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ВЛИЯНИЕ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА НА СЕМЕЙНУЮ ЖИЗНЬ: ВОЗМОЖНОСТИ, ПРОБЛЕМЫ И ЭТИЧЕСКИЕ ИЗМЕРЕНИЯ

Аннотация. В современном мире искусственный интеллект (ИИ) называется интеллектуальными системами, основанными на чрезвычайно больших наборах данных, которые способны анализировать свое окружение для выполнения конкретных задач. ИИ может помочь повысить эффективность коммуникации и усилить участие родителей в процессах обучения детей. Хотя семейные преимущества по-разному при поддержке ИИ, существует ряд проблем и возможностей, а также этических аспектов, которые необходимо учитывать в семейной жизни. Специфические измерения ИИ, такие как перевод на язык, персонализация и доступность, влияют на динамику семейного общения несколькими способами. Возможности языкового перевода способствуют межкультурному пониманию и инклюзивности в многоязычных семьях, повышая эффективность коммуникации. Персонализация адаптирует взаимодействие ИИ к предпочтениям и потребностям отдельных членов семьи, способствуя более персонализированному и привлекательному обмену. Доступность гарантирует, что все члены семьи, в том числе с ограниченными возможностями или различными стилями обучения, могут в полной мере участвовать в общении, способствуя инклюзивности и справедливости в семье. Эти измерения в совокупности способствуют формированию более гибких, инклюзивных и

отзывчивых коммуникационных процессов в семьях, интегрирующих технологии искусственного интеллекта. Поэтому в этой статье обсуждается роль ИИ в семейной жизни с акцентом на проблемы, возможности и этические аспекты.

Ключевые слова: Искусственный интеллект, семейная жизнь, вызовы, возможности, этические проблемы

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THE IMPACT OF ARTIFICIAL INTELLIGENCE ON FAMILY LIFE: OPPORTUNITIES, CHALLENGES, AND ETHICAL DIMENSIONS

Abstract. In the present world, artificial intelligence (AI) is referred to as intelligent systems based on enormously large datasets that are capable of analyzing their surroundings in order to fulfil specific tasks. AI can help improve communication efficiency and strengthen parental involvement in children's learning processes. Though family advantages in various ways with the support of AI, there are number of challenges and opportunities and ethical dimensions that need to be considered in family life. Specific dimensions of AI, such as language translation, personalization, and accessibility influence family communication dynamics in several ways. Language translation capabilities facilitate cross-cultural understanding and inclusivity within multilingual families, enhancing communication effectiveness. Personalization tailors AI interactions to individual family members' preferences and needs, fostering more personalized and engaging exchanges. Accessibility ensures that all family members, including those with disabilities or different learning styles, can participate fully in communication, promoting inclusiveness and equity within the family unit. These dimensions collectively contribute to shaping more fluid, inclusive, and responsive

communication processes within families integrating AI technologies. Therefore, this article discusses about the role of AI on family life focusing on challenges, opportunities, and ethical dimensions.

Keywords: Artificial intelligence, family life, challenges, opportunities, ethical concerns

1. Accessibility of AI

Accessibility of AI supports to the family communication in several ways. Accessibility of AI-powered devices and applications can make it easier for family members to communicate with each other, even if they are physically separated. For example, video conferencing software like Zoom or Skype can help families stay connected when they cannot be together in person. Smart home devices like Amazon Echo or Google Home can also be used to make phone calls or send messages hands-free (Dattathrani and De, 2023). With the support of AI accessibility family bond can be further improved with good activities among family members.

2. Language translation

Language translation is one of the important role of AI in line with family life. AI-powered translation software can help families communicate across language barriers. This can be especially helpful in families where members speak different languages or where family members live in different countries (Liao et al., 2023). Language translation with the support of AI supports family to enhance the relationship among families in line with good family bond. Moreover, AI supports family communication in the ways of keeping privacy among families. AI can potentially compromise family privacy by collecting and analyzing data about family members' communication habits and behaviors. For example, a smart speaker that is always listening could potentially record private conversations. It is important for families to be aware of the privacy implications of using AI-powered devices and applications and to take steps to protect their privacy (Liu et al., 2022).

AI helps to reduce bias in family communication. When family communication builds up with the support of AI technologies, bias in family connection reduces and make families more effective forever. Ntoutsis et al., (2020) suggested that AI systems can perpetuate biases and stereotypes that exist in society. For example, an AI-powered language translation app may not accurately translate certain languages or dialects, which could reinforce harmful beliefs and attitudes. It is important for families to be aware of these biases and to use AI-powered devices and applications in a way that is inclusive and respectful. AI-driven scheduling tools are incredibly valuable for busy families, as they offer a centralized platform for managing daily activities. By reducing the mental burden associated with remembering appointments and tasks, these apps allow families to focus on what truly matters -enjoying quality time together.

Moreover, in the support of AI on family life that helps to ensure family safety by monitoring for potential risks and threats, such as cyberbullying or online predators. For example, a parental control app that uses AI could monitor a child's online activity and alert parents to potential risks. However, it is also important to consider the potential for AI-powered surveillance to infringe on privacy and to use these tools responsibly and ethically. Family safety is another advantage of AI in family communication.

AI also helps with altered communication patterns. AI has revolutionized communication, with instant messaging and social media platforms becoming integral parts of our lives. However, the rise of AI-powered communication tools can lead to a shift in family communication patterns.

Teenagers, in particular, may find themselves immersed in digital conversations, leading to reduced face-to-face interactions within the family. Another advantage of AI in family communication is influencing on decision making.

3. AI supported Natural Language Processing (NLP) in family communication

In line with AI's support in communication, Natural Language Processing (NLP) is a field within Artificial Intelligence (AI) that allows machines to parse, understand, and generate human language. This branch of AI can be applied to multiple languages

and across many different formats. In the application of NLP, there are two types, such as Traditional NLP and Machine Learning. Traditional NLP attempts to deconstruct sentences into smaller phrases, which in turn are broken down into parts of speech. The second type of NLP is machine learning. Unlike traditional NLP techniques, machine learning does not need to be explicitly programmed; instead, it is trained on examples (called training data). The learning aspect of machine learning means that the solutions get better over time as they are exposed to more and more examples. In other words, they continue learning and get better as more data becomes available. There are many types of ML, each best suited to different types of problems. The most common type of ML used for NLP applications is called Recurrent Neural Networks (RNN). RNNs (which fall within a category of ML called deep learning) are popular in this field, given their ability to handle sequential data.

4. AI as a mediator in parent-child relationships

The influence of AI in family structure is not just a communication tool but also acts as a mediator in parent-child relationships. The influence of AI on child development in the rapid and drastic development of technology, AI technology, also known as machine learning or supercomputer, can change human interactions. Such as communication interaction patterns between friends, neighbors, teachers, and students, to communication patterns between parents and their children. To emphasize this point, according to UNICEF (2023), virtual assistants, educational chatbots, and child monitoring apps help streamline family communication by reminding children about tasks and organizing schedules. This is particularly useful for busy families. However, Chung et al. (2020) found that during high-pressure situations, such as the COVID-19 pandemic, AI use sometimes increased family tensions. Parents with less AI knowledge felt a loss of control, while tech-savvy children became more independent in seeking information, reducing parental involvement in discussions.

Furthermore, UNESCO (2023) highlights that AI in education often shifts parents roles from facilitators to monitors. Instead of engaging in collaborative learning, parent-

child interactions may become more instructional or supervisory, changing the nature of communication within families. Parents can use different technologies to monitor their children. When parents give space to their children to act on their own, their activities go wrong not for the betterment of the family relationship. Number of activities which are not good for society is being done by the children when parents do not take care of them. Therefore, AI supports as a mediator in parent and child relationship.

As a part of parent and children relationship with the support of AI, generative AI transforms school-family communication by tailoring student updates to meet each family's unique needs while automating routine tasks. This technology frees teachers from administrative minutiae, enabling them to focus on building stronger relationships with both students and parents. As a result, parents are better equipped to engage in their child's education. With Generative AI tools, teachers and schools can generate personalized student updates. For example, generative AI can create customized progress summaries, intervention plans, and attendance outreach messages, helping educators share relevant insights with families to know the progress level of their children.

5. AI and Parenting

Parenting varies widely across families, with cultural backgrounds having a significant role in shaping family dynamics and child-rearing practices. Digital parenting interventions have emerged as a solution to some of these challenges. These interventions have been adapted from an existing evidence-based in-person parent training program. They vary in delivery, with most focusing on structured teaching methods and skill development (i.e., requiring parents to progress through modules in a sequential pathway), while others focus on psychoeducation. In addition, they use a variation of technology components (e.g., audio, video, text, quizzes, skills training or coaching) to deliver the program content; and interactive features (e.g., discussion boards or gamified content) to engage parents, promote self-efficacy, and encourage problem-solving.

Artificial intelligence (AI) can now be applied in almost all fields, including parenting. The use of AI by parents to help raise their toddlers for a full day has already been done. Language-based technologies, often called "conversational AI", "dialogue systems", "chat-bots", "virtual assistants" or "conversational agents" (i.e., both text-based and speech- or voice-based modalities for input and output), have increasingly been adopted by parents and children alike. AI assistants that use Automatic Speech Recognition (ASR) and Natural Language Understanding (NLU) add a new dimension to how home technology can enhance parent-child interaction and influence parenting behaviors (Petsolari et al, (2024).

Based on that, to accomplish different needs of the children there are different parenting styles, such as Authoritarian Parenting, Authoritative Parenting, Permissive Parenting, and Uninvolved Parenting. The influence of AI in all parenting styles helps parents to build up effective family bond. This can be clearly explained based on each parenting style.

Authoritarian parenting style

Authoritarian parents typically engage in a one way mode of communication where they establish strict rules that the child is expected to follow without question or negotiation. These rules are rarely explained, and children are expected to meet high standards without making mistakes. Errors are often met with punishment. Authoritarian parents tend to be less nurturing, maintaining high expectations with limited flexibility. In this parenting style, the support of AI technologies helps for effective communication and to build up good family bond with all members of the family.

Authoritative parenting style

The second parenting style is authoritative parenting that is characterized by a close, nurturing relationship between parents and children. Parents set clear expectations and guidelines and explain the reasoning behind their disciplinary actions. They use disciplinary methods as a supportive tool rather than as punishment. Children are encouraged to have input in setting goals and expectations, thereby fostering open,

frequent, and appropriate communication between parent and child. This parenting style generally results in the healthiest outcomes for children but requires considerable patience and effort from both parties (Petsolari et al, (2024). The AI support in authoritative parenting style helps for the betterment of children as they use positive way in dealing with the aspects of family members.

Permissive parenting style

Permissive parents are typically warm and nurturing, often holding minimal expectations for their children. They impose few rules and maintain open communication, allowing their children to navigate situations independently. This lack of expectation usually leads to infrequent disciplinary actions, as permissive parents often take on a more friend-like role than that of traditional authority figures.

Uninvolved Parenting

Uninvolved parenting grants children a high degree of freedom, as these parents typically take a hands-off approach. While they may fulfill their child's basic needs, they remain emotionally detached and disengaged from their child's life. Uninvolved parents do not adhere to a specific disciplinary style and maintain limited communication with their children, providing minimal nurturing and having few, if any, expectations. In those parenting styles AI influences in various ways to make family communication better.

6. Challenges and Ethical Concerns

Like a coin has two sides there are challenges and ethical concerns that need to be considered in the application of AI in family communication. AI brings both benefits and challenges to parenting. One challenge is the shift in discipline patterns. AI provides structured tools like task reminders and digital access controls, but over-reliance on AI can make discipline more algorithmic and reduce parents' role in teaching moral values (Glassman et al., 2021).

Another issue is the digital literacy gap between parents and children. Children often adapt to AI faster than their parents, creating a divide where they become more

independent and rely less on parental guidance (Newman et al., 2021). Excessive dependence on AI for decision-making is also concerning. Parents who rely too much on AI may lose sensitivity to their children's emotional needs. Some parents "delegate" parenting to AI, using educational chatbots for learning instead of direct interaction. This weakens the parent-child bond, making it crucial for parents to stay engaged despite AI's convenience (UNESCO, 2023).

Moreover, UNICEF (2023) notes that AI can shift the way respect is framed in the family, from authority-based respect to competence-based respect. Children who are more accustomed to using AI in their daily lives may no longer respect their parents solely due to family hierarchy but more because of the skills and knowledge their parents possess. Meanwhile, in 2022 Organization for Economic Co-operation and Development emphasizes that excessive use of AI in parenting can reduce parental involvement in children's lives, leading to a decline in emotional bonds within the family. As interactions are increasingly mediated by AI, children may begin to view their parents as less relevant in the decision-making process. On the other hand, UNESCO (2023) highlights that AI can also be used as a tool to strengthen family communication if used wisely. For example, in families that use AI as an educational tool that supports joint discussions and learning, AI can actually enhance positive interactions between parents and children.

Maintaining parental authority in the age of AI presents several challenges that need to be addressed. One major issue is children's increasing dependence on AI for decision making. As they grow accustomed to seeking solutions from technology rather than consulting their parents, family communication may weaken (Nguyen et al., 2024). Another challenge is the lack of parental understanding of AI. When parents struggle to grasp how AI functions, they risk losing authority within the family (McKenzie et al., 2019). This makes digital literacy education essential, enabling parents to stay relevant in guiding their children and maintaining their influence in family dynamics. AI also brings a shift in the concept of respect within families. Traditionally, respect for parents

has been rooted in authority, but with AI, it may transition to being based on competence (Pei et al., 2023).

Furthermore, loss of cultural aspects is another challenge in applying AI in family communication.

When family totally depends on technological aspects like AI, cultural things of people will not be practiced instead AI rules the society. In addition, AI parenting also affects gender roles. In digitally literate families, AI helps balance parenting duties between mothers and fathers. However, in many Southeast Asian cultures, AI often reinforces traditional roles, with mothers taking the lead in technology-based parenting.

Moreover, over-reliance on AI-powered devices and applications for communication can potentially weaken in-person communication skills and lead to social isolation. For example, if family members only communicate through texting or messaging apps, they may miss out on the nuances of in-person communication. Families need to balance their use of AI-powered devices and applications with in-person communication (Ntoutsis et al., 2020).

When an AI-based technology may become present in a child's life to such a significant extent that it takes over the role of a parent, questions arise about its impact on the child's psychological and cognitive development. The excessive use of smart agents may impact children's social and

Cognitive development. Overuse of smart agents potentially leads to reduced interpersonal interactions between parents and their children. Since personal interactions between parents and their children are essential for the children's development of social skills, problem-solving skills, Previous studies identified positive effects of implementing personal informatics tools to track children's data. They highlighted that it not only improves parents' understanding of their child's patterns but also reduces the need for frequent physical check-ups by facilitating the transfer of baby-related information, such as sleep patterns, movements, and signs of distress, heart rate or breathing, to mobile applications (Lupton, 2020). Conversely, Wang et al. (2017) also

identified that using baby monitoring or child habits monitoring may have detrimental effects on parents' mental health as it can increase their anxiety. Cognition and empathy (Lanjekar et al., 2022).

Bias and Discrimination

The first ethical concern related issue that should be taken into account is bias and discrimination. AI systems are trained on massive amounts of data, and embedded in that data are societal biases. Consequently, these biases can become ingrained in AI algorithms, perpetuating and amplifying unfair or discriminatory outcomes in crucial areas such as hiring, lending, criminal justice, and resource allocation. When AI influences family concerns like family communication, bias and discrimination related ethical issues can be done by family members. Therefore, checking this ethical concern is important for family members.

Transparency and accountability

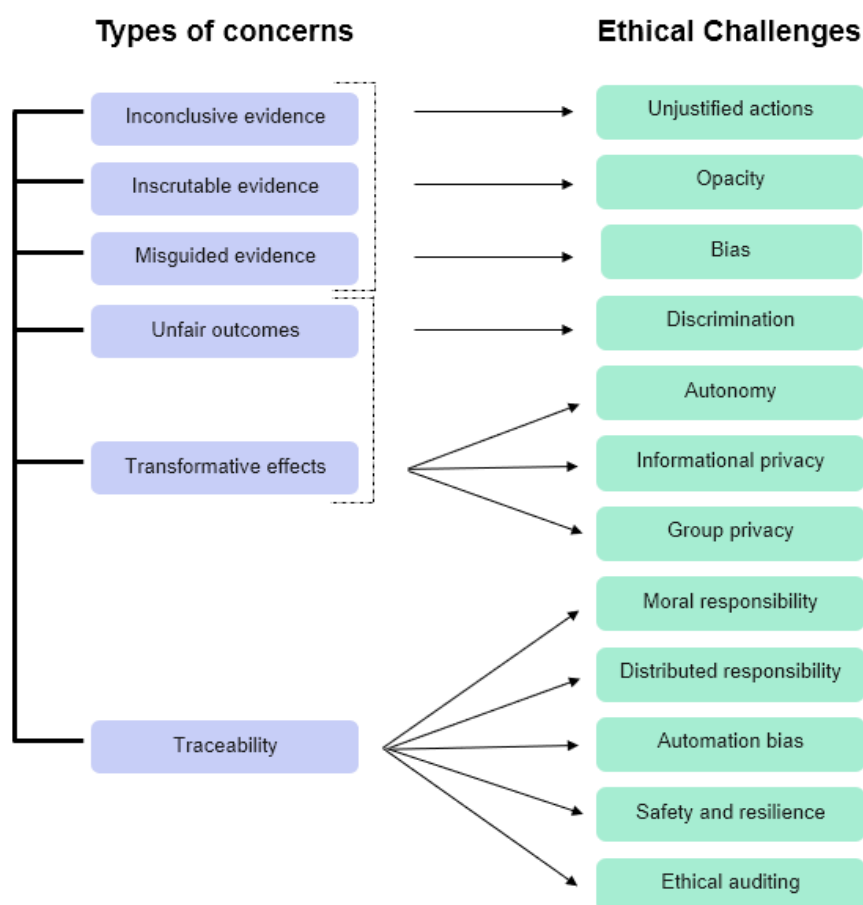
Transparency and accountability are another concerns of AI ethics. AI systems often operate in a "black box," where these systems offer limited interpretability of how they work and how they arrived at certain decisions. In critical domains like health care or autonomous vehicles, transparency is vital to ascertain how decisions are made and who bears responsibility for them. Clarifying accountability is particularly important when AI systems make errors or cause harm, ensuring appropriate corrective actions can be taken. In family communication, it is very important to maintain transparency and accountability with family members.

Privacy, security, and surveillance

It is crucial maintaining privacy, security, and surveillance in the application of AI. The effectiveness of AI often hinges on the availability of large volumes of personal data. When we use personal data of family members, it sometimes causes issues with privacy and security. Therefore, In AI, preserving individuals' privacy and human rights becomes paramount, necessitating robust safeguards against data breaches, unauthorized access to sensitive information, and protections from extensive surveillance.

Social Manipulation and Misinformation

Social manipulation and misinformation is another ethical concern factor of the use of AI in family communication. This should be seriously taken concern as it influences on family related matters. According to CAPITAL Technology University (2023), Fake news, misinformation, and disinformation are commonplace in politics, competitive business, and many other fields. AI algorithms can be exploited to spread this misinformation, manipulate public opinion, and amplify social divisions. For example, technologies like deep fakes, which are capable of generating realistic yet fabricated audiovisual content. The figure: 1 below clearly explains about ethical concerns in the use of AI in family communication and even in other aspects.



Sourcefrom: [https:// www.coe.int/en/web/human-rights-and-biomedicine/common-ethical-challenges-in-ai](https://www.coe.int/en/web/human-rights-and-biomedicine/common-ethical-challenges-in-ai)

Conclusion

In this article, it is clearly explained that how AI influences family towards positive family communication. Based on that, the subtopics are clearly discussed to understand the use of AI in family communication. Moreover, it is revealed that AI technologies have significantly enhanced communication effectiveness and interpersonal perceptions among family members since their adoption. However, it also identifies critical policy concerns on challenges, opportunities, and ethical concerns of AI on family life.

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