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ARTIFICIAL INTELLIGENCE AND INTELLIGENT TECHNOLOGIES IN THE FIELD OF SOCIAL WORK WITH CHILDREN AT RISK

Ekaterina Uzhikanova-Kovacheva [1]

[1] *PhD in Social Policy and Social Work, Chief Assistant Professor of The Department of Social Activities at the Faculty of Pedagogy, Plovdiv University „Paisii Hilendarski", Plovdiv, Bulgaria*
Email: ek.ujikanova@uni-plovdiv.bg, ORCID: https://orcid.org/0009-0000-5674-0567

ABSTRACT. This paper presents an in-depth analysis of the integration of artificial intelligence (AI) and robotics into various areas of work with children and families, focusing on the study of practices related to social work with children. The article contributes to the literature by systematising AI-based and robotic tools as complementary resources for social work with children at risk and by outlining the professional and ethical conditions for their responsible implementation. The theoretical framework of the analysis is built through a synthesis of established models of smart technologies, including socially assistive robotics (SAR) as an approach used to support social engagement and child-centred practice. A specific analysis of the functionalities of examples of children's engagement and interaction with therapeutic robots - Nao and Kaspar - is presented to support the tone of the research in the context of this article, which emphasizes the importance of digital technologies and artificial intelligence and their implementation in the practice of social services and social activities with children. The article explores the role of artificial intelligence and its impact on children, their upbringing, education, therapy and development. The role of the social worker and the need for digital inclusion in his professional position are outlined, as the article addresses the critical gap in the scientific literature regarding the application of artificial intelligence and intelligent technologies in social practice and social work with children, which can be defined as the "Digital Divide". The article highlights key issues for discussion regarding the application of AI and intelligent technologies in the social sphere, setting out circumstances and recommendations for transformation at the practical level.

Keywords: *artificial intelligence, intelligent technologies, socially assistive robotics, social work, social workers.*

INTRODUCTION

Problem Statement and Relevance. The dynamic development of the social environment and the advent of digital transformations bring to the forefront the need for innovative solutions. In this context, the relevance of the topic is enhanced by the integration of individual intelligent technologies, including artificial intelligence (AI), socially assistive robotics (SAR), digital platforms, chatbots and online counseling, as tools that can optimize the decision-making process and offer working techniques for dealing with risky situations. The discussion about the balance between traditional helping practices and technological innovations is extremely timely and key for the development of the sector. The lack of a clear conceptual framework that connects traditional helping practices with new technological capabilities creates a risk of inefficiency in the case management of children at risk and limits the achievement of optimal outcomes for vulnerable children and families. A conceptual understanding of social work can effectively guide social workers in choosing appropriate tools (including smart technologies) in the process of solving specific risk situations, so as to ensure maximum effectiveness for both social workers and service users.

The aim of this article is to analyse the introduction of artificial intelligence into the helping professions, of which social work is a part, paying particular attention to social engagement

in accessing modern and innovative smart technologies for working with children, using the example of their integration into pedagogical interaction, psychological counselling and paediatric care.

Research methodology. The research methodology is based on a critical theoretical review and conceptual analysis of the scientific literature devoted to the implementation of artificial intelligence technologies in social work with children at risk. The article analyses studies on the application of digital technologies, social assistance models and robots, as well as best practices involving artificial intelligence aimed at interacting with children in various professional settings, whilst also drawing attention to the mechanisms for developing children's potential through contact with new technologies.

Analysis of recent research and publications.

The well-being of the child and the family is a fundamental concept in the system of the helping professions, both in structuring activities, services and approaches for the practical application of support for them, and in introducing new forms of effectiveness for measures and activities in this direction. The conceptual understanding of support for the well-being of children and families, in the context of social work, is linked to the decision to apply an effective approach and the use of proven techniques and tools, whether supported by specific smart technologies and artificial intelligence, when addressing a specific risk situation for the family and the child. The conceptualisation of helping practice is key to understanding the effectiveness sought by social workers and service users when selecting an appropriate tool and technique in the course of their work.

The challenges of ensuring the reliability of support tools for children and families are specific to individual sectors – social, educational and health. This study focuses on the scope of the social work system and the potential of digital technologies in its practice. The examination of specific examples of the introduction and use of new tools – digital technologies and artificial intelligence – and their application in the process of interacting with children and families, highlights the importance of developing new practices that support individual users and communities. The article presents the application of smart technologies and artificial intelligence in the practice organised by support professionals – social workers, educators and psychologists – to support the well-being, development, learning and social adaptability of children from at-risk groups and their families.

Social work is a profession that focuses on human life and aims to address individual, family, group and community challenges and problems. The development and implementation of specific practices in the field of social work contribute to the development of policy, legislation and social service systems in support of specific groups of people, with particular attention being paid to children and children at risk.

In recent years, Bulgaria has seen progress in providing a wide range of services and forms of social, psychological, educational and health support, aimed at ensuring the full development of children, family well-being and protection from risks for specific groups of children and families in need. A number of policies have been developed in the field of social services and access for children and families to information, therapy, rehabilitation and counselling, as well as models for prevention, child protection or support for families in conflict and at risk of violence. The updating of legislation is in line with international standards for the implementation of child protection policies and draws on the accumulated experience of a number of state institutions, social services and organisations. By examining the understanding of the purpose of supporting child welfare and protection, important prerequisites are identified for incorporating experience and practice from other significant sectors, such as health and education. The need to reform the child protection system has focused the attention of the professional community of support specialists on the development of new high-quality services, preventive approaches and tools for engaging with children and families. Despite the efforts made in recent years, the social services system for

children and families has the potential to make even more significant progress in improving the effectiveness of its work to support child development, by utilising new areas of action opened up by the possibilities of digital technologies and artificial intelligence.

The digitalisation of social services ensures improved efficiency and accessibility of services, but also provides new tools for personalising support and optimising interaction between social workers and service users. The use of information and communication technologies, and increasingly - the potential of artificial intelligence in social work, is one of the key factors in providing a more accessible and higher-quality service that takes into account the individual needs of people from vulnerable groups and ensures better protection for service users [1].

The development of artificial intelligence (AI) and social-assistive robotics (SAR) over the past decade has opened up new horizons for the field of social work, child protection and services for children at risk and their families. The new opportunities of the digital age have a role to play in supporting the well-being of children and families, as exemplified by the use of social robots to promote mental well-being [2; 3]. Any new change would enrich existing practices in the social sector by drawing on the experience of other systems, such as the education system.

The education system offers numerous examples of the integration of social work into pedagogical interactions and integrated, multimodal platforms in classrooms [4; 5] for interactive play and learning activities [6], robot-assisted learning activities [7], and robotic stage programmes for different age groups of children to promote STEAM education [8], all of which demonstrate the effectiveness of interactions and counselling for children. Smart technologies and the application of artificial intelligence systems are having an increasingly significant impact on the levels of interaction and social communication between clients and professionals in the helping professions. Examples of the implementation of new practices in support of children's development, health, education and social competence are available and adapted to the specific needs of each child and family [2]. For children at risk – including those with special educational needs (SEN), emotional trauma, a history of or exposure to violence, or social isolation – smart technologies can serve as 'social bridges' and tools to support interaction and interventions that aid development, the acquisition of new knowledge, inclusion and socialisation. The contribution of this article lies in the conceptual systematisation of AI-based tools, socially assistive robotics, online counselling platforms, and digital inclusion practices as complementary resources for strengthening social work with children at risk.

PRESENTATION OF THE MAIN RESEARCH MATERIAL

Social interaction and robotic therapy in support of child development. The reviewed literature on the effectiveness of digital technologies is based on large-scale meta-analyses and controlled trials that examine a wide range of samples, including the application and impact of smart technologies and artificial intelligence on children at risk and families at risk. A key study by Wang et al. analyses the impact of SAR on a wide range of samples, including children in vulnerable situations [9]. The authors use rigorous statistical methods to calculate the 'effect size' in order to determine the extent to which robots actually help compared to traditional methods of supporting children (tablets or human intervention alone). The data show moderate to high positive results in improving both cognitive functions and emotional well-being in children. A review of individual studies on the topic reveals evidence for the application of technology and significant potential to influence and stimulate children's intellectual development [10], language skills and communication [11], concentration and attention, and early childhood learning and education [4; 5]. According to Scassellati, children are more likely to initiate communication and acquire new vocabulary in the presence of a robot mediator [11], which the author presents as robotic therapy for children with autism and which could be identified as a potential new practice in individual work with children. Intelligent assistive technologies may serve as a promising resource for supporting children at risk, offering unique advantages in the areas of emotional regulation and cognitive development.

Socially assistive robotics is based on activity and direct social interaction with children, with the therapy designed primarily to facilitate effective engagement with children with autism and special educational needs, as the 'robot assistant' is often perceived as less stressful by people. Socially assistive robotics utilises children's natural inclination towards interaction and play to ensure effective counselling, therapeutic benefits, or developmental sessions involving the acquisition of new skills and knowledge. Research into the application of SAR also covers other child support systems, such as the healthcare system. The application of SAR in paediatric settings demonstrates the potential to assist children in regulating negative emotions and stress arising from medical interventions, including emotional support [12], hugging [13] or guided emotional regulation [14].

The role of SAR also shows results in improving children's physical condition and breathing through participation in breathing exercises [15] or its use as a motivational communication aid [16] in unfamiliar environments. Given these advantages, socially assistive robots are increasingly being integrated into paediatric healthcare practice. Although they represent a promising area of research, socially assistive robots have not yet been studied in sufficient depth. In their study on the application of artificial intelligence and robots, Mitevska and Nikiforov state that "despite the limited research on the use of social robots for children and adolescents with communication disorders (CD), promising results have been reported" [19, p. 626]. Akyazı and Baştemur present a classification of socially assistive robots based on their roles in supporting specific areas of child development [20], identifying the social, recreational, educational, rehabilitative and therapeutic functions of the technology in supporting users.

The research identifies Kaspar, Nao, Eliza, Woebot, Youper, Wysa, Simsensei Kiosk, Paro, NeCoRo, Bandit and Pepper as therapeutic robots. *The University of Hertfordshire in the UK* [21] presents data on the effectiveness of one of the SAR models – Kaspar (Kinesics and Synchronisation in Personal Assistant Robotics). The Kaspar robot is designed with simplified facial features to make it recognisable and predictable for children with emotional and social difficulties. Author Wood, in collaboration with other researchers, presents a novel approach to studying the impact of robots in the interview process, with data confirming the potential of Robot-Mediated Interviews (RMI) and the approach to interaction adopted by specialists in interviewing children.

The authors' study presents the Kaspar model in the role of an interviewer of a child – a user of services. Kaspar helps children explore social interactions in a safe environment and is programmed to respond to touch (for example, by saying 'that hurts' if squeezed too hard), which aids children's learning and understanding of cause-and-effect relationships in social behaviour, whilst also developing their empathy. Its design helps children feel more at ease with physical contact [10].

Individual work with children is a fundamental approach in social work, based on trust, an understanding of children's needs and development, an approach to assessing the child's needs, and involving the child as an active participant in the process. Assistive robotics could be a key area for testing social, cognitive and neuroscientific theories [22], which in practice should increase the range of possibilities for interaction and effectiveness in direct work with service users – children and families.

There are examples of positive outcomes and effectiveness linked to emotional acceptance, trust and interaction with children in the direct work of professionals during meetings and consultations with children, and the involvement of specific models of SAR. These examples are relevant to social work because they demonstrate how technology-mediated interaction may support assessment, engagement, communication, emotional regulation, and inclusion of children in vulnerable situations.

When working with children with autism, studies [11; 17; 23; 24; 25] demonstrate the potential of SAR to promote positive outcomes in interventions with children, interaction and

engagement with tasks, questions and examples presented by the human figure, and the heightened interest this provokes in children. A positive example of social engagement in children with autism is through interaction with the assistive robot Nao – defined as an imitative robot. Tapus et al. [26] show that greater social engagement when children interact with the Nao robot, compared to a human partner, in a task involving the imitation of motor movements. Various behavioural criteria (i.e. gaze, gaze shifts, spontaneous and prompted initiations of arm movements, as well as smiling/laughing) and their assessments suggest high variability in responses to the Nao robot. The use of humanoid robots such as Nao shows significant potential for improving cognitive functions through imitation and play scenarios [11].

The use of socially assistive robotics in work with children can be described as a 'therapeutic model' for improving shared attention and object recognition in children during interaction. Research shows that children demonstrate a higher level of engagement and sustained attention when instructions are given by a robot, compared to a traditional tablet or computer [11]. A brief analysis of the functionalities and focus of the results from the previous examples of engagement and interaction between children and therapeutic robots - Nao and Kaspar should support the research in the context of this article, emphasising the importance of digital technologies and artificial intelligence in the practice of social services and social activities in Bulgaria.

Table 1 below outlines the main characteristics of the models and presents information on the functionalities of the educational robot Nao and the robot Kaspar.

Table 1. Technical specifications and functionalities of the educational robot models: NAO and Kaspar

Characteristic	NAO (version V6)	Kaspar (K5)
Degrees of freedom	25 degrees (allows walking and dancing)	14 to 22 degrees (focus on head, neck and arms)
Appearance	Plastic, futuristic humanoid	Silicone skin, childlike features, clothing
Main sensors	2 HD cameras, 4 microphones, sonar, touch sensors, IMU	Cameras in the eyes, 15 force sensors (tactile) across the whole body
Movement	Walking (on two legs)	Stationary (seated position)
Communication	Speech recognition in 20 languages and synthesised voice	Pre-recorded messages and sounds
Specialisation	Social engagement, learning through play	Tactile therapy, empathy, 'cause and effect'

Note. *The table presents selected characteristics relevant to the comparative analysis.*
Source: *Compiled by the author based on Génération Robots [18] and the University of Hertfordshire [21].*

Key functional differences between the two robot models examined in socially assistive contexts – Nao and Kaspar – also determine the main roles in the robots' direct work with children.

The Nao robot can be described as a 'social partner' that engages children in interaction to improve verbal communication and social inclusion. The robot is capable of imitating complex human movements, which makes it suitable for use in both individual sessions with children and group activities, such as psychomotor and physical rehabilitation exercises, as well as group socialisation activities for children.

The Kaspar robot can be described as a 'social mediator', suitable for developing empathy in children, learning and social engagement, by encouraging communication between children and adults, thereby reducing feelings of isolation. Kaspar is suitable for individual sessions and therapeutic sessions with children, but also has advantages when incorporated into educational and therapeutic group sessions.

Data from the analysis of the two SAR models identify specific capabilities, effectiveness and outcomes in support of the child's cognitive and emotional development, as well as their educational and language-speech needs, which can be summarised as follows:

Impact on language skills – robots successfully stimulate vocabulary development, which is key in individual educational activities and in social work with children;

Impact on cognitive development – robots aid concentration and attention in children, whilst also increasing the time spent on direct work with the child. They help improve visual perception and visual-motor coordination in 5-year-old children [7].

Impact on emotional development – robots provide opportunities for learning through simulated scenarios in which children are supported in recognising emotions – a key prerequisite when working with children who have experienced social neglect. Social-psychological work in a protected environment, with the inclusion of SAR, helps build a trusting relationship, which is an important prerequisite for effective work, for example with child victims of violence;

Impact on socialisation – robots support the process of overcoming social isolation, for example in children with special educational needs and children with disabilities, as well as promoting interactive learning. Social skills and shared experiences are improved [27; 28], as is cooperation among children [5].

Robot-assisted therapy is a rapidly developing field of research [28]. Reviews of the literature indicate a preference for humanoid robots and their application in working with children with specific needs, such as autism, as well as in the development of fine motor skills [27; 28]. The use of interactive robotic technologies in pre-school settings, for example, promotes so-called „exploratory literacy"[4; 5], which supports creative, emotional and collaborative exploration, thereby helping to overcome social isolation. Interaction leads to greater emotional benefits than those derived from passive observation alone [3; 29], and supports early childhood education through play-based learning [30]. Although many of these practices originate in education, psychology, or healthcare, they may be adapted to social work contexts where the professional goal is to support children's safety, participation, emotional well-being, and social inclusion.

Digital platforms and tools. At a time of growing uncertainty and economic instability within communities, children and families face a range of challenges linked to a lack of, or low levels of, household income, a lack of financial and material resources, and limited access to education and social benefits, which has a significant impact on the quality of life of adults and children. Social work focuses specifically on the consequences of these and other risk factors for children and families, using traditional approaches to address them – individual and group counselling for individual members, family counselling and family support, alongside advocacy campaigns, mediation and information provision, training and the development of a support network for individual clients. Developing the ability to exercise control over the quality of one's own life is the essence of humanity [31], and social workers are involved in supporting individuals

in these abilities. Counselling is one of the key tools and approaches for supporting children and their families, and is even more relevant today, when it can be organised remotely through online consultations.

This approach, which can facilitate change in a remote setting, highlights the opportunity for social workers to „be present“ in a crisis situation via an online connection, using platforms and digital tools to access resources remotely and provide support. Research shows that online counselling services are beneficial and have an impact on the lives of children and young people [33] and can be an opportunity to reach children and young people who would otherwise receive no professional help [32]. Artificial intelligence, accepted as a valuable addition rather than a substitute for practical support in a real-life conversation – in person – should play a preventive role, as exemplified by the online counselling platform krisenchat (German for „crisis chat“).

Rarey and his team present the platform as an online counselling programme providing a service for German-speaking children and young people, delivered by professional psychologists, psychotherapists and social workers. The service operates as a digital chat platform and offers professional digital psychosocial counselling. The scope of the programme includes support and counselling for specific groups of children – children and young people from families with low social status. In a project funded by the German Federal Ministry of Health, the authors [33] present the results of the platform’s effectiveness, which demonstrate the need for crisis support for all children and young people [33] and the high feasibility and acceptance of the service [32].

Early interventions are extremely important for children and young people. Baldofski and team highlight the role of professionals, through online counselling, in providing recommendations for referral to the healthcare system or for seeking additional help from a trusted adult [34], particularly in cases of psychosocial crises and behavioural difficulties that require specialist intervention, including from the healthcare system. An analysis by Baldofski and his team demonstrates that online counselling platforms are a therapeutic tool with a ‘low threshold of access’ which does not replace traditional support, but are an indispensable filter that identifies the most at-risk and isolated children and young people, provides them with psychological and social support, and guides them through the barriers of stigma towards long-term recovery [34]. This form of counselling positions social workers and psychologists as mediators, advocates and intermediaries in contact with other specialists, and enables timely intervention in identifying current risks to children and predicting future and potential risks.

Online counselling, organised via the platform, adheres to the established framework for conducting this process, with each individual phase – building a trusting relationship, understanding the problem, clarifying the aim of the counselling session, finding a joint solution, and properly concluding the counselling session. In the authors’ analysis, the reported topics are summarised into four categories: psychiatric symptoms, psychosocial distress, emotional distress and violence, as expressed by the individuals – the service users – as needs. Within these groups, the following psychosocial problems are distinguished: conflicts within the family, at school, at work, in relationships or with friends; difficulties adapting to a new situation or environment; fear of the future; bullying; stress and burnout; online relationships; coping with an incident or physical illness affecting a relative or friend; and coping with suicide, non-suicidal self-harm, mental health disorder or substance misuse by a relative or friend [34].

Research and data on the application of online counselling [32; 33; 34; 35] is available in academic circles, but little is known about the effects or benefits of online counselling due to the anonymity of the services [34]. A review and analysis of the published literature reveals a general trend towards identifying online counselling as a useful service for children and young people to share their experiences and receive guidance regarding psychosocial problems [34], which is also one of the main reasons for seeking these services. In recent years, the use of online counselling has shown a significant shift in the development of the influence of help-seeking across different age groups [36] in this environment. Integrating these approaches into counselling practice will

help counsellors better understand clients' psychological processes and provide more targeted support [37]. To support young people's access to help for their social well-being and mental health, it is necessary to engage the personal relationship between parents and the family to encourage the use of services. In the online environment, it is particularly important to ensure professional ethics and counselling skills to guarantee that complementary services and support are effective and appropriate.

The application of digital technologies and artificial intelligence in working with children at risk and supporting their development, as an approach within social work, can improve the effectiveness of social services and activities only through the establishment of structured guidelines and clear ethical principles for practice. Future research should develop strategies for the application of each of the digital approaches – assistive technologies or digital platforms with artificial intelligence – to support the development of the competence of practitioners – social workers, psychologists or other specialists. Consequently, social work educators and those defining the frameworks, methodologies and principles for conducting consultations should purposefully incorporate topics based on the application of artificial intelligence in social practice, reflecting the actual capabilities of each system – structural, financial, capacity and resources, training and skills related to processing structured feedback and supervising teams of specialists.

Digital inclusion of social workers. The contemporary paradigm of social work faces the need for digital transformation, driven by the explosive advancement of artificial intelligence technologies. The analysis presented confirms the application of specific models of SAR, digital technologies and artificial intelligence as applicable or innovative practices in support of children and child development in pedagogy, psychology and paediatrics; however, according to Báez, the adoption of these technologies in social work remains limited [38]. Today, social workers continue their work, grappling with limited resources and structural shortcomings in the face of growing and complex problems [39], but another important task is emerging for them, linked to the need to raise awareness of artificial intelligence in social work education and practice [40].

This study addresses a critical gap in the academic literature regarding the application of artificial intelligence and intelligent technologies in social practice and social work with children, which can be defined as the "Digital Divide". Clients, who are the primary users of social services and fall within the scope of social work – children, individuals and families in disadvantaged situations – face the risk of being excluded from technological progress due to a lack of resources, skills or access to digital services. To bridge the so-called 'digital divide' within individual systems, social workers can act as facilitators, mediators and trainers, providing clients with access to digital tools for learning, job seeking or administrative services.

The integration of artificial intelligence into social work should be viewed not merely as a technological issue, but as a new stage in the evolution of social work as a profession and a discipline. An example of an opportunity to implement artificial intelligence and digital technologies to support the training and development of social workers is the 'SocialITAI' project, implemented in the country, which focuses on developing digital skills to assist users of social services for children and, through a web-based case management platform, will support the work of social workers [1]. The introduction of new tools and good practices, such as the "SocialITAI" project, and the creation of a platform for the practical support of social workers, developed specifically for the needs of the children's social services sector, is an active and decisive step in the process of progress on this issue. Through the opportunities offered by similar projects and practices, their study, and the filling of the scientific and literature gap on the subject, social work science can integrate digital technologies and artificial intelligence into the practice of individual social services, social activities and methodologies, in order to create a new tool for social equality and empowerment. The opportunities for overcoming the relevant divisions can be summarised by setting out specific recommendations. These recommendations are addressed not only to individual

social workers, but also to social service managers, educators in social work, policymakers, and developers of AI-based tools intended for vulnerable groups.

Personalised interventions through which AI can help create accessible applications for people with disabilities or special needs (e.g. voice assistants for people with visual impairments or chatbots for primary social support for young people).

The dual role of the social worker: as a facilitator of digital inclusion for vulnerable groups of children and families, and as a supervisor in the practical application of individual methods, with the aim of objectively evaluating AI-mediated social interventions.

Technological Empowerment for disadvantaged clients (individuals and children with low socio-economic status, minority groups, people with disabilities) who lack the skills to use AI effectively to improve their quality of life.

Social workers – mediators providing active training and motivational support to clients in the use of AI (e.g. generative learning models, assistive technologies for children and people with disabilities, job search platforms).

Educational reforms incorporating subjects related to digital literacy and ethics in its application into social work and social services curricula. Studying the application of artificial intelligence as a technology, and its humanitarian and social applications, will expand the range of support tools available for at-risk groups within the scope of social work.

Discussion

The analysis indicates that the integration of artificial intelligence and SAR marks a new evolutionary stage in working with children. Empirical data indicate that the application of digital technologies and SARs in direct individual and group work with children at risk may yield positive results, overcoming social isolation and stimulating interactive learning. However, the study identifies a significant gap in the scientific literature regarding the application of technology in social work with children, despite the potential for current practices to be implemented. The results emphasise that technology is merely a complementary tool, whose success in Bulgaria depends critically on qualified human input and strict adherence to ethical standards, with the best results being achieved when robots are operated directly by specialists, in this case by a social worker or therapist, rather than operating independently. The use of AI-based tools and SAR in work with children at risk requires strict ethical safeguards, including data protection, informed consent, professional supervision, and prevention of algorithmic bias. The academic community in the field of social work should focus more on developing practical approaches to the implementation of artificial intelligence in support of children, families and social workers. AI should not be used as an autonomous decision-maker in child protection cases, but only as a supportive tool under the responsibility of qualified social workers. Future empirical research may offer answers and perspectives on its application, alongside the legal, ethical and professional responsibilities of social institutions. A conceptual framework for future discussions should present perspectives on the functioning of artificial intelligence at two main levels: the macro level (institutional governance and data) and the micro level (direct client work and empowerment). This study is limited by its theoretical and literature-based design and does not include original empirical data. Therefore, the conclusions should be interpreted as conceptual and analytical rather than as direct evidence of the effectiveness of AI-mediated interventions in all social work contexts. The findings may be interpreted at three interconnected levels: the professional level, where social workers act as mediators of digital inclusion; the institutional level, where social services require clear protocols and resources; and the ethical level, where AI-based tools must remain subordinate to human responsibility and child protection principles.

CONCLUSIONS

The implementation of digital innovations and artificial intelligence (AI) in the social sphere should be understood not merely as a technological transition, but as a significant stage in the development of socially oriented professional practices.

The reviewed literature shows that social workers must assume the strategic role of digital mediators. Their commitment is directed towards empowering disadvantaged clients by ensuring equal access to technology and facilitating high-tech, humanised social interventions. The integration of new digital technologies and SAR in the context of child protection and support holds significant scientific, therapeutic and practical potential. Direct individual and group work with children at risk, through the use of SAR, has shown promising results. The robots function as an innovative platform for multi-layered interactions, whilst intelligent technologies and online counselling open up new avenues for overcoming social isolation, stimulating social connectedness and promoting interactive learning. This approach opens up entirely new horizons for intervention aimed at supporting children and their families, ensuring that artificial intelligence serves as a tool for social equality, inclusion and digital inclusion. Artificial intelligence and specialized digital applications have high potential to function as complementary tools in social work with children at risk. They allow for faster data processing, early identification of risk factors and better interdisciplinary coordination of cases. The theoretical review confirms their potential, but technologies should not displace the role of the social worker, but should expand the professional toolkit of social workers, while the indispensable elements of social work — empathy, trust-building, critical thinking and emotional support — remain entirely within the realm of human competence. Institutional readiness for the effective and safe application of AI in child protection requires clear ethical standards and professional supervision, to avoid the risk of discriminatory practices against vulnerable groups. Based on the analysis, a significant conclusion can be formulated, defining the digital transformation in the social sector as possible, through the active digital inclusion of both social workers (through continuous training and development of digital skills), and the clients themselves and their families (by ensuring access to technologies and overcoming digital inequality). The present study outlines the need for subsequent scientific research to focus on empirical testing and validation of the effectiveness of AI tools in the specific conditions of specific social services. Future studies should measure the real impact on the well-being of children at risk through quantitative and qualitative indicators.

In conclusion, the analysed data and recommendations emphasise that technology is a powerful complementary resource with the potential to significantly enhance the quality and efficiency of social work. The success of this transformation, appears to depend on two key conditions: uncompromising adherence to ethical standards and the provision of a qualified human workforce.

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