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Artificial intelligence as a potential empowerment tool for single mothers: opportunities, risks, and structural implications

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Abstract. This literature review examines whether and under what conditions Artificial Intelligence (AI) can function as a meaningful empowerment tool for single mothers. Situated at the intersection of gender, caregiving, labor, social policy, and digital inequality, the review argues that AI has significant potential to reduce some of the structural and everyday burdens disproportionately borne by single mothers. Specifically, AI may support economic opportunity, caregiving coordination, access to information, emotional assistance, and time-saving forms of practical infrastructure. At the same time, the review emphasizes that such empowerment is not automatic. AI's value depends on affordability, accessibility, digital literacy, ethical design, cultural responsiveness, and the extent to which technological systems address rather than reproduce existing inequalities. Drawing on interdisciplinary scholarship published roughly between 2002 and 2025, with particular emphasis on recent work from 2020 to 2025, the review synthesizes literature on empowerment, single motherhood, caregiving burdens, digital inequality, and AI applications in everyday life. It also examines the major risks associated with AI, including bias, surveillance, exclusion, privacy harms, overreliance, and uneven access. The review concludes that AI should not be understood as a substitute for public policy or human support, but as a potentially valuable tool whose empowering capacity depends on justice-oriented governance and inclusive institutional design.

Keywords: artificial intelligence, single mothers, digital inclusion, caregiving, social equity

1. Introduction

Single mothers encounter numerous problems, intensified by their responsibilities as primary caregivers and providers, sometimes within systems that offer no support. The challenges encompass financial strain, time constraints, psychological fatigue, and institutional obstacles, intensified by insufficient flexible and accessible support services [1-3]. Traditional support systems are often fragmented, stigmatizing, and challenging to navigate, thereby perpetuating poverty and eroding social connections [4]. In this context, AI technologies provide potential solutions that may mitigate some of these difficulties. Artificial intelligence tools, such as chatbots, scheduling applications, and health platforms, offer intelligent, adaptive assistance that improves caregiver effectiveness and well-being [5]. These technologies can assist with daily tasks, provide emotional

support, and enhance access to information and resources, possibly diminishing the time and emotional labor needed for single mothers [6]. To guarantee inclusivity and advantage for all users, the adoption of AI systems must tackle issues of justice, access, and privacy [6]. Notwithstanding the promise of AI, comprehensive reforms are necessary to tackle the pervasive socioeconomic and institutional obstacles encountered by single mothers, including the demand for more dependable childcare and flexible educational and employment regulations [7]. The integration of AI with policy reforms can provide a more conducive environment for single mothers, assisting them in balancing dual responsibilities and enhancing their overall quality of life [7, 8].

Artificial intelligence enhances opportunities for single mothers by expanding access to economic prospects, caregiving services, information, emotional support, and time-efficient solutions. The empowering potential of AI is not intrinsic; it is contingent upon factors like as cost-effectiveness, accessibility, ethical design, digital literacy, and the degree to which AI mitigates rather than perpetuates existing structural inequalities. This prompts a significant research inquiry: can AI effectively mitigate the challenges encountered by single mothers, and under what circumstances does it empower rather than exploit, surveil, or exacerbate inequality? The primary assertion of this study is that AI possesses authentic empowering potential when deployed in manners that are accessible, reliable, culturally adept, and attuned to the nuances of caregiving and gendered labor. This subject is pertinent as it intersects gender, technology, family policy, labor, and social equity, while also posing a broader normative inquiry of whether innovation is intended to assist those in most need.

2. Conceptual framework

Empowerment is a complex notion that includes multiple elements, each enhancing people' or groups' control over their lives and surroundings. Economic empowerment entails the augmentation of financial resources and possibilities, facilitating individual participation in economic activities and enhancement of living standards. This feature is essential for surmounting obstacles to economic involvement and attaining financial independence [9]. Informational empowerment denotes the access to and application of information, crucial for making informed decisions and engaging successfully in societal processes. It is intricately connected to the capacity to influence and hold responsible the institutions that impact individuals' lives [10]. Emotional and psychological empowerment emphasizes the augmentation of self-efficacy, self-esteem, and resilience, which are essential for personal development and well-being. This factor underscores the significance of psychological processes in enabling individuals to surmount adversity and seize opportunities [9, 11]. Temporal empowerment, which entails conserving time and alleviating cognitive burden, focuses on optimizing processes and decision-making to enhance individual freedom and efficiency in daily life [12]. Social and institutional empowerment entails the ability to engage with and impact social and institutional frameworks, promoting inclusive and accountable government. This dimension is essential for empowering underprivileged groups to participate in social transformation and attain enhanced social justice [10, 13]. These elements collectively demonstrate that empowerment encompasses not just individual capacities but also the establishment of supporting contexts and frameworks that promote active engagement and autonomy in one's life [14, 15].

Single motherhood is a complicated social and economic phenomenon that resists a unique categorization due to its intrinsic variability. It is not simply a uniform category but a dynamic social construct shaped by multiple intersecting elements, including class, color, handicap, immigration status, language, geography, and the number and age of children. The diversity of single parenting is seen in the various circumstances that drive women to this condition, such as divorce, widowhood, and never having been married, each posing

distinct problems and experiences [16, 17]. The economic and social difficulties encountered by single moms are intensified in impoverished regions, where women frequently endure the consequences of economic disparity and the absence of social advantages relative to their male counterparts [16]. This situation is exacerbated by cultural stigmas and preconceptions that depict single moms as less competent in child-rearing, leading to their social exclusion and marginalization within the conventional two-parent family paradigm [18]. The confluence of single parenting with many social categories, including ethnicity and class, underscores the necessity for a complex comprehension that transcends the reductive label of 'lone mother' [19]. The intricacy is evident in the diverse definitions and conceptualizations of single motherhood within various legal and social policy frameworks, frequently leading to uneven and occasionally discriminatory treatment of these families [20]. Furthermore, patriarchal and capitalist socio-economic frameworks exacerbate the marginalization of single moms by neglecting to meet their distinct demands, especially in reconciling employment and caregiving obligations [18]. Notwithstanding these problems, single moms frequently depend on informal networks of solidarity and assistance to manage the precariousness and social exclusion they encounter, highlighting the resilience and agency inherent in this varied group [18]. Consequently, comprehending single motherhood necessitates a holistic approach that accounts for the interaction of diverse social variables and the overarching socio-economic environment in which these families operate.

Artificial Intelligence (AI) is a diverse domain that includes numerous technologies and applications aimed at emulating human cognitive abilities such as learning, reasoning, and problem-solving. Generative AI, a significant subset of artificial intelligence, concentrates on producing novel content that emulates human creativity through the application of deep learning architectures, including Generative Adversarial Networks (GANs) and Transformer-based models like GPT and DALL·E. These models are trained on comprehensive datasets to generate original outputs in text, images, music, and other mediums, profoundly influencing sectors such as content creation, healthcare, and marketing, while simultaneously eliciting ethical concerns related to plagiarism and data privacy [21]. Predictive AI, a vital application, employs machine learning algorithms to examine previous data and forecast future events, essential in domains such as finance for risk assessment and fraud detection [22]. Conversational agents, including chatbots and digital assistants like Alexa and Siri, utilize natural language processing to comprehend and reply to human language, hence improving user interaction and automating customer service functions [22, 23]. Recommendation systems, such as those employed by Netflix, leverage artificial intelligence to assess user preferences and propose material, thus personalizing user experiences and enhancing engagement [22]. Finally, AI-driven administrative and automation technologies enhance operations by automating repetitive processes, increasing productivity, and minimizing human error across diverse sectors [24, 25]. These AI applications collectively illustrate the revolutionary capacity of AI technology in improving productivity, creativity, and decision-making, but simultaneously requiring meticulous attention to ethical considerations and appropriate utilization [24, 26].

The theoretical frameworks of feminist technology studies, care economy theory, digital inequality framework, capacity approach, and structural inequality and intersectionality offer extensive tools for examining the complex interplay between gender and technology. Feminist technology studies underscore the necessity for gender equity in digital health, illustrating how digital health technologies frequently reinforce gender disparities due to the exclusion of women, particularly those from minority backgrounds, from design processes and leadership positions [27]. The care economy theory, examined during the COVID-19 pandemic, illustrates how structural inequalities—such as race, class, and migration status—converge to disadvantage caregivers, primarily women, who endure precarious employment and heightened risks without sufficient governmental support [28]. The digital inequality framework examines the gender digital divide, especially in the Global South, where discrepancies in access, literacy, and sociocultural barriers persist, reinforcing structural inequalities in digital environments [29]. The capability approach, when applied to mobile phone

usage among low-income women, demonstrates how maintenance affordances influence their capacity to utilize technology for fulfilling lives, emphasizing the intersection of technological affordances with structural inequalities such as inadequate employment conditions [30, 31]. The capacity approach is essential for comprehending how digital technologies can improve women's well-being and agency, while also potentially reinforcing gender-based limitations, as evidenced in the digital industrial revolution [32]. Structural inequality and intersectionality are essential for comprehending the digital literacy obstacles encountered by minority girls in Pakistan, where intersecting factors such as gender, religion, and ethnicity contribute to digital exclusion, thereby requiring gender-responsive policies and community involvement [33]. These theoretical frameworks advocate for an intersectional, inclusive, and justice-oriented methodology in technology policy and design, urging synchronized worldwide initiatives to establish fair digital futures [34].

3. Methodology

This study adopts a qualitative literature review methodology to examine whether and under what conditions artificial intelligence may function as an empowerment tool for single mothers. Because the topic lies at the intersection of gender, caregiving, labor, social policy, digital inequality, and emerging technology, a literature review is the most appropriate method for synthesizing insights across multiple fields rather than isolating the question within a single empirical domain. The purpose of this review is interpretive and analytical rather than statistical. It seeks to identify recurring themes, conceptual patterns, structural tensions, and normative concerns in the existing scholarship on artificial intelligence, caregiving, women's well-being, and social inequality.

The review is guided by the central research question developed in this paper: Can AI meaningfully reduce the burdens faced by single mothers, and under what conditions does it empower rather than exploit, surveil, or reproduce inequality? To address this question, the study uses an interdisciplinary and thematic approach. It draws on scholarship from social policy, gender studies, family studies, technology ethics, digital governance, healthcare, labor studies, and education. The literature reviewed in this paper spans approximately 2002 to 2025, with foundational sources on single motherhood, care, poverty, and structural inequality drawn from earlier scholarship, and more recent sources from 2020 to 2025 used to capture contemporary developments in artificial intelligence, digital platforms, and AI ethics. This temporal range is appropriate because it allows the review to combine enduring structural insights with rapidly developing technological debates.

The literature included in the review was selected through purposive thematic sampling. Sources were chosen on the basis of their relevance to one or more of four major analytical areas: first, the structural challenges faced by single mothers, including economic precarity, time poverty, psychological strain, and institutional barriers; second, the potential uses of AI in areas such as caregiving support, household organization, access to information, emotional assistance, education, and income generation; third, the risks and limitations of AI, including bias, surveillance, exclusion, privacy concerns, and unequal digital access; and fourth, the policy and design conditions under which AI may become more equitable, accessible, and socially beneficial. The review therefore privileges conceptual relevance and analytical fit over narrow disciplinary boundaries.

Methodologically, this paper uses narrative synthesis rather than meta-analysis. Since the relevant literature spans different disciplines, methods, and types of sources, the review does not attempt to aggregate findings quantitatively. Instead, it organizes the literature into thematic categories and synthesizes how different scholars describe the opportunities, constraints, and implications of AI in relation to the lives of single mothers. This approach is especially appropriate where the field is still emerging and where the goal is to clarify concepts, map debates, and identify gaps in current scholarship. The synthesis is therefore structured

around the major sections of the paper: conceptual framework, structural challenges, pathways of empowerment, risks and limitations, critical distributive questions, and policy implications.

The review is also informed by an equity-centered and intersectional lens. It does not treat single mothers as a homogeneous group, but instead understands single motherhood as shaped by differences in class, race, disability, language, migration status, geography, and family structure. Likewise, it does not treat AI as a neutral tool whose effects are automatically beneficial. Rather, the analysis proceeds from the premise that technological systems are socially embedded and that their effects depend heavily on design choices, affordability, digital literacy, institutional context, and broader power relations. For that reason, the review evaluates AI not only in terms of technical capability, but also in terms of accessibility, trustworthiness, cultural responsiveness, and justice-oriented governance.

This methodology has several limitations. As a literature review, it does not generate new primary empirical data from single mothers themselves, nor does it measure the real-world outcomes of particular AI systems in a controlled setting. In addition, because the AI-related literature is concentrated in recent years, especially 2023 to 2025, parts of the evidence base remain emergent and may include conceptual, exploratory, or rapidly evolving scholarship rather than long-settled findings. Nevertheless, this method remains valuable because it allows for a broad, critical synthesis of an emerging field and helps establish a foundation for future empirical research.

Taken together, this methodological approach allows the study to make a conceptual and policy-relevant contribution. Rather than asking only what AI can do in the abstract, it asks how AI should be understood, designed, and governed if it is to function as a credible tool of empowerment for single mothers in real social contexts.

4. Structural challenges faced by single mothers

Single mothers encounter numerous structural obstacles that intensify their economic precariousness, chiefly attributable to salary disparity, unstable employment, childcare expenses, and insufficient financial reserves. Wage disparity persists as a critical concern, with single moms frequently occupying low-income positions that fail to offer adequate financial security [35, 36]. Precarious employment exacerbates this issue, since numerous single moms are involved in non-standard labor arrangements devoid of job security and benefits, complicating the balance between work and family obligations [36]. daycare expenses constitute a significant obstacle, consuming a considerable fraction of a single mother's income, frequently dissuading them from full-time job or compelling them to depend on substandard daycare options [37-39]. The exorbitant expense of childcare restricts employment opportunities and influences eligibility for social benefits, as demonstrated by the intricate relationship among childcare costs, welfare participation, and labor supply [38, 39]. Moreover, single moms frequently lack a financial buffer, rendering them susceptible to economic disruptions such as job loss or unforeseen expenditures [40, 41]. The COVID-19 pandemic has exacerbated these vulnerabilities, as single mothers have faced elevated unemployment rates and a protracted recovery relative to other family structures [41]. The deficiency of sufficient social support systems and financial literacy intensifies these issues, highlighting the necessity for specific interventions including financial education programs and enhanced access to childcare subsidies [39, 40]. These structural challenges underscore the necessity for comprehensive policy reforms that tackle the specific economic vulnerabilities encountered by single mothers, ensuring they receive adequate support to attain financial stability and enhance their overall well-being [1, 8]. Single moms encounter considerable structural obstacles associated with time poverty, mostly stemming from the dual demands of paid employment and unpaid caregiving, exacerbated by bureaucratic burdens. The simultaneous obligations of job and caregiving generate a time constraint that is intensified by meager salaries and

inadequate employer-provided benefits, resulting in single moms facing limited finances and diminished time for their children [42]. The problem is exacerbated by structural and contextual variables affecting single moms, including economic pressures, social support networks, and sociocultural contexts, which are frequently neglected in policy discourse [1]. The welfare system in the U.S. enforces stringent temporal frameworks on single moms, utilizing time as a mechanism of control rather than assistance, so intensifying their difficulties in navigating erratic timetables [43]. The 'third shift' phenomena underscores the bureaucratic work necessary to maneuver through welfare systems, requiring substantial time and effort from single moms, frequently without offering a definitive route out of poverty [44]. The difficulties are exacerbated for individuals with health concerns or children with impairments, as employment may not yield adequate income or health insurance, so constraining their capacity to fulfill their families' requirements [45]. The inconsistent and precarious character of temporary employment does not provide the consistency necessary for effective parenting, hence exacerbating the time poverty faced by single moms [3]. Notwithstanding these problems, certain single moms exhibit resilience and flexibility, whereas those with chronic vulnerabilities persistently encounter compounded stressors over time [46]. The deficiencies of existing antipoverty strategies, which neglect the worth of single mothers' time, result in an inflated assessment of their well-being and diminish policy efficacy [42]. Consequently, tackling the structural obstacles encountered by single moms necessitates a thorough comprehension of their time scarcity and the formulation of policies that acknowledge and assist their intricate circumstances [47].

Single mothers encounter considerable systemic obstacles that exacerbate their emotional and psychological burdens, such as decision fatigue, social isolation, and burnout. Decision fatigue occurs due to the incessant requirement to make multiple everyday choices independently, resulting in mental weariness and diminished decision-making ability over time [4, 48]. Social isolation constitutes a significant concern, since single moms frequently lack sufficient social support networks, intensifying feelings of loneliness and potentially resulting in psychological distress, including anxiety and depression [49, 50]. The lack of financial and social assistance exacerbates these challenges, as single mothers frequently bear the burden of both economic and caregiving duties independently, heightening their susceptibility to stress [1, 50]. Burnout and stress are common among single mothers due to the simultaneous demands of work and family obligations. The absence of collaborative caring responsibilities and societal pressures leads to a persistent state of stress, resulting in burnout, defined by emotional fatigue and diminished professional effectiveness [51, 52]. This burnout stems not only from the immediate pressures of single parenting but also from the overarching societal frameworks that inadequately support and acknowledge the unrecognized labor performed by these moms [48, 53]. The aggregate influence of these stressors substantially affects the mental health of single moms, resulting in elevated levels of psychological distress relative to their married counterparts [54]. To tackle these issues, structural reforms are necessary, encompassing enhanced social support systems, adaptable employment arrangements, and societal acknowledgment of the distinct hardships encountered by single moms [1, 48].

Single moms have substantial structural obstacles, especially institutional hurdles, that hinder their capacity to maneuver through systems that are not intended with their distinct caregiving circumstances in mind. Bureaucratic complexity poses a significant obstacle, as single moms frequently face intricate procedures when seeking social help, leading to stress and shame, which ultimately limits their socio-economic mobility [2]. This intricacy is exacerbated by disparities in access to vital resources, including legal, educational, and healthcare services. Single mothers pursuing higher education encounter institutional barriers, such as rigid systems that fail to accommodate their dual responsibilities as caregivers and students, hindering their ability to sustain enrollment and attain academic success [55-57]. These educational institutions frequently lack policies that cater to the distinct needs of single moms, like flexible scheduling and childcare assistance, which are essential for their academic and professional progression [57, 58]. Moreover, the employment and legal

frameworks pose further obstacles, as single moms must maneuver through these domains while fulfilling home obligations, frequently without sufficient assistance from social services [59]. The rigidity of these systems neglects the parenting responsibilities of single mothers, so sustaining cycles of poverty and constraining their prospects for upward mobility [56, 59]. In the realm of migration, these issues are intensified, as single mothers face policy deficiencies and resource constraints in unfamiliar settings, underscoring the necessity for comprehensive support systems tailored to their situations [60]. Addressing these institutional impediments necessitates a reconfiguration of social support delivery to mitigate systemic damages and more effectively accommodate the reality of single parenting [2].

5. Pathways through which AI may empower single mothers

AI technologies provide substantial avenues for economically empowering single mothers by improving their access to employment prospects, entrepreneurship, and financial management. AI-assisted job search and resume writing tools, exemplified by the AI-Powered Opportunity Crafter, enhance employability by refining resumes for Applicant Tracking Systems and offering tailored interview preparation, therefore augmenting the success rates of job seekers [61]. In the domain of digital entrepreneurship, AI enables cost-effective business establishment and administration, allowing single mothers to participate in e-commerce and freelancing. AI-driven platforms such as the AI Freelancing Application offer customized job-talent alignment and multilingual assistance, enhancing the accessibility and efficiency of freelancing [62]. Moreover, AI facilitates digital entrepreneurship by providing tools for predictive analytics and digital marketing automation, hence improving decision-making and operational efficiency for women entrepreneurs [63]. AI-driven personalized financial coaching enhances financial planning and budgeting by addressing obstacles to financial literacy and offering customized financial guidance, hence promoting greater financial autonomy [64]. These AI applications assist single mothers in accessing financial assistance and enable them to make informed financial decisions, hence contributing to broader socio-economic development [64]. Furthermore, structured entrepreneurship programs that include AI tools might enhance the business acumen and resilience of single mothers, hence diminishing reliance on external financial support [65]. AI functions as a revolutionary instrument that can substantially augment the economic empowerment of single mothers by furnishing them with the resources and support necessary to excel in the digital economy.

AI technologies possess considerable promise to empower single mothers by improving caregiving and household assistance through multiple avenues. AI can substantially enhance scheduling and reminder systems, as these technologies support ambient assisted living applications, improving the coordination and management of caregiver duties [66]. AI-driven platforms, like ChatGPT, offer customized guidance and assistance for parents, aiding them in managing the intricacies of child-rearing and home administration. Regarding meal preparation, household organization, and routine management, AI can allocate duties and illustrate contributions, thus alleviating caregiving burdens and promoting a more equitable distribution of obligations within the family [67]. AI can significantly contribute to educational tutoring support for youngsters. AI-mediated educational environments can facilitate family collaboration, tackling coordination difficulties and enhancing collective learning experiences [67]. Moreover, AI technologies can give linguistic assistance for multilingual families, delivering tailored language learning solutions that encompass audio descriptions and text-to-speech capabilities, hence improving communication and social integration [68]. These AI-driven solutions not only assist with the practical elements of caring but also tackle wider concerns such as social isolation and stress, which are common among single parents [69]. Integrating AI into daily activities enables single mothers to achieve greater efficiency and assistance, hence enhancing their well-being and empowerment in caregiving duties.

Artificial Intelligence (AI) possesses considerable potential to empower single mothers by enhancing informational access, streamlining complex procedures, and enabling real-time problem resolution. AI-driven platforms, like ChatGPT, can provide customized counsel and support to parents, tackling the intricacies of child-rearing through individualized guidance and help. The digital age has provided moms with extensive information regarding parenting, education, health, and public services, so augmenting their roles and fostering gender equality through digital inclusion [70]. The revolutionary potential of AI lies in its ability to bridge disparities in access and quality of services, especially in healthcare and education, by providing adaptive technology and early diagnostic tools that are essential for single mothers juggling numerous obligations [71]. Moreover, AI-powered digital platforms incorporate tailored healthcare, mental health assistance, and emergency safety functionalities, offering a comprehensive strategy for women's health and safety, especially advantageous for single mothers confronting distinct obstacles. AI tools augment digital literacy and information accessibility, establishing a feedback loop that empowers individuals by strengthening their capacity to learn and obtain resources [72]. The implementation of AI technologies must take into account cultural contexts and infrastructural constraints, as demonstrated by the application of maternal health chatbots in low-resource environments, underscoring the necessity for culturally informed and inclusive AI designs. AI can substantially empower single mothers by equipping them with essential tools and information to manage their everyday lives more efficiently; yet, it necessitates deliberate design and governance to guarantee inclusivity and accessibility [73].

AI technologies present promising avenues to empower lone mothers by delivering emotional and psychological assistance through diverse novel tools. AI companions, like AI Buddy, are engineered to alleviate loneliness and deliver continuous emotional support by emulating the presence of loved ones through auditory and holographic representations, thereby providing companionship and guidance in times of need [74]. These AI companions have demonstrated efficacy in mitigating loneliness, analogous to human connection, by fostering a sense of being heard and understood, which is vital for single mothers who may encounter isolation [75]. Furthermore, AI-driven chatbots such as those seen in MindCare and FASSLING offer affordable, stigma-minimizing emotional support alternatives. These platforms employ sophisticated language models to provide tailored, sympathetic, and context-sensitive replies, effectively connecting traditional treatment with automated support [76, 77]. MindCare provides a scalable and ethical digital solution for mental health care, prioritizing emotional response and user happiness [78]. Moreover, AI-powered mental health companions such as Mindmate and Jarvie offer mental health assessments and self-regulation resources, including mood tracking and guided interventions, to assist users in cultivating emotional resilience and managing stress [79, 80]. These techniques are especially advantageous for single mothers who may encounter obstacles in getting conventional mental health services owing to financial constraints or societal stigma. The use of AI in mental health support encompasses platforms such as ChatGPT, which provide rapid accessibility and practical aid for diverse psychological needs; nonetheless, they should not supplant human therapists [81]. AI technologies offer single mothers accessible, tailored, and stigma-free emotional support, mitigating loneliness and improving mental well-being through constant digital assistance [82].

Artificial Intelligence (AI) possesses considerable potential to augment the temporal agency of solitary mothers through multiple avenues. AI can primarily assist by minimizing repetitive duties, therefore liberating time for more essential pursuits. AI-driven personal assistants and chatbots can oversee daily responsibilities, including appointment scheduling, food preparation, and reminders for payments and medications, thereby optimizing routine activities and alleviating stress [83]. This automation reduces cognitive burden and enables single mothers to concentrate on high-priority duties, thereby optimizing their cognitive resources [84]. Moreover, AI facilitates planning and prioritization, exemplified by programs such as Microsoft To Do, which aids working mothers in more successfully balancing professional and personal obligations by arranging duties

and alleviating stress [85]. incorporation of AI into everyday life enhances the efficient utilization of constrained time by allowing single mothers to assign cognitive and emotional tasks to AI systems, thereby transforming their management and subjective perception of time [86]. Moreover, AI-driven solutions can improve work-life balance by offering flexible and cost-effective learning opportunities, enabling single mothers to develop new skills and pursue rewarding occupations [87]. AI's capacity to automate mundane duties, facilitate planning, and alleviate cognitive loads substantially empowers single mothers by enhancing their time management and allowing them to concentrate on personal and professional development.

6. Limits and risks of AI as an empowerment tool

The digital divide imposes considerable constraints and hazards on the utilization of AI as an empowerment instrument, chiefly owing to disparities in access to devices, broadband, and paid AI services, alongside deficiencies in digital literacy. The enduring inequities in access to AI technologies are shaped by social, regional, and educational disadvantages, which obstruct fair participation in the AI-driven future [88]. Although AI possesses the capacity to mitigate inequalities, especially in education via personalized learning and accessibility enhancements, these advantages are not evenly allocated owing to resource inequities and algorithmic biases [89, 90]. The digital gap encompasses not just internet access but also digital literacy and skills, which are essential for the proper utilization of AI technology [91]. Marginalized communities, particularly in rural or economically disadvantaged regions, encounter heightened risks stemming from digital disparities, which can intensify cybersecurity vulnerabilities and worsen pre-existing injustices [91]. AI-driven digital literacy platforms, such as the proposed Phoenix Engines, seek to bridge these gaps by offering culturally relevant, adaptive learning tools tailored to individual requirements, while ethical concerns like data privacy and algorithmic bias persist as significant issues [92]. Moreover, systemic obstacles such as elevated expenses and time limitations persist in obstructing access, underscoring the necessity for focused measures to improve digital literacy and decrease costs [93]. Digital access is acknowledged as a fundamental right, necessitating extensive initiatives to enhance infrastructure, subsidize devices, and establish digital literacy programs, positioning broadband access as a public health necessity [94]. Although AI possesses revolutionary potential, its implementation must be backed by inclusive policies and investments to ensure it empowers rather than marginalizes underprivileged areas [72]. Artificial Intelligence (AI) systems, despite their considerable potential for empowerment, present serious concerns associated with bias and exclusion, notably with gender, ethnicity, and non-dominant family structures. AI systems frequently mirror and intensify pre-existing societal biases as a result of the skewed or inadequate data on which they are educated. AI applications in women's and children's welfare, despite its transformational potential, frequently exacerbate gender biases because to the underrepresentation of women in AI development and the patriarchal structures inherent in the data [95, 96]. AI systems can similarly promote racial and gender discrimination, as evidenced in healthcare and social media, where biased algorithms may result in detrimental effects unbeknownst to users. The marginalization of non-dominant family structures and caregiving realities is a significant concern, as AI systems often prioritize statistical averages, thereby disadvantaging tiny minorities and outliers [23]. The marginalization is exacerbated by the insufficient diversity in AI development, leading to systems that fail to accurately represent the experiences of marginalized people [97, 98]. Furthermore, the influence of AI in perpetuating gender stereotypes is apparent in virtual assistants and recruiting algorithms, which frequently reinforce historical discriminations [96, 98]. To alleviate these concerns, it is imperative to establish ethical frameworks and inclusive practices in AI development, prioritizing diversity, equity, and the inclusion of marginalized perspectives [99, 100]. Such steps are essential to guarantee that AI systems do not simply mirror current disparities but rather foster a more equitable and inclusive society.

The utilization of Artificial Intelligence (AI) as a means of empowerment poses considerable privacy and surveillance threats, especially regarding the disclosure of sensitive personal and familial information and the extraction of data from at-risk populations. AI technologies, although advantageous in numerous fields, present significant risks to privacy due to their capacity to deduce sensitive information, including race, gender, and intelligence, from ostensibly benign data sources, potentially resulting in the revelation of personal information beyond human capabilities [101]. The classification of AI privacy concerns indicates that AI technologies can generate novel privacy threats or intensify pre-existing ones, including those associated with deepfake pornography and surveillance resulting from data gathering for training objectives [102]. Conventional privacy frameworks are insufficient for tackling these difficulties because of AI's distinctive traits, such as autonomous learning and opaque decision-making, requiring a more comprehensive comprehension of privacy threats that incorporates human elements. The ethical issues related to AI in data collecting and surveillance highlight the ambiguous boundaries regarding optimal methods for utilizing personal information, frequently prioritizing security over privacy. Moreover, the capacity of AI systems to analyze extensive datasets presents significant privacy threats, including model inversion and data reconstruction attacks, which may reveal confidential information [103]. The equilibrium between public safety and individual confidentiality is essential, as AI's transformative influence on data privacy and security may result in potential biases and privacy infringements within surveillance systems [104]. To alleviate these risks, privacy-enhancing technologies such as differential privacy and federated learning are utilized, however they only tackle a portion of the privacy risks linked to AI [105]. The incorporation of AI across many sectors requires a cooperative endeavor by technology firms, society, and governmental bodies to safeguard against the misuse of personal data and to uphold privacy [106].

The incorporation of Artificial Intelligence (AI) as an enhancement tool in healthcare and public institutions offers both advantages and considerable dangers, especially with overdependence and dehumanization. In healthcare, AI's contribution to patient-centered care is dual-faceted, providing advantages such as decreased administrative burdens and enhanced decision-making, while also presenting risks like reduced empathy and excessive dependence on automation, potentially compromising the human aspects of care if not aligned with patient-centered principles [107]. The possibility of AI transferring responsibility from public systems to individual technological use is apparent in the danger of overdependence, where AI tools may be employed beyond their limitations, resulting in significant errors and cognitive degradation. This is especially troubling in mental health, as AI's deficiencies in grasping cultural subtleties and fostering authentic therapeutic interactions underscore the irreplaceability of human treatment, particularly for vulnerable populations. Moreover, the involvement of AI in public administration, particularly in social security, highlights the potential to disadvantage clients lacking technological resources and to neglect social welfare principles, which could intensify inequalities if not meticulously regulated [108]. The Expiration Theory posits that institutions may become misaligned with AI-driven environments, jeopardizing their relevance unless they modify their core norms to incorporate AI responsibly [109]. Although AI can enhance human abilities, its implementation must be meticulously regulated to avoid overdependence and to guarantee it supplements rather than supplants human care and institutional support, preserving the fundamental human elements vital for effective caregiving and public service provision.

The utilization of AI as an empowering instrument in diverse fields, including healthcare, legal affairs, finance, and parenting, raises substantial concerns over quality and accuracy, chiefly attributable to the inconsistent reliability of AI systems across numerous platforms and circumstances. In the legal field, interactive systems offering legal counsel are being utilized as economical substitutes for conventional attorney services. The quality of AI-generated legal advice is uneven and challenging to evaluate, presenting dangers of disinformation and mechanical malpractice to consumers who may be unaware of these limitations [110]. In the healthcare industry, AI systems, such as massive language models like ChatGPT, demonstrate potential in

improving patient care and increasing medical accessibility. However, they also present hazards including erroneous medical guidance, breaches of privacy, and the reinforcement of biases, hence requiring rigorous inspection and regulation to guarantee safe incorporation into healthcare systems [111, 112]. The precision of AI health recommendations varies considerably across languages and contexts, with performance particularly diminishing in non-European languages and varying by topic and source. This highlights the necessity for thorough multilingual and domain-specific validation prior to the implementation of AI in global health communication [113]. Moreover, dependence on AI recommendations in decision-making, such as medical treatments or financial investments, may result in excessive reliance, causing users to inadequately evaluate the quality of AI guidance and respond accordingly. This underscores the imperative to establish metrics for assessing Appropriate Reliance (AR) on AI recommendations, allowing users to differentiate between accurate and erroneous guidance and to make informed decisions [114]. The limitations of AI in medicine are exacerbated by concerns over data quality, algorithmic bias, and the legal environment, necessitating enhancements in data integrity, algorithm transparency, and regulatory supervision to alleviate these dangers [115]. Although AI possesses the ability to serve as an empowering tool, its implementation across many fields is laden with obstacles that require meticulous evaluation and intervention to guarantee the quality and precision of the guidance offered.

7. Critical question: empowerment for whom and under what conditions

The potential advantages of AI for single mothers, especially those who are well-educated, digitally proficient, and resource-abundant, are significantly more evident than for their less privileged counterparts. Artificial intelligence technologies, including personalized learning systems and financial coaching, confer substantial benefits by delivering customized educational and financial guidance that corresponds with individual requirements and objectives, so augmenting personal and economic empowerment [64, 90]. Nonetheless, these advantages are not uniformly allocated. The AI divide, marked by inequalities in access to digital infrastructure and resources, frequently disadvantages underprivileged populations, such as low-income single moms [99]. This disparity is intensified by algorithmic biases and the architecture of AI systems that often advantage individuals with greater digital literacy and technological access [97, 116]. AI-driven educational technologies can democratize learning; but, they often unwittingly exacerbate social inequality by favoring individuals with superior access to high-quality gadgets and internet connectivity [116]. AI's impact on labor markets indicates that women, especially in low-wage roles, are more susceptible to job displacement from AI, even when employed in AI-exposed occupations [117]. Moreover, AI applications in women's welfare, including predictive models for identifying abuse, underscore both the transformative promise and the risks of perpetuating gender biases stemming from underrepresentation in AI development [95]. Consequently, whereas AI has the potential to empower resource-abundant single mothers, it concurrently poses a risk of exacerbating existing inequities for individuals lacking digital literacy and resources. Mitigating these inequities necessitates inclusive AI design and fair access to AI knowledge and resources, so that all single mothers may benefit from breakthroughs in AI [23, 99]. The advancement and use of AI systems in healthcare frequently emphasize market principles over societal requirements, resulting in an emphasis on lucrative consumers rather than systematically disadvantaged caregivers. This trend is summarized by the "Inverse Data Law," which posits that AI systems are primarily trained on data from individuals with greater purchasing power and reduced disease burden, consequently overlooking the requirements of marginalized communities [118]. The marketization and financialization of care intensify this problem by converting care into a commodity, where profit motives and competition eclipse the ethical obligation to deliver affordable and inclusive care [119]. This market-oriented strategy frequently produces AI tools that perpetuate existing social hierarchies and

power disparities, rather than functioning as equalizers [120]. Furthermore, algorithmic bias in AI systems reflects underlying structural challenges associated with power disparities in the creation of healthcare technology, disproportionately impacting underprivileged groups [121]. To tackle these difficulties, it is essential to engage marginalized communities in the design and regulation of AI technologies, ensuring their needs and perspectives are integral to the development process [122], advancing equality in AI-based mental health care necessitates efforts to address biases and improve inclusivity [123]. Innovative methodologies, including knowledge-based platforms, can enhance the delivery of goods and services to at-risk groups by improving the comprehension and coordination of demand and supply [124]. The effective incorporation of AI in caregiving requires a socio-technical framework that harmonizes technological advancements with ethical, social, and practical factors to equitably benefit all stakeholders [100].

Genuine empowerment in caregiving environments necessitates tools that are bilingual, culturally sensitive, and tolerant of varied caregiving practices. This is especially apparent in the evaluation and intervention strategies for Culturally and Linguistically Diverse (CLD) populations, where conventional methodologies frequently prove inadequate. The assessment of autism diagnostic instruments reveals the potential for misidentification within culturally and linguistically diverse populations, attributable to insufficient cultural and linguistic responsiveness, thereby emphasizing the necessity for enhanced evaluation methodologies to guarantee precise identification and prompt intervention for these groups [125]. eHealth tools developed with cultural competence can greatly assist marginalized ethnic minority groups, such as Latinos, by mitigating disparities in healthcare access and preventive care information, thus empowering these communities [126]. The creation of multilingual resources, exemplified by the Draw-Care web-based dementia tool, underscores the significance of culturally responsive design, which improves usability and engagement across varied family caregivers [127]. In primary care, addressing language hurdles and cultural disparities is vital, and treatments like multimodal digital technologies and intercultural communication training are crucial for enhancing care for culturally and linguistically diverse patients [128]. Culturally responsive pedagogy in multilingual classrooms enhances the learning environment and cultivates a sense of belonging, essential for student engagement and motivation [129]. The modification of caregiver-implemented interventions for many groups, including Latinx caregivers, underscores the importance of matching these interventions with cultural and language preferences to guarantee their efficacy and acceptance [130, 131]. These examples collectively demonstrate that genuine empowerment in caregiving necessitates tools and interventions that are both multilingual and culturally sensitive, respecting diverse caregiving norms to enhance outcomes and promote inclusivity across various contexts.

Artificial Intelligence (AI) functions as a potent instrument capable of augmenting many sectors; nonetheless, it cannot replace the necessity for thorough policies in childcare, labor protection, affordable housing, or healthcare accessibility. The capacity of AI to mitigate socio-economic inequalities depends on strong policy frameworks that focus on data quality, digital infrastructure, and ethical issues, as emphasized in Urooj Fatima's research on AI's influence in local planning and development [132]. The incorporation of AI into human development should adhere to principles of transparency, inclusivity, and ethical governance to guarantee the enhancement of human capabilities without undermining autonomy or equity [133]. The Expiration Theory posits that numerous institutions are failing to adapt to the swift progress of AI, jeopardizing their relevance unless they reevaluate their core norms and principles [109]. In healthcare, AI can optimize administrative functions and improve clinical decision-making; nonetheless, it necessitates meticulous regulation to avert algorithmic bias and guarantee fair access [134, 135]. Furthermore, the influence of AI on the global workforce demands policies that prioritize worker protection and ethical advancement, highlighting the necessity for reskilling and social safety nets [136]. The ethical and legal frameworks regulating AI must conform to human rights standards to alleviate dangers such as privacy infringement and algorithmic bias

[137]. Consequently, although AI can augment and improve current systems, it cannot supplant the necessity for comprehensive policies that tackle the wider socio-economic causes of well-being. Successful AI integration necessitates a harmonious strategy that merges technology advancement with robust institutional frameworks to guarantee equitable and inclusive development across all sectors.

8. Policy and design implications

The use of Artificial Intelligence (AI) into caregiving and digital literacy programs offers a promising opportunity to improve assistance for caregivers and close the digital divide. AI solutions have demonstrated substantial assistance to informal caregivers by offering intelligent, adaptable support that enhances their efficacy and well-being. These solutions, frequently utilizing machine learning, provide functions such as remote monitoring and care coordination, essential for addressing the escalating demands on caregivers resulting from an aging population [5, 66]. Furthermore, the accessibility of complimentary AI tools, as examined in educational settings, underscores the possibility of equal access to high-quality resources, thereby alleviating resource limitations and fostering sustainable learning practices [138]. Public digital literacy projects can utilize AI to improve information accessibility and tailor learning experiences, which are crucial for bridging the digital gap. AI-driven platforms, like as the Phoenix Engines, are engineered to be culturally relevant and adaptable, offering multilingual and multimodal content tailored to the distinct requirements of underprivileged populations [92]. These activities are essential for tackling the enduring disparities in access to AI technologies, underscoring the necessity for inclusive design and investment to guarantee that the advantages of AI are available to everyone [88]. Moreover, scalable AI solutions in healthcare can enhance access to quality care in low-income and remote regions, illustrating AI's capacity to address disparities in global healthcare access. The Cost per Health Model illustrates a zero-cost, AI-driven framework that utilizes open data and complimentary AI infrastructure to enhance the quality of life for seniors, demonstrating the potential of AI to be implemented at no expense for the benefit of vulnerable populations [139]. These initiatives highlight the revolutionary capacity of AI in aiding caregivers and improving digital literacy, hence fostering social and economic empowerment in many areas.

Ethical and inclusive design of AI systems, especially in care-focused environments, necessitates the incorporation of concepts that emphasize human dignity, privacy, and accountability. Care-centered design principles underscore the significance of human-centered approaches, incorporating participatory co-creation and intersectional analysis to guarantee that AI systems are inclusive and congruent with human values [140]. In eldercare, the "Dignity-First" concept promotes informed and continuous permission, data reduction, and customizable privacy settings to uphold the autonomy and dignity of older individuals [141]. In pediatric care, involving families in the co-design process guarantees that AI tools are consistent with caregiving practices and ethical considerations, hence improving communication and maintaining empathy [142]. prejudice testing and accountability are essential in AI design to avert algorithmic prejudice and guarantee fairness, particularly for vulnerable populations such as the elderly and children [143, 144]. This entails utilizing varied datasets and transparent feedback mechanisms to improve trust and accountability [145]. Protections for family-related data privacy are essential, as AI systems frequently gather sensitive information. Strategies include data minimization, purpose limitation, and transparent data usage policies are crucial for protecting privacy and fostering user trust [141, 146]. In family-centered healthcare, digital solutions must enable secure information exchange and uphold confidentiality to alleviate the care load on families. Ethical AI design necessitates a collaborative approach that includes stakeholders, such as families, to guarantee that AI technologies uphold human values and promote, rather than diminish, human dignity and autonomy [140, 142].

Public interest AI prioritizes the creation and implementation of artificial intelligence systems that focus on societal advantages rather than solely market efficiency, requiring cooperation among governments, organizations, educators, and developers. The Partnership on AI illustrates teamwork by uniting industrial, non-profit, and academic entities to foster the advantageous application of AI technology and enhance public comprehension [147]. AI systems possess the capacity to tackle substantial societal issues, including climate change, public health, and social services; however, the practical application of AI for the public good is still inadequately investigated, frequently confined to ethical discussions without a definitive framework for implementation [148]. A framework for 'public interest AI' has been proposed to bridge this gap, highlighting democratic control, public justification, equity, co-design procedures, technical safeguards, and openness to validation [149]. The concentration of AI development among a limited number of private enterprises presents democratic concerns, underscoring the necessity for open and public-interest methodologies in AI that enable society to actively influence AI technologies. Public AI efforts, including Estonia's "bürokratt" and the EU's GAIA-X, exemplify the alignment of AI with societal values through trustworthiness, social innovation, and accessibility. The interdisciplinary domain of public interest technology promotes ethical and equity-centered technological advancement, highlighting the necessity of collaboration among varied stakeholders to guarantee that AI systems are equitable and innovative [150]. Corporate governance is essential, providing possibilities for various stakeholders to promote AI in the public interest via multistakeholder governance and responsible corporate practices [151]. Ultimately, public interest AI opposes accelerationist ideology by advocating for equitable, sustainable, and democratically responsible technology advancement, ensuring that AI development aligns with public values rather than only commercial interests [152]. These initiatives collectively highlight the significance of cross-sector collaborations to leverage AI for the collective benefit, ensuring that technical progress yields positive societal contributions.

The incorporation of Artificial Intelligence (AI) across diverse sectors, including mental health and the workplace, requires a conducive policy framework that enhances rather than supplants existing structural supports such as childcare subsidies, mental health accessibility, paid leave, and flexible work arrangements. The potential of AI to improve mental health treatment is substantial, including tools for prevention, screening, and support between therapy sessions; nevertheless, it should not supplant human therapists but rather augment existing care systems to enhance capacity and efficacy [153]. In the workplace, AI can enhance employee engagement and satisfaction by providing personalized support and flexible work arrangements; nevertheless, its deployment must be ethical and connected with employee requirements to guarantee sustainable success [154]. The swift advancement of AI presents concerns like workforce displacement and ethical issues, underscoring the necessity for human-centric policies that emphasize worker protection and equitable access [136]. European regulations prioritize the ethical utilization of AI; yet, further legislation is required to safeguard workers from potential risks, indicating that AI should augment rather than supplant human labor [155]. Furthermore, supportive job perks such as family leave and flexible work hours are essential for alleviating mental health risks among working parents, highlighting the necessity of preserving these structural supports in conjunction with improvements in AI [156]. The policy framework must evolve to guarantee that AI technologies serve societal interests while mitigating dangers such as socio-economic marginalization and algorithmic bias [157]. A balanced approach that integrates AI with current supports is crucial to cultivate a future in which AI enhances human capacities and society values [158, 159].

9. Conclusion

In conclusion, artificial intelligence need to be recognized as a potentially substantial, if highly contingent, instrument of empowerment for lone mothers. Its potential is in its ability to alleviate time constraints, enhance

information accessibility, facilitate income generating, and offer emotional and practical support that may otherwise be expensive, inaccessible, or inconsistently available. For single mothers managing the intersecting responsibilities of paid employment, unpaid caregiving, household administration, and institutional bureaucracy, these roles are not mere conveniences. They may alternatively signify substantial types of assistance that enhance daily capacity, alleviate cognitive burden, and establish new avenues for stability, adaptability, and autonomy. In this regard, AI might alleviate certain structural and daily stressors that disproportionately affect single moms, especially in environments where conventional support services are fragmented, underfunded, or inaccessible. This empowering potential must not be exaggerated or regarded as inevitable. Artificial intelligence does not function in isolation; its advantages are influenced by overarching factors of inequality, accessibility, and governance. Its utility is contingent upon its affordability, comprehensibility, reliability, and design that accurately represents the reality of caregiving, gendered labor, and varied family configurations. In the absence of deliberate design, equitable access, assistance for digital literacy, and substantial structural safeguards, AI may merely replicate or exacerbate the disparities that single mothers currently encounter. A technology that seems effective for some may be rendered unusable, unsafe, inaccurate, or exclusionary for others, particularly for individuals already marginalized by race, class, disability, language, immigration status, or restricted technical access. Consequently, AI should not be idealized as a replacement for public policy, human assistance, or institutional reform. Its value is contingent upon its integration within a broader framework of justice-oriented design and social responsibility. The wider significance of this investigation, consequently, beyond the issue of technological progress alone. The fundamental concern is not merely the increasing sophistication of AI, but rather the manner in which it is built, managed, and disseminated to effectively benefit people who bear significant societal burdens. This transitions the discourse from innovation for its own merit to innovation as a matter of societal intent. It inquires whether modern technologies are focused solely on market convenience or on addressing the genuine needs of individuals whose work, caregiving duties, and systemic disadvantages are frequently overlooked. Viewed in this context, the examination of AI and single motherhood transcends mere tools; it encompasses values: whose needs are prioritized, whose challenges are recognized, and whether technical advancement can be harmonized with dignity, equity, and substantive human support. Subsequent study should persist in exploring the impact of AI on time poverty, economic mobility, emotional well-being, and institutional access for single mothers, while also assessing the dangers associated with bias, exclusion, and inequitable access. Only via such study can the empowering potential of AI be assessed with both gravity and prudence.

References

[1] Oliveira, J. T. de, & Kissula, J. C. (2023). *Os desafios da monoparentalidade feminina: Uma perspectiva sistêmica familiar* [The challenges of female single parenthood: A family systemic perspective]. Zenodo. https: //doi.org/10.5281/zenodo.10116727

[2] Occhiuto, K., & Occhiuto, K. (2025). The complexities of navigating social supports: Impacts on low-income lone mothers. *Studies in Social Justice, 19*(3), 571–595. https: //doi.org/10.26522/ssj.v19i3.4816

[3] Malmqvist, A., O'Hanlon, M., & Pralica, A. (2017). Ensamstående mamma och timanställd: En tolkande fenomenologisk analys av sju kvinnors berättelser [Single mother and hourly employed: An interpretative phenomenological analysis of seven women's narratives]. *Tidskrift för Genusvetenskap, 38*(1-2), 77–98. https: //doi.org/10.55870/tgv.v38i1-2.2959

[4] Woda, R., & Pontoan, M. D. A. (2024). Fenomena kondisi psikologis perempuan single parent dalam generasi sandwich. *Ranah Research, 6*(4), 1261–1270. https: //doi.org/10.38035/rrj.v6i4.915

[5] Borna, S., Maniaci, M. J., Haider, C. R., Gomez-Cabello, C. A., Pressman, S. M., Haider, S. A., Demaerschalk, B. M., Cowart, J. B., & Forte, A. J. (2024). Artificial intelligence support for informal patient caregivers: A systematic review. *Bioengineering, 11*(5), Article 483. https: //doi.org/10.3390/bioengineering11050483

[6] Lindeman, D., Kim, K. K., Gladstone, C., & Apesoa-Varano, E. C. (2020). Technology and caregiving: Emerging interventions and directions for research. *The Gerontologist, 60*(1). https: //doi.org/10.1093/geront/gnz178

[7] Richardson, F., & Harrington, C. (2022). Single mother students are lacking sufficient support to persist to graduation in community colleges. *Impacting Education, 7*(2), 26–31. https: //doi.org/10.5195/ie.2022.202

[8] Siemieńska, R., & Matysiak, I. (2014). Lone mothers: Care arrangements between support and isolation. In C. Ranci, T. Brandsen, & S. Sabatinelli (Eds.), *Social vulnerability in European cities* (pp. 221–243). Palgrave Macmillan. https: //doi.org/10.1057/9781137346926_8

[9] Ranatunga, R. V. S. P. K., & Priyanath, H. M. S. (2025). A systematic literature review on youth empowerment and its determinants. *International Journal of Academic Research in Business & Social Sciences, 15*(8). https: //doi.org/10.6007/ijarbss/v15-i8/26264

[10] Narayan, D. (2007). Empowerment. *Journal of Ambulatory Care Management, 30*(2), 120–125. https: //doi.org/10.1097/01.JAC.0000264601.19629.5f

[11] Christens, B. D., Peterson, C. H., & Speer, P. W. (2014). *Psychological empowerment in adulthood.* https: //sohe.wisc.edu/wordpress/wp-content/uploads/2014/05/Christens-2014-Psychological-empowerment-in-adulthood.pdf

[12] Rachmad, Y. E. (2022). *Empowerment theory*. Cáceres Conquistadores Publicaciones Internacionales. https://doi.org/10.17605/OSF.IO/WYMNZ

[13] Kienko, T. S. (2022). The empowerment approach as a methodology for research and overcoming social issues of people, groups, and communities in mutual activities: Review and research framework. *Sotsiologicheskoe Obozrenie, 21*(2), 274–303. https: //doi.org/10.17323/1728-192x-2022-2-274-303

[14] Tengland, P.-A. (2008). Empowerment: A conceptual discussion. *Health Care Analysis, 16*(2), 77–96. https: //doi.org/10.1007/S10728-007-0067-3

[15] Schutz, A. (2019). *Empowerment: A primer.* Routledge. https://doi.org/10.4324/9780429279324

[16] Halwiindi, J. N. (2025). *Single motherhood: A growing sociological and economic existential concern for global communities*. https: //doi.org/10.5281/zenodo.14695959

[17] Letablier, M.-T. (2011). La monoparentalité aujourd'hui: Continuités et changements. In E. Ruspini (Ed.), *Monoparentalité,homoparentalité,transparentalité en France eten Italie: Tendances,défis et nouvelles exigences* (pp. 33–68). L'Harmattan. https: //hal.archives-ouvertes.fr/ird-00554415

[18] Hernández Monleón, A. (2016). *Ni solas, ni en solitario: Condiciones de vida, solidaridad informal y cuidados en la monomarentalidad* [Not alone, not in solitude: Living conditions, informal solidarity and care in single motherhood] [Doctoral dissertation, Universidad de Granada]. Dialnet. https: //dialnet.unirioja.es/servlet/tesis?codigo=119263

[19] May, V. (2006). *Lone motherhoods in context* [Working paper]. NCRM Working Paper Series. http: //eprints.ncrm.ac.uk/483/1/0506_lone_motherhoods.pdf

[20] Avilés Hernández, M. (2015). ¿Qué es la «monoparentalidad»? Una revisión crítica de su conceptualización en materia de política social [What is "lone parenthood"? A critical review of its conceptualization in the context of social policy]. *Cuadernos de Trabajo Social, 28*(2), 317–331. http: //revistas.ucm.es/index.php/CUTS/article/download/49251/47627

[21] More, A. B. (2024). Generative AI. In *Advances in Computational Intelligence and Robotics Book Series* (pp. 17–46). https: //doi.org/10.4018/979-8-3693-8557-9.ch002

[22] Anonymous. (2025). *Comprehensive overview of artificial intelligence: Types, applications, and emerging trends in 2025*. Zenodo. https: //doi.org/10.5281/zenodo.17086248

[23] River Publishers. (2022). Inclusively designed artificial intelligence. In *Inclusively designed artificial intelligence* (pp. 89–110). River Publishers. https: //doi.org/10.1201/9781003337928-5

[24] Suresh, S., & Sasidharan, C. (2025). Artificial intelligence. *International Scientific Journal of Engineering and Management, 4*(3), 1–7. https: //doi.org/10.55041/isjem02419

[25] Morandín-Ahuerma, F. (2022). What is artificial intelligence? *International Journal of Research Publication and Reviews, 3*(12), 1947–1951. https: //doi.org/10.55248/gengpi.2022.31261

[26] Warankar, M. (2024). Generative artificial intelligence. *Indian Scientific Journal of Research in Engineering and Management, 8*(4), 1-7. https: //doi.org/10.55041/ijsrem31146

[27] Figueroa, C. A., Luo, T. C., Aguilera, A., Aguilera, A., & Lyles, C. R. (2021). *The need for feminist intersectionality in digital health. 3*(8). https: //doi.org/10.1016/S2589-7500(21)00118-7

[28] Musolino, C., Baum, F., Flavel, J., Freeman, B., McKee, M., Chi, C., Giugliani, C., Falcão, M. Z., De Ceukelaire, W., Howden-Chapman, P., Nguyen, T. H., Serag, H., Alvarez Dardet, C., Gesesew, H. A., London, L., Popay, J., Paremoer, L. E., Tangcharoensathien, V., Sundararaman, T., … Villar, E. (2024). Caring during COVID-19: A study of intersectionality and inequities in the care economy in 16 countries. *International Journal of Social Determinants of Health and Health Services*, Article 27551938241269198. https: //doi.org/10.1177/27551938241269198

[30] Faith, B. (2018). Gender, mobile, and mobile internet: Maintenance affordances, capabilities and structural inequalities: Mobile phone use by low-income women. *Information Technologies and International Development, 14*, 15. http: //www.itidjournal.org/index.php/itid/article/view/1556

[31] Faith, B. (2018). Maintenance affordances and structural inequalities: Mobile phone use by low-income women in the United Kingdom. *Information Technologies & International Development (Special Section), 14*, 66–80.

[32] Özmen Bol, Z. (2025). *Navigating the digital industrial revolution: Enhancing women's well-being and agency freedom through Amartya Sen's capability approach*. https: //doi.org/10.1108/978-1-83608-650-520251010

[33] Hamid, S., Ahmed, S. N., Hayee, H., Rana, F., & Memon, M. M. (2025). Digital literacy as a right: Addressing gendered and structural barriers for minority girls in Pakistan. *Social Sciences Spectrum, 4*(3), 409–429. https: //doi.org/10.71085/sss.04.03.344

[34] Dixit, A., & Banday, M. U. L. (2022). Problematising the digital gender gap: Invoking decoloniality and intersectionality for inclusive policymaking. *Gender & Development, 30*(3), 437–457. https: //doi.org/10.1080/13552074.2022.2117930

[35] Roman, C. (2017). Between money and love: Work-family conflict among Swedish low-income single mothers. *Nordic Journal of Working Life Studies, 7*(3), 23–41. https: //doi.org/10.18291/njwls.v7i3.97093

[36] Caragata, L., & Cumming, S. (2011). Lone mother-led families: Exemplifying the structuring of social inequality. *Sociology Compass, 5*(5), 376–391. https: //doi.org/10.1111/j.1751-9020.2011.00368.x

[37] Martello, G. (2019). *The burden of child care costs: A feminist analysis of the punitive welfare policies on single mothers* [Master's thesis, Merrimack College]. https: //scholarworks.merrimack.edu/soe_student_ce/34/

[38] Andrén, T. (2002). *A structural model of childcare, welfare, and the labor supply of single mothers* (Göteborg University Working Paper). https: //gupea.ub.gu.se/bitstream/2077/2848/1/gunwpe0082.pdf

[39] Connelly, R., & Kimmel, J. (2003). The effect of child care costs on the employment and welfare recipiency of single mothers. *Southern Economic Journal, 69*(3), 498–519. https: //doi.org/10.2307/1061691

[40] Cruz, C. A., Hilario, A., Matawaran, Ma. E., Reyes, I. N., Valero, L. M., & Paez, A. T. (2024). Unseen struggles on the financial challenges faced by single parents. *International Journal of Research and Innovation in Social Science, 8*(11), 3466–3476. https: //doi.org/10.47772/ijriss.2024.8110267

[41] Parolin, Z., & Lee, E. (2022). Economic precarity among single parents in the United States during the COVID-19 pandemic. *The Annals of the American Academy of Political and Social Science, 702*(1), 206–223. https: //doi.org/10.1177/00027162221122682

[42] Albelda, R. (2011). Time binds: US antipoverty policies, poverty, and the well-being of single mothers. *Feminist Economics, 17*(4), 189–214. https: //doi.org/10.1080/13545701.2011.602355

[43] Coelho, K. (2003). Timed out: Temporal struggles between the state and the poor in the context of U.S. welfare reform. *Arizona Anthropologist, 15*, 72–98. https: //journals.uair.arizona.edu/index.php/arizanthro/article/download/18519/18169

[44] Branigan, E. (2007). *Why single mothers need to be accountants: The "third shift" of bureaucratic labour under welfare reform* (pp. 61–76). https://api.semanticscholar.org/CorpusID:153964329

[45] Wolfe, B., & Hill, S. C. (1993). *The health, earnings capacity, and poverty of single-mother families* (pp. 89–120). Palgrave Macmillan. https: //doi.org/10.1007/978-1-349-22953-6_4

[46] Moles, B., & Bernardi, L. (2025). Navigating lone parenthood over time: A qualitative and vulnerability life-course approach. *Journal of Family Issues.* Advance online publication. https: //doi.org/10.1177/0192513x251393152

[47] Goodin, R. E. (2011). Who's really time poor? *Family Matters, 87*, 9. https: //openresearch-repository.anu.edu.au/handle/1885/39814

[48] Heinz, A., Pietsch, M., Heinz, A., & Pietsch, M. (2025). Mental load und Elternstress: Eine Analyse unsichtbarer Lasten im Familienalltag. *Sozial Extra.* Advance online publication. https: //doi.org/10.1007/s12054-025-00811-2

[49] Silva, L. S., Abreu, K. M. de A., Vendruscolo, D. A. B., Ferreira, K. M. M., Borges, D. A., & Moraes, D. C. (2025). A sobrecarga das mães solo: Os desafios que elas enfrentam na contemporaneidade e como isso tem causado-lhes adoecimento psicológico. *Revista Fisio & Terapia, 29*(142), 13–14. https: //doi.org/10.69849/revistaft/dt10202501312013

[50] Dharani, M. K., & Balamurugan, J. (2024). The psychosocial impact on single mothers' well-being: A literature review. *Journal of Education and Health Promotion,13*, 1. https: //doi.org/10.4103/jehp.jehp_1045_23

[51] Araújo, M. de F. V., Fontes, M., & Andrade, S. D. (2024). A exaustão silenciosa: Burnout em mães solo contemporâneas. Revista Ibero-Americana de Humanidades, *Ciências e Educação, 10*(10), 3965–3975. https: //doi.org/10.51891/rease.v10i10.16341

[52] Pastorelli, S. de O. S., Viana, C. T. de S., Benincasa, M., & Rossi, V. (2024). A sobrecarga de mães trabalhadoras durante o isolamento social da pandemia da covid-19. *Revista Contemporânea*. https: //doi.org/10.56083/rcv4n5-149

[53] Franz, M. (2005). Wenn Mütter allein erziehen. *Praxis der Kinderpsychologie und Kinderpsychiatrie, 54*(10), 817–832. https: //doi.org/10.25656/01: 968

[54] Avison, W. R., Ali, J., & Walters, D. (2007). Family structure, stress, and psychological distress: A demonstration of the impact of differential exposure. *Journal of Health and Social Behavior, 48*(3), 301–317. https: //doi.org/10.1177/002214650704800307

[55] Sutton, H. (2025). Single mother learners make up 10% of students—but need particular holistic support. *Student Affairs Today, 28*(7), 6–7. https: //doi.org/10.1002/say.31610

[56] Freeman, A. L. (2015). The winding path back to school: Hidden obstacles to higher education for low-income single mothers. In *International Conference on Higher Education Advances* (pp. 189–196). https://doi.org/10.4995/HEAD15.2015.317

[57] Memon, M. A., & Rizvi, S. A. A. (2025). Challenges faced by single mother's pursuing higher education in Sindh Pakistan: An analysis. *Qualitative Research Journal for Social Studies*, 2(2), 1507–1519. https: //doi.org/10.63878/qrjs202

[58] Single mother learners need specific holistic support. (2025). *The Successful Registrar, 25*(5), 5–6. https: //doi.org/10.1002/tsr.31477

[59] Barnes, S. L. (2008). A case study of the working poor single mother experience: An analysis of the structure versus agency discourse. *Journal of Poverty, 12*(2), 175–200. https: //doi.org/10.1080/10875540801973575

[60] Skubiejūtė, G. (2025). The triple bind and beyond: The case of Lithuanian single mothers who migrate. *Community, Work & Family*, Advance online publication, 1–21. https://doi.org/10.1080/13668803.2025.2551142

[61] Sasikumar, N. (2025). AI-powered opportunity crafter: Unlocking smart career possibilities. *International Journal for Science Technology and Engineering, 13*(4), 5032–5037. https: //doi.org/10.22214/ijraset.2025.68844

[62] Kirubavathy, Narayanan, S., N., & S K., S. (2025). AI freelancing application. *Journal of Ubiquitous Computing and Communication Technologies, 7*(3), 298–312. https: //doi.org/10.36548/jucct.2025.3.004

[63] Jyothsna, A., Reddy, N. S., & Soujanya, B. (2025). Empowering women entrepreneurs through artificial intelligence: Innovations, opportunities, and challenges. *International Journal of Emerging Technologies and Innovative Research*, 1–8. https: //doi.org/10.48175/ijetir-80001

[64] Adelaja, A. O., Abikoye, B. E., Nezianya, M. C., Amosu, O. R., & Ayodele, O. F. (2024). Harnessing AI for personalized financial coaching: A pathway to financial inclusion and empowerment for women in the United States. *World Journal of Advanced Research and Reviews, 23*(2), 1356–1367. https: //doi.org/10.30574/wjarr.2024.23.2.2491

[65] Yahya, R. binti, & Roddin, R. (2025). Single mother entrepreneurship: Empowering women through enterprise. *International Journal of Research and Innovation in Social Science, 9*(7), 2780–2785. https: //doi.org/10.47772/ijriss.2025.907000227

[66] Milella, F., & Bandini, S. (2024). Fostering artificial intelligence-based supports for informal caregivers: A systematic review of the literature. *Intelligenza Artificiale*, Advance online publication, 1–21. https: //doi.org/10.3233/ia-240028

[67] Yao, L., Jing-Yi, X., Ya-Fang, L., He, Z., Ge, W., Gaojian, H., Rui, Y., & Si, C. (2025). *"Learning together": AI-mediated support for parental involvement in everyday learning*. https: //doi.org/10.48550/arxiv.2510.20123

[68] Asrifan, A., Shafa, S., Pratiwi, W. R., Bahri, A., Siregar, S. R., & Ingilan, S. (2025). Bridging gaps. In *Advances in Computational Intelligence and Robotics Book Series* (pp. 105–128). https: //doi.org/10.4018/979-8-3693-7260-9.ch006

[69] Arkonac, S. E., Frazer, J., Horgan, R. J., Kracewicz, A., & Al-Naimi, L. (2017). ParentCircle: Helping single parents build a support network. In *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems*, 26–32. https: //doi.org/10.1145/3027063.3049271

[70] Saidi, A., Von, W. Y., Omar, T. Z. Z., Pek, L. S., Mee Mee, R. W., & Khoo, K. L. (2024). Connected caregiving: Investigating mothers in the era of digital access. *International Journal of Informatics and Communication Technology, 14*(1), 347. https: //doi.org/10.11591/ijict.v14i1.pp347-354

[71] Gupta, O. (2025). *Empowering the last mile: Inclusive AI for all.* https: //doi.org/10.62823/inspira/2025/9788199024557/11

[72] Parra-Valencia, J. A., & Massey, M. L. (2023). Leveraging AI tools for enhanced digital literacy, access to information, and personalized learning. In H. Qudrat-Ullah (Ed.), *Managing complex tasks with systems thinking* (pp. 213–234). Springer. https: //doi.org/10.1007/978-3-031-40635-5_9

[73] Ezenwa, C. L. (2025). Artificial intelligence for inclusive innovation: Investigating how AI-driven information systems can democratize access to opportunities in underserved communities. *World Journal of Advanced Research and Reviews, 27*(3), 897–908. https: //doi.org/10.30574/wjarr.2025.27.3.3217

[74] Bansode, A. P., Ankushrao, V. K., Jagtap, T. M., & Pawar, A. S. (2025). AI buddy: Redefining companionship. *International Journal of Advanced Research in Science, Communication and Technology*, 313–324. https: //doi.org/10.48175/ijarsct-29129

[75] De Freitas, J., Oğuz-Uğuralp, Z., Uğuralp, A. K., & Puntoni, S. (2025). AI companions reduce loneliness. *Journal of Consumer Research*. Advance online publication. https: //doi.org/10.1093/jcr/ucaf040

[76] Anusha, S., Hiranmayee, N., Kamala, P. S., Sagarika, N., Sushma, P. R., Thangavelu, L., & Sri, M. K. (2025). AI for mental health support. In *International Journal of Innovative Science and Research Technology* (pp. 1047–1053). https://doi.org/10.38124/ijisrt/25apr831

[77] Zhu, Y. (2024). FASSLING: Transforming emotional and coaching support through artificial intelligence (AI) innovation. *Journal of Clinical Technology and Theory, 2*(1), 1–10. https: //doi.org/10.54254/3049-

5458/2024.18639

[78] Pattar, V., Patil, T., Dhuri, B., Karel, A., Deole, A., & Kulkarni, S. (2025). Mindcare: A multi-agent AI architecture for personalized and responsible mental health support. *International Journal of Research and Scientific Innovation, 12*(5), 2006–2021. https: //doi.org/10.51244/ijrsi.2025.120500181

[79] M.Priyadharshan, Ranjith Kumar, R., Tamilarasu, M., Vimal, S., & Vineeth, S. (2025). Mindmate artificial intelligence: Healing through conversion. *International Journal of Scientific Research and Engineering Development* (IJSRED), 8(5), 946–953. https: //doi.org/10.5281/zenodo.17246236

[80] Fegade, M., Bandpatte, P., Medar, N., Mahajan, D., & Wagh, V. (2024). Review paper on "Jarvie: AI-driven mental health companion." *Indian Scientific Journal of Research in Engineering and Management, 8*(10), 1–5. https: //doi.org/10.55041/ijsrem37982

[81] Giray, L. (2024). Cases of using ChatGPT as a mental health and psychological support tool. *Journal of Consumer Health on the Internet*, Advance online publication, 1–20. https: //doi.org/10.1080/15398285.2024.2442374

[82] Lin, Z. (2025). *Functional intersubjectivity: Toward a well-being framework for AI companions*. PsyArXiv. https: //doi.org/10.31234/osf.io/rxedj_v1

[83] Prathiksha, K., Tamizh Malar, S. G., Nivedha, P., Divya, D. M., & Srijayanthi, S. (2024). IntelliAid: A personal assistant chat-bot for enhanced task management. In *2024 5th International Conference on Electronics and Sustainable Communication Systems (ICESC)* (pp. 432–436). IEEE. https: //doi.org/10.1109/ICESC60852.2024.10689912

[84] Pulickal, D. P. (2025). *Cognitive Offloading and Work Delegation: A Personal Strategy for Intellectual Efficiency and Resilience via Artificial Intelligence*. Zenodo. https: //doi.org/10.5281/ZENODO.17512238

[85] Azmi, M., Nurhayati, Rahmayuni, I., Okta Kirana, S., & Sonatha, Y. (2024). Pemanfaatan Microsoft To Do sebagai penunjang work life balance bagi ibu bekerja. *Jiptek, 2*(1), 1–7. https: //doi.org/10.62527/jiptek.2.1.7

[86] Flaherty, M. G., Rughiniș, C., Matei, Ș., & Mijaiche, A. (2025). Time work in the age of AI: New actors, techniques, and settings for temporal agency. In *2025 24th RoEduNet Conference: Networking in Education and Research (RoEduNet)* (pp. 1–6). IEEE. https: //doi.org/10.1109/RoEduNet68395.2025.11208465

[87] Mahalakshmi, V., & Jayanthiladevi, A. (2024). Harnessing artificial intelligence for women empowerment and work-life balance enhancement in management. *International Journal of Advanced Research in Science, Communication and Technology*. https: //doi.org/10.48175/ijetir-8048a

[88] Torrisi-Steele, G. (2025). Addressing the digital divide. In *Advances in Computational Intelligence and Robotics Book Series* (pp. 77–106). IGI Global. https: //doi.org/10.4018/979-8-3373-2397-8.ch004

[89] Üstün, A. G., & Sur, E. (2025). Artificial intelligence and equal opportunity in education. In *Advances in Computational Intelligence and Robotics Book Series* (pp. 27–54). IGI Global. https: //doi.org/10.4018/979-8-3373-5097-4.ch002

[90] Shapiro, S. J. (2025). Bridging the AI divide. In *Advances in Computational Intelligence and Robotics Book Series* (pp. 183–220). IGI Global. https: //doi.org/10.4018/979-8-3373-1195-1.ch006

[91] Edwards, N.-S. (2025). The digital divide reimagined: AI, human vulnerabilities, and cybersecurity risks in the majority world. In R. Adams, P. Hacker, & others (Eds.), *Majority world*. Oxford University Press. https: //doi.org/10.1093/9780198945215.003.0212

[92] The Phoenix engine: AI-powered digital literacy platforms for underserved communities. (2025). *IOSR Journal of Computer Engineering, 27*(5), 41–49. https: //doi.org/10.9790/0661-2705044149

[93] Tapp, F. W. (2023). Breaking Barriers or Widening Divides? An Examination of Survey Responses. *Journal of Innovations, 3*(1), 48-63. DOI: https: //doi.org/10.62470/4a253027

[94] Jakobsen, G. (2024). *Reconceptualizing the digital divide as digital disability: Implications for health equity*. OSF Preprints. https: //doi.org/10.31235/osf.io/93kwp

[95] Tomar, A., Batra, S., & Kumar, S. (2025). AI for women and child welfare: Opportunities, risks, and feminist imperatives. *International Journal for Multidisciplinary Research, 7*(4), 1-4. https:

//doi.org/10.36948/ijfmr.2025.v07i04.52963

[96] Rodrigues, E. E. (2025). A inteligência artificial promove a (des)igualdade de gênero? In *Sexualidades e relações de gênero: Perspectivas contemporâneas e desafios sociais* (pp. 71–78). https: //doi.org/10.37885/250920280

[97] Kayyali, M. (2025). Algorithmic discrimination. In *AI and New Forms of Exclusion* (pp. 33–56). IGI Global. https: //doi.org/10.4018/979-8-3373-2685-6.ch002

[98] Çırtlık, B., & Cosar, S. (2024). Gender bias in AI. *Feminist Asylum, 2*, 3. https: //doi.org/10.5195/faci.2024.124

[99] Yu, C. (2024). *Gender inequality in the age of AI: Predictions, perspectives, and policy recommendations.* OSF Preprints. https: //doi.org/10.31219/osf.io/5zrh9

[100]Steiner, O. (2025). Künstliche Intelligenz und Inklusion. In G. Linnemann, J. Löhe, & B. Rottkemper (eds.), *Künstliche Intelligenz in der Sozialen Arbeit: Grundlagen für Theorie und Praxis* (pp. 128–140). Beltz Juventa. https: //doi.org/10.26041/fhnw-13590

[101]Jurewicz, M., Klein Kafer, N., & Kran, E. (2024). Artificial Intelligence and Privacy: Causes for Concern. *Privacy Studies Journal*, *3*, 1–32. https: //doi.org/10.7146/psj.v3i.143099

[102]Lee, H.-P., Yang, Y.-J., Von Davier, T. S., Forlizzi, J., & Das, S. (2024). Deepfakes, phrenology, surveillance, and more! A taxonomy of AI privacy risks. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems* (Article 775). Association for Computing Machinery. https://doi.org/10.1145/3613904.3642116

[103]Ziade, T. B. (2025). *Privacy and ethical concerns in AI-powered data processing* (Version 1.0.0). Zenodo. https: //doi.org/10.5281/zenodo.15310785

[104]Pavithra, Y. S., & Rashmitha, S. K. (2025). AI in privacy and security and the ethics of surveillance. *Journal of Research & Development, 17*(7), 173–177. https://doi.org/10.5281/zenodo.16926616

[105]Shahriar, S., Allana, S., Hazratifard, S. M., & Dara, R. (2023). A survey of privacy risks and mitigation strategies in the artificial intelligence life cycle. *IEEE Access, 11*, 61829–61854. https://doi.org/10.1109/ACCESS.2023.3287195

[106]Ardi, M., & Bintari, E. D. (2024). Systematic literature review: Risiko privasi dan keamanan data pribadi dalam penggunaan artificial intelligence (AI). *Informasi Interaktif: Jurnal Informatika dan Teknologi Informasi, 9*(1), 23–28. https://doi.org/10.37159/jii.v9i1.64

[107]Horvath, D., & Lorincz, N. S. (2026). Artificial intelligence in patient-centered care: Macro-, meso-, and micro-level determinants of rehumanization and dehumanization: A qualitative interview study. *Journal of Medical Internet Research*. Advance online publication. https://doi.org/10.2196/82774

[108]Carney, T. (2020). *Artificial intelligence in welfare: Striking the vulnerability balance?* Monash University. https://doi.org/10.26180/13370369.v2

[109]Frimpong, V. (2025). *When institutions cannot keep up with AI: Expiration theory and the collapse of human-centered systems*. figshare. https://doi.org/10.6084/m9.figshare.30277741.v1

[110]Lauritsen, M., & Steenhuis, Q. (2019). Substantive legal software quality: A gathering storm? *Proceedings of the International Conference on Artificial Intelligence and Law*, 52–62. https: //doi.org/10.1145/3322640.3326706

[111]Bortolini, V. S., Engelmann, W., & Garcia, A. de S. (2024). Artificial intelligence in medicine. *Brazilian Journal of Law, Technology and Innovation, 2*(2), 1–18. https: //doi.org/10.59224/bjlti.v2i2.1-18

[112]Liu, Z., Zhang, L., Wu, Z., Yu, X.-X., Cao, C. Y., Dai, H., Liu, N., Lu, J., Li, W., Li, Q., Shen, D., Li, X. (Robert), Zhu, D., & Liu, T. (2024). Surviving ChatGPT in healthcare. *Frontiers in Radiology, 3*. https: //doi.org/10.3389/fradi.2023.1224682

[113]Garg, P., & Fetzer, T. (2025). *AI health advice accuracy varies across languages and contexts*. Research Square. https://doi.org/10.21203/rs.3.rs-7460273/v1

[114]Schemmer, M., Hemmer, P., Kuhl, N., Benz, C., & Satzger, G. (2022). *Should I follow AI-based advice? Measuring appropriate reliance in human-AI decision-making*. arXiv. https:

//doi.org/10.48550/arXiv.2204.06916

[115]Beregovykh, V. V., Panteleev, V. I., Shimanovsky, N. L., & Roitberg, P. G. (2025). Risks and limitations of using artificial intelligence in medicine. *Vestnik Rossiiskoi Akademii Meditsinskikh Nauk, 80*(3), 198–206. https: //doi.org/10.15690/vramn18075

[116]Ergashev, A. (2025). Hidden patterns of digital inequality in educational technology: Analysis of unintentional amplification of social stratification. In *2025 5th International Conference on Technology Enhanced Learning in Higher Education (TELE)* (pp. 135–140). IEEE. https://doi.org/10.1109/TELE66816.2025.11211964

[117]Cazzaniga, M., Panton, A., Li, L., Pizzinelli, C., & Tavares, M. M. (2025). A gender lens on labor market exposure to AI. *AEA Papers and Proceedings, 115*, 56–61. https: //doi.org/10.1257/pandp.20251046

[118]Ameen, S., Wong, M. C., Yee, K. C., Nøhr, C., & Turner, P. (2023). The inverse data law: Market imperatives, data, and quality in AI supported care. *Medical Informatics Europe, 302*, 428–432. https: //doi.org/10.3233/SHTI230166

[119]Zechner, M., Näre, L., Karsio, O., Olakivi, A., Sointu, L., Hoppania, H.-K., & Vaittinen, T. (2022). Profit making and ailment: The marketisation and financialisation of care. In *The politics of ailment: A new approach to care*. Policy Press. https://doi.org/10.1332/policypress/9781447343479.003.0003

[120]Roewer-Despres, F., & Berscheid, J. (2020). *Continuous subject-in-the-loop integration: Centering AI on marginalized communities*. arXiv: Computers and Society. https: //dblp.uni-trier.de/db/journals/corr/corr2012.html#abs-2012-01128

[121]Walker, R., Dillard-Wright, J., & Iradukunda, F. (2023). Algorithmic bias in artificial intelligence is a problem —and the root issue is power. *Nursing Outlook, 71*(5), 102023. https: //doi.org/10.1016/j.outlook.2023.102023

[122]Parthasarathy, S., & Katzman, J. (2024). Bringing communities in, achieving AI for all. *Issues in Science and Technology, 40*(4), 41–44. https://doi.org/10.58875/SLRG2529

[123]Tawiah, N., & Monestime, J. P. (2024). Promoting equity in AI-driven mental health care for marginalized populations. *Proceedings of the AAAI Symposium Series, 4*(1), 323–327. https://doi.org/10.1609/aaaiss.v4i1.31810

[124]Rosu, D., Aleman, D. M., Beck, J. C., Chignell, M., Consens, M. P., Fox, M. S., Gruninger, M., Liu, C., Ru, Y., & Sanner, S. S. (2017). A virtual marketplace for goods and services for people with social needs. *IEEE Canada International Humanitarian Technology Conference*, 202–206. https: //doi.org/10.1109/IHTC.2017.8058188

[125]Harris, B., Barton, E. E., & Albert, C. (2014). Evaluating autism diagnostic and screening tools for cultural and linguistic responsiveness. *Journal of Autism and Developmental Disorders, 44*(6), 1275–1287. https: //doi.org/10.1007/S10803-013-1991-8

[126]Victorson, D., Banas, J. R., Smith, J., Languido, L., Shen, E., Gutierrez, S., Cordero, E., & Flores, L. (2014). eSalud: Designing and implementing culturally competent eHealth research with Latino patient populations. *American Journal of Public Health, 104*(12), 2259–2265. https: //doi.org/10.2105/AJPH.2014.302187

[127]Thodis, A., Dang, T. H., Wickramasinghe, N., Ulapane, N., Cooper, C., Dow, B., Mortimer, D., Nguyen, T. A., Xiao, L. D., Antoniades, J., Gilbert, A. S., Enticott, J., Gurgone, M., Varghese, M., Loganathan, S., & Brijnath, B. (2025). *Co-designed multilingual website in ethnically diverse family carers of people with dementia: Preliminary evaluation study* (Preprint). https: //doi.org/10.2196/preprints.81128

[128]Villagrán Castro, K. N., Hernández Rincón, E. H., García Zárate, G., & Jaimes Peñuela, C. L. (2023). *Communication with a culturally and linguistically diverse population from primary care. 50*(4), 102149. https: //doi.org/10.1016/j.semerg.2023.102149

[129]Putera, Z. F., & Akid, A. (2022). Teaching culturally responsive pedagogy in multilingual classrooms: Valuing linguistic and cultural diversity. *Transformational Language Literature and Technology Overview in Learning (TRANSTOOL), 1*(4), 19–24. https: //doi.org/10.55047/transtool.v1i4.1366

[130]Sands, M. M., Meadan, H., Ramos-Torres, S., & Fanta, A. (2021). The cultural and linguistic adaptation of a caregiver-implemented naturalistic communication intervention. *Early Childhood Education Journal*, 1–11.

https: //doi.org/10.1007/S10643-021-01280-4

[131]Soto, G., & Vega, J. (2024). Designing cultural adaptations of caregiver-implemented interventions for Latinx caregivers of children who use augmentative and alternative communication: Key considerations. *American Journal of Speech-Language Pathology*, 1–14. https: //doi.org/10.1044/2024_ajslp-24-00101

[132]Fatima, U. (2025). Bridging the gap: Policy challenges in AI for addressing socio-economic disparities across districts. *International Educational Journal of Science and Engineering (IEJSE), 8*(6), 101–104. https://doi.org/10.5281/zenodo.15698251

[133]Lengfelder, C., Tapia, H., & Biggeri, M. (2025). Navigating AI with a human development compass – Shaping tomorrow's capabilities. *Journal of Human Development and Capabilities, 26*(3), 439–448. https://doi.org/10.1080/19452829.2025.2520011

[134]Joshi, S. (2025). *Medicare and Medicaid healthcare access and affordability using agentic generative AI and AGI: Policy implications and guidelines*. Preprints. https://doi.org/10.20944/preprints202509.1269.v1

[135]Yang, Y. T., & Ricciardi, R. (2026). Regulating AI in nursing and healthcare: Ensuring safety, equity, and accessibility in the era of federal innovation policy. *Policy, Politics, & Nursing Practice, 27*(1), 17–25. https://doi.org/10.1177/15271544251381228

[136]Yadav, R., Singh, S. K., Gunathilaka, D. H. P. M., & Dang, T. (2025). Policy and regulatory frameworks for AI and global work. In *Advances in Computational Intelligence and Robotics Book Series* (pp. 269–282). https: //doi.org/10.4018/979-8-3373-1270-5.ch015

[137]Kaliraman, S., & Dhand, S. (2025). AI, ethics, and human rights. In *Advances in Human and Social Aspects of Technology Book Series* (pp. 95–114). https: //doi.org/10.4018/979-8-3693-9035-1.ch005

[138]Gaikwad, M. N., & Sagar, G. D. (2025). A review of ten free AI tools and its applications in education. *IIP: International Multidisciplinary Research Journal, 2*(3). https: //doi.org/10.5281/zenodo.17385013

[139]Kruse, C. G. K. (2025). *The cost per health model: A zero-cost, AI-empowered framework for sustainable well-being in an aging population*. Zenodo. https: //doi.org/10.5281/zenodo.16875623

[140]Jain, A. (2025). *Designing for ethical and inclusive AI through a human-centered design lens*. https: //doi.org/10.70924/f83n6wqz/kdxoixwt

[141]Joseph, J. (2025). Designing for dignity: Ethics of AI surveillance in older adult care. *Frontiers in Digital Health, 7*, Article 1643238. https://doi.org/10.3389/fdgth.2025.1643238

[142]Filogna, S., Arras, G., Turchi, T., Prencipe, G., Beani, E., Bombonato, C., Fedeli, F., D'Alessandro, G., Scrocco, A., & Sgandurra, G. (2025). Pathways to family-centered healthcare: Co-designing AI solutions with families in pediatric rehabilitation. *Frontiers in Robotics and AI*, 12. https: //doi.org/10.3389/frobt.2025.1594529

[143]Chandra, J., & Navneet, S. K. (2025). *Advancing responsible innovation in agentic AI: A study of ethical frameworks for household automation*. https: //doi.org/10.48550/arxiv.2507.15901

[144]Haider, U. (2023). *Ethical considerations in artificial intelligence: Addressing bias, privacy, and accountability*. https://doi.org/10.5281/zenodo.8106858

[145]Murphy, E., Gordon, D., Keegan, B. C., Doyle, J., Stavrakakis, Y., & O'Sullivan, D. (2022). Towards an ethical framework for the design and development of inclusive home-based smart technology for older adults and people with disabilities. *Proceedings of the 15th International Joint Conference on Biomedical Engineering Systems and Technologies*, 614–622. https: //doi.org/10.5220/0010879900003123

[146]Shafik, W. (2025). Investigating family dynamics and children's safety in the era of artificial intelligence. In *Advances in Computational Intelligence and Robotics Book Series* (pp. 135–174). https: //doi.org/10.4018/979-8-3373-2170-7.ch006

[147]Heer, J. (2018). The partnership on AI. *AI Matters, 4*(3), 25–26. https://doi.org/10.1145/3284751.3284760

[148]Züger, T., & Asghari, H. (2024). Introduction to the special issue on AI systems for the public interest. *Internet Policy Review, 13*(3). https: //doi.org/10.14763/2024.3.1802

[149]Züger, T., & Asghari, H. (2022). AI for the public: How public interest theory shifts the discourse on AI. *AI & Society, 38*(2), 815–828. https: //doi.org/10.1007/s00146-022-01480-5

[150]Walker, D. (2024). Deprogramming implicit bias: The case for public interest technology. *Daedalus, 153*, 268–275. https: //doi.org/10.1162/daed_a_02059

[151]Cihon, P., Schuett, J., & Baum, S. D. (2021). Corporate governance of artificial intelligence in the public interest. *Information, 12*(7), 275. https: //doi.org/10.3390/INFO12070275

[152]Okolo, C. T. (2025). The paradox of AI accelerationism and the promise of public interest AI. *Science, 390*(6768), eaeb5789. https: //doi.org/10.1126/science.aeb5789

[153]Kabrel, N., Aru, J., & Eichstaedt, J. (2025). *Current AI should extend (not replace) human care in mental health*. https: //doi.org/10.31234/osf.io/e3qg7_v1

[154]Behare, N. (2025). Embracing AI: Fostering employee engagement and satisfaction in the digital era. In S. Pawirosumarto (Ed.), *Innovative approaches for international competitiveness through human resource management* (pp. 155–168). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3373-1005-3.ch006

[155]Wright, S. (2025). Artificial intelligence and work: A review of the European policy landscape. *Journal of Industrial Relations, 67*(5), 794-805. https: //doi.org/10.1177/00221856251394780

[156]Schnake-Mahl, A., & Jahn, J. (2025). Invited commentary: Policies that support working parents and gender health equity—Needed research and methodological challenges. *American Journal of Epidemiology, 194*(2), 331–335. https://doi.org/10.1093/aje/kwae223

[157]Miailhe, N. (2017). The policy challenges of automation. Field Actions Science Reports. *The Journal of Field Actions*, 66–71. https: //journals.openedition.org/factsreports/pdf/4476

[158]Panagou, S., & Klumpp, M. (2025). *Dawn of the Human-Only Era: Reframing Human-Centric AI and Workforce Values in the Age of Automation and Symbiosis*. Zenodo. https://doi.org/10.5281/zenodo.17019868

[159]Aggarwal, M., Gingras, C., & Deber, R. (2021). Artificial intelligence in healthcare from a policy perspective. In M. Househ, E. Borycki, & A. Kushniruk (Eds.), *Multiple perspectives on artificial intelligence in healthcare* (pp. 77–93). Springer. https://doi.org/10.1007/978-3-030-67303-1_5