervision of an instructor doctor. Analysis results were checked by an instructor and a professor.

3.6   Validity

To ensure validity in content analysis, Potter and Levine-Donnerstein (1999) suggest a two-step process.

1. developing a coding scheme to guide coders so that coders stay true to focal points

2. assessing the coder's decision-making according to standards.

The first step for this study was conducted by the CO:RE project team. The CO:RE team not only developed a coding scheme but also gave online training to national teams before the coding process started.

The second step was partially controlled by the CO:RE project team and partially by an instructor doctor in the Turkish national coding team. The CO:RE project team arranged online meeting sessions to follow the progress and check the coding process after the coding process started. The expert in the Turkish national team was consulted during the data coding process, and then coded data was again checked by the expert.

For more information about the CO:RE project team and their roles in the project concerning validity issues, please see: https://core-evidence.eu/about-core#our-mission.

3.7 Analyzing Data

Coded data were transferred to IBM SPSS Statistics 28 for analysis. For each research question analysis method is given in **Table 3.1** below.

Table 3.1 Research questions and their analyses

	Research Question	Data Source	Data Analysis
1	What are the research topics that Turkish scholars study about "children online"?	Topic, keywords	Frequency & Text analysis
2	What is the ratio for publications that obtained consent from participants and considered ethical issues before doing the research	Research method, consent status, ethical approval	Crosstab
3	What are: • The research methods Turkish scholars used in their publications? • The scopes of the target groups in the research area? • The sample sizes of studies?	Type of study, methodology, researched group, children's age, sample size, research method	Crosstab, Frequency
4	What are the implications Turkish scholars provided for different social groups related to "children online"?	Implications	Frequency & Text analysis

3.8   Limitations

This study includes publications (1) between the 2014-2020 years, (2) authored by Turkish scholars, and studies conducted partially or fully in Turkey, and (3) with publicly open access.

Except for this guideline, the CO:RE project team advised the national coders to keep the number of publications between 30-100 in order to balance the number of publications between countries to make analyses and interpretations in a consistent way.

CHAPTER 4

RESULTS

For this research, 177 publications were collected. 109 of them were excluded, and 68 publications were selected to be coded. Two of the 177 publications were excluded due to publication type. One of them was a master's thesis, and the other one was an undergraduate thesis. 14 journal articles, 4 conference proceedings and, one report/working paper were excluded due to the year range criterion. 8 journal articles and one conference proceeding were excluded due to not having a strong scientific framework. Two journal articles were repetitive of excluded publications, and 16 journal articles were repetitive of coded publications. One journal article was excluded due to the age range of the sample. 29 journal articles, one conference proceeding, and one report/working paper were excluded due to weak relevancy to the research. 25 journal articles, 2 report/working papers, and 2 conference proceedings were excluded for not being reliable.

Table 4.1 Excluded publications

	Journal Article	Conference proceeding	Report and working paper	Book Chapter	PhD Thesis	Masters Thesis	Undergrad Thesis
Publication Type						1	1
Year	14	4	1				
Scientific Framework	8	1					
Repetitive Data	18						
Age Range	1						
Relevancy	29	1	1				
Reliability	25	2	2				
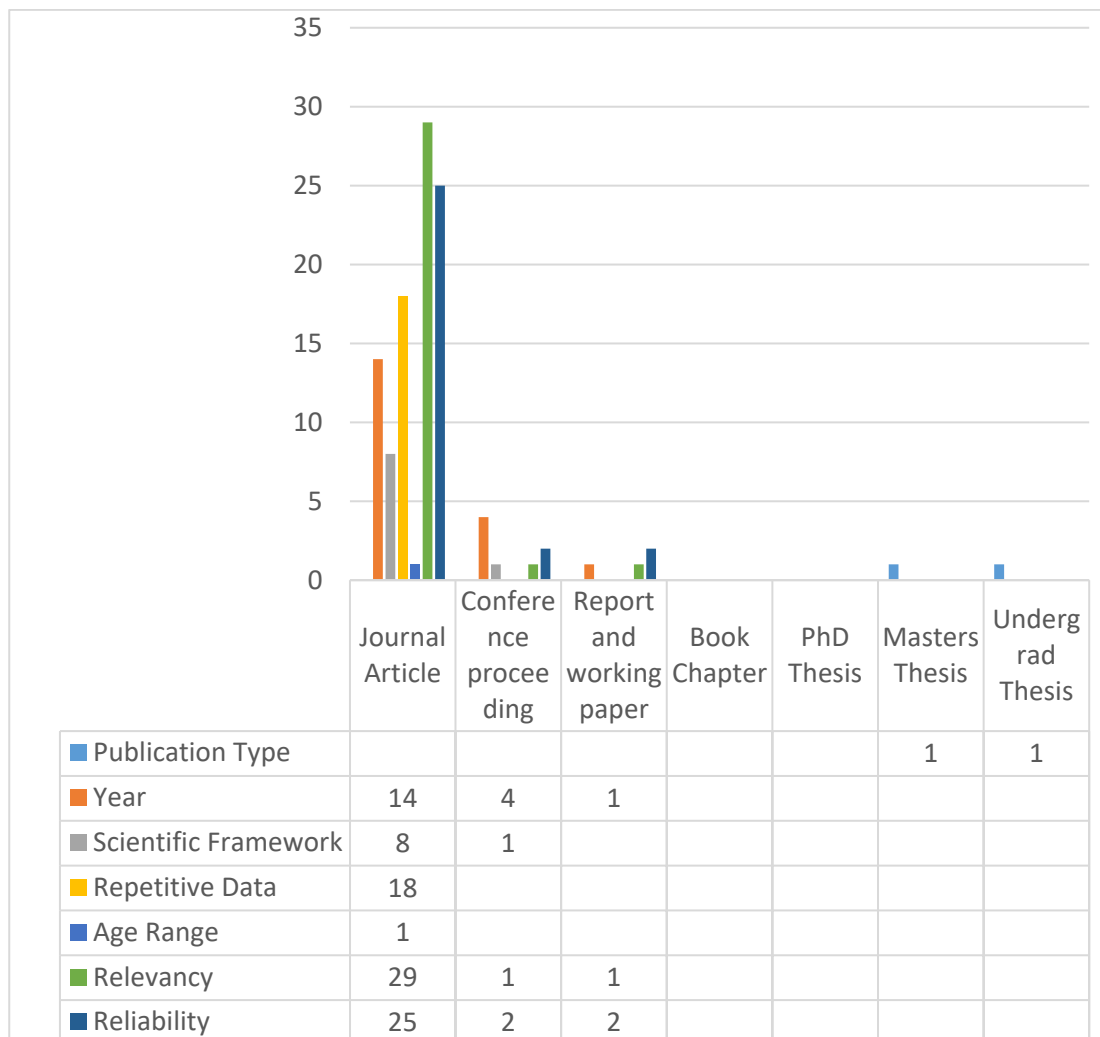
4.1 Publications Demographics
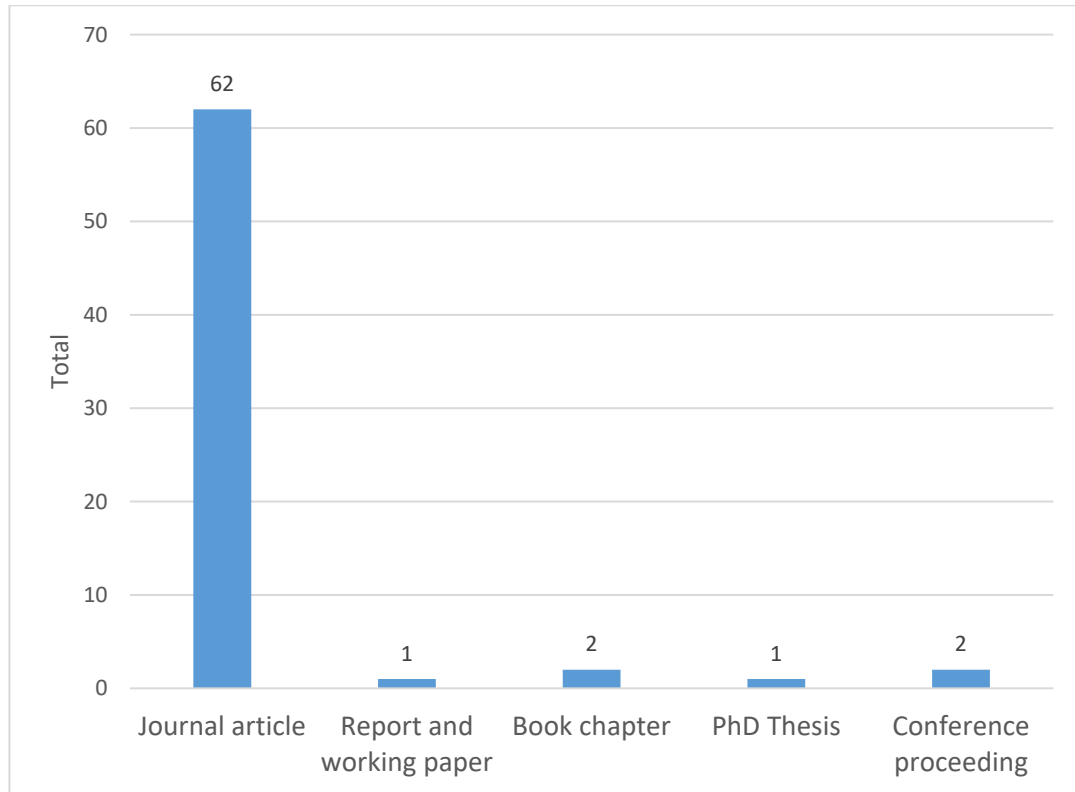
Figure 4.1 Types of publication

Figure 4.1 shows the number for each type of publication. In the collected data, journal articles outnumbered other types of publication by n=62. The numbers of book chapters (n=2) and conference proceedings (n=2) are the same as it is the same for the report and working paper (n=1) and Ph.D. Thesis (n=1).

The distribution of publication types over the years is given in Table 4.2

Table 4.2 Distribution of publication types by years

		2014	2015	2016	2017	2018	2019	2020	2021
Book Chapter									
	f	2	0	0	0	0	0	0	0
	%	100	0	0	0	0	0	0	0
Conference proceeding									
	f	0	0	2	0	0	0	0	0
	%	0	0	100	0	0	0	0	0
Journal Article									
	f	5	2	12	7	9	16	10	1
	%	8.06	3.23	19.35	11.29	14.52	25.81	16.13	1.61
Ph.D. Thesis									
	f	0	0	0	0	0	0	0	1
	%	0	0	0	0	0	0	0	100
Report and working paper									
	f	0	0	0	1	0	0	0	0
	%	0	0	0	100	0	0	0	0
Total									
	f	7	2	14	8	9	16	10	2
	%	10.29	2.94	20.59	11.76	13.24	23.53	14.71	2.94

Most of the collected data was published in 2019 by 23.53%, followed by years 2016 by 20.59%, 2020 by 14.71%, 2018 by 13.24%, 2017 by 11.76%, 2014 by 10.29%, and 2015 and 2021 by 2.94%.

Demographics of publication were given in **Figure 4.1** Types of publication and **Table 4.2** Distribution of publication types by years. Results of the research questions were given separately.

Research Question (RQ)-1: What are the research topics that Turkish scholars study about "children online"?

To analyze this question, topic and keywords fields were used.

The topic of a publication was identified by reading through the publication title, keywords, abstract, method, and results. Certain topic identifier words were sought during the readings. Those identifying words are listed in Appendix A – Topics and Subtopics. For instance, if a publication is about purposes and habits of Internet usage and also Internet addiction, the publication falls under both 'wellbeing' and 'Internet usage, practices, and engagement' topic categories.

Categories for keywords were formed by taking CO:RE project topic categories as a base. For keywords that are not relevant to the table provided by the project team, new categories were created. For example, in some publications study method was used as a keyword; therefore, a new category was created for these keywords.

Furthermore, implications for various social groups were examined under this research question, as implications were considered as issues raised by authors. Implications were extracted from the discussion, conclusion, and, if it exists, recommendation section of publications. Implications were mainly related to the research topic and based on the gap in the fields. Therefore, implications were evaluated as an indicator of critical issues raised by the authors.

Topics

Every publication is related to at least one topic determined by CO:RE project team. There are eleven main topics. Subtopics were listed under each main topic to guide coders while doing research for relevant content. Subtopics were used as keywords while searching publications for the project. In the coding process, main topics were entered into the form. Data for the topic area were arranged as one cell to include only one topic value. Multiple topics of a publication were counted separately; therefore, the total count of topics is higher than the total count of coded publications. Later frequency of topics was analyzed and presented in **Figure 4.2**.
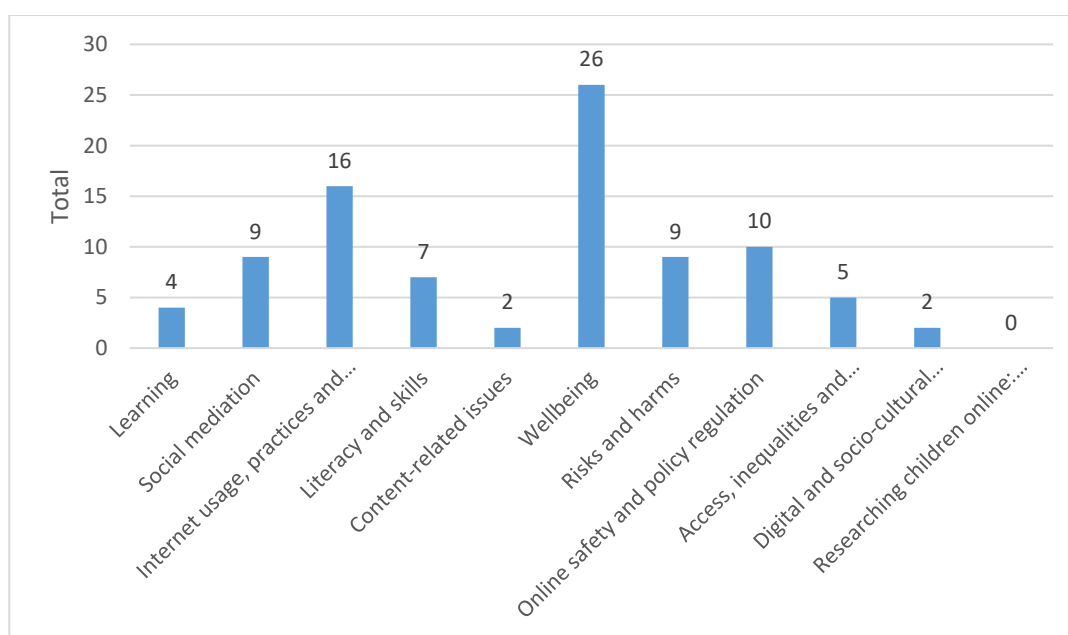
Figure 4.2 Total counts of publication topics

Note. One publication can be related to more than one topic; hence the sum exceeds the total publication count.

Figure 4.2 represents the frequency of topics researched in publication. The most frequently studied topic is wellbeing (n=26), followed by Internet usage, practices and engagement (n=16), online safety and policy regulation (n=10), social mediation (n=9), risks and harms (n=9), literacy and skills (n=7), access, inequalities and vulnerabilities (n=5), learning (n=4), content-related issues (N=2), and digital and socio-cultural environment (n=2).

Keywords

The keywords of the publications were listed in an Excel sheet. Two of the publications did not have keywords. Keywords for these were created by the coder by choosing the most conspicuous and summative words. The keyword count for 68 publications in total was 300. All the keywords were reviewed twice before categorizing them. Categories were created based on CO:RE projects topic category list; however, they were not solely dependent on this list. Keyword categories are semantically more specific to the content. For example, there are 'risks' and 'online

sexual abuse/extortion' categories. 'Internet risks, risk' keywords were categorized under 'risks'. 'Sexual abuse, sexual extortion' keywords were categorized under 'online sexual abuse/extortion' even though these keywords were under the 'risks and harm' topic category in CO:RE project guideline. Keywords causing confusion, seeming as can be categorized under two or more categories, were evaluated in the context of the publication. Therefore, keywords in their own context can be and were classified under one category only. As a result, there is no repetitive keyword value in this analysis. Keyword analysis results are presented in the following figure.
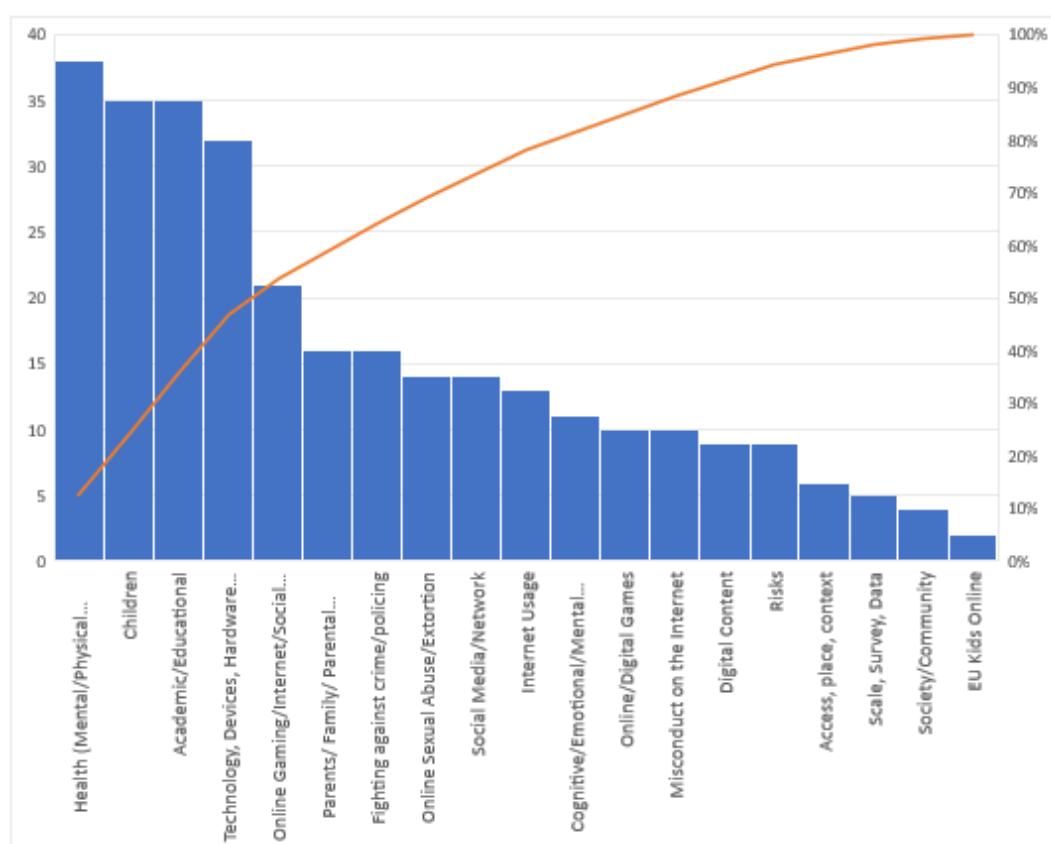
Figure 4.3 Keyword usage in the publications

Most of the keywords were related to Health (Mental/Physical/Psychological/Social) category with n=38, 12.67%, followed by Children (n=35, 11.67%), Academic/Educational (n=35, 11.67%) and Technology, Devices, Hardware Infrastructure (n=32, 10.67%) categories.

RQ-2: What is the ratio for studies that obtained consent from participants and considered ethical issues before doing the research?

To analyze these research questions, data were examined by considering study methodology, ethical approval, and consent status. Consent or ethical approval may not be required by the nature of the study. For this reason, to make a better judgment, consent and ethical approval were evaluated dependent on the study methodology. Consent may be obtained from participants, guardians of participants if applicable, school administration, and/or official institutions. Ethical approval, on the other hand, must be obtained from a committee. Reaching this information in the publications was not always a direct path. Depending on the publication, this information was found in different sections, such as, mostly in methodology, sometimes in findings/results, or in additional notes at the end of the publication, depending on the journal. Therefore, in order not to miss any information, publications were skimmed carefully. Results are presented in the tables below. In the first table, results were given separately. In the second and third tables, ethical approval and consent results were given in combinations.

Table 4.3 Ethical approval & Consent

	Ethic. Apr'd	Ethic. pro. not ment'd	Cons. not ment'd	Cons. Obt'd	No Cons. Need.
Empirical research – Quantitative	24	16	16	23	1
Empirical research – Qualitative	0	9	6	1	2
Empirical research – Mixed methods	1	4	4	1	0
Systematic review / Meta-analysis	4	0	0	0	4
Empirical research – Experiment/Intervention	0	4	4	0	0
Other	5	1	0	0	6
Total	30	38	30	25	13

Note. Ethic. Apr'd: ethically approved, Ethic pro. not ment'd: ethical process not mentioned, Cons. not ment'd: consent not mentioned, Cons. Obt'd: consent obtained, no cons. need.: no consent is needed.

As seen in **Table 4.3**, 30 studies out of 68 have ethical compliance. That is, they were ethically approved by a committee, or they did not require ethical approval and comply with ethical rules due to the nature of the study. 25 studies out of 56 which required consent from participants obtained consent. 31 of 68 studies did not mention consent, and 12 of 68 studies did not require consent due to study methodology.

Table 4.4 Ethically Approved & Consent Status

	Ethically Approved		
	Consent Obtained	Consent not mentioned	No consent needed
Empirical research – Quantitative	18	5	1
Empirical research – Qualitative	0	0	0
Empirical research – Mixed methods	0	1	0
Systematic review / Meta-analysis	0	0	4
Empirical research – Experiment/Intervention	0	0	0
Other	0	0	5
Total	18	6	10

In **Table 4.4**, it is observed that 18 of the ethically approved studies obtained consent from the participants, and 10 of the ethically approved studies did not require any consent from the participant. However, 6 of the ethically approved studies did not mention consent status even though the methodology required consent from participants.

Table 4.5 Ethical Process Not Mentioned & Consent Status

| | Ethical Process Not Mentioned | | |
	Consent Obtained	Consent not mentioned	No consent needed
Empirical research – Quantitative	5	11	0
Empirical research – Qualitative	1	6	2
Empirical research – Mixed methods	1	3	0
Systematic review / Meta-analysis	0	0	0
Empirical research – Experiment/Intervention	0	4	0
Other	0	0	1
Total	7	24	3

Table 4.5 shows whether researchers obtained consent or not. 24 of the studies which did not mention the ethical approval process did not mention obtaining consent from the participants either. 7 of the studies obtained consent and did not mention the ethical process. 3 of the studies did not require consent from participants and did not mention the ethical process. Consents were obtained from different groups. These groups are given in Table 4.6.

Table 4.6 Groups consent obtained from

	f	*%*
Children	15	37.5
Parents	14	35
School officials/principals	4	10
Teachers/caretakers	2	5
Other	5	12.5
Total	40	100

Some of the studies obtained consent from two or more groups. Therefore, the total number of groups in **Table 4.6** is more than Consent obtained number in **Table 4.3**. Researchers mostly obtained consent from children (n=15, 37.5%) and parents (n=14, 35%). The number of other groups whose consents were obtained is as follows: other (such as Provincial Education Directorate, Ministry of National Education, or legal guardians) n=5, 12.5%, school officials/principals n=4, 10%, and teachers/caretakers n=2, 5%.

RQ-3: What are the:

- research methods Turkish scholars used in their publications?

- scopes of the target group in the research area?

- sample sizes of studies?

This research question was analyzed with the frequency of the type of study and methodology areas in the database. The result of this research question is presented in the table below.

Table 4.7 Research methods depending on the type of study

Type of study	f	%	Methods	f	%
Empirical research – Quantitative	40	58.82	Survey	39	51.32
			Interview*	1	1.32
			Other	1	1.32
Empirical research – Qualitative	9	13.24	Other	2	2.63
			Case study	2	2.63
			Textual / documentary / content analysis;	3	3.95
			Participatory	1	1.32
			Interview	2	2.63
Other	6	8.82	Other	5	6.58
			Media diaries	1	1.32
Systematic review / Meta-analysis	4	5.88	Other	3	3.95
			Textual / documentary / content analysis	1	1.32
Empirical research – Mixed methods	5	7.35	Focus group	1	1.32
			Interview	3	3.95
			Case study	2	2.63
			Survey	5	6.58
Empirical research – Experiment/Intervention	4	5.88	Experimental / Quasi-experimental	4	5.26
Total	68	100	Total	76	100

Note. * This interview technique was used as a supportive technique to the main Survey method.

The most frequently used research genre was quantitative, and the most deployed method was by far Survey with 57.9% (sum of survey methodology in both quantitative and mixed type of studies) among all studies.

Table 4.8 Distribution of researched groups

	f	*%*
Children	57	72.15
Parents	11	13.92
Teachers/Educators	2	2.53
Policymakers	5	6.33
Other practitioners working with children	2	2.53
Individuals (whole population, children included)	2	2.53
Total	79	100

More than one group may have been examined in a study. The most studied group was children (n=54, 74.05%). Other examined group is parents (n=11, 14.47%), policymakers (n=5, 6.58%), teachers/educators (n=2, 2.63), other practitioners working with children (n=2, 2.63%), and individual (whole population, children included) (n=2, 2.63%).
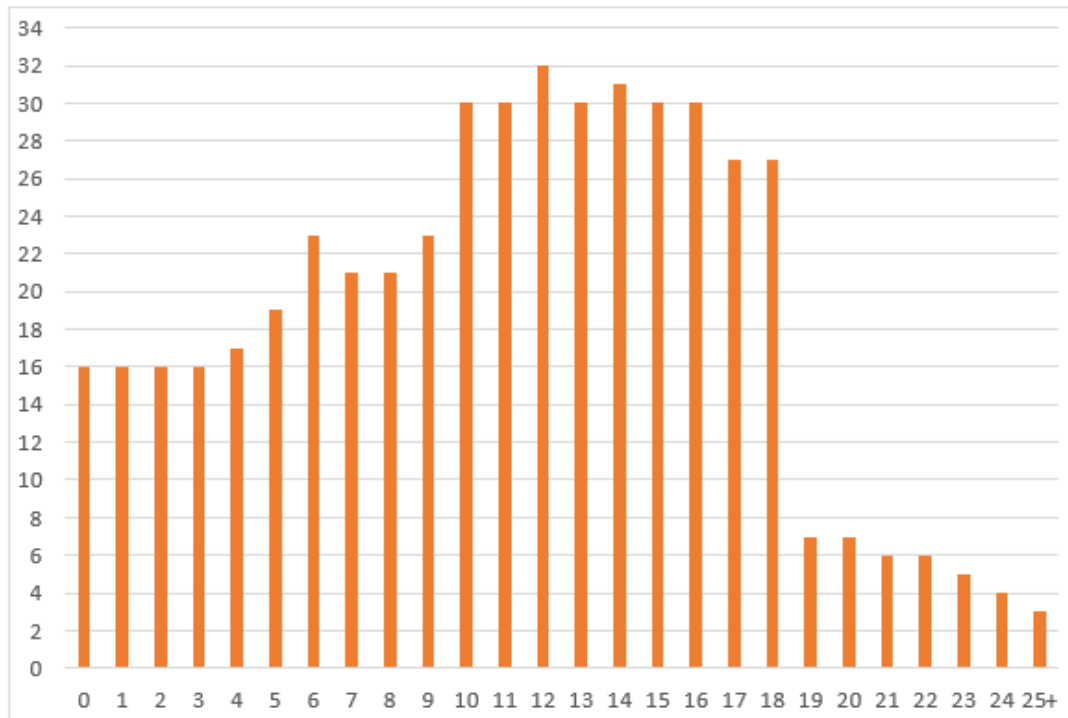
Figure 4.4 Children's age distribution

Children's age groups are presented in **Figure 4.4**. One study may include more than one age group; therefore, the total number of age groups is greater than the total study number. Most researched children's ages were 12 years old (n=32), 14 years old (n=31), and followed by 10, 11, 13, 15, and 16 years old children (n=30). The number of studies conducted research on children between ages 0-3 was 16. 4-year-old children were researched by 17 studies; 5-year-old children by 19 studies; 6-year-old children by 23 studies; 7 and 8-year-old children by 21 studies; 9-year-old children by 23 studies; 17 and 18-year-old children. The least studied ages in descending order were 19 and 20-year-old by 7 studies, 21 and 22-year-old by 6 studies, 23-year-old by 5 studies, 24-year-old by 4 studies, and 25 year-old and older by 5 studies.

Not all the studies have a sample consisting of participants due to the nature of the study. Analysis of sample size included qualitative, quantitative, and mixed method studies. One quantitative study did not mention the sample size. Two of the qualitative studies did not have participants due to methodology. 10 of the 68 studies

were not included in this analysis due to the type of study. In total, 55 studies were included in the sample size analysis.
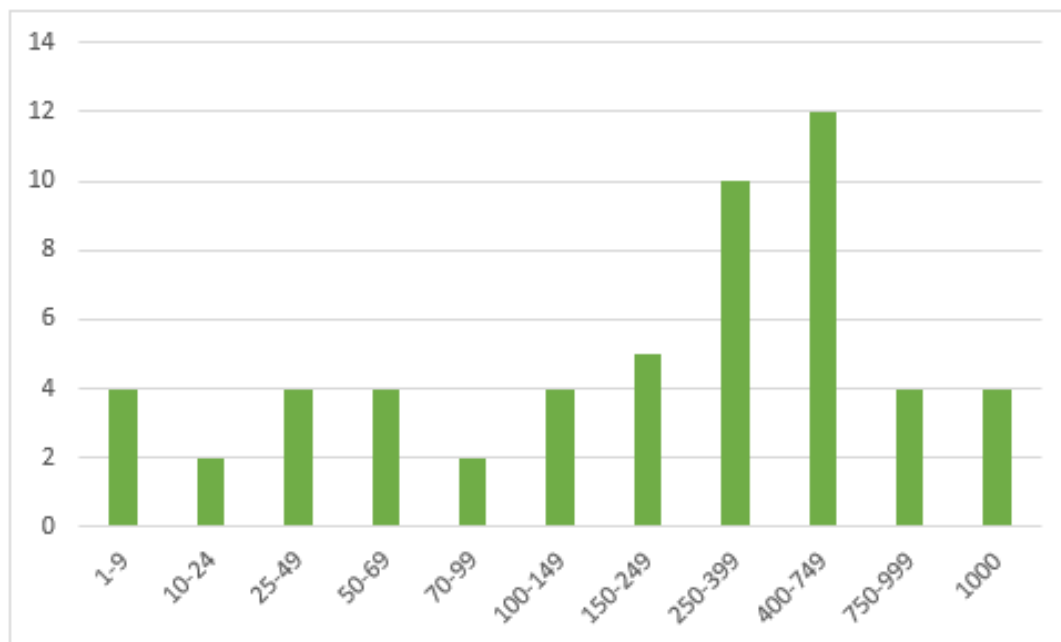
Figure 4.5 Sample size distribution of the studies

Sample size range was mostly around 400-749 participants with n=12, followed by 250-399 participants with n=10, 22.73%; 101-250 participants with n=8, 18.18%; 45-100 participants with n=6, 13.64%; and lastly more than 1000 participants with n=4, 9.09%.

RQ-4 What are the implications Turkish scholars provided for different social groups related to "children online"?

 Implications

The majority of the publications had implications for different social groups. Discussion, conclusion, recommendation, and/or further research sections were skimmed through for any kind of implication. Later, these were coded into publication form. One publication may have implications for more than one social group in more than one aspect.

Table 4.9 Implication numbers for different groups

Groups	*f*	*%*
Parents	17	27.87
Educational professionals	9	14.75
Policymakers	12	19.67
Other stakeholders	23	37.70
Total	61	100

Table 4.9 gives the number of publications that provides implication for the target group. The percentage of publications that give implications to parents is 27.87%, educational professionals are 14.75%, policymakers 19.67%, and other stakeholders are 37.70%.

Table 4.10 Implications for parents

	f	*%*
Parental digital literacy	3	13.60
Parental practices / parental mediation	8	36.40
Parenting guidance / support	10	45.45
Other	1	4.55
Total	22	100

Table 4.10 indicates the number of each implication category for parents. The total number in this table does not add up to the number of publications that provided implications for parents in Table 4.9 since one publication can have more than one implication. Most frequently referred implication is parenting guidance/support (n=10, 45.45%). Parental guidance/support implies that parents should guide children when they use the Internet, for example, encouraging them to use the Internet for learning. 8 of the studies had implications for parental

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practices/parental mediation (36.40%). Implications for parental practices/mediation are the interventions between the child and the Internet, for example, an authoritative parent regulating the Internet usage style/time of a child. 3 of the studies had implications for parental digital literacy (n=3) by 13.60%. These studies implied that parents should improve digital literacy skills so that they can guide their children. One of the studies (4.55%) implied that parents should gain more knowledge about cyberbullying and its risks so that they can protect their children.

Table 4.11 Implications for educational professionals

	f	$\%$
Digital citizenship	1	11.11
Professional development	2	22.22
School Innovation	1	11.11
STEM Education	1	11.11
Other	4	44.44
Total	9	100

Table 4.11 presents the number for each implication category for educational professionals. The number of implications for professional development is n=2 (22.22%), for digital citizenship, school innovation, and STEM education is n=1 (11.11%), and for other is n=4 (44.44%). Digital citizenship stands for the ethical and responsible use of technological devices. For example, teachers/schools teach children to be discreet when sharing information on online platforms. Professional development is for teachers/counselors regarding their professional growth, such as in-service training on digital literacy skills. School innovation suggests investments in technological innovation in schools. Implications suggesting curriculum change in technology courses were included in the STEM Education category. The 'Other' category included implications as follows:

- Individual/group counseling for students

- Educational professionals giving information/training to parents
- Deploying new teaching methods

Table 4.12 Implications for policymakers

	f	*%*
Creating a safe environment for children online	6	46.15
Fighting against child sexual abuse and child exploitation	4	30.77
Stepping up awareness and empowerment	1	7.69
Other	2	15.39
Total	13	100

As seen in **Table 4.12**, the Turkish authors wrote implication for policymakers on creating a safe environment for children online (n=6, 46.15%), fighting against child sexual abuse and child exploitation (n=4, 30.77%), stepping up awareness and empowerment (n=1, 7.69%), and other (n=2, 15.39%). Implications for policymakers include suggestions for changing rules and regulations to protect children from the risks, create a safe online environment for children, or raise public awareness of safe Internet by arranging seminars.

Table 4.13 Implications for other stakeholders

	f	*%*
Healthcare	2	8.69
Industry	2	8.69
Researchers	18	78.26
Other	1	4.35
Total	23	100

Other stakeholders that the authors concluded implications for are given in **Table 4.13**. Most frequently, implications were pointed out to researchers by 78.26%.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1   Introduction

In this section, the results of this study are discussed and compared to other studies related to this research field. Later, the study was concluded, and recommendations were given for further studies.

5.2   Discussion

This study was conducted as a part of the CO:RE project consisting of studies authored by Turkish scholar between 2014-2020. The present study is a descriptive study. In total, 177 publications were collected and 68 of them that met the selection criteria were included in the study. 62 of the publications were journal articles. 40 of 68 publications were quantitative research studies. In 39 of 40 quantitative studies, survey methodology was deployed. This research aimed to investigate critical issues raised by Turkish scholars. By looking at the results, the majority of the keywords were classified in Health (Mental/Physical/Psychological/Social) category and the most frequently studied topic was wellbeing; these two matching results confirm each other's dominance in the research field. The most frequently studied group was children and showed results consistent with the number of keyword usages for the category Children (11.67%). Implications in the publications were mostly pointed at other stakeholders (researchers, industry) by 37.70% and parents by 27.87%. The majority of 68 studies did not mention the ethical or consent process. Collected data are not restricted to a specific field. Some of the research fields of publications are pediatrics, education, social sciences, media, and psychology. Therefore, with the sample size of this study (n=68), there is not any pattern or trend found in research

topics according to year. Further data are needed to see research trends in different fields.

A total of 76 methods were used in 68 studies. 44 of them used the survey method. Of the 44 survey methods, 5 of them were mixed method studies, 39 of them were quantitative methods, and 38 studies out of 40 quantitative methods used only the survey method as a method. Kara Aydemir and Can (2019) found out that quantitative studies outnumbered qualitative studies, despite the increasing interest in qualitative research methods. Since then, the increase in quantitative research methods seems to be continuing. In this respect, researchers can turn to different methods while investigating this issue. It may be recommended to conduct more experimental and qualitative studies.

In this study, mostly researched children's ages were between 10 and 18. As opposed to this result, in another study, university students were the major research group (Segura-Robles, Moreno-Guerrero, Parra-González & López-Belmonte, 2020). However, in the context of that study, which is learning and the Internet in "higher education", this result is not surprising. The reason for the result of this study may be related to the research topic as stated that younger children are more likely to face risks due to inadvertent use of the Internet (Kaşıkçı et al., 2014; Orhan & Akkoyunlu, 2004), and older children can learn from peers or by making mistakes but letting young children do this is risky (Sonck, Livingstone, Kuiper & de Haan, 2011). It is recommended that researchers should study children between 0-5-year-old and 19-24-year-old young adults.

Study on the topic 'Researching children online: methodology and ethics' was not found in the literature between 2014-2020 by Turkish researchers. In this study, by comparing the results for ethical approval and consent, it can be said that studies which are approved ethically are more likely to obtain consent from participants. Similarly, studies which do not mention ethical processes are less likely to obtain consent from participants. It should be noted that most of the studies did not obviously mention the ethical process before conducting the study, nor did they

mention obtaining consent from participants even if the study methodology required consent. An ironic contradiction arises here, do researchers consider children's offline 'wellbeing' while researching children's online wellbeing? Considering ethical approval and consent status in collected data, this result is not surprising. Therefore, it is recommended that researchers should dwell on this topic and close the gap in the literature. Furthermore, in graduate education, more emphasis should be placed on ethical issues in graduate education. Brown and Krager (1985) stated that graduate students could not follow ethics and moral rules if they did not face their responsibilities in ethics and work with their supervisors. Yet, another point of this issue is that conducting research with children is complex. Dockett, Einarsdottir, and Perry (2009) state that including children's participation in the research is challenging because (i) they do not want to spend their private time (such as playtime) on a research study, and they do not hesitate to express their unwillingness, (ii) researchers should ask questions in an understandable and clear way for children, and they should make the right interpretation from what children answer. Therefore, especially working with the children, researchers should be trained to have the competence to work with children.

In this study, 10 of the publication researched online safety and regulations – subtopics mostly concerning the policymakers (see Appendix A. Topics and Subtopics), and 13 of the publications had an implication for policymakers. The issue here is that the current policies against cybercrimes and online sexual child abuse are not effective in protecting children against harm (Açar, 2017). Since the Internet does not depend on countries/continents, cybercrimes are unhindered by location. Therefore, actions to be taken by a universal committee may seem to be logical in this regard. Açar (2017) examined the global fight issue from four different layers: governmental, police force, non-governmental, and private sector. He referred to the challenges faced in these layers; governments had different legal conditions and procedures, police forces had outdated methods compared to the pace of technological developments, non-governmental organizations had limited powers

and resources, and lastly, private sectors had commercial balance concerns. Considering these aspects, it seems not only challenging but unfeasible.

In this study, one of the groups which researchers had implications for was parents. Even though implications for other stakeholders were dominant to the number of implications for parents, parents have direct contact and communication with children. Moreover, Aslan and Karakuş Yılmaz (2017) stated that the unaware use of the Internet increases the risk rate. Other than this, in different studies, it was found that a negative relation between parents' education and income level, and children's risky behavior (Erişti & Avcı, 2018; Eroğlu, Aktepe, Akbaba, Işık & Özkorumak, 2015; Kayrı, Tanhan & Tanrıverdi, 2014; Kılıç et al., 2019; Kocturk & Yuksel, 2018). Children are more likely to perform risky Internet use behaviors in a low-level education and monthly income family structure. This may be related to parental support or parenting styles. Kayrı et al. (2014) reported that children who did not have the relationship they wanted with their families had higher Internet addiction levels. Children who did not feel happy in their home or school were found to be more prone to online flirtation and sexting (Barbovschi et al., 2021). As seen in the findings from various studies, children's safety depends on different factors such as family socioeconomic status, child-parent relationship, and parenting styles (Brikše et al., 2014). However, children's safety on online platforms can be reduced by educating children (Barbovschi et al., 2021). The school curriculum should also focus on raising awareness of safe Internet use. Moreover, children should be encouraged and educated to speak up against risks and threats when faced by school counselors and by their parents. However, the primarily responsible stakeholder for children's Internet safety should be parents, and clinicians should collaborate with parents and teachers (Moreno, Egan, Bare, Young & Cox, 2013).

Kılıç et al. (2019) found out parents' allowing their children to use mobile devices to occupy them would not only lead children to non-supervised exposure to content on the Internet but also weaken the interaction and communication between parent and child. Before the issue of technology use and parenting turn into the question "which comes first, the chicken or the egg?", parents should be informed about the

effects of technology use at children's early ages and the importance of parental mediation. Older children can gain digital and safety literacy skills from their peers and by trial-and-error; however, the risk of waiting for young children to develop their own skills should not be taken (Sonck et al., 2011). When children reach school age, educational professionals and school administrators should guide children on safe Internet use. The number of children connected to the Internet increased in Turkey in recent years (TÜİK, 2021b). Policies and regulations, both private industries and governmental, may not be enough to protect children. One example of this can be creating social media accounts. Even though companies like Meta (owner company of Instagram and Facebook) and Twitter do not allow children under 13 years old to create an account, there is no identity check for true birth date. A child who is decisive in having an account can easily deceive the social media websites and enter his/her birth date as to be older than 13 years old. Optimistically, if it is detected or reported that a user misrepresents their age in any way, their account is deleted. Meta declared in late July 2021 that the company is working on AI to detect underage accounts by stating challenges in detecting under 13-year-old users (Diwanji, 2021). Although companies in the industry are working on the issue, here, it is essential to educate the mind of a child through open communication with parents, caretakers, and/or teachers so that children know and understand the risks and consequences of their actions on the Internet.

5.3   Conclusion

This study was conducted as a part of a Europe-wide CO:RE project. The scope of this study was publications about young children in the digital age written by Turkish researchers between 2014-2020. The most researched topic was wellbeing; the most researched group was by far children with a percentage of 72.15% and followed by parents with 13.92%. Keywords were mostly in the health category, which matches the most researched topic: wellbeing.

Children's Internet use styles differ depending on parental guidance, and the educational and social background of their families (Brikše et al., 2014). In Turkey, studies showed that facing online risks is negatively related to the family's education, income level, and the parent-child relationship.

In an ideal world, all stakeholders could contribute and collaborate for a positive experience on the Internet. Clearly, this is not the case in today's commercial world, as explained in the publication written by Açar (2017). Yet, to minimize the risks, we should aim for the ideal. For that matter, every social group should be aware of their shares in the pie and take responsibility accordingly. Since monitoring the children is challenging with the mobility of technology (Hasebrink et al., 2011), guiding and supporting them is essential. Open communication between parents and children may lower the probability of risks turning into harm. In order to have open communication, parents should be educated about both approaching children and risks on the Internet.

5.3.1 Main Highlights

- Since Internet usage among children has increased over the years, especially during Covid-19, safe Internet usage should be more dwelled on as well as digital literacy skills.
- Children should be encouraged and educated to speak up against risks when faced by school counselors and by their parents.
- Parents should be informed about safe Internet usage with awareness-raising activities/seminars so that they can guide or support children.
- Most of the studies in the literature focus on children between 10-18. More studies can be conducted researching children between ages 0-5 and young adults between ages 19-24.
- Researchers should dwell on the 'Researching children online: methodology and ethics' topic.
- More emphasis should be placed on ethical issues in graduate education.

- Alternative research methods, other than quantitative/survey, should be used.
- This study reflects Turkey's case; however, comparative studies should be conducted, especially with the countries within the scope of CO:RE.

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APPENDICES

A. Topics and Subtopics

TOPIC	SUBTOPIC
Learning	E-learning, M-learning, digital learning environments; Online collaborative learning; Gamification & Playful learning environment; Formal / Informal / Non-formal learning; Academic performance and ICT usage; Digital curriculum
Social mediation	**Family**: Parental mediation: styles and efficacy; Styles of parenting and parenting practices; Online surveillance by parents; Family / intergenerational online communication; Family rules about children's digital engagement; Parental digital literacy **School**: Teachers' perceptions of using ICTs / of young people's technology use; External support & help; school-home (teacher-parent) cooperation **Peer**: Sociality & peer support
Internet usage, practices and engagement	Online activities; Online participation; Opportunities / benefits; Adventures; Entertainment; Digital leisure; Social networking / Social media; Satisfaction of needs; Engagement in civic and political life; Online interactions; Friendship / peer interaction; Digital citizenship; Agency, voice & activism
Literacy and skills	Digital competences; technical/operational skills"; Information / critical literacy; Media Literacy; Media

TOPIC	SUBTOPIC
	Education; Discerning fake news; Learning digital skills; Digital natives debate; Digital sociability; children's rights in the digital age; Digital literacy & online safety; Security and privacy education; internet self-efficacy; ICT Labour market; E-collaboration skills
Content-related issues	YouTube and youtubers; Positive contents; Kids as content creators; Influencers; Advertising and commercial content; Content-related risks;
Wellbeing	Digital wellbeing; Mental health & anxiety; Resilience & coping; Vulnerability; Internet/smartphone dependency/addiction; Screen time debate; Depressive disorder; E-health (for healthcare practice supported by information and communication technology) / M-health (use of mobile technologies in health care and public health); Obesity; Six components of well-being: material, physical, psychological, social, developmental, and societal. Six different dimensions of well-being: material well-being, health and safety, education, peer and family relationships, behaviours and risks, and young people's own subjective sense information and communication of well-being.
Risks and harms	4Cs of risk (content, contact, contract, conduct): Exposure to illegal content; Exposure to harmful or offensive content; Contact with strangers (paedophiles, grooming); Encountering sexual/violent/racist/hate material; Advertising, commercial exploitation; Misinformation; Giving out personal information; Invasions of privacy

TOPIC	SUBTOPIC
	(spam, viruses, etc); Cyberbullying and victimization; Downloading (ill/legal); Hacking; Gambling; Negative User-generated content; Use of challenging sites (suicide, anorexia, drugs, etc); Cyberstalking or harassment; Unwanted Online Attentions (UOA): harassment, impersonation, denigration and ordering goods, physical threats, hacking, and disseminating private information and audio-video material without permission; Sharenting; Cyberhate; Underage use; Online risk perception; online risk measurement; Sexting; Cyber dating abuse; Sexual Extortion of Children in Cyberspace (SECC) / Online child sexual abuse; Controlling one's romantic partner through digital media / cyber dating abuse.
Online safety and policy regulation	High-quality content online for children and young people (e.g. Stimulating the production of creative and educational online content for children; Promoting positive online experiences for young children). Stepping up awareness and empowerment (e.g. Digital and media literacy and teaching online safety in schools; Scaling up awareness activities and youth participation; Simple and robust reporting tools for users). Creating a safe environment for children online (e.g. Age-appropriate privacy settings; Wider availability and use of parental controls; Wider use of age rating and content classification; Online advertising and overspending).

TOPIC	SUBTOPIC
	Fighting against child sexual abuse and child exploitation (e.g. Faster and systematic identification of child sexual abuse material disseminated through various online channels, notification and takedown of this material; Cooperating with international partners to fight against child sexual abuse and child sexual exploitation). Children's right in digital age; Agency, voice & activism; Underage use; Privacy/GDPR; Datafication; Cyber-security (also within the home); E-safety awareness; Privacy / personal data protection; Online safety / online protection / online risk exposure
Access, inequalities and vulnerabilities	Inequalities in home schooling contexts; Social inequality in school-related Internet use; Fixed / mobile / wearable; Access when/where; On/offline; In/equity & in/exclusion; Unaccompanied foreign minors / migrant children / second generations; Educational poverty; Vulnerability / resilience; children with mental health conditions; Children with special needs
Digital and socio-cultural environment	Technology and its users; Digital affordances; Normative values in tech; Innovation & datafication; Default effect; Automated approaches to risk detection / monitoring
Researching children online: methodology and ethics	Free and informed consent from children and parents; Ethical procedure in researching children online

B. Coding: Publication Form

1. Coder *
2. National team of the coder *
3. DOI
4. Title (original language) *
5. Title (English translation)
6. Issued *
7. Author(s) *
8. Abstract Executive summary (original language)
9. Abstract Executive summary (English translation)
10. Language *
11. Keywords (original language)
12. Keywords (English language)
13. Type of publication *
14. Journal
16. Volume
17. Issue
18. Start page
19. End page
20. Editor(s)
21. Title of the edited book
22. Publisher
23. Place
24. Pdf link
25. Topics
26. Sample

27. Main results / Highlights *
28. Theoretical contribution
29. Implications for parents
30. Implications for educational professionals
31. Implications for policy makers
32. Implications for other stakeholders

C. Coding: Study Form

1. Coder *
2. Name of the research project (original language) *
3. Name of the research project (English translation)
4. Scope of the Study *
5. Countr(y/ies) included in the study
6. Year of data collection *
7. Type of study *
8. Methodology
9. Researched group
10. Children's age group
11. Main research focus and goals of the study *
12. Funder(s) of the Study
13. Type of Funder
14. Formal ethical clearance/approval of the Study
15. Informed consent
16. Consent obtained
17. Consent from children
18. Ethical considerations
19. Url of the research project website
20. Data set availability
21. Data set link

D. CO:RE Project - Publication Data Coding Page

E. CO:RE Project - Study Data Coding Page

4. Scope of the Study *	ⓘ	Choose an option ▾
5. Countr(y/ies) included in the study	ⓘ	
6. Year of data collection *	ⓘ	Choose an option ▾
7. Type of study *	ⓘ	Choose an option ▾
8. Methodology	ⓘ	
9. Researched group	ⓘ	

14. Formal ethical clearance/approval of the Study	ⓘ	☐
15. Informed consent	ⓘ	Choose an option ▾
16. Consent obtained	ⓘ	
17. Consent from children	ⓘ	☐
18. Ethical considerations	ⓘ	
19. Url of the research project website	ⓘ	19. Url of the research project website