# Parents' Perceptions About the Use of Generative AI Systems by Adolescents

Maria Eira
Centre for AI and Robotics
United Nations Interregional Crime and Justice Research Institute
Porto, Portugal
maria.eira@un.org

Amirkaveh Rasouli
Centre for AI and Robotics
United Nations Interregional Crime and Justice Research Institute
The Hague, Netherlands
amirkavehrasouli@gmail.com

Vicky Charisi
Berkman Klein Centre
Harvard University
Cambridge, Massachusetts, USA
vcharisi@cyber.harvard.edu

## Abstract

Current research on the impact of Generative Artificial Intelligence (GenAI) on adolescent development yields mixed results, and parents are left to navigate this emerging technology without clear support and knowledge. A missing step toward effective digital parenting is understanding parents' concerns and beliefs. Therefore, this preliminary study explores parental perspectives on the use and impact of GenAI on adolescents aged 13 to 17. We conducted a survey with $N = 159$ parents from 19 countries across Europe, Asia, Africa, and the Americas. Findings suggest that most parents are unaware of how their children use GenAI and feel disconnected from them on this topic. Importantly, while parents recognise the opportunities and risks of GenAI, their views vary based on their own familiarity with the technology, with those who use it regularly being significantly more optimistic about its impact on adolescents' development. These results highlight a gap in digital parenting when it comes to adolescents' use of GenAI, underscoring the need for a systematic approach to parental support. Future work will expand the survey into a larger-scale study and incorporate adolescents' perspectives.

## CCS Concepts

• **Human-centered computing** → **Empirical studies in HCI**; • **Computing methodologies** → **Artificial intelligence**; • **Social and professional topics** → **Adolescents**.

## Keywords

AI Literacy, Responsible AI, Generative AI, Large Language Models, Digital Parenting

**ACM Reference Format:**
Maria Eira, Amirkaveh Rasouli, and Vicky Charisi. 2025. Parents' Perceptions About the Use of Generative AI Systems by Adolescents. In *Interaction Design and Children (IDC '25), June 23–26, 2025, Reykjavik, Iceland*. ACM, New York, NY, USA, 5 pages. https://doi.org/10.1145/3713043.3731508


*IDC '25, Reykjavik, Iceland*

ACM ISBN 979-8-4007-1473-3/25/06
https://doi.org/10.1145/3713043.3731508

## 1 Introduction

The increasing use of Generative Artificial Intelligence (GenAI) tools, such as Large Language Models (LLMs) (ChatGPT, Gemini, Claude etc.), has introduced new opportunities for adolescents to engage in digital spaces, already showing some initial positive impacts[3, 16, 17, 20, 31]. GenAI systems are used in leisure and formal education, while their application varies from search machines or intelligent tutoring systems to content creators and social chatbots. However, an increasing body of literature raises questions about the emerging challenges of GenAI use by teenagers, such as the impact on human development [7], the concerns about privacy [12], and the amplification of societal biases [1].

While the adoption of GenAI tools by teenagers has been a sweeping phenomenon, the response to emerging challenges has not been able to keep the same pace. Several governmental agencies took quick and radical measures, such as the decision of New York City to ban the use of ChatGPT in schools for fear that students could cheat [10]. However, more nuanced interventions are needed. For example, AI literacy has been considered an effective strategy for teenagers to navigate the responsible use of GenAI [26], accompanied by the support of educators. UNESCO's guidelines [14] are an example of support and material to educators for the responsible use of GenAI in school. What remains unexplored is the type of support parents might need, as figures who traditionally play an instrumental role in the guidance of teenagers beyond school hours [4]. Although parental involvement and intervention have been shown to have a drastic impact on children's development and learning [24, 25], anecdotal evidence shows that, currently, parents feel poorly equipped to provide informed support to their children about the use of GenAI tools.

To address this challenge, our work focuses on parents' role as agents of adolescents' responsible use of GenAI. This paper presents our preliminary results on parents' awareness and beliefs about the use of GenAI by their teenage children, and it is the first step of a larger project on GenAI literacy in informal family settings.

## 2 Background

### 2.1 GenAI and adolescents

Recent research on the use of GenAI shows that 70% of adolescents in the United States have used at least one type of GenAI tool [19]. In the UK, 77% of adolescents had used GenAI, mostly for homework and seeking entertainment [27]. The rise of GenAI prompts important questions about its effects on adolescents' skills and well-being. Although some studies identify a number of risks and benefits associated with youth interactions with GenAI, our

understanding of its full impact on children's cognitive and social development and overall well-being remains incomplete [29]. Initial evidence on the impact of GenAI on students' critical thinking shows that tools such as ChatGPT provide access to extensive information, allowing students to explore various viewpoints and engage in critical thinking [2]. However, students also tend to accept inaccurate responses from ChatGPT and to rely on copy-pasting without evaluating the information beforehand, indicating a lack of critical thinking skills [3, 15]. Inconsistent results were also found regarding the impact on creativity. GenAI tools can provide timely and contextually relevant feedback, which broadens ideation for tasks such as writing [11]; however, there are challenges regarding authenticity [12], cultivation of collective novelty [28] and the generation of ideas beyond what is generated by GenAI [11]. In addition, we are already witnessing plans and real implementation of GenAI tools in educational settings, such as Estonia's nationwide rollout of ChatGPT Edu [22]. In this context, research highlights the core role of AI literacy, which has been shown to be linked to increased engagement with AI technologies for learning, leading to improved academic performance and enhanced development of problem-solving and critical thinking skills among students [26].

## 2.2 Digital parenting

Digital parenting — the active guidance parents provide in their children's use of technology — has emerged as a powerful strategy for supporting teenagers outside of school, with parental involvement playing a critical role in ensuring the responsible use of GenAI [5, 9, 18]. However, studies reveal a significant difference in parental experience of the use of GenAI compared to adolescents, as well as parental awareness regarding how children engage with GenAI [21]. In addition, evidence shows that parents' concerns differ from those of teenagers. While parents are mainly concerned about issues such as data collection, misinformation, and exposure to inappropriate content, teenagers are more worried about becoming overly dependent on virtual relationships, the spread of harmful content, and privacy invasions [30]. The lack of dedicated parental control features in GenAI tools forces parents to rely on system-built controls, manual history-checking, and active mediation — efforts that often fall short in addressing the full spectrum of risks (ibid.).

The complexity of the benefits and risks of GenAI tools for children, combined with the current gap in parental experience and awareness about the nature of children's GenAI use, prompted us to investigate the following questions:

**RQ1:** What are parents' perspectives about adolescents' use of GenAI in terms of the purpose of application and general impact on their cognitive and social development?

**RQ2:** How do parents' previous experiences with GenAI affect their perceptions about adolescents' use and its impact?

By addressing these questions, we aim to better understand and eventually enhance parental awareness about GenAI use and contribute to the expansion of teenagers' responsible use of GenAI.

# 3 Methodology and data analysis

We conducted a survey with $N = 159$ parents of teenage children aged 13-17 years from 19 countries in Asia, Europe, Africa, and the Americas. Recruitment for this preliminary study was carried out through social media. Participation was voluntary, no compensation was provided, and responses were anonymous. The survey included 10 questions addressing the study objectives, 3 of which referred to demographic information (see supplementary material).

To address the first research question, we used Pearson's chi-square (goodness-of-fit) test [23]. If the test was significant, we examined the nature of those differences with descriptive analysis and raw data visualisation. To address research question 2, we divided the parents into three groups – regular users, sporadic users, and unfamiliar audience - based on their replies to the initial question: "How often, if ever, have you used or heard of generative AI systems?". For the analysis of whether parents' prior experience with GenAI affects their perceptions about teenagers' use and its impact, we used a chi-square test of independence (with Monte Carlo simulation) on response items. This allowed us to assess whether the distribution of perceptions differed significantly across the three parent-experience groups. In cases where the overall test was significant, we performed post-hoc pairwise chi-square comparisons (with Monte Carlo simulation) for each (parent) group pairing, adjusting p-values using the Holm method to control for multiple comparisons [13]. If a pairwise comparison was significant, we then performed follow-up category-level Fisher's exact tests [8] (with Monte Carlo simulation) for each response category, again adjusting p-values for multiple comparisons.

# 4 Results

## 4.1 Parents' perspectives about teenagers' use of GenAI

*Parents' insights on teenagers' generative AI usage across different activities.* We asked parents how often their teenage children use GenAI for eight different purposes (e.g., searching for information, school assignments, etc.) (see Fig.1A). Chi-square goodness-of-fit tests revealed that all eight sub-questions had responses significantly non-uniform ($p < 0.001$). In other words, the distribution of answer choices was not evenly spread across the available response options, indicating that certain usage categories were more or less frequent than others. For information- or academic-oriented activities, the most frequent answers were "Has tried it" (30% and 32% respectively) or other higher-usage categories. Interestingly, for the most common application of GenAI — searching for information — over 80% of parents indicated that their teenage child had at least tried a GenAI tool for that purpose. In contrast, for personal or sensitive uses, "Never" (almost half) or "I don't know" (almost one-third) dominated the parents' responses.

*Parental perspectives on GenAI use and literacy.* We asked parents to indicate whether they agreed, disagreed, remained neutral, or felt uncertain about ten statements on AI usage. Chi-square tests revealed all items had significantly non-uniform responses ($p < 0.001$). Almost 50% of parents believed that their children informed them about how they used GenAI, but around 40% indicated they did not keep track of their children's actual usage. For questions about the teenager's knowledge of AI and the perceived ability of AI chatbots to help parents guide schoolwork, responses were distributed among options. A strong majority (82%) disagreed that their child "spends too much time chatting with AI chatbots". While

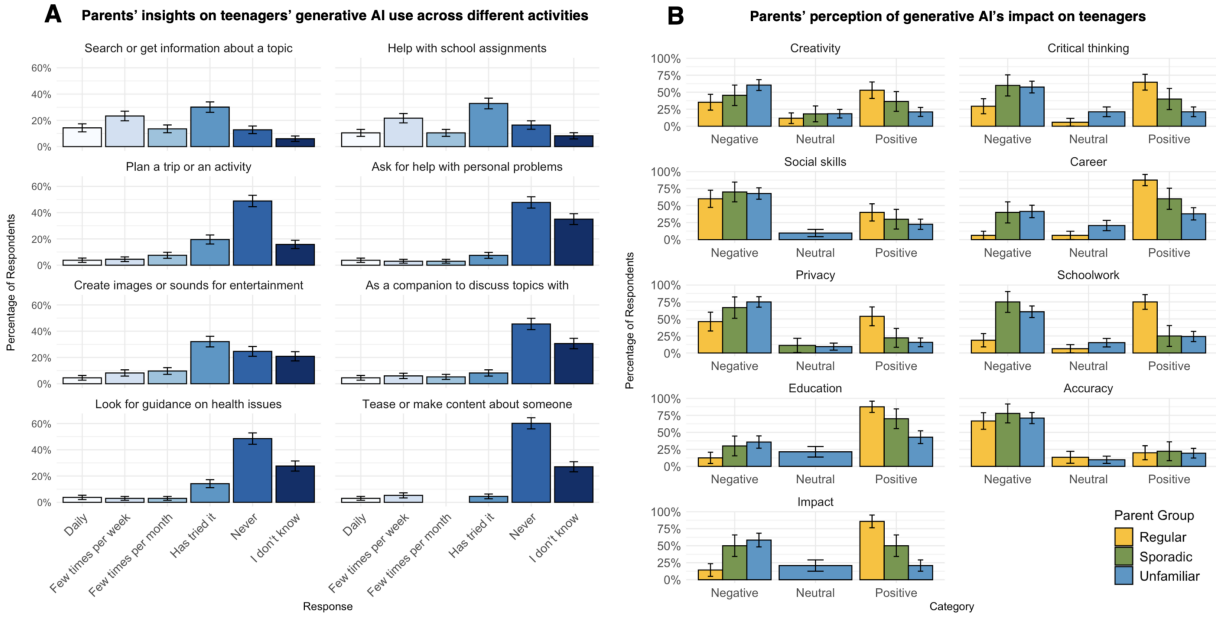


**Figure 1: Results of the survey of $N = 159$ parents of adolescents aged 13-17 from 19 countries in 5 continents.**

40% of parents agreed that their teenager "knows how to use AI responsibly", a plurality of parents (43%) felt that they did not "have sufficient knowledge on how to use AI tools responsibly to guide their child". In contrast, AI literacy items, such as the need for "introduction of AI literacy in schools" and the importance of building "AI literacy in teenage children before they use this technology", obtained broad agreement (73% and 93% respectively). Finally, almost 50% of parents agreed that "AI chatbots should be restricted until proper regulation" is in place.

*Parents' perception on GenAI's impact on teenagers.* Participants rated nine statements about GenAI's potential impact on teenagers using a 1-5 Likert scale. Because we were interested in the general trends for our research questions, we decided to collapse 1-2 as positive, 3 as neutral, and 4-5 as negative. Chi-square tests revealed all items possessed significantly non-uniform distributions ($p < 0.05$). Parents leaned negatively for most topics, including creativity (54%), critical thinking (58%), social skills (69%), privacy (68%), schoolwork (51%), trustworthiness of GenAI accuracy (75%), and impact on children's future (49%). By contrast, parents leaned positively for topics like career (51%), and the introduction of GenAI in education practices (56%). Notably, on average, only around 11% of parents were neutral, suggesting that most parents held a distinct state, either positive or negative, regarding GenAI's influence on their children.

## 4.2 Impact of parents' prior experience with GenAI on their perceptions about teenagers' use and its effect

*Parents' familiarity with GenAI.* To evaluate parents' familiarity with GenAI, we asked about their usage and awareness and consolidated six response options into three categories: Regular users ("daily" or "weekly"), Sporadic users ("monthly" or "tried before"), and Unfamiliar parents ("heard but never used" or "never heard of"). A chi-square goodness-of-fit test ($\chi^2(2) = 3.50$, $p = 0.17$) compared the observed distribution with a uniform distribution and found no significant deviation, indicating that the sample was roughly balanced across these three groups. Interestingly, in this sample, we can see that 60% of surveyed parents use GenAI tools or have at least tried them before.

*Parental perspectives on GenAI use and literacy.* For "My teenage child knows how to use AI responsibly" ($\chi^2 = 14.95$, $p = 0.0196$), Sporadic vs. Unfamiliar parents differed significantly ($p_{\text{adjusted}} = 0.014$): Unfamiliar parents were more likely to select "Agreed" ($p_{\text{adjusted}} = 0.02$), whereas Sporadic parents chose "Neutral" more ($p_{\text{adjusted}} = 0.016$), suggesting moderate familiarity influenced views on responsible AI use. Regarding "AI chatbots enable me to support my teenage child in schoolwork" ($\chi^2 = 27.00$, $p < 0.001$), Regular vs. Unfamiliar parents differed ($p_{\text{adjusted}} = 0.0005$): Regular users "Agreed" more ($p_{\text{adjusted}} = 0.0009$), while Unfamiliar parents "Disagreed" ($p_{\text{adjusted}} = 0.049$) and chose "I don't know" ($p_{\text{adjusted}} = 0.033$) more often, indicating frequent GenAI users were more confident about chatbots' educational support. Similarly, for "I have sufficient knowledge on how to use GenAI responsibly to guide my child" ($\chi^2 = 15.93$, $p = 0.0156$), Regular vs. Unfamiliar parents differed ($p_{\text{adjusted}} = 0.0019$): Regular parents "Agreed" more ($p_{\text{adjusted}} = 0.002$), whereas Unfamiliar parents "Disagreed" more ($p_{\text{adjusted}} = 0.011$), reflecting how personal use of GenAI fostered parental confidence in using it responsibly. Finally, "AI chatbots should be restricted for teenagers until proper regulation" ($\chi^2 = 30.60$, $p < 0.0001$) differed significantly between Regular and Unfamiliar parents ($p_{\text{adjusted}} < 0.0001$): Unfamiliar parents more frequently chose "Neutral" or "I don't know" (both $p_{\text{adjusted}} < 0.0001$), while Regular users "Disagreed"

($p_{\text{adjusted}} < 0.0001$), suggesting Regular users were more open to adolescents GenAI usage without proper regulations.

*Parents' perception on GenAI's impact on teenagers.* Participants rated nine items (see Fig.1B) on a 1-5 Likert scale. We collapsed 1-2 as Positive, 3 as Neutral, and 4-5 as Negative. Across five items, we observed significant group effects. For all items, the significance was driven by the difference between Regular users and Unfamiliar parents, with Regular users feeling more positive in all those areas (Critical Thinking: $p_{\text{adjusted}} = 0.026$; Career: $p_{\text{adjusted}} = 0.0119$; Schoolwork: $p_{\text{adjusted}} = 0.0107$; Education: $p_{\text{adjusted}} = 0.0175$; Development Impact: $p_{\text{adjusted}} = 0.0007$). Subsequent Fisher's exact tests with Monte Carlo simulation revealed the following differences: for "Critical Thinking", Regular users selected the Positive category significantly more than Unfamiliar users ($p_{\text{adjusted}} = 0.013$). For "Career", Regular users selected the Positive category more often than Unfamiliar parents ($p_{\text{adjusted}} = 0.005$), whereas Unfamiliar parents selected the Negative category significantly more than Regular users ($p_{\text{adjusted}} = 0.0329$). Regarding "Schoolwork", Regular users chose the Positive category significantly more than Unfamiliar parents ($p_{\text{adjusted}} = 0.004$), whereas Unfamiliar parents were more Negative ($p_{\text{adjusted}} = 0.0145$). For "Education", Regular users were significantly more Positive than Unfamiliar parents ($p_{\text{adjusted}} = 0.0138$). Lastly, for "Development Impact", Regular users were more Positive ($p_{\text{adjusted}} = 0.0004$), whereas Unfamiliar parents were more Negative ($p_{\text{adjusted}} = 0.0313$).

## 5 Discussion

Parental participation has been considered catalytic for children's development. However, little research exists regarding their involvement in teenagers' support for the responsible use of GenAI. Our results show that the vast majority of parents believe that their child uses or has at least tried a GenAI tool, at a slightly higher rate than previous studies [19, 27]. Searching for information and supporting homework are the most popular uses of GenAI; however, one-third of respondents confirmed that they do not know if their children use GenAI for personal use, which aligns with previous studies [30]. Additionally, less than half of the parents feel their children inform them about how they use GenAI, indicating the need for improvement in communication between parents and children on this topic. Considering that parents generally believe GenAI can negatively impact teenagers' development, and the potential external risks — such as reports on sexual extortion and bullying using AI-generated explicit images [6] — having an open channel of communication is very important for children to feel comfortable sharing and getting support from parents in concerning situations. Interestingly, our findings indicated a consistent significant difference between parents with different levels of familiarity with GenAI, a topic that, to our knowledge, has not been examined previously. Parents who use GenAI regularly appear more positive and see the positive impact on teenagers' critical thinking, and school performance and grades. Additionally, they believe that the use of GenAI can give teenagers an advantage in career prospects and that it offers greater benefits to development than the risks it poses. The potential explanations for this difference could be that parents who regularly use GenAI have first-hand experience, which probably reduces the "fear of the unknown", making them more confident in its responsible use and potential to support education, critical thinking, and schoolwork. Also, familiar parents may have a more adaptable and receptive mindset toward innovation, embracing AI as a tool that offers more benefits than risks. Finally, almost all parents agreed that teenagers should have basic information about AI before using it and that AI literacy should be introduced in school curricula, confirming the importance of schools in providing AI literacy. Also, a plurality of parents feel that they do not have sufficient knowledge to guide their child to use AI responsibly, showing that parents are not adequately prepared to guide their children.

This study provides insights into parental perspectives; however, it is only the first step and has certain limitations. The sample size was relatively small, and most respondents were from Europe (75%), which limits the generalizability of our findings. Also, the social media recruitment method may introduce selection bias, potentially over-representing tech-savvy parents. Exploring differences based on demographic factors, such as socioeconomic background, education level, or cultural context, could reveal further nuances in GenAI's adoption and its perceived effects.

Our future work aims to expand the survey to include more comprehensive demographic information and a larger geographical distribution to better understand the impact of parents' background on their perceptions and also some qualitative insights to enrich the findings, and explore why parents are uninformed or disconnected. Additionally, in this study, we focused solely on parents' views without considering teenagers' responses, which could have provided a more comprehensive understanding and is part of our future work.

The results of our study indicate that there is a need for actions that will (i) close the communication gap between parents and teenagers and (ii) promote AI literacy for parents and children. Parents need further support in order to reduce their uncertainties and fears and guide their children properly. The responsible use of GenAI by adolescents should be, therefore, a shared responsibility between schools — with AI literacy programs through formal education — and families — with AI literacy support in informal settings.

## 6 Conclusion

This work contributes to the initial understanding of parental beliefs and perceptions regarding adolescents' use of GenAI. Our analysis shows that most parents are not fully aware of how their children use GenAI and believe it is mostly for information searches and schoolwork, and not for personal use. This reveals a disconnection and a lack of communication in this context. Parents feel that adolescents' use of GenAI can negatively impact cognitive skills such as creativity and critical thinking, social skills, privacy, and academic performance. Results further indicate that parents' perspectives are significantly influenced by their own familiarity with and use of GenAI tools. Parents who lack opportunities to familiarise themselves with these tools should be supported, so they can reduce their uncertainties and better support their children. AI literacy programs, both in formal education and informal family settings, can benefit parents and adolescents alike, fostering the responsible use of GenAI as a key element in building empowered future societies.

## Acknowledgments

This project was partially funded by The Walt Disney Company.

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