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ORIGINAL PAPER

Digital Ambivalence in the Online Era: A Social-Ecological Study of Parental Monitoring

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Abstract

Parents monitor their children digital activities in a number of different ways and multiple factors have been identified as significant drivers of parental digital choices. Following the socio-ecological theory developed by Urie Bronfenbrenner, this study aims to contribute to the extant literature on digital parental monitoring by exploring how Italian parents of early adolescents approach monitoring their adolescents' internet use throughout different nested environmental levels, moving from the narrow family environment to broader life contexts, such as school and peer groups, up to the larger society. Face-to-face interviews were administered to a purposive sample of 147 parents of early adolescents exploring their representations of the internet and of the risk(s) associated with youth internet use, and their knowledge and perspectives on strategies for addressing such risk(s) across various interconnected environments (e.g., home, school and communities). Interviews transcripts were submitted to a quantitative semantic analysis by means of the T-Lab software. The findings revealed that parental monitoring choices evolve as the parents move from the innermost ecological levels with which they are more familiar (e.g., family home and schools) to the levels in which they are not active participants (e.g., peer groups and social networks) and the broader society. The main implication of this study is that parental digital monitoring during early adolescence includes several strategies that change across the multiple nested environmental systems. Understanding the monitoring choices along with a socio-ecological perspective remains critical in promoting healthy online behaviors among early adolescents.

Keywords Internet · Early-adolescence · Parental monitoring · Socio-ecology · Qualitative study

Highlights

- The research examines parental internet monitoring through the lens of socio-ecological theory
- During early adolescence, parental digital monitoring encompasses various strategies that evolve within different environmental systems
- Parental monitoring approaches change as parents transition from familiar inner ecological levels (e.g., home and school) to less involved levels (e.g., peer groups, social networks, and broader society)

In the last two decades, internet use among adolescents has increased steadily and become integral to their daily lives, with recent data showing that over one-third of young people aged 11–15 years maintain constant online contact with friends, one-third play digital games daily, while problematic social media use has risen sharply from 7% in 2018 to 11% in 2022 (WHO Regional Office for Europe, 2024). Young people are now active users of the internet: they have access to online resources and platforms for various purposes (e.g., learning, social interaction, entertainment, gaming, etc.) through a variety of devices (e.g., smartphone, tablet, game console, laptop, etc.) with 95% of adolescents having access to smartphones, 90% to desktop or laptop computers, and 80% to gaming consoles (Pew Research Center, 2024). In what Floridi (2014) defined as the "onlife era", where the boundaries between online and offline existence are

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increasingly blurred, people born between 1997 and 2012, the so-called Generation Z, have been defined as "digital natives" because they have grown up in an "always-on technological environment" (Dimock, 2019).The internet offers several opportunities in terms of learning, entertainment, self-exploration and growth (Hollis et al., 2020), but at the same time, it poses potential risks to physical and psychological health: among others, reduction of sleep quality (Kawabe et al., 2019) and school performance, increased compulsive and addictive behaviors (Jorgenson et al., 2016), and exposure to online bullying and harassment (Eden et al., 2016; Kammerl et al., 2023).

A European study conducted in 2018–2019 in 19 countries (Smahel et al., 2020) revealed that among children aged 9–16, smartphone use was reported as either 'daily' or 'nearly constant', with average screen time ranging from two to three-and-a-half hours per day. Young people in Italy demonstrate high levels of digital engagement consistent with European trends, with 84.9% of youth aged 11–19 years having social media profiles and significant daily online interaction with peers (ISTAT, 2024).

A number of studies focused on adolescents due to their vulnerability to these risks and their massive internet use (Geng et al., 2023; Livingstone et al., 2011; Tateno et al., 2019). Given the centrality of the family context and parenting approach to the overall development of adolescents, several investigations explored the relationship between family and internet use, as well as their mutual influence (Benson & Buehler, 2012; Bronfenbrenner & Ceci, 1994; Gerard & Buehler, 1999).

The family environment can have an impact on how adolescents use the internet: conflictual family relationships or childhood maltreatment, as well as harsh parenting toward internet use (e.g., aversiveness, overinvolvement, and withdrawal from supervision) have been identified as factors that may lead adolescents to engage in problematic internet use (David et al., 2023; Geng et al., 2023; Wu et al., 2022; Zhou et al., 2018), while harmonious and supportive family relationships that provide space for autonomy and self-confidence, as well as age-appropriate parental monitoring emerged as protective factors against problematic internet use (David et al., 2023; Geng et al., 2023). In addition, the family emerged as a relational context where major changes occurred after the emergence of the social web: for example, daily interactions between family members shifted from face-to-face communication to instant messaging (e.g., WhatsApp), thus increasing the physical distance between parents and adolescents (Christensen, 2009; Winstone et al., 2021). Family ties are often maintained through both social networks and face-to-face interactions, and this dual mode of communication and relationship can sometimes lead to conflicts and tensions between family members (Aroldi, 2015).

Previous research documented parents' ambivalent attitudes toward digital technologies among UK families (Livingstone & Blum-Ross, 2020). This ambivalence manifests in how parents simultaneously recognize the internet's educational benefits while expressing concerns about its risks, leading to complex and sometimes contradictory monitoring practices. Such parental ambivalence reflects broader societal tensions regarding technology's role in children's development.

The internet has also influenced the way parents play their role in a hyper-connected and post-narcissistic society. It has been argued that the parent-child relationship has shifted towards one between siblings or friends, and this reversal can undermine parental digital custodianship, particularly given that adolescents tend to use the internet more often and more easily than their parents (Ammaniti, 2015; Kanter et al., 2012; Lancini, 2023). According to Lancini (2023), the post-narcissistic paradigm is characterized by adults' fragility that leads to paradoxical expectations toward children, summarized in the mandate 'Be yourself, but in my way.'

Given the importance of parental digital monitoring, the present study aims to shed light on how parents manage to monitor their adolescents' internet use within and beyond the microsystem level represented by the family environment.

Parental Monitoring

Parental monitoring refers to parents' knowledge, supervision, and active involvement in adolescents' behaviors and activities; it encompasses parental attitudes, and behaviors toward their children, including reactions to rule violations or misbehaviour (Guilamo-Ramos et al., 2010). With respect to the internet, parental monitoring can take different forms, such as active mediation (e.g., sharing one's own interpretation of online content with one's child), restrictive mediation (e.g., restrictions on the time spent online and the media content that a child is allowed to view), interactional restrictions (e.g., rules about who the adolescent is allowed to interact with), rules about who the adolescents can communicate with, technological mediation (e.g., application control and restrictions), and supervision and co-use (e.g., using the internet with the adolescents or supervising their online activities) (Livingstone & Helsper, 2008; Sonck et al., 2013; Symons et al., 2017).

Several factors have been identified in the literature as barriers to parental digital monitoring. The so-called "bedroom culture" - i.e., the tendency of adolescents to access the internet anytime and anywhere through personal devices-has been shown to make it difficult for parents to monitor adolescents' internet use, as it takes place in more

private settings than in the past decade, when adolescents accessed the internet only through "family computers" (Mascheroni & Ólafsson, 2014; Livingstone et al., 2011); furthermore, the variety of online activities carried out by adolescents (McMillan & Morrison, 2006) and the dual nature of the internet, which brings both risks and opportunities (Valkenburg et al., 2013; Vincent, 2015), may make parents reluctant to limit their children's internet use, as they are aware of the benefits and opportunities that this medium offers to their adolescents. Finally, there is the generational digital divide (Livingstone et al., 2011; Sonck et al., 2013; Symons et al., 2017): parents with a low level of Information and Communication Technology (ICT) knowledge are less inclined to engage in monitoring and active mediation (Livingstone & Haddon, 2008; Wang et al., 2005).

Although many studies examined parental internet monitoring and its barriers, little is known about how parents implement monitoring strategies in everyday life and the potential challenges they face in monitoring their children's internet use in everyday contexts (Symons et al., 2017). Moreover, the existing literature presented some inconsistency in age-range definitions and terminology: some studies focused on broad age spans (e.g., 9–16 years in Livingstone et al., 2011; Smahel et al., 2020), while others specifically targeted early adolescents (e.g., Benson & Buehler, 2012; Hernandez et al., 2023). Similarly, available national statistics often encompassed broader adolescent populations (11–19 years in ISTAT data), making direct comparisons challenging. This variability in age ranges and definitions presents both a limitation and an opportunity: while it makes direct comparisons challenging, it also highlights the need for more precise age-specific research.

Early adolescence, typically encompassing the ages of 10 to 14 years (Blum et al., 2014), is a critical phase of adolescent development characterized by profound social, affective, cognitive, and behavioral changes that have significant consequences for young people later in life. This developmental stage is marked by the onset of puberty, which brings about hormonal changes and consequent physical developments (Blakemore et al., 2010), as well as the development of new feelings and perspectives about self and relationships, and increased vulnerability to emotional and behavioral problems (Demkowicz et al., 2023). In the specific context of digital monitoring, early adolescence is particularly interesting as it marks the transition from childhood digital supervision to more autonomous internet use, posing unique challenges for parents who need to adapt their monitoring strategies to support their children's developing autonomy while ensuring their online safety. During this developmental stage, the family serves as a highly relevant buffering context against the potential effects of negative peer dynamics (Trudeau et al., 2012), even more so than during middle and late adolescence (Snyder, 2002). Moreover, Hernandez et al. (2023) suggested that parents' media monitoring strategies during early adolescence are rapidly evolving and not confined to a singular approach. This underscores the importance of understanding family dynamics and parental involvement in adolescents' digital media use for the prevention of problematic behaviors in children. The current study's focus on early adolescence (10–14 years) is supported by studies demonstrating distinct developmental characteristics of this age group (Blum et al., 2014; Valkenburg et al., 2013) and unique parental monitoring challenges during this transitional period. In reviewing the literature, we have included studies that either specifically focus on early adolescence or include this age group as part of a broader sample, acknowledging that findings from studies with wider age ranges may have varying applicability to the early adolescent period.

Given these gaps in the literature, the present study aims to deepen the understanding of parental internet monitoring by investigating how monitoring strategies are implemented in everyday life and whether they are limited to the narrow family context or extend beyond it. Following a socio-ecological perspective that considers the multiple social and environmental factors that influence people's actions, the present paper seeks to examine parental internet monitoring across multiple ecological levels (Bronfenbrenner, 1977).

Parental Monitoring from a Socio-Ecological Perspective

In our study, we draw upon the socio-ecological perspective initially introduced by Urie Bronfenbrenner (1977) and later formalized as a theory (Bronfenbrenner, 1989). According to this approach, individual development is influenced by a series of interrelated environmental systems, ranging from the immediate environment to broad societal structures. Bronfenbrenner conceptualized the person-environment relationship along five different systems: the microsystem (i.e., the direct relationship each person has with the immediate environment, such as family, school, peers, etc.), the mesosystem (i.e., the connections between microsystems, such as parent-teacher interactions), the exosystem (i.e., the settings that indirectly influence a person, the social environment, and the family), macro-system (i.e., the overarching social ideologies, cultural values, and macrophenomena such as law, economics, etc.), and the chronosystem (i.e., the effect of time on all systems, such as life transitions). According to Johnson & Puplampu (2008), internet use is a technological subsystem that reflects influences between and within the other systems and

mediates interactions at the microsystem level. It is important to note that while our study places parents at the center of the ecological model to understand their monitoring practices, adolescents would have their own distinct but overlapping ecological systems. Throughout this study, we examine the ecological systems from the parents' perspective, acknowledging that this represents one side of the digital monitoring dynamic. While parents are key actors in their children's microsystem, they are also experiencing their own ecological reality as they navigate digital monitoring challenges. For instance, for adolescents, social media platforms serve as part of their microsystem where they directly interact with peers, while for parents these platforms represent a complex intersection of microsystem and exosystem - they may personally engage with social media while simultaneously experiencing it as an environment that influences their children's development in ways beyond their direct participation.

The way parents intervene in their children's use of the internet is related to a variety of factors and dynamics at different ecological levels. At the micro level, changes in parent-adolescents relationships occur during early adolescence; the coexistence of a personal need for autonomy and a secure base makes adolescence an ambivalent developmental phase, and such ambivalence has a distinct impact on parental monitoring. Indeed, monitoring strategies may alternate between less control to promote adolescent autonomy (Keijsers et al., 2009) and a strong presence in adolescents' lives (Scabini et al., 2015) to provide support and guidance (Branje et al., 2002). At the meso level, there is evidence that school-family collaboration can promote student well-being (Cefai & Cooper, 2010; Hampden-Thompson & Galindo, 2017; Skinner et al., 2014), and this effect could also apply to internet use. At this level, relevant factors influencing internet monitoring are parents' internet use, their perception of the risks and opportunities offered by the internet, and their ability to understand and engage in internet use (Livingstone & Helsper, 2008; Wang et al., 2005). Finally, there are macro-level factors that cannot be ignored, such as the cultural change that can be seen in children's use of the internet: it has indeed doubled compared to ten years ago (Smahel et al., 2020), the use of mobile devices by children is almost universal (Rideout & Robb, 2020), and children usually have their own personal device since primary school (Andrade et al., 2021). This process can also be seen in the market, where a wide variety of devices are available and many of them are targeted at young people (e.g., tablets for children). Public policies are promoting the use of technology in schools through various measures (e.g., investment in equipment for public schools), but it has been noted that a supporting process of digital skills for teachers and students is still needed to minimize the risks (Guzzo et al., 2023).

In fact, we adopted a social-ecological perspective to examine the extent to which the ways in which parents interact with their children regarding internet use are limited to the narrow family context, which represents the primary microsystem during early adolescence (Trudeau et al., 2012), or also include direct/indirect interactions with broader life contexts (e.g., school, peers, peer group, etc.), up to the macro-level environment, including social representations of the internet, its potential risks and opportunities, as well as established internet-related social practices.

Method

Participants

The present study is part of a larger research project on the risks associated with internet use among early adolescents, conducted in the Apulia region of southern Italy and financed by Apulian Co.Re.Com. (Regional Committee for Communication). Throughout this paper, we use the term "early adolescents" to refer specifically to youth aged 11–14 years, corresponding to the middle school period in Italy, and the term "children" to refer to these early adolescents unless otherwise noted. Earlier, using a multi-method approach, we had conducted a large survey involving 8622 early adolescents, 1466 parents and 799 teachers from 61 public schools. In the follow-up to the survey. We asked parents who completed the questionnaire whether they would be willing to be reinterviewed. Parents who consented to the second interview participated in the present study.

The study sample consisted of 147 parents (74.83% female; M_age = 43.81, SD_age = 6.56, range: 29–62 years) recruited through their children's middle schools. The target children, comprising 76 females and 71 males, were all between 11 and 14 years old (M_age = 12.4, SD_age = 0.9). Among the participants, 51 (34.69%) reported having multiple children (additional children's ages 3–18 years). Only one parent per family participated. Educational level and income were not collected in the current study, as the previous quantitative study (N = 1466) found no significant association between these variables and monitoring responses. No compensation was provided. The participants lived in the Apulia region, which has 96% broadband coverage with household internet subscriptions averaging €25–30 monthly and mobile internet is around €12 per month (AGCOM, 2021).

Procedure and Instruments

Data were collected through face-to-face interviews that took place between October 2018 and January 2019. The

interviews were conducted at locations convenient to the participants, such as their homes or workplaces. Four junior researchers (research assistants with master's degrees in Psychology) conducted interviews using a semi-structured interview protocol that ensured systematic coverage of key topics while allowing for conversational flexibility.

To ensure focus on early adolescents, parents with multiple children received both written and verbal instructions to answer all questions specifically regarding their child attending the recruiting middle school class. This instruction was reinforced at the beginning of the interview with the statement: "Please answer the following questions thinking about your child who is attending the middle school class through which you were contacted".

The interview protocol covered the following topics: (1) representations of the internet and its impact on society/community life in general and family life in particular (e.g., "The use of the internet and social networks is widespread among young people and adults and affects their daily lives as well as their relationships. This is an issue that has been at the forefront of the attention of experts and policy makers, as well as public opinion. What are your thoughts on this issue?"); (2) identifying the risk(s) associated with youth internet use (e.g., "What are your primary concerns regarding the use of the internet by early adolescents/youth/boys and girls of your children's age?"); (3) possible strategies to address the identified risk(s) (e.g., "What could be done specifically to address the risk(s)? "What could be done specifically to address the problematic us of the internet use among early adolescents?"); (4) potential strategies to address the identified challenge(s) that could be implemented at the school and community level (e.g., "In light of the concerns you mentioned, what do you think should be done at the community and social level?)

All participants provided informed verbal consent after the interviewer described the purpose of the research, the voluntary nature of participation and the data collection being in full compliance with the General Data Protection Regulation (GDPR; Regulation EU 2016/679). Respondents were also informed of the procedure for administering the interview, its approximate duration, whom to contact with questions, and the right to withdraw from the interview at any time, in accordance with Standard 3.10 Informed Consent as stated in the APA Ethical Guidelines. The interviews lasted approximately 1 hour and were audio recorded and transcribed verbatim.

Data Analysis

The purpose of the analysis was to identify the core themes woven throughout the parents' narratives of the internet, covering both representations of the internet and adolescents' use of the internet, and to highlight perceived risks and potential strategies for coping with the challenges of adolescents' use of the internet within and beyond the family context. Theme identification is one of the most fundamental tasks in qualitative research, and many techniques can be used to achieve it (Ryan & Bernard, 2003). In order to identify meaningful themes and answer the research questions, we conducted computer-assisted content analysis using T-Lab software (Lancia, 2004). Semantic analysis was performed to detect meanings and see how their mutual relationships denote significant themes, which in turn allowed us to answer the research questions. Specifically, lexical correspondence analysis and descending cluster analysis applied to qualitative textual data allowed us to detect meanings that emerged from the relationships between words within textual contexts (e.g., sentences or paragraphs) (Veltri, 2013).

Before carrying out the analyses, the transcribed interviews were merged into a single textual corpus, and verbs, nouns and adjectives were reduced to their lemmas. A lemma is the canonical form or dictionary form of a set of word forms (Zgusta, 2006, p. 202). A common lexical root through an automatic lemmatization process performed by the software; furthermore, words with a frequency of less than 5 and 'empty' words such as pronouns, articles, prepositions and conjunctions were removed from the textual corpus. Then, the corpus was automatically divided into pieces of text for successive analyses; these pieces - never longer than 400 characters - were automatically detected based on punctuation and constitute 'elementary context units' (ECUs). The final text corpus consisted of 161058 occurrences and 6198 lexical units. After the preliminary procedures were completed, the resulting text consisted of 3175 different ECUs.

ECUs were grouped using descending cluster analysis. This technique, based on lexical co-occurrences within strings of words, produces semantic classes, each characterized by a distinct number of lexical units and ECUs that together denote specific themes. Lexical units (i.e., words) may be typical of several clusters, but their co-occurrence within specific ECUs varies across clusters, thus denoting specific meanings and objects. A correspondence analysis of the contingency table 'lexical units x clusters' was then performed to explore the relationships between the clusters. Like other techniques of factorial analysis, the correspondence analysis allows the extraction of new variables (i.e., the factors) that organize the significant information. In fact, once extracted, the new variables make it possible to examine the relationships between themes (i.e., clusters) along with their positions on a two-dimensional factorial space formed by two axes (i.e., factors) that develop from a negative (-) to a positive (+) pole.

Interviews were conducted and analyzed in Italian. T-Lab is specifically designed to handle multiple languages

including Italian. All themes and semantic analyses, as well as the interpretation of findings were conducted in Italian to preserve cultural meanings. All analyses and result interpretation were conducted in Italian, with translation to English performed only after completion for publication purposes. Two bilingual researchers independently translated the research findings and a third bilingual researcher resolved potential discrepancies. All translators had expertise in family studies and qualitative research methodology.

Results

The methodological approach to cluster interpretation was predicated on a systematic analysis of lemmatic co-occurrence patterns within salient lexical units derived from interview transcripts. This means that to understand what a word means in our analysis, we looked at how it connects with other meaningful words that appear alongside it in the same interview excerpt. This method is based on theories that suggested words gain their meaning not in isolation, but through their relationships with other words in the specific context where they are used (Cole, 1996; Edwards & Potter, 1992; Salvatore et al., 2010; Gergen, 1999; Nightingale & Cromby, 1999; Salvatore, 2016; Valsiner, 2007, 2014).

Clusters Description

Cluster analysis resulted in 6 clusters grouping 3175 ECUs (99.97%). No difference was found between the clusters according to the gender or age of the participants. Each cluster was characterized by a set of distinctive lexical units (Table 1) and ECUs and labeled accordingly. Table 1 presents the principal lexical units for each thematic cluster, showing the top five units with the highest chi-square values (for complete results, see Table S1 in Supplementary Materials). The contribution of both lexical units and ECUs to the clusters is indicated by the respective chi-squared value. The quotes presented for each cluster were selected based on their chi-square values, with the highest chi-square values indicating the strongest statistical association with that cluster's thematic content. The original Italian quotes are available in the supplementary materials (Table S2).

Table 1 Principal lexical units by Thematic Cluster (top 5 per Cluster)

Lexical unit	χ^2	N within cluster	N in total
***Cluster 1: Digital Benefits and Risks* (26.85% ECUs)**			
Positive	329.375	119	141
Negative	289.432	119	152
Information	246.422	118	164
Research	195.77	140	238
Instrument	184.124	102	153
***Cluster 2: Children's Activities* (13.95% ECUs)**			
Mobile	602.914	252	375
Phone	436.758	182	270
House	279.066	147	248
Leaving	140.168	89	165
Coming_back	117.364	43	59
Cluster 3: Communication and Trust (15.25% ECUs)			
Parent	850.834	321	518
Sons/Daughters	433.842	181	309
To_control	112.313	94	229
To_talk	69.702	152	528
Dialogue	46.978	33	74
Cluster 4: Online Risks (20.35% ECUs)			
People	362.32	190	289
Social	286.8	151	230
Photo	179.469	84	120
To_worry	156.141	72	102
Reality	119.368	83	145
Cluster 5: Social Media World 14,30% ECUs			
To_see	344.623	306	847
Daughter	261.808	136	288
Mum	212.563	71	116
Video	174.755	88	183
To_watch	110.904	80	200
To_see	344.623	306	847
Cluster 6: Multilevel Monitoring (10.20% ECUs)			
School	562.979	250	692
Family	318.144	102	230
Meetings	236.393	48	79
Education	177.43	41	74
Boy	127.302	187	906

Chi-square values indicate the statistical significance of quote-cluster associations within the thematic analysis.

Cluster 1 useful but worrying

The first cluster, which represents 21.89% of the ECUs, accounts for the opinions and attitudes of the respondents towards the internet, as testified by the most significant lexical units, such as positive ($\chi^2 = 329.375$), negative ($\chi^2 = 289.432$), information ($\chi^2 = 246.422$), research ($\chi^2 = 195.77$), instrument ($\chi^2 = 184.124$). Parents expressed a generally positive perspective of the Web as a useful tool that allows young people to search for news and access information and multiple sources of knowledge; in fact, according to the respondents, the internet can support adolescents in doing homework and school activities. However, respondents also shed light on the negative aspects associated with unpurposive internet use (e.g., it creates distraction). This ambivalence toward digital

technologies emerged clearly in parents' narratives, as they struggled to balance appreciation for the internet's educational potential with concerns about its risks. The following excerpts illustrate this perspective:

> Interview 87, man, 37 years : We have been talking of the positive use that they could make of the internet, but the use of the web made by young people is something I don't totally agree with. As a parent I try to monitor what my kid search for on the internet. ($\chi^2 = 557{,}802$)
>
> Interview 141, woman, 51 years : I see a positive side because there is the possibility of exchange, of knowledge - I do not speak of knowledge in terms of meeting people, the internet is an instrument for finding information, updates, study resources. Then if we talk about social media, obviously there are the positive and negative sides.. ($\chi^2 = 217.793$)

Cluster 2 dangerous smartphones

The second cluster classified 17.64% of the significant ECUs. Overall, this cluster reveals parents' concerns about their children's use of digital devices, especially smartphones. The most significant lexical units, such as mobile ($\chi^2 = 602.914$), phone ($\chi^2 = 436.758$), house ($\chi^2 = 279.066$), leaving ($\chi^2 = 140.168$), refer to the massive use of smartphones among adolescents, who use these devices to access the internet for both study and leisure purposes. Ambivalent attitudes toward this issue emerged from the most significant ECUs that contributed to this cluster. On the one hand, interviewees acknowledged the positive aspects of allowing their early adolescents to have their own smartphones, since they can be easily reached by phone; on the other hand, a predominant concern emerged regarding the fact that having a smartphone allows early adolescents to easily avoid parental supervision and increases the risk of overuse. In fact, the parents interviewed agreed that control and restriction are effective monitoring strategies, as the following excerpts show.

> Interview 100, woman, 40 years: I check her phone every night, her history, her chats, etc. And she can use smartphone for short time. When she goes to school, she leaves it at home. During the night I turn it off and keep it with me, let's say she uses it only when she's out, because you never know what can happen and the phone is useful. ($\chi^2 = 840.094$)
>
> Interview 33, woman, 33 years: When they grow up, they need [smartphones] to call home, but they don't need them at school, they could leave them at home. I am against the phone. There are places where you need it and you bring it, but for other places we can just as well leave it at home. ($\chi^2 = 806.492$)

Cluster 3 parental monitoring

The third cluster grouped 15.62% of ECUs and focuses on the monitoring strategies implemented by parents to supervise their adolescents' use of the internet, as suggested by the most significant lexical units such as parent ($\chi^2 = 850.834$), sons/daughters ($\chi^2 = 433.842$), to_control ($\chi^2 = 112.313$), to_talk ($\chi^2 = 69.702$), etc. At home, parents combined several monitoring strategies. They used open communication and mutual trust to explain to their children the risks associated with internet use and how to protect themselves. At the same time, they also established rules to limit the use of technological devices and agreed that parents must set good example for their children, as explained in the ECUs reported below.

> Interview 96, man, 35 years: I often see parents who spend more time on the internet than their children. We adults need to be educated first, because we are a role model for our children, and if they see us overusing the internet: not only in terms of time spent, they may feel empowered to do the same. We need to set rules for them and for ourselves. ($\chi^2 = 1380.403$)
>
> Interview 59, woman 48 years: It is necessary for early adolescents to talk with their parents about everything that happens or might happen to them [when they are on the web]. Information and dialogue with parents is essential. Talk, talk, talk". ($\chi^2 = 1176.121$)
>
> Interview 94, man, 43 years: I trust him, but a parent's duty is also to educate and control their children, it is not yet time to let them go completely free. Trust is good, everything is good, but they are still children. ($\chi^2 = 862.937$)

Cluster 4 online risks

Cluster 4 grouped 20.35% of the significant units and presented a predominantly negative characterization picture of the internet. The most significant lexical units characterizing this cluster, e.g., people ($\chi^2 = 362.32$), social ($\chi^2 = 268.8$), photo ($\chi^2 = 179.469$), to_worry ($\chi^2 = 156.141$), support the respondents' concerns about the amount of time their children spend online. Specifically, this cluster makes it clear that participants believe that the more time children spend online and using digital devices, the greater the risk that they will engage in dangerous online encounters and suffer negative consequences. Parents expressed concern about the

dangers posed to their children by strangers who can contact them online and ask for private information and pictures. See for instance the ECUs reported below:

> Interview 70, woman, 50 years: There can be pedophiles, for example, or people who use photos of other people instead of their own to hide their identity. You should never trust anyone, this is key. ($\chi^2 = 411.205$)
>
> Interview 58, man, 42 years: Often, these people with bad intentions invade social networks under false pretenses with the sole purpose of luring early adolescents, insulting them, and/or trying to steal personal information and photos in order to extort money or create gaming groups, as in the case of Blue Whale. ($\chi^2 = 236.020$)

In describing adolescents' exposure to online risks, respondents referred to the internet as a parallel and surrogate world that is far removed from everyday real-world contexts and, therefore, prevents adolescents from forming and maintaining real relationships:

> Interview 71, man, 50 years: A few years ago, we used to meet in a bar, in the middle of the square, on the street; now they meet on the internet, on Facebook, they sign up for meeting sites. The internet also distances people, there are many people who prefer to be on the internet and social media instead. ($\chi^2 = 369.654$)

Cluster 5 social media world

Cluster 5, which covered 14.30% of the ECUs, revealed that social media platforms (e.g., YouTube, Instagram, Whatsapp, Facebook) are figured by the respondents as online contexts where adolescents meet people of the same age and have various experiences in their daily lives. The most significant lexical units, such as to_see ($\chi^2 = 344.623$), daughter ($\chi^2 = 261{,}808$), mum ($\chi^2 = 212.563$), video ($\chi^2 = 174.755$), together with the relevant ECUs, suggest that participants were concerned about the use of social media, given that they also reported difficulties in understanding how it works and in managing the viewing and sharing of online content. Parents reported having very little control over their children's use of social media, for technical reasons (e.g., algorithms suggesting new videos or new contacts in unpredictable ways) and the fact that adolescents preferred to use them when alone or with other peers. In fact, parents used to monitor their children's use of social media through controls and restrictions in order to reduce risks and avoid dangers, as shown by the ECUs exposed below.

> Interview 118, woman, 40 years: She often watches videos on YouTube, and sometimes she watches a video that she shouldn't. I don't know if it's possible, but I think they (social networking companies) should put limits on that. ($\chi^2 = 1013.539$)
>
> Interview 97, woman, 39 years: the deal is that she can be on Instagram but we have to assemble friendships, that is, I have to know who she has on her phone, in fact I don't hide from you that I have her Instagram profile on my phone, so that I can figure out who she talks to, what she sees, or who she gets friendship requests from". ($\chi^2 = 736.626$)
>
> Interview 86, woman, 36 years: On YouTube you search for a video and then you get fifty. So you know that the kids are on YouTube, but you cannot really understand what is happening, you cannot stay there, it becomes difficult to control them. For example, with bloggers' videos and these things they see, there's so much information coming through and it's not pretty. ($\chi^2 = 659{,}809$)
>
> Interview 110, man, 54 years: "[…] I feel sorry for the adolescents, because they watch everything without restrictions, when they should watch age-appropriate content. ($\chi^2 = 620.321$)

Cluster 6 multilevel monitoring

Together with cluster 3, cluster 6, which contained 10.20% of the ECUs, revolved around monitoring strategies in school settings - which represent a key microsystem for both parents and adolescents, though experienced differently by each group. This is indicated by the most significant lexical units: school ($\chi_2 = 562.979$), family ($\chi^2 = 318.\ 144$), meetings ($\chi^2 = 236.393$), education ($\chi^2 = 177.43$), boy ($\chi^2 = 127.302$), psychologist ($\chi^2 = 108.559$). However, in contrast to cluster 3, it took into account effective monitoring practices and activities that can be carried out in different daily contexts, but not in the family, and indicated which social actors can carry out these actions. According to the parents interviewed, the school, in synergy with the family, plays a leading role in promoting a safe and healthy use of the internet among young people. Training courses, thematic meetings with experts and opportunities for dialogue and prevention of cyber-risks were among the practices suggested by the parents interviewed in order to make young people aware of the risks they can run when surfing the internet and to promote safe online behaviour:

> Interview 92, woman, 41 years: I think the school has to inform the children; the schools do it through courses, for example, my children went to workshops on cyberbullying. These courses have helped

Table 2 Lexical units per factor

Factor 1				*Factor 2*			
(−) Society		*(+) Family*		*(−) Online*		*(+) Offline*	
Lemma	Test value	Lemma	Test value	Lemma	Test value	Lemma	Test value
Positive	−12.42	Telephone	16.64	Video	−11.23	School	20.97
Social	−11.49	Smartphone	15.40	To_see	−10.03	Parent	17.24
Negative	−11.20	To_see	11.34	Daughter	−9.28	Family	15.75
People	−11.10	Daughter	11.18	Social	−8.96	Education	11.69
Information	−10.52	Home	11.05	Facebook	−8.94	Meeting	11.55
Web	−10.36	To_leave	9.89	Years	−8.82	Boy	8.94
World	−8.47	Mum	9.52	Photo	−8.64	Sons/daughters	7.97
Instrument	−7.74	School	8.85	To_watch	−7.86	To_talk	7.58
To_utilize	−7.68	Son	7.67	People	−7.06	Professor	7.35
Young	−7.61	To_put	7.62	Instagram	−6.81	Role	7.09
Use	−7.33	To_play	7.15	Site	−6.75	Dialogue	6.79
To_meet	−7.18	Parent	6.67	YouTube	−6.69	Teacher	6.59
Research	−6.92	Rules	6.36	Mum	−6.66	Psychologist	6.24
To_find	−6.87	To_control	6.36	Reality	−6.28	Effective	5.99
To_worry	−6.54	To_ask	5.97	To_worry	−6.16	Institution(s)	5.97
In_general	−6.31	To_go_out	5.96	Whatsapp	−5.55	Problem	5.94
Adult	−6.10	Browsing_history	5.81	To_play	−5.22	Organizing	5.75
Useful	−5.97	Night	5.66	To_hide	−5.18	Important	5.55
Risks	−5.89	To_talk	5.46	Profile	−5.06	School_principal	5.51
Knowledge	−5.74	Password	5.39	People	−4.87	To_step_in	5.44

them to be more aware of what can happen on the internet, so the school has a key role in this. The obstacles are there because there is never a relationship between the school and the family". ($\chi^2 = 1131.459$)

Interview 125, man, 56 years: The school plays an active role. I communicate our rules to the school when I meet with the teachers and we talk about the rules and we try to get them respected by the children, the community at school and individuals at home". ($\chi^2 = 839{,}515$)

Interview 103, woman, 35 years: In the school, first of all, the teachers should be trained, for example, by the Postal Police, and even attend classes with them. But I know that they have lessons with psychologists, now there is the listening center with the psychologist in the school. There are some interventions that the school has activated. ($\chi^2 = 825{,}455$)

While some lexical units appear in multiple clusters, their meaning and usage differ based on their co-occurrence with other terms and the broader thematic context. For instance, 'daughter' appears in both Cluster 2 ('Dangerous Smartphones') and Cluster 5 ('Social Media World'), but with different contextual meanings: in Cluster 2, it co-occurs with terms related to device control and home usage, reflecting parents' direct supervision of their daughters' smartphone use. In Cluster 5, it appears alongside terms related to social media viewing and content consumption, representing parents' concerns about their daughters' online social interactions.

Similarly, seemingly related terms like 'to_ask' (Cluster 5) and 'to_search' (Cluster 3) represent distinct parental behaviors: 'to_ask' appears in contexts where parents inquire about their children's social media activities and online interactions, while 'to_search' is associated with parents' active and independent monitoring and rule-setting behaviors. These nuanced distinctions emerge from the co-occurrence patterns within each cluster and help differentiate the various aspects of parental monitoring practices.

Correspondence Analysis

The correspondence analysis performed after the cluster analysis revealed two factors. The first factor explained 27.82% of the inertia (i.e., variance in the correspondence analysis), and the second factor explained 23.80% of the inertia. The most significant lexical units per factor are listed in Table 2.

Factor 1. On the negative polarity, lemmas refer to a general description and evaluation of the internet in the social macrosystem. The internet is referred to as an instrument that is part of the daily life of people of different generations, as suggested by lexical units such as instrument (−7.74), to_utilize (−7.68), use (−7.33), knowledge (−5.74), young (−7.61), adult (−6.10), and world (−8.84). It has a dual nature with both positive (−12.42) and negative (−11.20) aspects. On the one hand, the internet has the potential to facilitate relationships and the search for information - see the words social (−11.49), web (10.36), people (11.10), information (10.52), and research (6.92). On the other hand, it raises some concerns because it implies some risks - see lexical units like risks (−5.89) and to_worry (−6.54). On the positive polarity, the internet is represented as part of the family microsystem, as suggested by the lemmas you (7.02), daughter (11.18), son (7.67), mom (9.52), parent (6.67), and home (11.05). In family contexts, parents play a role in monitoring their children's use of the internet and online activities - see the lemmas to_see (11.34), to_leave (9.89), to_control (6.36), to_ask (5.97), rules (6.36), (browsing) history (5.81).

Factor 2. On the negative polarity, the Web is framed as an online social microsystem where relationships are established and maintained, as suggested by the lemmas social (−8.96), Facebook (−8.94), Instagram (−6.81), people (−7.06), and entertaining activities are carried out, as indicated by the lexical units video (−11.23), photo (−8.64), Youtube (−6.69), to_play (−7.15). The use of the internet for socializing and entertainment also appears as a potential problem - see the lexical units to_hide (−6.16) and to_worry (−5.18). On the positive polarity, offline microsystems such as school (20.97), parents (17.24), family (15.75), professor (7.35), teacher (6.59), psychologist (6.24) are mentioned as playing a role (7.09) through specific training initiatives and dialogical activities, as shown by the lexical units education (11.69), meeting (11.55), to_talk (7.58), dialogue (6.79), problem (5.94), organizing (5.75).

Figure 1 shows the relationships between the thematic clusters as projected onto the two-dimensional space defined by the two factors. On the first factor, clusters 1 and 4 are on the polarity that refers to the social macrosystem, while all the others, especially clusters 2 and 5, are on the positive pole that refers to the family microsystem. On the second factor, clusters 6 and 3 are opposite to cluster 5 (with clusters 1 and 2 in a neutral position), the former closer to the polarity referring to the offline microsystems and the latter closer to the polarity referring to the online microsystem.

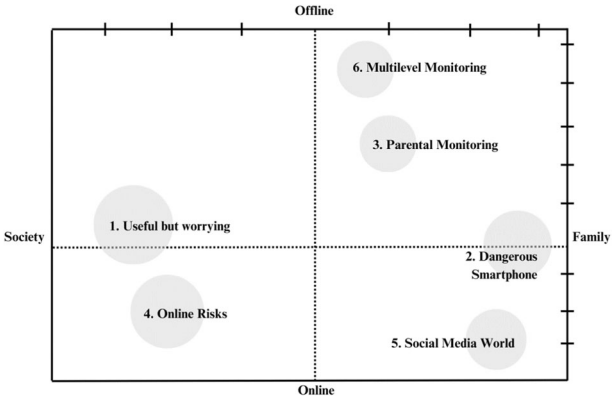

Fig. 1 Location of clusters in the factorial space

Discussion

This study uniquely explores how the monitoring strategies and concerns of parents of Italian early adolescents evolve across different ecological levels (Bronfenbrenner, 1977). From parents' perspective, this ranges from direct supervision within their family microsystem (which represents part of their children's microsystem) to engagement with broader societal influences. This extends previous research that has primarily examined parental monitoring within the family context.

The results indicate that the strategies parents choose to monitor their early adolescents' internet use are related to their representations of the internet and internet-related practices, and to the ways in which they make sense of the contexts in which their children participate. The parents' combined use of communication-based and rule-based monitoring strategies appears particularly appropriate for early adolescence, as this developmental stage requires both support for growing autonomy and clear boundaries. Such dual approaches can help early adolescents develop critical skills in assessing online risks and opportunities while having a safety net of parental oversight. This aligns with research suggesting that early adolescence is an optimal time for developing digital literacy and online decision-making capabilities within supportive family and school environments (Blum et al., 2014; Daly & Marshall, 2021). Overall, the findings suggest that representations of the internet and parental monitoring change as the parents move from the innermost ecological levels - i.e., the micro- and mesosystem levels - to the exosystem level in which they are not active participants - i.e., peer groups and social networks (e.g., youtube) - to the macro-system level, which includes the broader society with its customs, habits, and practices regarding the internet.

At the microsystem level (which partly overlaps with their children's microsystem), as highlighted in previous studies, parents consider internet use as a factor that makes parenting more difficult (Pew Research Center, 2020), especially in terms of how effectively they monitor their children's use and overuse of digital devices. The difficulties experienced are evident from the findings and seem to

reflect the role crisis theorized by several scholars of family relations (Ammaniti, 2015; Kanter et al., 2012; Lancini, 2023). A closer look at the results shows that parents' ambivalent position towards the internet is also reflected in the mix of monitoring strategies chosen in the family context: parents express concerns regarding the proliferation of digital devices as it could limit the opportunities for adolescents to cultivate personal interactions, but they use the same tools to monitor their children; they claim the need to promote dialogue and communication, but at the same time they feel it is their parental duty to impose rules and restrictions on both the content consumed and the time spent on the internet.

The solution to the difficulties experienced at the microsystem level is identified at the mesosystem level. At the mesosystem level, where parents and schools interact (representing connections between two key microsystems in adolescents' lives), the importance of promoting dialogue and open communication is highlighted. Furthermore, risk prevention programs developed by teachers and professionals (e.g. psychologists) and parental self-help groups are expected at this level. These findings are in line with previous studies that confirmed the need for parents to be professionally trained in both digital and relational skills (Dingus Keuhlen et al., 2020; Livingstone & Helsper, 2008; Wang et al., 2005) in order to promote their effectiveness in setting boundaries and ensuring a safe online context for their children.

At the exosystem level (from parents' perspective), which includes social media platforms, social networks, and broader online interactions among adolescents - environments that represent microsystems for their children but spaces of indirect influence for parents - adults demonstrated a tendency to control and restrict, being mostly concerned about potential risks. They were particularly vigilant about their children's use of social media and worried about exposure to inappropriate content and online interactions.

At the macrosystem level, participants exhibited clear ambivalence toward digital technologies, simultaneously viewing the internet as both beneficial and potentially harmful. This ambivalence manifested in parents' monitoring practices, as they alternated between enabling and restricting their children's digital engagement. Such findings align with recent research on parental digital ambivalence (Mascheroni et al., 2018) and extend our understanding of how this ambivalence shapes monitoring practices across ecological systems. Ambivalent/negative parental attitudes toward the internet have been associated with parental ineffectiveness in monitoring and communicating with their children about the internet (Jang et al., 2017; Valcke et al., 2010), and it is important to address this issue in order to strengthen parents' ability to intervene in adolescents' internet use. These findings highlight the challenging task parents face in navigating digital monitoring. While our results show parental ambivalence towards digital technologies, this should be understood as a reasonable response to a complex environment where both opportunities and risks are real and documented. Supporting parents in this challenging role through evidence-based resources and community support networks becomes crucial for fostering effective digital monitoring practices.

These findings emerged from the Italian context which presents unique characteristics in terms of family dynamics and digital adoption, with families traditionally playing a central role in adolescents' development and education (Grilli & Parisi, 2017; Santarelli & Cottone, 2009). Italian parenting typically emphasizes stronger family bonds and prolonged parental supervision. These cultural aspects may influence how Italian parents approach digital monitoring and negotiate independence in their children's online activities. Notably, our findings align with evidence from studies previously discussed in this paper, primarily conducted in the United States and Northern European countries. Italian parents demonstrate ambivalent attitudes toward the internet, consistent with parents from other cultural contexts (Livingstone & Blum-Ross, 2020), and integrate various monitoring strategies (from communication to control) similar to those observed in American families (Hernandez et al., 2023). They report difficulties in supervising their children's social media use due to limited understanding of these platforms, confirming that the generational digital divide remains a significant barrier to parental monitoring (Livingstone et al., 2011). While these dimensions may have broader cross-cultural relevance, further research is needed to examine how monitoring strategies and interactions with ecological systems vary across diverse contexts (Qian et al., 2024).

This study has limitations. The data were collected in 2019 in Italy, before the COVID-19 health emergency made internet use more prominent for adolescents and families. In 2020–2021, adolescents' use of the internet changed not only because educational activities were conducted exclusively online for many months, but also because online entertainment activities increased rapidly. It is possible that parents' perspectives on the internet have changed because of these macro-systemic changes. That almost 75% of the participants were mothers limits our understanding of paternal perspectives on digital monitoring. Another limitation concerns the availability of age-specific data. While our study focuses on early adolescence (11–14 years), much of the existing literature and national statistics encompass broader age ranges (e.g., 11–19 years in ISTAT data, 9–16 years in EU Kids Online). This makes it challenging to isolate findings specific to the early adolescent developmental period, though we have been careful to distinguish

when findings may be more or less applicable to our target age group. Future research should actively recruit fathers to examine potential gender differences in monitoring approaches. Another limitation is that the study did not simultaneously collect data from the children of the participating parents. This would have helped to clarify underlying representational differences that might highlight the generational divide in internet use patterns and attitudes.

Conclusion

Research on Italian families has documented the complexity of parental monitoring strategies and the ambivalent attitudes parents hold toward digital technologies (Caso et al., 2023). Parents' attitudes towards internet-related practices are ambivalent and are reflected in the strategies they choose to monitor their early adolescents' internet use, ranging from control and restriction to dialogue and open communication. From an ecological perspective, it is evident how parental digital monitoring operates across multiple nested ecological levels - from the family microsystem (experienced differently by parents and adolescents) through to broader societal influences. The findings suggest monitoring practices must be understood through this dual lens, recognizing how ecological systems differ between parents and their children while remaining interconnected. This has implications for interventions at various levels: within the family microsystem, through school-family partnerships at the mesosystem level, via social media platforms that represent exosystems for parents but microsystems for adolescents, and through broader societal responses at the macro level. Considering the person-environment mutual relationship upon which the human development occurs (Bronfenbrenner, 1977), it can be argued that the monitoring choies are somehow influenced by the environment that compells parents to adapt to its restrictions and conditions. These findings have interesting implications for intervention. For instance, they suggest that programs to support parents in safekeeping and promoting their adolescents' digital health should be tailored to the conditions, resources and obstacles available in the interconnected ecological levels. Our findings also point to the need for broader societal responses at the exo and macro-system levels. At the exosystem level, social media platforms could implement more robust age-verification systems and parental control tools, while community organizations could offer digital literacy programs. At the macrosystem level, policy measures such as improved digital safety regulations, mandatory digital citizenship education in schools, and public awareness campaigns could help create a more supportive environment for parents navigating digital monitoring challenges. These multi-level interventions could complement and reinforce parents' monitoring efforts within the family microsystem.

This study advances understanding of parental digital monitoring in the Italian context by revealing its multi-level nature and identifying specific patterns of parental ambivalence. Our findings extend previous research by demonstrating how monitoring practices operate across different ecological systems and, in line with extant literature that emphasizes the importance of context for monitoring choices, this study takes a step further and encourages to adopt a broader approach which considers the different level and size environments and their reciprocal relations.

Data Availability

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy and ethical restrictions.

Supplementary information The online version contains supplementary material available at https://doi.org/10.1007/s10826-025-03138-4.

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Compliance with ethical standards

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References

AGCOM. (2021). Osservatorio sulle Comunicazioni N. 4/2021. Autorità per le Garanzie nelle Comunicazioni. https://www.agcom.it/pubblicazioni/osservatori/osservatorio-sulle-comunicazioni-n4-2021

Ammaniti, M. (2015). *La famiglia adolescente (i Robinson/Letture)*. Laterza.

Andrade, A. L. M., Scatena, A., Bedendo, A., Fiorim Enumo, S. R., Dellazzana-Zanon, L. L., Bazanelli Prebianchi, H., & De Micheli, D. (2021). Internet addiction among Brazilian students: Prevalence and association with emotional problems. *Universitas Psychologica*, *20*, 1–15.

Aroldi, P. (2015). Famiglie connesse. Social network e relazioni familiari online. *MEDIA EDUCATION –Studi, Ricerche, Buone Pratiche*, *6*(1), 1–17. https://oaj.fupress.net/index.php/med/article/view/8713/8448

Benson, M. J., & Buehler, C. (2012). Family process and peer deviance influences on adolescent aggression: longitudinal effects across early and middle adolescence. *Child Development*, *83*(4), 1213–1228. https://doi.org/10.1111/J.1467-8624.2012.01763.X.

Blakemore, S., Burnett, S., & Dahl, R. E. (2010). The role of puberty in the developing adolescent brain. *Human Brain Mapping*, *31*(6), 926–933. https://doi.org/10.1002/hbm.21052.

Blum, R. W., Astone, N. M., Decker, M. R., & Mouli, V. C. (2014). A conceptual framework for early adolescence: a platform for research. *International Journal of Adolescent Medicine and Health*, *26*(3), 321–331. https://doi.org/10.1515/IJAMH-2013-0327.

Branje, S. J. T., Van Aken, M. A. G., & Van Lieshout, C. F. M. (2002). Relational support in families with adolescents. *Journal of Family Psychology*, *16*(3), 351–362. https://doi.org/10.1037/0893-3200.16.3.351.

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, *32*(7), 513–531. https://doi.org/10.1037/0003-066X.32.7.513.

Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nuture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, *101*(4), 568–586. https://doi.org/10.1037/0033-295X.101.4.568.

Bronfenbrenner, U. (1989). Ecological systems theory. In R. Vasta (Ed.), *Annals of Child Development* (Vol. 6, pp. 187–249). Jessica Kingsley Publishers.

Caso, D., Pecoraro, N., Fiorilli, C., & De Stasio, S. (2023). A re-examination of the Italian parental monitoring scale: Development, validation, gender, and school success measurement invariance. *Psychology in the Schools*, *60*(7), 2618–2636. https://doi.org/10.1002/pits.22899.

Cefai, C., & Cooper, P. (2010). Students without voices: the unheard accounts of secondary school students with social, emotional and behaviour difficulties. *European Journal of Special Needs Education*, *25*(2), 183–198. https://doi.org/10.1080/08856251003658702.

Christensen, T. (2009). Connected presence' in distributed family life. *New Media & Society - NEW MEDIA SOC.*, *11*, 433–451. https://doi.org/10.1177/1461444808101620.

Cole, M. (1996). *Cultural psychology: A once and future discipline*. Harvard University Press.

Daly, K. A., & Marshall, A. D. (2021). Trauma during early adolescence and boys' social behavior: A focus on teen dating violence. *Journal of Child & Adolescent Trauma*, *14*(4), 471–482. https://doi.org/10.1007/s40653-021-00339-z.

David, O. A., Fodor, L. A., Dascăl, M. D., & Miron, I. S. (2023). The efficacy of online parenting interventions in addressing emotional problems in children and adolescents: A meta-analysis of randomized controlled trials. *The International Journal of Social Psychiatry*, *69*(5), 1100–1112. https://doi.org/10.1177/00207640231156034.

Demkowicz, O., Panayiotou, M., Qualter, P., & Humphrey, N. (2023). Longitudinal relationships across emotional distress, perceived emotion regulation, and social connections during early adolescence: A developmental cascades investigation. *Development and Psychopathology*, *36*(2), 562–577. https://doi.org/10.1017/s0954579422001407.

Dimock, M. (2019). *Defining generations: Where Millennials end and Generation Z begins*. Pew Research Centre. https://www.pewresearch.org/short-reads/2019/01/17/where-millennials-end-and-generation-z-begins/

Dingus Keuhlen, K., Donald, K., Falbo, R., Lekuti, Y., Marroquin, L., & Ladd, L. (2020). Stop! collaborate and listen: A content analysis of peer-reviewed articles investigating parenting strategies for managing adolescent internet use. *Contemporary Family Therapy*, *42*(2), 163–174. https://doi.org/10.1007/S10591-019-09510-Z.

Eden, S., Heiman, T., & Olenik-Shemesh, D. (2016). Bully versus victim on the internet: The correlation with emotional-social characteristics. *Education and Information Technologies*, *21*(3), 699–713. https://doi.org/10.1007/S10639-014-9348-2.

Edwards, D., & Potter, J. (1992). *Discursive psychology*. Sage Publications.

Floridi, L. (2014). *The OnLife manifesto: Being Human in a Hyperconnected era*. http://dspace.cus.ac.in/jspui/bitstream/1/5731/1/The%20Onlife%20Manifesto.pdf

Geng, X., Zhang, J., Liu, Y., Xu, L., Han, Y., Potenza, M. N., & Zhang, J. (2023). Problematic use of the internet among adolescents: A four-wave longitudinal study of trajectories, predictors and outcomes. *Journal of Behavioral Addictions*. https://doi.org/10.1556/2006.2023.00021.

Gerard, J. M., & Buehler, C. (1999). Multiple risk factors in the family environment and youth problem behaviors. *Journal of Marriage and the Family*, *61*(2), 343 https://doi.org/10.2307/353753.

Gergen, K. J. (1999). *An invitation to social construction*. Sage Publications.

Grilli, S., & Parisi, R. (2017). The weight of belonging: Families and kinship in Italy between persistence and transformations. *Popolazione e Storia*, *18*, 45–66.

Guilamo-Ramos V., Jaccard J., & Dittus, P. (Eds.). (2010). *Parental monitoring of adolescents: current perspectives for researchers and practitioners*. Columbia University Press.

Guzzo, T., Caschera, M. C., Ferri, F., & Grifoni, P. (2023). Analysis of the digital educational scenario in italian high schools during the pandemic: Challenges and emerging tools. *Sustainability* (Switzerland), 15(2). https://doi.org/10.3390/SU15021426

Hampden-Thompson, G., & Galindo, C. (2017). School–family relationships, school satisfaction and the academic achievement of young people. *Educational Review*, *69*(2), 248–265. https://doi.org/10.1080/00131911.2016.1207613.

Hernandez, J. M., Ben-Joseph, E. P., Reich, S., & Charmaraman, L. (2023). Parental monitoring of early adolescent social technology use in the US: A mixed-method study. *Journal of Child and Family Studies*, *33*, 759–776. https://doi.org/10.1007/s10826-023-02734-6.

Hollis, C., Livingstone, S., & Sonuga-Barke, E. (2020). Editorial: The role of digital technology in children and young people's mental health - a triple-edged sword? *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *61*(8), 837–841. https://doi.org/10.1111/JCPP.13302.

ISTAT. (2024). Indagine bambini e ragazzi - Anno 2023: Nuove generazioni sempre più digitali e multiculturali. https://www.istat.it/it/files/2024/05/Bambini-e-ragazzi-2023.pdf

Jang, J., Hessel, H., & Dworkin, J. (2017). Parent ICT use, social capital, and parenting efficacy. *Computers in Human Behavior*, *71*, 395–401. https://doi.org/10.1016/J.CHB.2017.02.025.

Johnson, G., & Puplampu, K. P. (2008). A conceptual framework for understanding the effect of the internet on child development: The ecological techno-subsystem. *Canadian Journal of Learning and Technology*.

Jorgenson, A. G., Hsiao, R. C. J., & Yen, C. F. (2016). Internet addiction and other behavioral addictions. *Child and Adolescent Psychiatric Clinics of North America*, *25*(3), 509–520. https://doi.org/10.1016/J.CHC.2016.03.004.

Kammerl, R., Kramer, M., Müller, J., Potzel, K., Tischer, M., & Wartberg, L. (2023). *Dark Patterns und Digital Nudging in Social Media-wie erschweren Plattformen ein selbstbestimmtes Medienhandeln? [Dark patterns and digital nudging in social media-how do platforms make self-determined media behavior more difficult?]*. (Nomos Verlagsgesellschaf.

Kanter, M., Afifi, T., & Robbins, S. (2012). The impact of parents "Friending" their young adult child on facebook on perceptions of parental privacy invasions and parent-child relationship quality. *Journal of Communication*, *62*(5), 900–917. https://doi.org/10.1111/j.1460-2466.2012.01669.x.

Kawabe, K., Horiuchi, F., Oka, Y., & Ueno, S. I. (2019). Association between sleep habits and problems and internet addiction in adolescents. *Psychiatry Investigation*, *16*(8), 581 https://doi.org/10.30773/PI.2019.03.21.2.

Keijsers, L., Frijns, T., Branje, S. J. T., & Meeus, W. (2009). Developmental links of adolescent disclosure, parental solicitation, and control with delinquency: Moderation by parental support. *Developmental Psychology*, *45*(5), 1314–1327. https://doi.org/10.1037/a0016693.

Lancia, F. (2004). *Strumenti per l'Analisi dei Testi. Introduzione all'uso di T-LAB [Tools for text analysis. Introduction to the use of T-LAB]*. ((Franco Angeli.

Lancini, M. (2023). *Sii te stesso a modo mio essere adolescenti nell'epoca della fragilità adulta*. (Raffaello Cortina Editore.

Livingstone, S., & Helsper, E. J. (2008). Parental mediation of children's internet use. *Journal of Broadcasting & Electronic Media*, *52*(4), 581–599. https://doi.org/10.1080/08838150802437396.

Livingstone, S., & Haddon, L. (2008). Risky experiences for children online: Charting european research on children and the internet. *Children & Society*, *22*(4), 314–323. https://doi.org/10.1111/J.1099-0860.2008.00157.X.

Livingstone, S., & Blum-Ross, A. (2020). *Parenting for a Digital Future: How Hopes and Fears about Technology Shape Children's Lives.* (Oxford University Press.

Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). *Risks and safety on the internet: the perspective of European children: full findings and policy implications from the EU Kids Online survey of 9-16 year olds and their parents in 25 countries. EU Kids Online, Deliverable D4*. (EU Kids Online Network.

Mascheroni, G., & Ólafsson, K. (2014). *Net Children Go Mobile: Risks and Opportunities. Second Edition*. https://www.researchgate.net/publication/283320908_Net_Children_Go_Mobile_risks_and_opportunities_Second_edition_Milano_Educatt

Mascheroni, G., Ponte, C., & Jorge, A. (2018). *Digital Parenting: the challenges for families in the digital age. Yearbook 2018*. (The International Clearing House on Children, Youth and Media. https://norden.diva-portal.org/smash/get/diva2:1265024/FULLTEXT02.pdf.

McMillan, S. J., & Morrison, M. (2006). Coming of age with the internet: A qualitative exploration of how the internet has become an integral part of young people's lives. *New Media and Society*, *8*(1), 73–95. https://doi.org/10.1177/1461444806059871.

Nightingale, D. J., & Cromby, J. (Eds.). (1999). *Social constructionist psychology: A critical analysis of theory and practice*. Open University Press.

Pew Research Center. (2020). *Parenting Kids in the Age of Screens, Social Media and Digital Devices*. https://www.pewresearch.org/internet/2020/07/28/parenting-children-in-the-age-of-screens/

Pew Research Center. (2024). *Teens, Social Media and Technology 2024*. https://www.pewresearch.org/wp-content/uploads/sites/20/2024/12/PI_2024.12.12_Teens-Social-Media-Tech_REPORT.pdf

Qian, H., Wang, C., & Li, H. (2024). Parental risk factors and moderators of prolonged digital use in preschoolers: A meta-analysis. *Education and Information Technologies*, *29*(13), 17601–17619. https://doi.org/10.1007/s10639-024-12558-6.

Rideout, V., & Robb, M. B. (2020). *The common sense census: Media use by kids age zero to eight*. (Common Sense Media.

Ryan, G. W., & Bernard, H. R. (2003). Techniques to Identify Themes. *Field Methods*, *15*(1), 85–109. https://doi.org/10.1177/1525822X02239569.

Salvatore, S. (2016). *Psychology in black and white: The project for a theory driven science*. Information Age Publishing.

Salvatore, S., Gelo, O., Gennaro, A., Manzo, S., & Al-Radaideh, A. (2010). Looking at the psychotherapy process as an intersubjective dynamic of meaning-making: A case study with Discourse Flow Analysis. *Journal of Constructivist Psychology*, *23*(3), 195–230.

Santarelli, E., & Cottone, F. (2009). Leaving home, family support and intergenerational ties in Italy: Some regional differences. *Demographic Research*, *21*, 1–22. https://doi.org/10.4054/demres.2009.21.1.

Scabini, E., Marta, E., & Lanz, M. (2015). *Transition to adulthood and family relations: an intergenerational approach*. (Psychology Press.

Skinner, E., Pitzer, J., & Brule, H. (2014). The role of emotion in engagement, coping, and the development of motivational resilience. In P. A. Alexander, R. Pekrun, & L. Linnenbrink-Garcia (Eds.), *International Handbook of Emotions in Education* (pp. 331–347). Routledge.

Smahel, D., Machackova, H., Mascheroni, G., Dedkova, L., Staksrud, E., Ólafsson, K., Livingstone, S., Hasebrink, U., Smahel, D., Mascheroni, G., Dedkova, L., Staksrud, E., Ólafsson, K., & Livingstone, S. (2020). EU Kids Online 2020: Survey results from 19 countries. https://doi.org/10.21953/lse.47fdeqj01ofo

Snyder, J. (2002). Reinforcement and coercion mechanisms in the development of antisocial behavior: Peer relationships. In J. B. Reid, G. R. Patterson, & J. Snyder (Eds.), *Antisocial behavior in children and adolescents: A developmental analysis and model for intervention*. (pp. 101–122). American Psychological Association.

Sonck, N., Nikken, P., & de Haan, J. (2013). Determinants of internet mediation. *Journal of Children and Media*, *7*(1), 96–113. https://doi.org/10.1080/17482798.2012.739806.

Symons, K., Ponnet, K., Walrave, M., & Heirman, W. (2017). A qualitative study into parental mediation of adolescents' internet use. *Computers in Human Behavior*, *73*, 423–432. https://doi.org/10.1016/J.CHB.2017.04.004.

Tateno, M., Teo, A. R., Ukai, W., Kanazawa, J., Katsuki, R., Kubo, H., & Kato, T. A. (2019). Internet addiction, smartphone addiction, and Hikikomori trait in Japanese young adult: Social isolation and social network. *Frontiers, Psychiatry*, *10*, 455 https://doi.org/10.3389/FPSYT.2019.00455.

Trudeau, L., Spoth, R., Randall, G. K., Mason, W. A., & Shin, C. (2012). Internalizing symptoms: effects of a preventive intervention on developmental pathways from early adolescence to young adulthood. *Journal of Youth and Adolescence*, *41*(6), 788–801. https://doi.org/10.1007/S10964-011-9735-6.

Valcke, M., Bonte, S., De Wever, B., & Rots, I. (2010). Internet parenting styles and the impact on internet use of primary school children. *Computers & Education*, *55*, 454–464. https://doi.org/10.1016/j.compedu.2010.02.009.

Valkenburg, P. M., Piotrowski, J. T., Hermanns, J., & de Leeuw, R. (2013). Developing and validating the perceived parental media mediation scale: A self-determination perspective. *Human Communication Research*, *39*(4), 445–469. https://doi.org/10.1111/HCRE.12010.

Valsiner, J. (2007). *Culture in minds and societies: Foundations of cultural psychology*. Sage Publications.

Valsiner, J. (2014). *An invitation to cultural psychology*. Sage Publications.

Veltri, G. (2013). Viva la Nano-Revolucion! A Semantic Analysis of the Spanish National Press. *Science Communication*, *35*, 143–167. https://doi.org/10.1177/1075547012440353.

Vincent, J. (2015). *Mobile Opportunities Exploring positive mobile media opportunities for European children*. London School of Economics and Political Science. https://eprints.lse.ac.uk/61015/1/__lse.ac.uk_storage_LIBRARY_Secondary_libfile_shared_repository_Content_POLIS_Vincent_Mobile-Opportunities_2015.pdf

Wang, R., Bianchi, S. M., & Raley, S. B. (2005). Teenagers' internet use and family rules: A research note. *Journal of Marriage and Family*, *67*(5), 1249–1258. https://doi.org/10.1111/J.1741-3737.2005.00214.X.

WHO Regional Office for Europe. (2024). *New WHO report indicates need for healthier online habits among adolescents*. https://www.who.int/europe/news/item/25-09-2024-new-who-report-indicates-need-for-healthier-online-habits-among-adolescents

Winstone, L., Mars, B., Haworth, C. M. A., & Kidger, J. (2021). Social media use and social connectedness among adolescents in the United Kingdom: a qualitative exploration of displacement and stimulation. *BMC Public Health*, *21*(1), 1–15. https://doi.org/10.1186/S12889-021-11802-9/FIGURES/4.

Wu, Y. Q., Liu, F., Chan, K. Q., Wang, N. X., Zhao, S., Sun, X., Shen, W., & Wang, Z. J. (2022). Childhood psychological maltreatment and internet gaming addiction in Chinese adolescents: Mediation roles of maladaptive emotion regulation strategies and psychosocial problems. *Child Abuse & Neglect*, *129*, 105669 https://doi.org/10.1016/J.CHIABU.2022.105669.

Zgusta, L. (2006). *Lexicography then and now: Selected Essays*. De Gruyter.

Zhou, N., Cao, H., Li, X., Zhang, J., Yao, Y., Geng, X., Hou, S., Liu, F., Chen, X., & Fang, X. (2018). Internet addiction, problematic internet use, nonproblematic internet use among Chinese adolescents: Individual, parental, peer, and sociodemographic correlates. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors*, *32*(3), 365–372. https://doi.org/10.1037/ADB0000358.