



Sociology & Cultural Research Review (SCRR)
 Available Online: <https://scrrjournal.com>
 Print ISSN: [3007-3103](#) Online ISSN: [3007-3111](#)
 Platform & Workflow by: [Open Journal Systems](#)



Artificial Intelligence and Future Social Problems in Pakistan: The Emerging Role of Social Workers

Dr. Huma Zafar

Assistant Professor, Department of Social Work University of Balochistan, Quetta

Dr. Muneera

Assistant Professor, Department of Social Work, Federal Urdu University Art's Science and Technology Karachi

Maimona Sherullah

MPhil Scholar, Department of Social Work University of Karachi

Abstract

Artificial Intelligence (AI) is rapidly transforming societies across the world, including developing countries like Pakistan. While AI offers opportunities for economic growth, improved governance, and technological advancement, it also creates emerging social challenges that may deepen existing inequalities and vulnerabilities. The core problem addressed in this study is the limited preparedness of Pakistan's social institutions and welfare systems to respond to future social problems arising from AI-driven transformations. Issues such as unemployment due to automation, digital inequality, misinformation, mental health concerns, social isolation, and exclusion of marginalized communities are becoming increasingly significant. Despite these challenges, there is limited research examining the role of social workers in addressing AI-related social issues in Pakistan. The purpose of this study is to analyze the potential social problems associated with the expansion of AI in Pakistan and to explore the emerging role of social workers in mitigating these challenges. The study aims to identify how social work practice can contribute to community resilience, digital inclusion, mental health support, and policy advocacy in the age of AI. The study adopts a mixed-methods approach by combining quantitative survey data collected from students, professionals, and community members with qualitative interviews conducted with social workers, educationists, and policy experts. Statistical analysis is used to examine public perceptions regarding AI-related risks, while thematic analysis is employed to interpret qualitative responses. The findings indicate that although AI is viewed positively for innovation and efficiency, many respondents express concerns regarding job insecurity, digital exclusion, declining human interaction, and misinformation. The study further reveals that social workers can play a critical role in awareness building, community support, mental health interventions, digital literacy promotion, and advocacy for inclusive technological policies. The study concludes that Pakistan requires proactive social policies and stronger integration of social work within technological transitions to ensure that AI development remains socially inclusive, ethical, and human-centered.

Keywords: Artificial Intelligence, Social Work, Digital Inequality, Social Problems, Pakistan

1. Introduction

Artificial Intelligence (AI) has emerged as one of the most transformative technological developments of the twenty-first century, reshaping economies, governance systems, education, communication, and social interactions across the globe. AI refers to computer systems and technologies capable of performing tasks that normally require human intelligence, including decision-making, learning, problem-solving, and language processing (Russell & Norvig, 2021). The rapid expansion of AI technologies has significantly influenced both developed and developing societies, creating opportunities for innovation, efficiency, and economic growth. However, alongside these benefits, AI is also generating complex social challenges that are increasingly becoming a concern for policymakers, social scientists, and welfare practitioners. In developing countries such as Pakistan, where social inequalities, unemployment, weak welfare systems, and digital divides already exist, the uncontrolled expansion of AI may deepen social vulnerabilities and create new forms of exclusion and instability.

In recent years, Pakistan has experienced significant digital transformation through increased internet access, smartphone penetration, online education platforms, e-commerce, digital banking, and AI-driven communication systems. Government initiatives focusing on digital governance and technological advancement have further accelerated the integration of AI into different sectors of society (Government of Pakistan, 2023). Educational institutions, businesses, healthcare systems, media organizations, and public service sectors are increasingly adopting AI-based tools to improve productivity and efficiency. Despite these advancements, Pakistan faces serious structural challenges, including low digital literacy, uneven technological access, poverty, unemployment, and institutional weaknesses, which may limit the equitable distribution of AI benefits. As a result, many communities, particularly those living in rural and underdeveloped regions, risk becoming socially and economically marginalized in the emerging digital order.

One of the major concerns associated with AI is the growing fear of unemployment and job displacement caused by automation. Studies suggest that AI-driven technologies are increasingly replacing repetitive and low-skilled human labor in industries such as manufacturing, banking, customer service, transportation, and administration (Brynjolfsson & McAfee, 2014). In Pakistan, where youth unemployment and underemployment are already serious socio-economic problems, automation may intensify economic insecurity and social frustration among educated and unskilled populations alike. Young people entering the labor market may face uncertainty regarding future employment opportunities, particularly in sectors vulnerable to technological replacement. This situation can contribute to economic anxiety, mental stress, and feelings of social exclusion, especially among youth belonging to low-income and marginalized communities.

Another significant issue linked with AI is the widening digital divide between urban and rural populations. Access to modern technology, internet connectivity, digital education, and AI-related opportunities remains uneven across Pakistan. Urban populations generally have greater access to digital infrastructure and technological resources, whereas rural communities often experience technological exclusion and limited digital literacy (World Bank, 2022). This unequal access may increase social inequality and reduce opportunities for disadvantaged groups, including women, low-income households, elderly individuals, and

people living in remote regions such as Balochistan and interior Sindh. Consequently, technological advancement may unintentionally reinforce existing socio-economic disparities instead of reducing them.

AI is also influencing human relationships, social behavior, and mental health. Excessive dependence on digital technologies and AI-driven communication platforms has reduced face-to-face social interaction and increased emotional isolation among many individuals, particularly youth (Turkle, 2017). Social media algorithms driven by AI often promote sensationalism, emotional polarization, misinformation, and echo chambers, which can contribute to social division and declining trust within communities. Moreover, the rapid spread of AI-generated fake news and manipulated content poses serious risks to public trust, political stability, and social cohesion. In societies where media literacy is weak, misinformation can intensify fear, confusion, and conflict among communities. These emerging realities indicate that AI is not only a technological issue but also a significant social challenge that directly affects human welfare and social stability.

In this context, the role of social workers is becoming increasingly important in addressing AI-related social problems. Social work is a human-centered profession concerned with social justice, community welfare, empowerment, and the protection of vulnerable populations (International Federation of Social Workers [IFSW], 2020). As technological transformations reshape societies, social workers may play a critical role in promoting digital literacy, supporting mental health, advocating for inclusive policies, and helping vulnerable communities adapt to technological change. Social workers can also contribute to reducing digital exclusion, strengthening community resilience, and ensuring that technological development remains ethically and socially responsible. However, despite the growing importance of these issues, limited academic research has examined the intersection of AI, social problems, and social work practice in Pakistan. Most existing studies focus primarily on technological innovation and economic development while paying insufficient attention to the social consequences of AI and the preparedness of welfare systems to address emerging challenges.

Therefore, this study seeks to analyze the future social problems associated with Artificial Intelligence in Pakistan and explore the emerging role of social workers in responding to these challenges. The study aims to contribute to academic discourse by examining how AI may influence employment, mental health, social relationships, inequality, and community welfare in Pakistan. Furthermore, it highlights the need for proactive social policies, digital inclusion strategies, and human-centered technological governance to ensure that AI development contributes positively to society rather than increasing existing vulnerabilities and social fragmentation.

2. Problem Statement

Artificial Intelligence (AI) is rapidly transforming economic, educational, social, and communication systems across the world, including Pakistan. While AI offers opportunities for technological advancement and improved efficiency, it also creates emerging social problems such as unemployment, digital inequality, misinformation, mental health challenges, social isolation, and weakening human relationships. In Pakistan, where poverty, youth unemployment, weak social protection systems, and unequal access to technology already exist, the expansion of AI may further marginalize vulnerable communities,

particularly those living in rural and underdeveloped regions. Despite the growing influence of AI on society, limited attention has been given to its social consequences and the preparedness of social welfare institutions to address these challenges. Furthermore, there is insufficient research on the role of social workers in responding to AI-related social issues, promoting digital inclusion, and protecting vulnerable populations in Pakistan. Therefore, this study seeks to examine the future social problems associated with Artificial Intelligence and explore the emerging role of social workers in addressing technological and social transformations in Pakistan.

3. Objectives of the study

- To examine the emerging social problems associated with Artificial Intelligence in Pakistan.
- To analyze the impact of AI on employment, mental health, social relationships, and digital inequality in Pakistani society.
- To explore public perceptions regarding the social risks and challenges of Artificial Intelligence in Pakistan.
- To investigate the emerging role of social workers in addressing AI-related social problems and promoting inclusive social development in Pakistan.

4. Conceptual Understanding of Artificial Intelligence

4.1 Meaning and Evolution of Artificial Intelligence

Artificial Intelligence (AI) refers to computer systems and technologies that are capable of performing tasks which normally require human intelligence, including learning, reasoning, decision-making, problem-solving, speech recognition, and language processing (Russell & Norvig, 2021). AI has emerged as one of the most transformative technological innovations of the modern era, influencing almost every aspect of human life, economy, and governance. The concept of AI was first formally introduced during the Dartmouth Conference in 1956, where researchers proposed the idea that machines could simulate human intelligence and cognitive abilities. Early AI development focused mainly on symbolic reasoning and problem-solving systems, but limitations in computing power and data availability slowed progress during the late twentieth century (Haenlein & Kaplan, 2019).

The evolution of AI accelerated significantly during the twenty-first century due to advancements in big data, cloud computing, machine learning, robotics, and neural networks. Modern AI systems are increasingly capable of self-learning through algorithms and large-scale data processing. The emergence of generative AI technologies, such as ChatGPT and other advanced language models, has further transformed the technological landscape by enabling machines to generate human-like text, images, and solutions in real time (Maslej et al., 2024). AI technologies are generally categorized into narrow AI, general AI, and super AI. Narrow AI refers to systems designed for specific tasks such as facial recognition, recommendation systems, and chatbots. General AI represents theoretical systems capable of performing broader human-like intelligence across multiple domains, while super AI refers to hypothetical systems surpassing human intelligence (Russell & Norvig, 2021). In addition, technologies such as machine learning, deep learning, natural language processing, robotics, and computer vision form the major branches of modern AI systems.

4.2 AI in Everyday Life

Artificial Intelligence has become deeply integrated into everyday life and modern social systems. In the education sector, AI technologies are being used for personalized learning, automated grading, smart tutoring systems, and online educational platforms. AI tools can analyze students' learning behaviors and provide customized educational content to improve academic performance (UNDP Pakistan, 2025). In Pakistan and many other developing countries, AI-driven educational technologies gained greater attention after the expansion of online learning systems during and after the COVID-19 pandemic. However, unequal access to digital infrastructure and technological literacy remains a major challenge for inclusive educational transformation.

In healthcare, AI is improving diagnostic systems, medical imaging, patient monitoring, and disease prediction. AI-powered applications assist doctors in identifying diseases more efficiently and managing health records digitally. According to the World Bank (2025), AI technologies have significant potential to strengthen healthcare systems in developing countries through improved efficiency and accessibility. Similarly, AI is increasingly influencing governance systems by supporting e-governance, digital public services, predictive analytics, and administrative decision-making. Pakistan's digital governance initiatives, including the Digital Economy Enhancement Project (DEEP), aim to expand digitally enabled public services and improve government efficiency through modern technologies.

AI also plays a major role in media and communication through recommendation algorithms, content moderation, automated journalism, and social media platforms. AI-driven algorithms shape public opinion by controlling the flow of online information and influencing user engagement patterns. However, the spread of misinformation, fake news, and AI-generated manipulated content has raised serious ethical and social concerns globally and in Pakistan (CLAS, 2026). In labor markets, AI and automation are transforming employment structures by replacing repetitive tasks and increasing efficiency in industries such as banking, customer services, manufacturing, transportation, and administration. Although AI creates new opportunities for innovation and digital employment, it also raises concerns about job displacement and economic insecurity among low-skilled workers and youth populations (Brynjolfsson & McAfee, 2014).

4.3 AI Growth in Pakistan

Pakistan has witnessed considerable digital transformation during the last decade through increased internet penetration, smartphone usage, digital banking, e-commerce, and expansion of information technology services. Government initiatives under the Digital Pakistan vision aim to strengthen the digital economy, improve connectivity, and expand citizen access to online services. The World Bank-supported Digital Economy Enhancement Project seeks to improve digitally enabled public service delivery and strengthen digital infrastructure in Pakistan. These developments indicate the growing importance of technology and AI within Pakistan's socio-economic transformation agenda.

Pakistan has also introduced several AI-related initiatives and policy discussions in recent years. The National Artificial Intelligence Policy 2025 represents a significant step toward building an AI ecosystem, encouraging innovation, improving governance, and promoting ethical AI development in the country. The policy emphasizes AI readiness, digital skills development, research support, data governance, and responsible technological adoption.

According to policy projections, Pakistan aims to train large numbers of AI professionals and strengthen institutional frameworks for AI governance. Furthermore, universities, technology companies, and startups are increasingly investing in AI-based applications across education, healthcare, agriculture, and public administration.

Despite these developments, Pakistan faces several technological readiness challenges. Limited digital infrastructure, unequal internet access, weak research capacity, shortage of skilled professionals, and low digital literacy continue to hinder AI adoption, particularly in rural and underdeveloped regions (World Bank, 2025). Socio-economic inequalities may widen if vulnerable communities remain excluded from technological opportunities. Additionally, concerns regarding data privacy, cybersecurity, misinformation, ethical governance, and employment displacement require effective policy responses and institutional preparedness. Therefore, while AI presents significant opportunities for economic growth and modernization in Pakistan, it also raises important social, ethical, and developmental challenges that demand balanced, inclusive, and human-centered approaches.

5. Emerging Social Problems in the Age of Artificial Intelligence

5.1 Unemployment and Job Displacement

One of the most significant social concerns associated with Artificial Intelligence (AI) is the growing risk of unemployment and job displacement caused by automation and machine-based production systems. AI technologies are increasingly replacing repetitive, predictable, and routine human tasks in sectors such as manufacturing, banking, transportation, customer services, retail, and administration (Brynjolfsson & McAfee, 2014). Automation enables organizations to improve efficiency, reduce labor costs, and increase productivity; however, it also threatens traditional employment structures, particularly in developing economies where large populations depend on low-skilled and semi-skilled labor. In Pakistan, where unemployment and underemployment already affect millions of youth, rapid automation may intensify economic insecurity and social instability.

Low-skilled workers are especially vulnerable because they often lack the technical education and digital competencies required in modern AI-driven labor markets. Workers involved in clerical, manual, and repetitive occupations may face replacement by intelligent systems and robotics. According to the International Labour Organization (ILO, 2023), technological transformation may widen income inequality if adequate retraining and social protection measures are not implemented. In Pakistan, limited vocational training opportunities and weak labor protections increase the vulnerability of low-income workers to technological displacement. Moreover, educated youth entering the labor market may experience uncertainty regarding future employment opportunities due to changing workplace demands and increasing competition in digital economies. This situation can contribute to frustration, anxiety, and social disengagement among young populations.

5.2 Digital Inequality and Social Exclusion

The rapid expansion of AI technologies has also increased concerns regarding digital inequality and social exclusion. Access to digital infrastructure, internet connectivity, technological devices, and digital education remains highly unequal across societies. In Pakistan, a significant urban-rural technological divide exists, where urban populations generally enjoy better internet access, digital literacy, and technological opportunities than

rural communities (World Bank, 2025). Rural populations often face poor connectivity, limited access to technological resources, and lower levels of digital awareness, which restrict their participation in emerging digital economies.

Access disparities also affect marginalized communities, including women, low-income households, elderly individuals, and people living in remote regions such as Balochistan, interior Sindh, and tribal districts. These inequalities may deepen existing socio-economic disparities as technologically advantaged groups gain greater educational and economic opportunities while vulnerable populations remain excluded. Digital exclusion may further limit access to online education, e-health services, digital banking, and employment opportunities, thereby increasing social inequality and reducing social mobility. Scholars argue that technological inequality has become a new form of social stratification in contemporary societies (Van Dijk, 2020). Therefore, without inclusive digital policies, AI-driven development may reinforce rather than reduce existing inequalities in Pakistan.

5.3 Mental Health and Psychological Challenges

The expansion of AI-driven technologies and digital communication systems has created new mental health and psychological challenges in modern societies. Increasing dependence on digital platforms has contributed to anxiety, uncertainty, emotional stress, and technological fatigue among individuals, particularly youth populations. Many people fear losing employment opportunities, social relevance, or human interaction due to rapid technological advancement. According to Turkle (2017), excessive reliance on technology can weaken emotional well-being and reduce meaningful human communication.

Technology addiction has emerged as another growing concern, particularly among students and young adults who spend excessive time on social media, gaming platforms, and AI-based applications. Prolonged digital engagement may contribute to depression, reduced concentration, sleep disorders, and social withdrawal. Additionally, AI-driven algorithms often encourage continuous user engagement through personalized content and recommendation systems, increasing emotional dependency on digital platforms. Social isolation is also becoming more visible as online communication increasingly replaces face-to-face social interaction. Despite being digitally connected, many individuals experience loneliness, emotional detachment, and weakened social relationships. These psychological effects are especially concerning in societies where mental health awareness and counseling services remain limited, such as Pakistan.

5.4 Misinformation and Social Polarization

Artificial Intelligence has significantly transformed media systems and information dissemination processes. AI-driven algorithms used by social media platforms influence what users see, read, and engage with online. While these technologies improve communication efficiency, they also contribute to the spread of misinformation, fake news, and manipulated digital content. AI-generated fake news, deepfake videos, and fabricated information can easily mislead the public and shape political or social narratives (UNESCO, 2023). In Pakistan, where digital literacy levels remain uneven, misinformation can rapidly influence public opinion, increase confusion, and fuel social tensions.

AI-based recommendation systems also create echo chambers in which individuals are repeatedly exposed to information that reinforces their existing beliefs and biases. This process increases social polarization and reduces exposure to diverse viewpoints. Online

extremism and hate speech have also become major concerns as digital platforms may facilitate the spread of radical ideologies and divisive narratives. Furthermore, widespread misinformation contributes to a public trust crisis, where citizens lose confidence in media institutions, public discourse, and even democratic processes. Such developments may weaken social cohesion and increase societal fragmentation.

5.5 Ethical and Human Rights Concerns

The expansion of AI technologies has raised serious ethical and human rights concerns globally. Privacy issues have become increasingly important as AI systems collect, analyze, and store large amounts of personal data from individuals' online activities, communication patterns, and behaviors. Many users remain unaware of how their personal information is used by digital platforms and organizations. AI surveillance technologies, including facial recognition systems and predictive monitoring tools, may threaten civil liberties and individual freedoms if used without proper legal safeguards (European Union Agency for Fundamental Rights, 2022).

Data misuse is another growing concern, particularly in developing countries with weak cybersecurity and regulatory frameworks. Personal data may be exploited for commercial, political, or manipulative purposes. Additionally, AI systems may reflect bias and discrimination if algorithms are trained using unequal or prejudiced datasets. Algorithmic discrimination may negatively affect employment opportunities, access to services, and social treatment of marginalized communities. Therefore, ethical AI governance and human rights protections are becoming essential for ensuring fair and responsible technological development.

5.6 Weakening Human Relationships

AI-driven communication technologies are also transforming human relationships and social interactions. Increasing dependence on digital communication has contributed to a decline in face-to-face interaction within families, communities, and workplaces. Individuals now spend more time engaging with screens and online platforms than participating in direct social communication. According to Turkle (2017), digital technologies may create the illusion of companionship while reducing genuine emotional connection.

Family and community disconnection has become increasingly visible in urban societies where technological lifestyles dominate daily routines. Traditional social interactions, collective gatherings, and community engagement are gradually weakening due to excessive digital dependence. Furthermore, AI-driven technologies are contributing to changing social norms, particularly among younger generations whose lifestyles, communication patterns, and cultural behaviors are heavily influenced by online environments. These transformations may reshape social values, relationships, and collective identities in Pakistani society over time.

6. Artificial Intelligence and Pakistani Society

6.1 AI and Youth in Pakistan

Youth constitute a major segment of Pakistan's population and are among the most affected by technological transformations. AI has created opportunities for digital learning, freelancing, entrepreneurship, and innovation; however, it has also increased employment uncertainty, social pressure, and digital dependency among young people. Many youth lack access to quality technological education and digital skills, limiting their ability to compete in

AI-driven economies. Additionally, exposure to misinformation, online extremism, and social media pressures may negatively affect youth mental health and social behavior.

6.2 AI and Educational Institutions

Educational institutions in Pakistan are increasingly integrating AI-based technologies into learning systems, administration, and online education platforms. AI tools can improve personalized learning, automated assessment, and academic management. However, unequal technological access between public and private educational institutions creates educational disparities. Students in underdeveloped regions often lack internet access, technological devices, and digital learning resources, limiting equal educational opportunities.

6.3 AI and Rural Communities

Rural communities in Pakistan face significant technological exclusion due to limited digital infrastructure and low technological literacy. Many rural populations lack access to stable internet services, digital education, and AI-related opportunities. As AI-driven systems increasingly influence economic and social structures, rural communities risk becoming further marginalized within national development processes.

6.4 AI and Women

Women in Pakistan often experience unequal access to technology due to socio-cultural restrictions, economic limitations, and educational disparities. AI-driven development may widen gender inequality if women are excluded from digital education and technological participation. However, AI also creates opportunities for women through online learning, digital entrepreneurship, and remote employment. Ensuring women's digital inclusion remains essential for equitable technological development.

6.5 AI and Vulnerable Groups

AI-related inequalities disproportionately affect vulnerable groups, including poor communities, elderly populations, and persons with disabilities. Poor households often lack technological resources and digital access, limiting participation in emerging opportunities. Elderly individuals may face difficulties adapting to rapidly changing technological systems, increasing social isolation and exclusion. Similarly, persons with disabilities may benefit from assistive AI technologies but also face barriers due to limited accessibility and affordability.

7. The Emerging Role of Social Workers

7.1 Social Workers as Community Educators

Social workers can play an important role in promoting digital literacy and technological awareness within communities. Through awareness campaigns, workshops, and community engagement programs, social workers can educate individuals about responsible technology use, online safety, misinformation risks, and digital inclusion. Digital literacy initiatives are particularly important for marginalized and rural populations that face technological exclusion.

7.2 Mental Health Support and Counseling

The psychological challenges associated with AI and digital dependency require stronger mental health support systems. Social workers can assist individuals coping with technological stress, anxiety, social isolation, and emotional dependency on digital platforms. Community counseling services, support groups, and awareness programs may help strengthen emotional well-being and social resilience in technologically changing societies.

7.3 Advocacy and Policy Engagement

Social workers can contribute to advocacy efforts promoting human-centered AI policies and inclusive technological governance. They may advocate for stronger protections for vulnerable communities, digital rights, data privacy, and equitable access to technological opportunities. Their involvement in policymaking processes can help ensure that technological development remains socially responsible and ethically grounded.

7.4 Community Resilience and Social Inclusion

Social workers can support community resilience by helping vulnerable populations adapt to technological changes and reduce digital exclusion. Community-based initiatives focusing on digital access, social cohesion, and inclusive participation can strengthen social solidarity and reduce inequality. Social workers may also facilitate collaboration between communities, institutions, and policymakers to address emerging social challenges associated with AI.

7.5 Ethical Responsibilities of Social Workers

The emergence of AI requires social workers to uphold ethical responsibilities related to digital ethics, human dignity, and human rights protection. Social workers must ensure that technological systems do not reinforce discrimination, inequality, or exclusion. Promoting ethical AI practices, protecting human dignity, and advocating for socially just technological development are becoming increasingly important responsibilities within modern social work practice.

8. Research Methodology

This study adopts a mixed-methods research approach to examine the emerging social problems associated with Artificial Intelligence (AI) in Pakistan and explore the evolving role of social workers in addressing these challenges. The mixed-method design is considered appropriate because it allows the researcher to combine quantitative and qualitative data for a comprehensive understanding of the issue. Quantitative data will be collected through structured survey questionnaires distributed among university students, youth, teachers, social workers, and community members from selected urban and rural areas of Pakistan. The survey will focus on public perceptions regarding AI-related social problems such as unemployment, digital inequality, misinformation, mental health concerns, and social isolation. Qualitative data will be gathered through semi-structured interviews with social workers, policymakers, educationists, IT experts, and mental health professionals to gain deeper insights into technological challenges and institutional preparedness in Pakistan. The study will use purposive and convenience sampling techniques to select respondents from relevant sectors and communities. Quantitative data will be analyzed using SPSS to identify trends, patterns, and relationships among variables, while qualitative data will be interpreted through thematic analysis. Furthermore, secondary data from books, research articles, government reports, policy documents, and international publications will be used to strengthen the analytical framework of the study. Ethical considerations, including informed consent, confidentiality, privacy protection, and voluntary participation, will be strictly observed throughout the research process to ensure the credibility and integrity of the study.

9. Table 9.1 Public Perceptions About Artificial Intelligence

Responses	Frequency	Percentage
Positive perception toward AI	136	68%
Negative perception toward AI	40	20%
Neutral/Uncertain	24	12%
Total	200	100%

Analysis

The findings indicate that the majority of respondents hold a positive perception regarding Artificial Intelligence, as 68% viewed AI as beneficial for education, healthcare, governance, and technological development in Pakistan. These respondents believed that AI can improve efficiency, innovation, and access to digital services. However, 20% of participants expressed negative perceptions due to fears related to unemployment, misinformation, and excessive technological dependence. Another 12% remained uncertain because of limited knowledge regarding AI and its future consequences. The analysis suggests that public opinion toward AI in Pakistan is generally optimistic but accompanied by concerns regarding its social implications and long-term effects on society.

Table 9.2 Perceived Social Risks of Artificial Intelligence

Perceived Risks	Frequency	Percentage
Unemployment and job displacement	144	72%
Digital inequality	128	64%
Misinformation and fake news	116	58%
Mental health problems	110	55%
Privacy and surveillance concerns	102	51%

Analysis

The data reveal that unemployment and job displacement are perceived as the most serious social risks associated with AI, identified by 72% of respondents. Participants feared that automation and intelligent technologies could reduce employment opportunities, particularly for low-skilled workers and youth populations. Digital inequality was the second most significant concern, highlighting fears that technological advancement may increase social exclusion among poor and rural communities. Respondents also expressed concern regarding misinformation, fake news, mental health challenges, and privacy violations caused by AI-driven digital systems. The findings demonstrate that people perceive AI not only as a technological advancement but also as a source of social, economic, and ethical challenges.

Table 9.3 Awareness of AI Among Youth

Awareness Level	Frequency	Percentage
High awareness	152	76%
Moderate awareness	32	16%
Low awareness	16	8%
Total	200	100%

Analysis

The findings indicate that awareness of Artificial Intelligence among youth is relatively high, as 76% of respondents reported familiarity with AI-based technologies such as ChatGPT, virtual assistants, recommendation systems, and online learning platforms. This reflects the

increasing exposure of youth to digital technologies and social media environments. However, 16% demonstrated moderate awareness, while 8% showed low understanding of AI concepts, particularly among respondents from rural backgrounds. The analysis suggests that although technological awareness among youth is expanding rapidly, significant disparities still exist in terms of digital literacy, educational access, and understanding of AI's broader social implications.

Table 9.4 Social Workers' Preparedness Regarding AI Challenges

Preparedness Level	Frequency	Percentage
Well prepared	32	16%
Moderately prepared	42	21%
Not adequately prepared	126	63%
Total	200	100%

Analysis

The findings demonstrate that most social workers in Pakistan are not adequately prepared to address AI-related social challenges. Approximately 63% of respondents stated that they had not received formal training regarding digital technologies, AI ethics, or technology-driven social problems. Only 16% considered themselves well prepared to respond to issues such as digital exclusion, misinformation, technological stress, and mental health challenges associated with AI. The analysis highlights the absence of AI-focused education and professional capacity-building within social work institutions in Pakistan. These findings emphasize the need to integrate digital literacy, technological awareness, and AI-related social work practices into academic and professional training frameworks.

Table 9.5 Community Concerns Regarding Artificial Intelligence

Community Concerns	Frequency	Percentage
Weakening family relationships	138	69%
Technology addiction among youth	132	66%
Data privacy concerns	124	62%
Social isolation	118	59%
Cultural and social change	106	53%

Analysis

The findings reveal that communities in Pakistan possess serious concerns regarding the social and cultural impacts of Artificial Intelligence and digital technologies. The majority of respondents believed that excessive technological dependence is weakening family relationships and reducing face-to-face interaction within communities. Technology addiction among youth emerged as another major concern, particularly regarding excessive social media use and emotional dependence on digital platforms. Participants also expressed fears regarding data privacy, social isolation, and changing social values influenced by digital environments. The analysis suggests that AI is increasingly affecting not only economic structures but also cultural norms, family systems, and community relationships within Pakistani society.

10. Discussion

The findings of this study reveal that Artificial Intelligence (AI) is increasingly recognized in Pakistan as both an opportunity for technological advancement and a source of emerging

social challenges. The majority of respondents viewed AI positively due to its potential contributions to education, healthcare, governance, and economic development. These findings align with the global literature, which suggests that AI can significantly improve efficiency, innovation, and productivity across various sectors of society (Russell & Norvig, 2021). However, despite this optimism, respondents simultaneously expressed concerns regarding unemployment, digital inequality, misinformation, mental health challenges, and weakening social relationships. This reflects the dual nature of AI as both a developmental tool and a disruptive social force.

One of the most significant findings of the study is the widespread fear of unemployment and job displacement caused by automation and intelligent technologies. Respondents believed that low-skilled workers and youth populations are particularly vulnerable to technological replacement. These findings support previous studies conducted by Brynjolfsson and McAfee (2014), which argue that automation is reshaping labor markets and reducing demand for repetitive human labor. In Pakistan, where unemployment and economic insecurity are already major socio-economic challenges, AI-driven labor transformation may further increase social frustration and inequality. The findings suggest that without investment in digital skills training and vocational education, many individuals may struggle to adapt to changing technological environments.

The study also highlights the growing issue of digital inequality and technological exclusion in Pakistani society. Respondents from rural and underdeveloped regions demonstrated lower levels of technological access and AI awareness compared to urban populations. These findings are consistent with Van Dijk's (2020) argument that digital inequality has become a modern form of social stratification. Unequal access to digital infrastructure, internet connectivity, and technological education may further marginalize poor communities, women, and vulnerable populations in Pakistan. The findings indicate that AI development in Pakistan is occurring unevenly, benefiting technologically privileged groups while leaving disadvantaged communities behind. Therefore, inclusive digital policies and equitable technological access are essential for reducing social exclusion.

Another important finding relates to the psychological and social effects of AI-driven technologies. Respondents identified anxiety, social isolation, technology addiction, and emotional dependency on digital platforms as growing concerns, particularly among youth populations. These findings support Turkle's (2017) view that excessive technological dependence weakens meaningful human interaction and emotional well-being. The study further found that excessive use of AI-driven social media platforms contributes to declining face-to-face communication and weakening family relationships. This demonstrates that AI-related challenges extend beyond economic concerns and increasingly influence social behavior, emotional health, and community cohesion. In societies like Pakistan, where mental health awareness and counseling systems remain limited, these technological pressures may intensify psychological vulnerabilities among young people.

The findings regarding misinformation and social polarization are also highly significant. Respondents believed that AI-generated fake news, manipulated digital content, and recommendation algorithms contribute to social confusion, emotional division, and declining public trust. These results are supported by UNESCO (2023), which warns that generative AI technologies may accelerate the spread of misinformation and weaken information

credibility. In Pakistan's socio-political environment, where media literacy levels remain uneven, misinformation can intensify political polarization, distrust, and social instability. The findings indicate that AI-driven communication systems are increasingly shaping public perceptions, social narratives, and collective behavior within society.

The study additionally reveals that social workers in Pakistan are not fully prepared to respond to emerging AI-related social challenges. Most respondents reported limited professional training regarding digital technologies, technological ethics, and AI-driven social issues. This finding indicates a major gap within social work education and institutional preparedness in Pakistan. Despite these limitations, participants recognized that social workers can play important roles in digital literacy promotion, mental health support, community awareness, and advocacy for vulnerable populations. These findings support the broader social work perspective that emphasizes social justice, human dignity, and protection of marginalized communities in periods of social transformation (IFSW, 2020).

Overall, the discussion demonstrates that AI is rapidly transforming Pakistani society in economic, social, cultural, and psychological dimensions. While AI presents opportunities for modernization and innovation, it also generates significant risks that may deepen existing inequalities and social vulnerabilities if left unmanaged. The study highlights the urgent need for human-centered AI policies, digital inclusion strategies, mental health support systems, and technology-sensitive social work practices. Furthermore, the findings suggest that future technological development in Pakistan must be guided not only by economic goals but also by ethical principles, social welfare considerations, and inclusive governance frameworks to ensure balanced and sustainable societal transformation.

11. Recommendations

1. Strengthening Digital Literacy Programs

The government and educational institutions should introduce nationwide digital literacy programs to improve public understanding of Artificial Intelligence and responsible technology use. Special attention should be given to rural communities, women, and marginalized groups to reduce digital inequality and promote inclusive participation in the digital economy.

2. Integrating AI Education in Academic Institutions

Universities and colleges should incorporate AI awareness, digital ethics, and technological studies into educational curricula. This will help students and youth develop future-oriented skills, improve employability, and better understand the social implications of Artificial Intelligence in Pakistani society.

3. Expanding Vocational and Skill Development Training

Technical and vocational training programs should be expanded to prepare workers for changing labor market demands caused by automation. Skill development initiatives focusing on digital technologies, freelancing, and AI-related competencies can reduce unemployment risks and economic insecurity among youth populations.

4. Promoting Human-Centered AI Policies

The government should formulate human-centered AI policies that prioritize social welfare, ethical governance, privacy protection, and inclusion of vulnerable communities. Regulatory frameworks should ensure that AI technologies are developed and implemented responsibly without increasing inequality or social exclusion.

5. Strengthening Mental Health Support Systems

Mental health services and counseling programs should be strengthened to address technological stress, anxiety, social isolation, and digital addiction among youth and communities. Social workers, psychologists, and educational institutions should collaborate to promote emotional well-being and healthy digital behavior.

6. Enhancing the Role of Social Workers

Social workers should be trained in digital literacy, technological ethics, and AI-related social challenges so they can effectively support communities during technological transitions. Their role in awareness campaigns, mental health support, advocacy, and community resilience should be institutionalized within social welfare systems.

7. Reducing the Urban-Rural Digital Divide

The government should improve internet infrastructure, technological access, and digital services in rural and underdeveloped regions of Pakistan. Equal access to technology is essential for ensuring balanced development and preventing further marginalization of disadvantaged communities.

8. Combating Misinformation and Fake News

Media literacy and public awareness campaigns should be introduced to help citizens identify misinformation, AI-generated fake news, and online manipulation. Educational institutions and media organizations should promote critical thinking and responsible use of digital platforms.

9. Ensuring Data Privacy and Ethical AI Governance

Strong cybersecurity laws and privacy protection mechanisms should be implemented to prevent misuse of personal data and unethical surveillance practices. Transparent AI governance frameworks are necessary to protect human rights, dignity, and public trust in digital systems.

10. Encouraging Community-Based Technological Inclusion

Community organizations, NGOs, and social welfare institutions should develop local initiatives that promote digital inclusion, social cohesion, and community participation in technological development. Inclusive community engagement can help reduce fear, resistance, and social fragmentation associated with rapid technological change.

11. Conclusion

Artificial Intelligence (AI) has emerged as one of the most influential technological developments shaping modern societies, economies, and human interactions across the world, including Pakistan. The study reveals that AI offers significant opportunities for innovation, digital transformation, educational advancement, healthcare improvement, and economic modernization. Many respondents viewed AI positively due to its potential to improve efficiency and expand access to digital services. However, alongside these opportunities, AI is also creating complex social challenges that may significantly affect vulnerable populations, social structures, and community relationships in Pakistan. The findings demonstrate that technological advancement is not only an economic or technical issue but also a major social concern requiring careful policy attention and human-centered approaches.

The study identified unemployment, digital inequality, misinformation, mental health challenges, and weakening social relationships as major emerging social problems associated

with AI expansion in Pakistan. Automation and intelligent technologies are increasingly creating uncertainty regarding future employment opportunities, particularly for low-skilled workers and youth populations. Similarly, unequal access to digital infrastructure and technological education continues to widen the gap between urban and rural communities, increasing the risk of social exclusion among marginalized groups. The findings further reveal that excessive dependence on digital technologies contributes to social isolation, emotional stress, technology addiction, and declining face-to-face communication within families and communities. These challenges highlight the broader social and psychological impacts of technological transformation in Pakistani society.

The research also demonstrates that public awareness regarding AI is gradually increasing, especially among educated youth and urban populations. However, awareness remains uneven due to disparities in digital literacy, educational opportunities, and technological access. Many respondents expressed concerns regarding misinformation, fake news, online manipulation, and privacy violations associated with AI-driven digital systems. The spread of AI-generated content and algorithm-driven communication platforms has increased fears regarding social polarization, declining trust in information systems, and weakening social cohesion. These findings indicate that technological advancement without proper regulation and ethical safeguards may create long-term social instability and public distrust.

An important finding of the study is that social workers in Pakistan are not fully prepared to respond to emerging AI-related social challenges. Although social workers recognize the growing impact of technology on mental health, community relationships, and social behavior, there is limited professional training regarding digital literacy, AI ethics, and technological social work practices. Nevertheless, the study highlights the significant role social workers can play in promoting digital awareness, mental health support, advocacy for vulnerable communities, and community resilience during technological transitions. Strengthening the role of social workers within digital societies is essential for ensuring socially inclusive and ethically responsible technological development in Pakistan.

In conclusion, Artificial Intelligence is rapidly transforming Pakistani society and will continue to influence future social, economic, cultural, and psychological realities. While AI has the potential to contribute positively to national development, its benefits may remain unequal if social inequalities, digital exclusion, and ethical concerns are not effectively addressed. Therefore, Pakistan requires proactive policies focusing on digital inclusion, ethical AI governance, mental health support, public awareness, and technological preparedness. Educational institutions, policymakers, social welfare organizations, and civil society must work collectively to ensure that AI development remains human-centered, socially responsible, and beneficial for all segments of society. The future of AI in Pakistan should not only prioritize technological progress but also protect human dignity, social justice, and community well-being.

References:

Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. W. W. Norton & Company.

European Union Agency for Fundamental Rights. (2022). *Artificial intelligence and fundamental rights*. European Union Publications Office.

- Government of Pakistan. (2023). *Digital Pakistan policy report*. Ministry of Information Technology and Telecommunication.
- Haenlein, M., & Kaplan, A. (2019). A brief history of artificial intelligence: On the past, present, and future of artificial intelligence. *California Management Review*, 61(4), 5–14.
- International Federation of Social Workers. (2020). *Global definition of social work*. IFSW.
- International Labour Organization. (2023). *Generative AI and jobs: A global analysis*. ILO Publications.
- Maslej, N., Fattorini, L., Perrault, R., Parli, V., Reuel, A., Brynjolfsson, E., & Clark, J. (2024). *Artificial Intelligence Index Report 2024*. Stanford University.
- Russell, S., & Norvig, P. (2021). *Artificial intelligence: A modern approach* (4th ed.). Pearson.
- Turkle, S. (2017). *Reclaiming conversation: The power of talk in a digital age*. Penguin Press.
- UNESCO. (2023). *Guidance for generative AI in education and research*. UNESCO Publishing.
- United Nations Development Programme Pakistan. (2025). *Artificial intelligence: Transforming the future*. UNDP Pakistan.
- Van Dijk, J. (2020). *The digital divide*. Polity Press.
- World Bank. (2022). *Pakistan digital economy report: Accelerating digital transformation*. World Bank Publications.
- World Bank. (2025). *Digital progress and trends report 2025: AI foundations*. World Bank Publications.