

ARTIFICIAL INTELLIGENCE'S IMPACT ON CHILDREN EDUCATION AND HEALTH AND CHILDREN'S RIGHTS

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Abstract

Artificial intelligence is spreading rapidly in all areas of life theoretically and practically and is providing many different changes and developments in these areas. It is shown as one of the three biggest events in history. It has a permanent and completely consistent feature that can spread quickly to large masses. Artificial intelligence affects not only adults, but also all individuals, including children and adolescents. Children and adolescents are taking their place more and more in important life departments such as daily life, education, health. In this study, it is revealed how artificial intelligence affects the living spaces of children and adolescents. While affecting and changing the whole life, there are various opinions, concerns and solution proposals related to legal situations and loopholes in the field of ethics, regarding the protection of the privacy of the private life of individuals. With the benefits it provides, the concerns it brings and the groundbreaking expectations for the future, it is believed that artificial intelligence will inevitably continue to influence individuals and societies in the short and long term.

Keywords: artificial intelligence, children, education, mental health.

1. INTRODUCTION

Artificial intelligence (AI) refers to systems or robots that execute tasks by mimicking human intelligence and can gradually improve itself with the data it accumulates (Jarret & Choo, 2021). A computer scientist coined the term "artificial intelligence." It has been described as "the science and engineering of producing intelligent machines" by John McCarthy. He defined artificial intelligence as a designed structure for logical, exploratory, pattern recognition, inference making, and experiential learning; he highlighted applications such as games, speech, natural language comprehension, and three-dimensional computer vision (McCarthy, 2004). According to legend, the defeat of Garry Kasparov by an artificial intelligence termed "Deep Blue" in 1997 was the first significant influence of artificial intelligence on the globe (Ardatürk, 2022).

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Artificial intelligence appears in a variety of forms. For example, our shopping habits can be tracked using smart devices, traffic lights can be changed, suspects can be identified using facial recognition (Martin, 2020), trainings can be personalized (Arslan, 2020), inferences about our mental health can be made (Uçar et al., 2018), and children can be cared for by robots (Sano, Horii, Abe, & Nagai, 2021). In these settings, where not only human activities but also machines are changing, Microsoft's artificial intelligence DeepCoder's goal is to produce code, while Google's AutoML artificial intelligence's task is to control other artificial intelligences (Ardatürk, 2022). We may notice the presence of artificial intelligence in all individual and social sectors, with beneficial and harmful consequences (Coşkun and Güllerolu, 2021).

In terms of how artificial intelligence works, there are two types: weak artificial intelligence, which is based on machine programming, and strong artificial intelligence, which can evolve autonomously and on its own after programming. The possibility of powerful artificial intelligence to take control and manage people and systems alone, which is feared and opposed by some organizations, is widely accepted (Pirim, 2006). Deep learning and machine learning are prominent concepts in the field of artificial intelligence. Machine learning refers to a structure that learns from data and improves its own performance. Machine learning is a subset of artificial intelligence. It cannot define everything of artificial intelligence (Gutierrez, 2017). Many subfields have been added and will continue to be added. These include artificial neural networks, fuzzy logic, expert systems, computer vision, genetic algorithms, chaotic modeling, and robotics (İşler and Kılç, 2021).

Artificial intelligence is concerned with brain functions and decision-making processes. It is a thinking mechanism that can also express emotions. Individuals' emotions, thoughts, and behaviors all have an impact on one another. Individuals' emotions and the cognitive processes affected by them are not stable and can vary rapidly (Martinez-Miranda & Aldea, 2005). Childhood traumas and cyber traumas, on the other hand, may be included on the last plane. Cyber traumas and cyber victimizations, which occur in addition to persistent childhood traumas, cause the emergence of cyber dissociation and cyber alter personalities, particularly with the advent of digital technology. Traditional/offline victimization and cyber victimization occur as a result of traumas that occur both offline and online, and the individual attempts to regulate the distressing situation by interacting with his abuser in order to manage his trauma (Derin and ztürk, 2020).

The following are the primary aspects that make the usage and development of artificial intelligence appealing: low cost (Tahça, 2009), easy access to high-performance IT features; a vast amount of data is available for education; and applied artificial intelligence provides a competitive edge. Intelligent information is required for the operation and growth of artificial intelligence. Artificial intelligence possesses a permanent, perfectly consistent property that may be rapidly disseminated to a large audience (Bozüyük, Yac, Gökçe, & Akar, 2005). Artificial intelligence has been identified as one of the three most significant occurrences in history. These are as follows: the creation of the universe, the birth of life, and the discovery of artificial intelligence (nder and Saygul, 2018). The emergence of artificial intelligence has been the result of many years of accumulation. In historical

order, it can be assumed that Daedalus, who is supposed to be the deity of wind in Greek mythology, began with a "artificial-human" enterprise thousands of years ago. Between 1965 and 1970, practically little progress was made. Computer experts planned to create intelligent machines by merely downloading data and establishing a thinking process. As a result, there was a period of waiting. There was a time between 1970 and 1975 when the road was cleared for rapid expansion. Artificial intelligences have created methods for disease detection. The groundwork for today's expansions has been laid. Artificial intelligence researchers began to use other disciplines of study, such as language and psychology, between 1975 and 1980. From 1980 to the present, artificial intelligence has been brought out of laboratories and considered with far more complex applications based on real-world needs. Today, more innovations have been revealed in a shorter period of time than in any previous periods (Pirim, 2006). The following are the most notable research that reveal the consequences of artificial intelligence: A program that could play chess with artificial intelligence was built in 1952. General Motors produced the first commercial robot, Unimate, in 1961, and it was demonstrated in 1968 that computers could interpret English terms. Honda initiated a secret project in 1986 to construct a humanoid robot. Deep Blue, a chess computer, defeated Gasparov in 1997. Honda created ASIMO, an intelligent human robot, in 2000. In 2009, Google created a driverless car, and memory was added to artificial intelligence in 2017 (İşler and Kılıç, 2021).

The artificial intelligence data pool Big Data is information gathered and analyzed through the monitoring of internet network traffic and social media. Big data is viewed as a revolution in artificial intelligence (Lohr, 2012). As one of the applications of artificial intelligence, it is an important source of data in discovering the daily habits, needs, and orientations of individuals and societies that cannot be known using traditional methods, and data is increasing exponentially every day (Atalay and Celik, 2017). These data are utilized to study current social spaces, as well as persons and communities, in order to design smart cities with livable and sustainable progress (Allam & Dhunny, 2019). The importance of big data in the realm of health is growing by the day. It is utilized for diagnosis, improvement, speedy treatment, and prediction. Blockchain is employed for this purpose in electronic health records, remote patient monitoring with smart sensors, drug supply and management, billing, clinical trials, and experimental processes (Pablo et al., 2021). Some children and teenagers contribute to big data by sharing psychiatric condition diagnoses and symptoms on social media. As a result, it has been said that adolescents will be able to be watched through social media shares (Uçar et al., 2018).

Artificial intelligence has had an impact on every aspect of modern life. It is available in all machine-based industries that we can think of, including military technology, aircraft, games, telephone, television, and computers, insurance, and communication (Gür, Ayden, & Yücel, 2019). One of them is the medical field. Today, artificial intelligence provides early disease detection, a better knowledge of disease progression, the discovery of new medicines, and the accurate adjustment of drug and treatment dosages. The artificial intelligence platform that will increase cancer research productivity by tenfold, the creation of two potential drug targets for

Alzheimer's disease in about a month with an artificial intelligence system that shortens the duration of drug research that takes many years and costs a lot, the expensive test used to create a suitable treatment for breast cancer can be performed at a low cost, the risk of high-risk ones ovulation. Each of them exhibits significant disparities in terms of speed, cost, and utility. The fact that information is massive and continues to accumulate indefinitely boosts the development of artificial intelligence geometrically (Kent, 2020).

2. The Use of Artificial Intelligence in the Field of Health

Human-centered, multifaceted management mechanisms, as well as trust, empathy, and safety, have emerged as the main expectations in the use of artificial intelligence in the field of child and adolescent health; sensor technology, cleaning robots, virtual reality visits, and 3D organs have been the most preferred among the services offered, while artificial intelligence-assisted nurses have been the least accepted. Children's and young people's ideas will be vital in shaping their own futures in areas of artificial intelligence development (Visram et al., 2021). In another medical sector investigation, hypertrophic cardiomyopathy was accurately identified at a high rate using an artificial intelligence electrodiagram in children and adolescents (Siontis et al., 2021).

Artificial intelligence is a significant component of the multidisciplinary entity in mental health, another discipline where it exists. With the need to include emotion and cognition into the intelligence-based machines created, these two fields have begun to collaborate and influence one other more. In recent years, artificial intelligence has made significant contributions to psychology, assisting mental health specialists in active areas of psychology such as prediction, prognosis, treatment, and intervention, as well as developing coping strategies for individual individuals and creating products that will be used for the benefit of people (Yilmaz, 2021). How to ensure patient privacy, whether there will be transparency in artificial intelligence training, whether to work with a sample to represent the general population, whether the new order that replaces the traditional order will have a disruptive effect, as in some technological developments, the risks that the industry and its related functioning may bring are issues that cause concern (He & al., 2019).

According to Allen (2020), there are no studies on the use of artificial intelligence in mental health in general standards; however, there are more small local efforts; the content of these studies is formed by artificial intelligence models that can predict when someone may be safe to leave the hospital or when the suicide risk is lower, which medications someone may respond to, and the patient should receive inpatient treatment. It has been suggested that the use of artificial intelligence in mental health may be more challenging than in other professions, and that it is less possible to identify a diagnosis in psychiatry based on the model that exists in other branches (including radiological and pathological results). The research to be undertaken, it has been indicated, will not directly diagnose and treat, but will provide help to professionals and will be aimed at preventing diseases and providing personal development (Doraiswamy, Blease, & Bodner, 2020). It has been argued that the usage of artificial intelligence in mental health will evolve in a two-way fashion. The first is the natural language processing process, which enables artificial

intelligence to understand and interpret human language; the second is the incorporation of various biomarkers with artificial intelligence during the early detection and diagnosis of certain disorders (Brunn, Diefenbacher, Courtet, & Genieys, 2020).

It has been suggested that the usage of artificial intelligence in this field may expand due to a shortage of doctors to treat the 792 million individuals worldwide who suffer from mental health problems (Allen, 2020). 791 psychiatrists from 22 countries were polled about the impact of artificial intelligence in the field of mental health during the next 25 years. When asked if artificial intelligence could replace a psychiatrist, half of the participants said it would affect the nature of the work, and 4% might lose their jobs. While 75% of participants believe that artificial intelligence tools can replace updating medical records, 33% believe that AI will one day be able to conduct mental health examinations, and only 17% believe that AI will be able to provide empathetic care to patients (Doraiswamy, Blease, & Bodner, 2020).

The initiative, which was created as a smartphone app for use in the field of mental health, employs a technology known as phenotyping to offer professionals and patients with information that is always up to date regarding their mental state. MindLAMP (learn, assess, manage, prevent) collects multiple data streams from patients such as questionnaires, cognitive exams, GPS locations, and exercise information. It has been said that the psychiatrist and the patient can determine jointly which data to gather, which can help the patient and the psychiatrist monitor potential side effects and mood for a person starting a new drug (Torous et al., 2019; Vaidyam, Halamka, & Torous, 2019). They employ machine learning in another application called BiAffect to anticipate individuals' manic and depressive periods based on keyboard input. A link between emotional states and keyboard information was discovered in a study of persons with bipolar disease (Zulueta et al. Dec., 2018).

Machine learning technologies in artificial intelligence can be used to predict, detect, and treat mental health. Deep learning from children's speech patterns can detect depression and anxiety and produce speedy answers in situations that could otherwise be neglected. Data analytics based on artificial intelligence correctly predicts symptoms from patient data. It can offer preventive services before mental health problems occur, as well as low-cost and easily accessible counseling to patients. A deep learning-supported integrated prediction model (DLIPM) and convolutional neural networks were designed for this goal. In comparison to other current approaches, the numerical findings reveal that the suggested method has a high sensitivity rate of 97.9%, specificity rate of 96.7%, recall rate of 95.6%, F-measurement rate with accuracy rate of 90.1%, and error rate of less than 9.2% (Zhang, Wang, Sharma, & Deverajan, 2021).

It has been stated that in ataxic dysarthria, which occurs as a neurological problem, the structured speech disorder test for children with ataxia using a hierarchical machine model is provided, the diagnosis of patients with ataxia can be made using machine learning in a study conducted with 10-second recordings of the PATA test, and the stratification of dysarthria severity will be provided using deep learning (Tartarisco et al., 2021). Woebot, an internet-based cognitive behavioral therapy application, has been used to provide self-help in those suffering from depression, anxiety, and substance abuse. It has been used in the treatment of

substance abuse on average twice a week for 8 weeks. Treatment is available without regard to geographic distance, access issues, or stigma. A 2-week trial indicated a significant reduction in anxiety and depression symptoms. It has been discovered that there is a large rise in resistance to drug use impulses. 76% of individuals who used the app said they would suggest it, 80% got the service they sought, and 43% said it addressed most or all of their needs (Fitzpatrick, Darcy, & Vierhile 2017; Prochaska et al., 2021).

3. The Use of Artificial Intelligence in the Field of Education

Artificial intelligence influences children on an individual, social, educational, and spiritual level, and it enters their lives earlier than adults. Adults are born into later developments, so their adaptations can be rapid, and their engagement and influence can be more intense. Many sectors are involved in the effects of artificial intelligence on children and child mental health, such as cyber activities, studies in children's mental health, educational programs and activities established (Benzim and Benzim, 2019; Morsünbül, 2018; Arslan, 2020). Education should serve as a springboard for intentional applications of artificial intelligence and AI-based technologies. While improving the quality of educational processes through digitalization, concepts such as electronic information and educational environment, digital didactics, and electronic pedagogy are introduced, learning processes should be personalized, improved, and managed through the analysis of educational data (Barakina, Popova, Gorokhova, & Voskovskaya, 2021). The application of artificial intelligence in education was also deemed important in order to harmonize the effects it has on all fields of science and society, and it was emphasized that artificial intelligence should be used when preparing education for artificial intelligence (Coşkun and Güllerolu, 2021). Children may fall behind their classmates in contexts where there is not enough time allocated to individual learning speeds and approaches in educational planning for children; they may face poor emotional conditions in addition to academic failure and may not fully reflect their potential (Sağdıç and Sani-Bozkurt, 2020). Artificial intelligence in education can create student-centered learning environments, personalize content, environment, and materials based on the student's unique characteristics, motivate students who are unable to attend school in October, and provide additional assistance to students with special educational needs. High-efficiency learning environments can be built in which students interact with their virtual teachers via designed teaching settings and for the needs of students from a variety of contexts and disciplines (Uçar, 2007; Arslan, 2020). For example, in China, speech recognition technology and artificial intelligence systems to assist in speech therapy utilizing Chinese syllable categorization methods have been created (Xu, Zou, & Lin, 2020).

Artificial intelligence is used in education as expert systems, intelligent instructional systems, and dialogue-based systems. Expert systems are computers that do tasks that would normally be undertaken by individuals with expertise in a certain topic. An expert and a computer program collaborate to design a personalized learning curriculum for the learner in smart tutorial systems. Dialogue-based systems, on the other hand, continue to personalize learning by developing a dialogue with the system through expectations and misconceptions, in addition to

intelligent instructional systems (Arslan, 2020). Artificial intelligence allows for the creation of continuous environments to ensure the continuity of students' learning (smartphone, tablet, etc.). Thus, disturbances in education will be avoided, education will be transferred outside of time and location, making it more widely available, and students will be able to propose individual solutions to their specific needs (Alanoglu and Karabatak, 2020). It has been stated that while artificial intelligence saves time and money over using real people to determine students' individual characteristics, it will reduce the economic burden except for the initial investment, and computer systems will eliminate the risk of real people becoming biased due to the personal situations they are in when discovering individual characteristics (Kazu ve Özdemir, 2009). Individual and group learning can be accomplished through the use of artificial intelligence in children's education, the impact of disruptive factors in the environment is reduced, cooperative work contributes to the skills of respecting the rights of others, and permanent learning is increased (Akdeniz, 2019).

Virtual and augmented reality's fictional universe is having a growing impact on all aspects of Metaverse existence. Even though it is still under construction, its scope of influence and place on the agenda are significant. In the metaverse, the entire digital reality coexists, and there is no question of authority or reliance on a center (Çelik, 2022). They delegate significant tasks to educators regarding the existence of the cosmos and its correct use, how children are prepared, and their roles in proper learning and usage. It has been said that Metaverse can be used to create permanent learning in an active and live environment with programs produced in accordance with educational contexts and assuring the protection of children in the exploration of the virtual world (Hirsh-Pasek et al., 2022). Ensuring Metaverse secrecy, which improves and expands opportunities in fields such as education, business life, communication, and public services, poses challenges concerning data management. It is especially crucial to preserve children's physical and emotional health since it is considered that there are flaws in properly protecting children and their rights in surroundings that are not directly designed for children but are accessible to children. While the options it provides are expanding, it has been suggested that research on how adults and children will feel this process, how it will effect their mental health or cognitive development, which are considered independently, is required (Dick, 2021).

Understanding and employing artificial intelligence is a critical component of digital literacy. All parents and children must understand the proper use of digital technology as a prerequisite of the age. It will prevent purposeless orientations in particular by helping youngsters to understand and learn about artificial intelligence. Sensitivity to culture, cooperative learning, and peer learning are all significant aspects of artificial intelligence training. Children's ability to apply their creativity and imagination in relation to artificial intelligence can be evaluated in artificial intelligence education by what they reveal as a result of their creativity (Yang, 2022). Nowadays, searching for information on the internet through search engines has become a requirement for both adults and children. Although adults can make calls using a real keyboard, it looks to be a deceptive aspect for children. Children who use voice search have difficulty understanding the artificial intelligence-based feature and require the development of conversational search interfaces (Allen,

Yang, Pera, & Gadiraju, 2021). While artificial intelligence is becoming more prevalent in many aspects of life, it is critical to teach youngsters about it. youngsters's books, which are a vital aid in the development of youngsters, have been altered for this purpose. Children's books, which play an essential role in children's development, are being made more functional by integrating books with technology with the use of augmented reality. This will relieve youngsters of the boredom associated with printed publications, allowing them to actively study and experience theoretical information (Zhou & Li, 2021). It has also been said that wearable technological gadgets that sense emotion can assist parents in raising their children (McStay & Rosner, 2021). Within the scope of artificial intelligence and robotics for children (AIR4Children), artificial intelligence education is attempted to be delivered to children in a less expensive manner and with Montessori education philosophy through the use of open sources in order to ensure inclusiveness, equality, and fairness in children's access to artificial intelligence and robotics education (Montenegro et al., 2021). The mathematical reasoning, self-regulation and problem-solving skills, language development, and creativity of the students in the experimental group improved at the end of the coding and robotics training conducted with 39 experimental and 41 control group students in the 5-6 age group (Canbeldek, 2020). Furthermore, gifted students improved their problem-solving abilities and coding-based self-efficacy (Kılıçkiran, Korkmaz & Çakır, 2020). Children who use smart technologies for robotics, coding, and 3D design utilize gadgets with a concentration on games and production, whereas children who use them as consumers mostly use smart devices for social media. It was noted that program developers should create apps that can guide children with varying interests and talents toward production (Yücelyiğit and Aral, 2020). Due to challenges in education and financing in poor or less developed nations, artificial intelligence and robotics education for children continues at the pilot study level, resulting in inequality of opportunity in the education of children on this subject (Badillo-Perez et al., 2022).

Artificial intelligence has the potential to play a significant role in modern computer games. It has been argued that the ability to accelerate graphics, foresee the next move, and adjust actions may be in question (Nareyek, 2000). It has been said that artificial intelligence can perform acts such as giving features in games, developing units, spatial thinking, learning, and target selection (Gür, Ayden, & Yücel, 2019). A computer game recognizes a wide range of opponents, from simple repeats to overcoming the best player, analyses player behavior, and can make games more difficult (Iskandar, Diah, & Ismail, 2020). In game hardware, ray tracing technology is used to see pixels in three dimensions, Deep Learning Super Sampling (DLSS) technology is used to ensure that low and high resolution image quality is not compromised, and Generative Adversarial Network (GAN) technology is used to generate new data from existing data. It has been stated that using software allows for daily development (Evci, 2020).

In a study on distinguishing between living and non-living things, their communication with a dog and a robot dog was examined, and they found the dog more accepting and alive than the robot, spending more time with him, and half of the children with the robot couldn't decide whether the robot was alive or a computer,

whether the robot dog lived or not. It was claimed that the response to the question of whether he lived a little or not was given (Melson et al., 2005). The children in the study with the robot and stuffed toy dogs attributed similar meanings to the stuffed dog with the robot in different places, they treated the stuffed dog worse, they gave more verbal directions to the robot, they were more anxious about the robot's movements, and 25% of the children responded to the robot. Half of them identify biological characteristics to the robot, while two-thirds attribute mental states, social adaption, and moral status to the robot. It has been suggested that it is difficult for children to separate their realities from their imagined judgments (Kahn, Friedman, Perez-Granados, & Freier, 2006). While children's references to AI robots make definitions based on life situation judgments, it is thought that children with more experience attribute more intellectual features, and as children's experience with AI grows, they will be able to distinguish these entities from familiar objects or living things (Bernstein & Crowley, 2008).

4. Using Virtual Reality

Virtual reality technology is one of the artificial intelligence-based application fields. The greater the ability of the virtual reality technology to keep the virtual environment created for the individual free of external factors, the more successful it is considered. Some versions provide users with sensory feedback such as sound, smell, and touch (Aydın, 2018). Virtual reality is utilized to help youngsters maintain acceptable communication skills, boost academic success, gain social skills, and daily living skills (Zdemir, Erbaş, & Zkan, 2019). It is suggested that in virtual reality-created children's eating scenarios, modifications can be made on eating behaviors in real life, providing chances for parents and children in eating control (Persky et al., 2018). Using virtual reality in surgical and psychiatric illnesses in children and adults, as well as in disorder research, evaluation, and management, as well as cognitive behavioral therapy applications in clinical psychology; It is effective in a variety of conditions, including anxiety disorders, autistic spectrum disorder, psychoses, and post-traumatic stress disorder (Işıklı, Baran & Aslan, 2019; Yiğit & Sani-Bozkurt, 2021; Yıldırım & Çakır, 2020; Akdeniz, Ahçı & Soft, 2020; Blacksmith, 2018). Artificial intelligence has been employed in psychological examinations used in the evaluation of children's mental health, producing a natural space comparable to a play environment for children while saving time for specialists (Arslan, 2020). In one study, it was discovered that using virtual reality reduced the severity of pain in children whose blood was drawn. In painful treatments such as burn wound care, chronic wound dressing, lumbar puncture, and bloodletting, virtual reality glasses have been utilized as a distraction method (Aydın, 2018). On the other side, it is predicted that persons suffering from digital addiction will benefit from the future profession of cyborg psychologists, who will assist in distinguishing between the physical and virtual worlds (Aksakal and Ülgen, 2021).

Early diagnosis is critical in autism spectrum disorder (ASD), and an algorithm built utilizing artificial intelligence can be used to diagnose ASD in children. It is supposed to greatly aid therapists' work by measuring children's stereotyped movements using artificial intelligence. Step-by-step skill training is provided for children with ASD. It is feasible to determine the gaps between the steps that provide the skill steps and which steps have been accomplished and which steps have not

been achieved using an artificial intelligence-based program (Sağdıç, Sani-Bozkurt, 2020). Artificial intelligence can be used to create controlled environments in children with ASD, reducing anxiety that may be experienced in real-life circumstances. Children may find it easier to interact with robots than with humans. While keeping object-like simplicity, AI can deliver human-like social cues. It can serve as a child's playmate, behavioral mediator, social mediator, and therapist (Huijnen, Lexis, Jansens, & de Witte, 2016). Children developed game concepts, did not insist on limited themes, and performed pretend games by following game themes, according to a study conducted by playing open-ended imitation games in augmented reality with children with ASD and language delay (Bai, Blackwell, & Coulouris, 2013).

Children gain basic interaction skills through robot-human contact in research on the use of autonomous robots in the treatment and education of children with autism, and they can also utilize robots as a communication bridge between them and their caretakers. After the youngsters became acquainted with the robot, they welcomed the researcher into their world and shared with him. They were said to have poor verbal communication skills in the months that followed. Long-term, free, stress-free connection with robots has been shown to result in spontaneous and proactive significant interactions in youngsters (Robins, Dautenhahn, Boekhorst, & Billard, 2005). A teleoperated child care robot named ChiCaRo, on the other hand, was utilized to anticipate the innate temperament features of youngsters (Sano, Horii, Abe, & Nagai, 2021). Different results were obtained that emphasized the importance of individual treatment in all children, which were recorded through the chest strap with the electrocardiogram sensor, through artificial intelligence (Billeci et al., 2018) in order to create an individualized and effective treatment plan for children with ASD. Furthermore, attention deficit and hyperactivity disorder, as well as anxiety disorders, were studied using comparable artificial intelligence-based data collection approaches (Welch et al., 2022).

A study was undertaken at the University of Michigan to predict the anxiety and depression levels of children in early childhood using machine learning. According to reports, childhood anxiety and depression (internalizing disorders) are frequently misdiagnosed, raising the risk of substance abuse, self-harm, and suicide. When the data from the study's three-minute speaking test was examined by machine learning, it was discovered that 80% correctly identified children with internalization disorder. Approximately 40% of the data is of poor sound quality (there are environmental sounds that affect the main sound). By closely examining the most distinguishing speech traits of internalizing disorder, including afflicted children's low-pitched noises, reproducible speech inflections, and content, it was discovered that they exhibit high-pitched responses to unexpected stimuli (McGinnis et al., 2019).

5. Ethical Issues and Children's Rights in Artificial Intelligence

Aside from the numerous benefits of using artificial intelligence in mental health, the difficulties in clinical integration of artificial intelligence, the existence of ethical gaps and the abuse of these gaps, as well as respecting and protecting patient autonomy, transparency in the use of algorithms, and the absence of long-term effects on individuals are all regarded as risks in the use of artificial intelligence (Fiske, Henningsen & Buyx, 2019). The corporate and public sectors are debating

the ethical and technical standards that will be used in the application of ethics in artificial intelligence. A plethora of texts have been proposed to govern ethical artificial intelligence. Transparency, justice and equity, non-harming, responsibility, and privacy are central to ethical values. There are questions about how the principles are interpreted, why they are important, how they should be applied, which ones should be prioritized, how conflicts between the principles will be resolved, who will do the ethical oversight, and how researchers and institutions will comply with the ethical guidelines in these determined titles (Jobin, Ienca & Vayena, 2019).

Intelligent toys/robots linked to the Internet can have negative consequences on a technological, societal, and individual level. On a technical level, these toys acquire, operate, and transfer data in the same way that computers do. Children do not understand how data is processed. Individually, they cause social isolation, overconfidence, and attachment, and prioritize purchase over the best interests of the child through commercialization by generating need profiles of youngsters. At the social level, issues such as normalizing child surveillance, a lack of artificial intelligence literacy that leads to inadequacies in guiding children about use, inequality in the purpose and amount of use based on socioeconomic status, and commodification of child identities may arise (Fosch-Villaronga, van der Hof, Lutz & Tamò Larrieux, 2021). According to the findings of a study conducted with kindergarten students, ethical issues such as who is responsible for the child's injury and how to ensure the privacy of the private information that children reveal as a result of their interaction with robots may arise when working with interactive robots (Tolksdorf et al., 2021). Another issue identified was gender inequality. In the same way that children are taught about gender roles in the traditional world, sexism emerges in the construction of artificial intelligence; for example, it has been suggested that the artificial intelligence utilized in the assistant service is represented by the feminine gender (Çifci, 2020).

Children are persons with specific rights that must be protected both in the real world and online. Children's rights relate to the digital realm as well (Livingstone, 2021). Children use the internet to obtain health information (particularly about their own developmental period), state that being exposed to cyberbullying will cause problems in real life, privacy is lost, play and leisure time change, they show their abilities and skills online better, they see access to the internet as a right, and it was emphasized that the language barrier should be eliminated on internet platforms (Kidron, 2021). It is critical for parents to understand the effects of artificial intelligence on children's rights in order to properly advise and safeguard their children. Because, while there are child rights-centered institutions in artificial intelligence systems, they are small in number, and the initiative is left to the institutions themselves (Atabey and Berber, 2021). It is stressed that toys and wearable technology, which are developed to observe children's emotional lives and collect information, can be followed by children, can manipulate children based on their knowledge, and children can be damaged by the power imbalance between companies and children. It has been suggested that parents are vulnerable to data literacy and protecting their children (McStay & Rosner, 2021). For example, it has been said that assuring privacy, accountability, psychological damage to children, and it can lead to emotional and psychological misdirection of the child in the same

environment with the artificial intelligence robot (Sharkey & Sharkey, 2010). With the South Korean Declaration of Robot Ethics, the manufacturer and produced product standards, user rights and obligations, and robot rights and responsibilities have all been studied. It was stressed that both consumers and robots should be held accountable and protect one another (Caşın, Dursun & Başkır, 2021). Because parental control may disappear and cause security issues in children's use of artificial intelligence-based online applications, studies have addressed the roles of parents in online safety education, setting boundaries, and setting time for their children, but virtual can be a communication tool between parents and children, approaching each other in a virtual way and a real communication door. It has also been stated that it is possible to open (Downing, 2018).

"Sharenting" is one of the places where children's rights are violated. It is a situation in which parents of children who do not use smart devices or social media themselves breach their children's privacy, the right to be forgotten, and lead to child abuse through their social media posts (imke, Gürkan, & Polat, 2018). Social media violates children's personal rights through unauthorized posts, unpleasant comments, and editing posts can cause psychological injury to children (Serin, 2019). With the near-complete loss of privacy and the uncontrollable flow of information, the inability to utilize social media consciously causes harm. Sharing and doing so voluntarily, as a need of social media's existence, results in the distribution of knowledge and data for business structures (Bostancı, 2019). Parents, without their will, prepare their children for a world full of fears and potential troubles for their future by sharing identification information, history, and images through their newly born offspring (Erişir and Erişir, 2018).

6. CONCLUSIONS

Artificial intelligence is becoming more powerful by the day, thanks to the internet of things, big data, and information generation. The goal now is to construct clever and learning programs on the route to creating a smart robot. The effects of the advances can be seen in many sectors of social life. Some of these implications include intelligent sensors, blockchain applications, the construction of smart cities, cloud computing, and the existence of big data. While artificial intelligence will take over the majority of labor-intensive employment, new business opportunities will emerge. Artificial intelligence shapes the evolution of societies based on creativity and knowledge (Öztemel, 2020). Artificial intelligence, in addition to its useful qualities, has ethical issues. Individualization in school, lowering the danger of leaving out; using machine learning to detect criminals in order to decrease suicide risk by monitoring patients, successfully applying therapies, or providing justice; While there are benefits to determining customer needs and interests and making product arrangements for the shopping sector, it may create legal and ethical issues in the discrimination of students in education, discrimination in health services and insurance, manipulating consumption patterns by secretly monitoring consumer information, and monitoring and collecting information without a search warrant (Martin, 2020). According to BBC news in 2014, famous physicist Stephen Hawking claimed that while primitive-form artificial intelligences are very beneficial, the

development of full artificial intelligence may lead to the extinction of the human race (Cellan-Jones, 2014). While artificial intelligence systems find a place in all areas of our lives, it was stated that it was necessary to train all individuals in society as individuals who could understand and adapt to artificial intelligence systems, and it was stated that they would provide great and positive human transformations as long as they are used for the right purposes (Coşkun and Gülleroğlu, 2021).

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