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ARTIFICIAL INTELLIGENCE IN KAZAKHSTAN: PUBLIC PERCEPTIONS, USE, AND DIGITAL WELL-BEING

Abstract. Artificial intelligence has become a part of today's life, widening its applications and the number of users. The goal of the article is the study of the population's attitude towards artificial intelligence as well as its awareness about ChatGPT, frequency of using AI, importance of AI for society, and perception of AI risks based on data from a representative sociological survey of 2,000 respondents conducted in Kazakhstan in 2025. The survey comprised citizens aged over 18 and older from 17 regions and the cities of republican significance: Astana, Almaty, and Shymkent. We also studied a range of global and sociological trends in using AI, and its impact on the digital well-being of the population. Based on specialized international publications, the authors analyzed the global trends in the impact of artificial intelligence on humans' sociological and psychological well-being amid the rapid digital transformation of society. The relevance of this study stems from the increasing integration of artificial intelligence into daily and professional lives, as a significant number of people experience new forms of psychological distress that range from fears of job displacement to emotional dependence on chatbots. This raises issues related to the population's digital well-being. The results of the study confirm the necessity of developing psychological programs to accompany the population in the context of digitalization as well as to promote digital literacy as a means to protect psychological well-being amid the widespread use of AI technologies. It is necessary to develop the sociology of artificial intelligence as a distinct field that reveals how technologies of AI affect societies, social groups, and institutions.

Keywords: Kazakhstan, artificial intelligence, public opinion, ChatGPT, psychological state, digital well-being, sociological survey, sociology of artificial intelligence.

Ботагөз Рақышева, Гульзи Наби, Қаламқас Есимова, Айнұр Ибраева
ҚАЗАҚСТАНДАҒЫ ЖАСАНДЫ ИНТЕЛЛЕКТ: ҚОҒАМДЫҚ
ҚАБЫЛДАУ, ПАЙДАЛАНУ ЖӘНЕ ЦИФРЛЫҚ ӘЛ-АУҚАТ

Аңдатпа. Жасанды интеллект қолдану аясын кеңейтіп, тұтынушылардың санын көбейтіп өміріміздің күнделікті элементіне айналуда. Зерттеудің мақсаты

– 2025 жылы Қазақстанда репрезентативті іріктеме бойынша 2000 респондентке жүргізілген әлеуметтанулық сауалнама нәтижелері арқылы еліміздегі халықтың ЖИ-ке көз-қарасын зерттеу. Соның ішінде ChatGPT туралы хабардарлық деңгейін, ЖИ-ті қолдану жиілігін, ЖИ-тің қоғам үшін маңызыдылығына қатысты пікірлерін және ЖИ-ті қаншалықты қауіпті санайтынын қарастыру. Зерттеуге 17 облыстан және республикалық маңызы бар 3 қаладан, яғни Астана, Алматы және Шымкент қалаларынан 18-ден асқан азаматтар қатысты. Сонымен қатар біз әр түрлі елдерде ЖИ қолдану салдарынан және ЖИ-тің халықтың цифрлық әл-ауқатына ықпалынан пайда болған жаһандық әлеуметтік-психологиялық үрдістерді зерттедік. Мақала авторлары халықаралық мамандырылған жарияланымдар негізінде қоғамның жедел цифрлық трансформациясы жағдайында ЖИ-тің адамның әлеуметтік-психологиялық жағдайына ықпалы бойынша жаһандық үрдістерді талдады. Зерттеудің өзектілігі ЖИ жүйесінің күнделікті өмірге және кәсіби қызметке кеңінен енгізілуіне байланысты адамдардың едәуір бөлігінде психологиялық дистрестің жаңа формалары қалыптасуымен байланысты. Ол жұмыс орнынан айырылып қалу қауіпіне байланысты мазасыздық, сондай-ақ чат-боттарға деген эмоционалдық тәуелділік сияқты құбылыстар. Бұл халықтың цифрлық әл-ауқатына байланысты мәселелерді ғылыми тұрғыдан зерделеудің өзектілігін күшейтеді. Зерттеу нәтижелері цифрландыру жағдайында халыққа психологиялық қолдау көрсету бағдарламаларын әзірлеудің және ЖИ технологияларының кең таралуы жағдайында психологиялық әл-ауқатты қорғау факторы ретінде цифрлық сауаттылықты қалыптастыру қажеттілігін растайды. Жасанды интеллект әлеуметтануын ЖИ технологияларының қоғамға, әлеуметтік құрылымдарға және институттарға ықпалын зерттейтін ғылыми бағыт ретінде дамыту қажет.

Түйін сөздер: Қазақстан, жасанды интеллект, қоғамдық пікір, ChatGPT, психологиялық жағдай, цифрлық әл-ауқат, әлеуметтанулық сауалнама, жасанды интеллект әлеуметтануы.

Ботагоз Ракишева, Гульзи Наби, Каламкас Есимова, Айнур Ибраева **ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ В КАЗАХСТАНЕ: ОБЩЕСТВЕННОЕ ВОСПРИЯТИЕ, ИСПОЛЬЗОВАНИЕ И ЦИФРОВОЕ БЛАГОПОЛУЧИЕ**

Аннотация. Быстрое Искусственный интеллект становится элементом повседневности, все больше и больше расширяя сферы использования и увеличивая потребителей. Цель исследования – изучение отношения населения страны к ИИ, в том числе осведомленность о ChatGPT, частота использования ИИ, отношение к важности ИИ для общества, восприятие опасности ИИ на основе социологического опроса 2000 респондентов проведенного по репрезентативной выборке в 2025 году в Казахстане. В исследовании приняли участие граждане старше 18 лет из 17 областей и трех городов республиканского значения – Астаны, Алматы и Шымкента. Также нами были изучены ряд глобальных социально-психологических тенденций, отмечаемых в различных странах из-за использования ИИ и их влияния на цифровое самочувствие населения. Авторы статьи на основе международных специализированных публикациях проанализировали глобальные тенденции, связанные с влиянием искусственного интеллекта (ИИ) на социально-психологическое состояние человека в условиях стремительной цифровой трансформации общества. Актуальность исследования обусловлена тем, что по мере интеграции систем ИИ в повседневную жизнь и профессиональную деятельность

у значительного числа людей формируются новые формы психологического дистресса - от тревожности, связанной со страхом замещения на рабочем месте, до эмоциональной зависимости от чат-ботов. Это актуализирует вопросы, связанные с цифровым самочувствием населения. Результаты исследования подтверждают необходимость разработки психологических программ сопровождения населения в условиях цифровизации и необходимость формирования цифровой грамотности как фактора защиты психологического благополучия в условиях широкого распространения технологий ИИ. Необходимо развивать социологию искусственного интеллекта, направления изучающего как технологии ИИ влияют на общества, социальные структуры и институты.

Ключевые слова: Казахстан, искусственный интеллект, общественное мнение, ChatGPT, психологическое состояние, цифровое самочувствие, социологический опрос, социология искусственного интеллекта.

Introduction

In recent years, artificial intelligence (AI) has rapidly integrated into various aspects of human life, transforming not only the economic and technological processes, but also the nature of human interaction with the digital environment.

In Kazakhstan, artificial intelligence is considered one of the key tracks of digital transformation of the economy and public administration. The Ministry of Artificial Intelligence and Digital Development of the Republic of Kazakhstan was established, the Concept of Artificial Intelligence Development for 2024-2029 was adopted, and “Digital Qazaqstan” the nationwide strategy for large-scale digitalization and the implementation of artificial intelligence technology was approved through 2029. The range of AI applications continues to expand, and international cooperation based on the use of AI is steadily increasing. One of the sectors experiencing rapid AI development is education. Kassym - Jomart Tokayev, President of the Republic of Kazakhstan signed the Decree “On Measures on Artificial Intelligence Adoption in Secondary Education of the Republic of Kazakhstan” [1]. During the delegation visit of OpenAI to Kazakhstan, there was a meeting with Zhaslan Madiyev, Deputy of Prime Minister – Minister of Artificial Intelligence and Digital Development, that involved discussions on expanding the AI development partnership. It was noted that Kazakhstan entered the TOP-30 countries with high usage of Artificial Intelligence [2].

According to the data of Axis Intelligence Company [3], ChatGPT has approximately one billion monthly active users, making the generative AI one of the most widespread technological phenomena of our time. The market share of AI chatbots in Kazakhstan for June 2025 – June 2026, according to Statcounter, is ChatGPT - 75.54%, Gemini - 13.36%, Claude - 4.66%, Perplexity - 4.66%, Microsoft Copilot - 1.73%, Deepseek - 0.05% [4].

The rapid changes in human and AI interaction have motivated the examination of this phenomenon in the present article. This study aims to examine public attitudes toward artificial intelligence (AI), including *awareness of ChatGPT, the frequency of AI use, perceptions of the importance of AI for society, and perceptions of the risks associated with AI*. The analysis is based on data from a representative sociological survey of 2,000 respondents conducted in Kazakhstan in 2025. In addition, the study examines a range of global socio-psychological trends associated with using AI across countries and their implications for society’s digital well-being.

Artificial intelligence as the research subject has been a focus of researchers in Kazakhstan over the past several years. The studies of Y.Tukumov are dedicated to the analysis of the development and current state of advanced technologies, and to artificial intelligence at global and national scales, as well as to identifying challenges and perspectives for using artificial intelligence in education and in scientific research [5]. The article by Z. Sovetova [6] focuses on the use of artificial intelligence in the creation of new literary works. A group of researchers from the Kazakh National University named after Al-Farabi, K.Kabylgazina, R.Zhaxylykbaeva, B.Imangaliyev are focusing on opportunities of using AI in education [7]. The advantages and disadvantages of integrating artificial intelligence technologies in education are noted in the article by A.Davletova, E.Assan, A.Kassymova, A.Medeshova [8]. The works by A. Gabdrakhman are dedicated to studying the convergence of psychology and artificial intelligence (AI) with a focus on human interaction with computers (HCI) and mental health support [9]. The author highlights the transformational potential of AI in mental health care, at the same time emphasizing the need for an interdisciplinary approach of optimization of that integration. The present study demonstrates that the issue of AI's impact on the human psyche is increasingly recognized within the Kazakhstani scientific community. However, no large-scale empirical studies have been conducted to date.

In a separate study, together with other coauthors, A.Gabdrakhman examines the use of the Burnout Assessment Tool (BAT) and Technologies of Artificial Intelligence (AI) to assess the emotional burnout of teachers [10]. The studies by B.Karbozova, N.Orazkhan, A.Rakimkulova [11] and by N.Shyndaliyeva, A.Serikkazy, G.Nurbekova are also focused on using AI in education [12]. G. Akybayeva and A.Myrzagaliyev examine the impact of artificial intelligence on the performance of industrial projects in Kazakhstan, focusing on cost reduction, time efficiency, and improvements in risk management [13]. Two studies published by the Kazakhstan Institute of Strategic Studies under the President of the Republic of Kazakhstan in 2026 are focused on using AI in law enforcement (A. Abdrashitova, N. Zatilla) [14] and in the agricultural sector (A.Alshanskaya) [15].

The sociological aspect is reflected in the article “How Kazakhstani People See the Future of Artificial Intelligence” [16]. In that publication, Prof. A. Zabirowa, Chief Research Fellow at the Kazakhstan Institute for Strategic Studies under the President of the Republic of Kazakhstan, notes that “The society has not yet an answer on the development of artificial intelligence technologies. Responses were distributed almost evenly among those who expect AI to bring benefits primarily (30.1% of respondents), those who believe that AI presents an equal balance of benefits and risks (37.7%), and those who perceive AI as posing more risks than benefits (26.7%)”. The survey was conducted between October and November 2025 using a representative sample of 8,000 respondents.

When conducting research, one of the tasks was defining the main algorithms of students' attitudes to the resources of AI, where a group of scientists N.Shyngyssova, E.Dudinova, M.Negizbayeva [17] surveyed students (n=100), who showed that 91.1 percent of participants use artificial intelligence.

According to the data of the Kazakhstan Institute for Strategic Studies under the President of the Republic of Kazakhstan (respondents n=8000 aged older than 18 years, the survey was undertaken in October – November 2025, the respondents from 17 regions and three cities of republican significance – Astana, Almaty and Shymkent – participated in the survey) 51,1 percent of the Kazakhstani population use AI technologies [18].

The exclusive representative of Gallup International in the Republic of Kazakhstan – the Center for Sociological and Marketing Studies BISAM Central Asia published the survey findings assessing the attitude of Kazakhstani people to AI. The survey was undertaken within the international survey GI in December 2025 based on a representative sample of 1043 urban respondents. Based on the findings of the survey, “In Kazakhstan, the attitudes towards artificial intelligence are generally positive. Specifically, 47.3% of respondents believe that the use of AI will bring more benefits than risks to the economy and society”. Only 18.9 percent of the respondents hold the opposite view. However, more than one-third of the respondents were reluctant to express a definite opinion, which leads to the conclusion that the further wide diffusion of AI and the emergence of new social consequences may alter the current distribution of views [19].

A special edition of the journal “Qogam jane Daur” (published by the Kazakhstan Institute for Strategic Studies under the President of the Republic of Kazakhstan) was prepared as part of the Sociological Forum “Sociological Research in the Era of Digitalization: Trends and Challenges”, with publication of several articles dedicated to Artificial Intelligence: the article of A.Sadvokassova, Sh. Dzhamanbalayeva, A.Amanzholova “From Readiness to Adoption: Social Discrepancies in Adoption the Artificial Intelligence in Kazakhstan” [20], the article by A.Kusmanova “A New Participant in the Sociological Field: What is Familiar about the Generative Artificial Intelligence in Social Research” [21].

Research Methods

As a substantial portion of social interactions increasingly shifts into the digitalThe empirical part is based on the findings of the sociological survey conducted in 2025. The survey is carried out using a representative sample comprising 2000 respondents. The study included respondents aged 18 years and older from all 17 regions and the three cities of republican significance: Astana, Almaty, and Shymkent. The survey’s margin of error does not exceed $\pm 2.19\%$. The data were collected by face-to-face interviews using the CAPI method. The survey was conducted in July 2025.

The questionnaire included four questions related to interaction of respondents with AI technologies: awareness about ChatGPT, frequency of using AI, importance of AI for society, and risks of AI toward people. The data processing was conducted using descriptive statistics (frequency distributions and percentages) and cross-tabulation analysis to examine the relationships between respondents’ socio-demographic characteristics and their attitudes toward AI. The results are presented as frequency distributions and contingency tables, reporting both absolute frequencies and percentages.

The authors, representing the disciplines of sociology, psychology, and anthropology, examined global trends in the impact of AI on humans, that lead to studying the findings of different scientific publications in the databases of PubMed, Scopus, and Web of Science from 2023 to 2025 on key inquiries: “artificial intelligence mental health”, “AI anxiety”, “AIRD”, “ChatGPT psychological impact”, “algorithmic empathy”. The selection of sources was made on the criteria of peer-review status, relevance to the research topic, and the currency of the data. The publications from leading medical and psychological journals, including The BMJ, Cureus, JAMA, JMIR Mental Health, and Nature Scientific Reports, as well as articles from specialized journals and reports published by international organizations, were selected and analyzed.

Research Limitations

The study is based on data from a one-time cross-sectional survey comprising four substantive questions and a socio-demographic section that did not allow for a more in-depth analysis.

Analysis of Global Trends

Human-computer interaction has intensified with the widespread adoption of AI in everyday life. A rapid diffusion of generative AI, particularly of chatbots based on large language models and digital systems, created a quite new situation in mental health and mental pressure. Compared to traditional media and social networks, chatbots are quite interactive and adaptive: they are responsive to the emotional signals of users, revealing humans' emotions and imitating sympathy and understanding. This phenomenon received the title "algorithmic empathy" or "artificial empathy", i.e. the capability of AI to reveal emotional patterns and humans' emotions and react to them accordingly, which in some cases creates addiction.

Another phenomenon has also emerged: "sycophancy", or the tendency of AI systems to agree with users even when they are incorrect. In their article *Programmed to Please: The Moral and Epistemic Harms of AI Sycophancy*, Cody Turner and Nir Eiskovits argue that although sycophantic behavior by AI assistants is sometimes harmless and even amusing, in most cases it undermines trust and can be dangerous [22]. The article presents a conceptual analysis of AI sycophancy.

The publication of OpenAI's audit results in the journal "The BMJ" in October 2025 became a turning point in the public discussions. According to that data, approximately 0,07 percent of active users of ChatGPT "within one week demonstrate possible signs of psychosis- or mania-related mental disorders" and "0,15 percent of users, when in conversation, had clear signs of potential planning or intention to commit suicide" [23].

Research published in JAMA in 2025, based on the data from nearly 21,000 adult respondents in the United States, identified a statistical relationship between intensity of AI use and mental health outcomes [24]. The main conclusion of the research is that the usage of artificial intelligence is considerably related to the intensification of symptoms of depression, and this situation differs depending on age. The authors argue that "the highest level of AI use was related to the gradual intensification of depression symptoms: the possibility of developing at least minimum moderate depression was higher by 30% among those who used it daily, especially among young users".

The findings of the sociological survey conducted in six European countries (France, Finland, Germany, Ireland, Italy, Poland), reflected in the journal *"Individual and well-being factors associated with social chatbot usage: A six-country study"* [25] showed that "a younger age and a higher level of psychological stress were simultaneously related to using the chat-bots in six European countries. There were other interrelations, too, but their significance varied depending on countries, which might indicate cultural differences". The given study included the findings on using social chat-bots, attitude towards new technologies, personal contacts, psychological stress, loneliness, and self-esteem.

Fear of being replaced by artificial intelligence in a professional setting comes as a serious threat to mental health. In September 2025, in the Cureus Journal of Medical Science, Stephanie McNamara and Joseph Thornton from the Department of Psychiatry at the University of Florida College of Medicine proposed a new clinical construct "Artificial Intelligence Replacement Dysfunction (AIRD)". The authors

define AIRD as “a clinical construct describing the psychological and existential distress that may be experienced by individuals facing threat or job displacement reality” [26]. They also propose a clinical framework for its identification and treatment.

According to the results of an international sociological study conducted by the Pew Research Center in 25 countries, Americans are most concerned about the spread of artificial intelligence in everyday life – 50%, while South Korean citizens are the least concerned – 16%. The average for all countries is 34% [27]. Residents of Italy (50%), Australia (49%), Brazil (48%), Greece (47%), and Canada (45%) expressed greater concern, while respondents from India (19%), Israel (21%), Nigeria (24%), and Turkey (26%) expressed less concern.

The global trends in AI development demonstrate different impacts on citizens and society as a whole. While AI is a powerful tool capable of bringing considerable benefits in different aspects of life, its development is accompanied by a range of negative risks. To these we can relate issues such as displacement of some professions, growing cybersecurity threats, the use of deepfakes, algorithms biases, and others. For this reason, it is very important and relevant to develop mechanisms to minimize potential risks and promote public well-being.

Finding of Sociological Research

To examine public attitudes toward AI technologies in Kazakhstan, a sociological survey was conducted using a sample of 2,000 respondents. The results of the univariate frequency distributions reveal the following pattern.

Awareness about ChatGPT. The majority of respondents (68.1%) reported being familiar with ChatGPT, whereas 31.9% were not.

Frequency of AI Use. The distribution of answers on frequency of using devices and applications with AI technologies in 2025 showed: daily use – 14.8%, several times a week – 22.7%; several times a month – 23%; several times a year – 10.4%; never used – 29.2%. With that said, about 70% of respondents use AI technologies at least sometimes.

Attitude Towards Importance of AI for Society. 60% of respondents (19.1% agree, and + 40.9% are more likely to agree) recognize the importance of AI technologies for societal development. At the same time, 32.2% of respondents disagreed with this statement to some degree, while 7.9% are reluctant to reply. The prevalence of positive points confirms that the society of Kazakhstan overall is ready for digital transformation, whereas a significant part of the still skeptical respondents demonstrates the necessity of conducting informational work.

Perception of AI Risks. 40.4% of respondents (10.9% agree, and +29.5% are likely to agree) to some extent still argue that AI is posing risks for people, while 50% (28.4% are more likely to disagree, and + 21.6% do not agree) do not support that suggestion. 9.7% of respondents were unable to provide an assessment.

Remarkably, the distribution of responses to this question is considerably more even than that for the question regarding the importance of AI, indicating an ambivalent public perception. The coexistence of positive evaluations of AI's usefulness and concerns about its potential risks reflects the psychological ambivalence described by the international scientists.

Table 1. Linear distributions of responses to questions about AI (n=2000)

Question	Answer option	Frequency	Percentages
Awareness about ChatGPT <i>The question in the questionnaire: Do you know what ChatGPT is?</i>	Yes, I know	1362	68.1%
	No, I don't know	638	31.9%
Frequency of AI Use <i>The question is in the questionnaire: How often in 2025 did you have to use devices and applications that use Artificial Intelligence technologies?</i>	Daily	296	14.8%
	Several times a week	454	22.7%
	Several times a month	459	23.0%
	Several times a year	208	10.4%
	Never	583	29.2%
AI is important for society	I completely agree	382	19.1%
	Rather, I agree	817	40.9%
	Rather, I disagree	388	19.4%
	I disagree	255	12.8%
	I find it difficult to answer	158	7.9%
AI is dangerous for humans <i>The question in the questionnaire: Do you agree that artificial intelligence technologies pose a danger to humans?</i>	I completely agree	217	10.9%
	Rather, I agree	589	29.5%
	Rather, I disagree	568	28.4%
	I disagree	432	21.6%
	I find it difficult to answer	194	9.7%

Gender Differences in Attitudes Toward AI

Cross-tabulation analysis revealed no substantial gender differences in attitudes toward AI. Awareness of ChatGPT was distributed relatively evenly: 67.5% of men and 68.6% of women report familiarity with the technology. Similarly, there is a 2% difference in risks of AI: 11.9% of men completely agree with AI's risks compared to 10% among women.

Table 2 - Gender differences in attitudes towards AI (n = 2000, women – 1082 respondents (54.1%), men – 918 respondents (45.9%)), %

Question	Answer option	Men (%)	Women (%)
Awareness about ChatGPT <i>The question in the questionnaire: Do you know what ChatGPT is?</i>	Yes, I know	67.5	68.6
	No, I don't know	32.5	31.4

Frequency of AI Use <i>The question is in the questionnaire: How often in 2025 did you have to use devices and applications that use Artificial Intelligence technologies?</i>	Daily	15.3	14.4
	Several times a week	22.2	23.1
	Several times a month	22.0	23.8
	Several times a year	10.3	10.4
	Never	30.2	28.3
AI is important for society	I completely agree	19.4	18.9
	Rather, I agree	39.5	42.0
	Rather, I disagree	21.1	17.9
	I disagree	12.3	13.1
	I find it difficult to answer	7.6	8.1
AI is dangerous for humans <i>The question in the questionnaire: Do you agree that artificial intelligence technologies pose a danger to humans?</i>	I completely agree	11.9	10.0
	Rather, I agree	29.7	29.2
	Rather, I disagree	28.4	28.4
	I disagree	21.2	21.9
	I find it difficult to answer	8.7	10.5

Age Differences in Attitudes Toward AI

More distinct differences were observed across in analysis of age groups. Awareness of ChatGPT is declining by age: 87.6% respondents are aware of ChatGPT in the group aged 18-34, 73.2% for the group aged 35-50, 46.9% for the group aged 51-65, and 24.3% for the group aged over 66. The given “digital discrepancy” exceeds 63 percentage points between the youngest and oldest age groups, indicating a substantial intergenerational gap in awareness of AI technologies.

A similar tendency is observed in the frequency of using AI. In the group aged 18-34, respondents comprise 23.1%, 31.8% is using several times a week, 11.3% of respondents are those who never use it. In the group aged 66+ and older, the results are quite opposite: 7.6% are for daily use, 65.4% never used.

Perception of importance of AI is also differentiated by age. In the group aged 18-34, 25.3% completely agree with AI’s being important and necessary for society’s development, 45.2% are likely to agree. This proportion declines with age: among respondents aged 66 and older, only 8.1% strongly agreed with the statement, while 30.3% agreed to some extent.

The analysis of AI posing risks reports a special interest. Among respondents aged 18-34, only 9.1% agree with AI’s being risky, while in the group aged 66+ and older, this indicator comprises 20.0%. At the same time, the proportion of respondents who did not perceive AI as risky declined from 24.3% among those aged 18-34 to 13.5% among respondents aged 66 and older, indicating a more cautious attitude toward AI among older generations. This pattern is consistent with global trends: older individuals, who are generally less familiar with AI technologies, are more likely to perceive them as a risk rather than an opportunity.

Table 3 - Age differences in attitudes towards AI (n = 2000, 18-34 years – 692 respondents (34.6%), 35-50 years – 699 respondents (34.9%), 51-65 years – 424 respondents (21.2%), 66 years and older – 185 respondents (9.3%)), %

Question	Answer option	18-34 (%)	35-50 (%)	51-65 (%)	66+ (%)
Awareness about ChatGPT <i>The question in the questionnaire: Do you know what ChatGPT is?</i>	Yes, I know	87.6	73.2	46.9	24.3
	No, I don't know	12.4	26.8	53.1	75.7
Frequency of AI Use <i>The question is in the questionnaire: How often in 2025 did you have to use devices and applications that use Artificial Intelligence technologies?</i>	Daily	23.1	14.4	5.0	7.6
	Several times a week	31.8	21.2	16.5	8.6
	Several times a month	25.6	27.2	17.2	10.3
	Several times a year	8.2	12.0	12.3	8.1
	Never	11.3	25.2	49.1	65.4
AI is important for society	I completely agree	25.3	19.7	12.7	8.1
	Rather, I agree	45.2	40.1	39.6	30.3
	Rather, I disagree	16.9	20.3	21.0	21.6
	I disagree	8.5	12.4	14.9	24.9
	I find it difficult to answer	4.0	7.4	11.8	15.1
AI is dangerous for humans <i>The question in the questionnaire: Do you agree that artificial intelligence technologies pose a danger to humans?</i>	I completely agree	9.1	9.7	11.6	20.0
	Rather, I agree	29.5	29.5	29.5	29.2
	Rather, I disagree	29.9	29.2	26.4	24.3
	I disagree	24.3	22.3	19.6	13.5
	I find it difficult to answer	7.2	9.3	13.0	13.0

Differences by Education Level

The level of awareness of ChatGPT is similar in all three groups divided by education level. Also, there is no difference in replies on the frequency of using AI in daily life.

The results show that higher education is not an unequivocal predictor of a positive attitude toward AI, rather, it is associated with a more nuanced and reflective perception of the technology. An analysis of perceptions of dangers and risks related to AI reveals a degree of distinctive ambivalence across all educational groups.

Overall, the results indicate that educational level primarily influences value judgments and interpretations of consequences of AI development rather than merely the level of awareness.

Table 4 - Differences by level of education (n = 2000, higher education (including academic degree) – 983 respondents (49.2%), secondary vocational – 724 respondents (36.2%), secondary and lower – 287 respondents (14.4%)), %

Question	Answer option	Higher education (%)	Secondary vocational education (%)	Secondary education (%)
Awareness about ChatGPT <i>The question in the questionnaire: Do you know what ChatGPT is?</i>	Yes, I know	68.7	65.7	71.8
	No, I don't know	31.3	34.3	28.2
Frequency of AI Use <i>The question is in the questionnaire: How often in 2025 did you have to use devices and applications that use Artificial Intelligence technologies?</i>	Daily	15.7	13.3	15.3
	Several times a week	23.8	20.3	24.7
	Several times a month	22.4	24.2	22.3
	Several times a year	9.4	10.6	13.2
	Never	28.8	31.6	24.4
AI is important for society	I completely agree	21.1	18.6	13.9
	Rather, I agree	41.2	41.3	38.0
	Rather, I disagree	18.9	17.8	24.7
	I disagree	11.1	13.8	16.0
	I find it difficult to answer	7.7	8.4	7.3
AI is dangerous for humans <i>The question in the questionnaire: Do you agree that artificial intelligence technologies pose a danger to humans?</i>	I completely agree	11.0	9.9	12.9
	Rather, I agree	28.8	30.4	28.9
	Rather, I disagree	28.9	29.3	25.1
	I disagree	20.8	21.8	23.3
	I find it difficult to answer	10.6	8.6	9.8

Differences by Employment Status

In all three groups by employment status, awareness of ChatGPT prevails, but at the same time it varies, too. Among those who are employed (the primary social category of the sample), the awareness of ChatGPT comprises 66.2%, which is lower than in the other two groups. The differences are moderate and, probably, they are related to the level of media consumption or general digital practices.

Differences are more distinctly revealed in the frequency of using AI. A group of self-employed and entrepreneurs who demonstrate high involvement in using AI: 80% of respondents use AI daily, while those who are in employment comprise 68.3%, and the unemployed category comprises 70%. Probably, it is related to a lack of practical need for AI, the specific nature of professional responsibilities, and psychological barriers described within the AIRD framework. With further increases in the use of AI technologies, these patterns may change over time.

Regarding the significance of AI for the development of society, all three employment groups evaluated it predominantly as positive; however, there were also slight differences in evaluations. Employees were more likely to strongly agree that AI is important for societal development (21.6%), whereas among self-employed and entrepreneurs, that indicator was lower – 15.8%.

There are also definite differences in perception of threats and risks related to using AI. Self-employed and entrepreneurs report a more definite and stable position, with only 5.7% of those who were unable to provide a reply, while in the other two groups the proportion of undecided respondents was approximately twice as high. This group is less likely to consider AI as a complete risk (6.9% fully agree) and is more reluctant to the statement “*Do you agree that artificial intelligence technologies pose a risk to people?*” (“more likely to disagree” – 38.1%). By contrast, in those groups with employees and the unemployed, the share of those who “fully agree” with AI risks, as well as with those who are reluctant to reply, is considerably high. This pattern may reflect greater anxiety and uncertainty regarding AI technologies and tools among these groups.

Table 5 - Differences by employment status (n = 2000, employed – 1014 respondents (50.7%), self-employed and entrepreneurs - 349 respondents (17.5%), unemployed – 622 respondents (31.1%), %

Question	Answer option	Employees	Self-employed and entrepreneurs	Not employed
Awareness about ChatGPT <i>The question in the questionnaire: Do you know what ChatGPT is?</i>	Yes, I know	66.2	69.1	70.6
	No, I don't know	33.8	30.9	29.4
Frequency of AI Use <i>The question is in the questionnaire: How often in 2025 did you have to use devices and applications that use Artificial Intelligence technologies?</i>	Daily	15.1	15.2	13.8
	Several times a week	21.8	27.2	22.0
	Several times a month	22.5	24.6	22.7
	Several times a year	9.0	12.9	11.3
	Never	31.7	20.1	30.2
AI is important for society	I completely agree	21.6	15.8	16.7
	Rather, I agree	40.2	39.5	42.4
	Rather, I disagree	16.1	28.4	20.3
	I disagree	12.4	12.0	13.8
	I find it difficult to answer	9.7	4.3	6.8

AI is dangerous for humans <i>The question in the questionnaire: Do you agree that artificial intelligence technologies pose a danger to humans?</i>	I completely agree	11.9	6.9	11.6
	Rather, I agree	28.9	32.4	28.8
	Rather, I disagree	25.7	38.1	27.3
	I disagree	22.6	16.9	22.8
	I find it difficult to answer	10.8	5.7	9.5

Discussion of Findings

The findings of the conducted research highlight several key trends that are consistent with the global scientific discourse on the impact of AI on human well-being.

The First Trend is a pronounced age-based differentiation in attitude toward AI. The survey findings indicate that younger respondents (aged 18-34) demonstrate a substantially higher level of awareness (87.6%), more frequent use of AI (88.7% reported using it at least occasionally), and a more positive attitude toward its role in society (70.5%). Based on data from OpenAI, the analytics on using AI instruments also support the use of AI by young people: “The primary driver of adoption is young people. The age group 18-24 accounts for 36.2% of all messages, whereas users aged 25-34 account for 35.8%. Overall, users aged 18-34 account for 72% of all inquiries. Younger users primarily employ AI for generating texts and multimedia, whereas users aged 25-34 are more likely to use AI for technical assistance” [2]. This pattern is consistent with evidence from many countries. International research also suggests that younger populations are at greater risk of developing emotional dependence on AI and are more likely to accept AI-generated recommendations without sufficient critical evaluation.

The Second Trend is the ambivalent perception of AI. 60% of respondents recognize the importance of AI for society, but at the same time 40.4% see it as a risk for people. It is worth noting that there is coexistence of positive and negative estimations to an equal extent as a social phenomenon, which indicates that respondents accept AI as a technology with big potential, but with cautiousness.

The Third Trend is the potential vulnerability of the employed population to the syndrome of AIRD. The findings of the sociological survey demonstrate that among the employed ones 40.8% consider AI to be potentially risky. In the framework of AIRD, this may reflect a realistic assessment of the risk of job loss associated with the implementation of artificial intelligence.

In this regard, particular importance should be given to “*Recommendation on the Ethics of Artificial Intelligence*”, adopted by 193 UNESCO Member States in November 2021. The Recommendation places the protection of human rights and human dignity at its core, and is based on fundamental principles of transparency and fairness, emphasizing the importance of human oversight of AI systems [28].

Conclusion

The wide daily use of artificial intelligence within the last several years is similar to the one at the beginning of the new era of internet use at the end of 90-s to the beginning of the 2000s, with the creation of personal computers, their increased availability, and technology development. The first steps in using the internet

were very cautious due to insufficient digital skills, concerns about data security, the appearance of computer viruses, distrust of technology, etc. Enhancing digital literacy and the development of the internet field as well as digital technologies led to increased trust in the internet. Nowadays, society is going through the same period of adjustment to AI, evaluating possibilities and risks. Similar to the Internet, artificial intelligence is becoming an integral part of human life, embedding into various spheres of social and economic activity.

Therefore, it is essential to enhance the digital literacy of the population, develop professional retraining programs, and integrate AI-anxiety screening into the practice of psychological assistance. Moreover, it is becoming increasingly relevant to study the digital well-being of the population: assessment of AI impact on human well-being and quality of life, level of trust in digital technologies, digital security, minimization of potential risks, etc. It is important to conduct regular sociological surveys of the population to estimate levels of trust and concern about AI, society's readiness for technology, education levels, and stereotypes about AI, etc.

Interaction of AI with society, its impact on social structures and institutions, culture, human behavior, as well as other matters in digital systems constitute the subject matter of the sociology of artificial intelligence, including the use of AI as a sociological research method. Further studies should focus on longitudinal studies examining changes in the psychological well-being of AI users, regular sociological assessments of AI perception and use, cross-cultural validation of the diagnostic criteria for AI-Related Dependency (AIRD), and the development of evidence-based psychological support interventions to promote population well-being in the ongoing digital transformation.

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