IMPACT OF AI ON THE HEALTH AND BEHAVIOURAL CHANGES OF YOUNGER GENERATION

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ABSTRACT

Artificial Intelligence (AI) has become a significant part of the daily lives of the younger generation, influencing their education, and decision-making. Although AI provides several advantages, such as easy access to information, enhanced learning opportunities, and improved productivity, excessive use of AI may result in health problems and behavioural changes. Both primary and secondary data were used for the research purpose. Primary data were collected through a structured questionnaire, and responses of 100 has been considered. Secondary data were collected from journals and previously published research articles. Data were analysed using SPSS software. The study concludes that AI has a significant impact on the health and behavioural changes of the younger generation. Excessive AI usage has reduced face-to-face social interactions, increased dependency on AI, and contributed to physical health issues such as eye strain, tiredness, and reduced physical activity. Therefore, responsible and balanced use of AI is essential to promote the overall well-being of the younger generation.

Keywords: Artificial Intelligence, Health, Behavioural Changes, Younger Generation, mental Health, Physical Health, Digital Technology

INTRODUCTION

Artificial Intelligence (AI) refers to the ability of computer systems and machines to perform tasks that normally require human intelligence, such as learning, problem-solving, decisionmaking, and communication. In recent years, AI has become an important part of everyday life through smartphones, social media, virtual assistants, educational applications, and entertainment platforms. The younger generation is the most active user of AI-powered technologies, using them for learning, content creation, and daily activities. AI has improved access to information, enhanced learning experiences, and increased productivity.

At the same time, the increasing use of AI has raised concerns about its influence on the physical health, mental well-being, and behaviour of younger people. Excessive screen time,

reduced physical activity, sleep disturbances, stress, anxiety, and behavioural changes have become common concerns among the younger generation. Understanding these effects is essential for promoting healthy technology usage and creating awareness about the responsible and balanced use of AI among young people.

SCOPE OF THE STUDY

The study focuses on the impact of Artificial Intelligence on the health and behavioural changes of younger generation. It examines the influence of AI on physical health, mental health, social behaviour, learning habits, and lifestyle. The study considers both the positive contributions and the negative consequences of AI use among young people. It also aims to provide suggestions for promoting the safe, balanced, and responsible use of AI technologies.

NEED OF THE STUDY

The need of this study arises from the rapid growth and widespread use of Artificial Intelligence (AI) among the younger generation. AI has become an integral part of daily life, particularly in education, entertainment, and decision-making. Although AI offers several benefits, such as improved learning, quick access to information, and increased productivity, its excessive use may have significant effects on the physical health, mental well-being, and behavioural changes of young people. Therefore, this study is needed to examine the impact of AI on the health and behavioural changes of the younger generation, identify both its positive and negative effects, and create awareness about the responsible and balanced use of AI technologies among younger generation.

SIGNIFICANCE OF THE STUDY

The significance of this study is to understand the impact of Artificial Intelligence (AI) on the health and behavioural changes of the younger generation. The study focuses on analysing how AI influences physical health, mental well-being, social behaviour, and lifestyle patterns among young people. It also aims to identify the benefits and challenges associated with the increasing use of AI technologies and understand the level of dependency of the younger generation on AI-based applications. The study helps in creating awareness about the need for effective AI usage among the younger generation.

RESEARCH GAP

The review of literature indicates that many researchers have examined the impact of Artificial Intelligence (AI) on health, behavioural change, cognitive development, and psychological well-being among younger generation. However, limited studies have focused specifically on the combined impact of AI on both the health and behavioural changes of the younger generation. Most previous research has concentrated on specific applications of AI, such as chatbots, or digital mental health interventions, rather than examining the overall influence of AI usage on the physical health, mental well-being, and behavioural patterns of young people. Therefore, this study attempts to bridge this gap by analysing the impact of AI on the health and behavioural changes of the younger generation.

OBJECTIVES OF THE STUDY

- To identify the demographic factors of the respondents.
- To analyze the impact of AI usage on the mental health and behavioural changes of younger generation.
- To study the physical health effects of prolonged AI and screen use among young people.
- To understand the level of dependency on AI technologies among young people.

REVIEW OF LITERATURE

Fu L et.al (2026) The study analyzed the design, development, and effectiveness of AI chatbots in promoting health behaviour change. The review found that AI chatbots improve health behaviours by providing personalized coaching, goal setting, feedback, monitoring, and social support. Positive outcomes were reported in areas such as physical activity, smoking cessation, stress management, and healthy eating. However, evidence on long-term effectiveness remains limited. The authors concluded that AI chatbots have promising potential to support health behaviour change, but further high-quality research is needed to establish their long-term impact.

Feng Y. et.al (2025) The study systematically reviewed and meta-analyzed the effectiveness of artificial intelligence (AI) driven conversational agents in improving mental health among young people. It evaluated the impact of AI-powered chatbots and virtual assistants on mental health outcomes, including symptoms of depression, anxiety, stress, and psychological wellbeing, the findings revealed that AI-driven conversational agents can significantly enhance

mental health by providing accessible, personalized, and timely psychological support, particularly for young individuals who may face barriers to traditional mental health services.

Young. J et.al (2024) The study examined how young people perceive AI-generated and human-generated responses to help-seeking messages on social media. The study found that participants preferred AI-generated responses for issues related to relationships, selfexpression, and physical health. However, for sensitive topics such as suicidal thoughts, they favoured human responses. The findings suggest that AI can support peer interactions and wellbeing among young people, but human involvement remains essential when addressing serious mental health concerns.

Shanmugasundaram M et.al (2023) The study reviewed the impact of digital technology, social media, and artificial intelligence on human cognitive functions. It examined how emerging technologies influence cognitive processes such as attention, memory, learning, decision-making, and problem-solving. The findings revealed that digital technologies and AI can enhance learning experiences, information accessibility, and cognitive performance through personalized and adaptive systems.

Shields C et.al (2022) The study examined the role of AI-powered chatbots in promoting health behaviour change. The findings showed that AI chatbots support healthy behaviours through personalized coaching, feedback, and goal setting, particularly in physical activity, diet, smoking cessation, and stress management. The authors concluded that AI chatbots have promising potential to improve health behaviours, although further research is needed to confirm their long-term effectiveness.

Lee. D et.al (2021) The study analyzed the application of Artificial Intelligence (AI) in the healthcare industry through a review of the literature and real-world case studies. The findings showed that AI improves patient diagnosis, treatment, nursing services, and hospital management by enhancing efficiency and decision-making. The authors concluded that AI has significant potential to transform healthcare, but its successful implementation requires effective planning, policies, and strategies to address associated challenges.

LIMITATION

The sample size was limited to 100 respondents. So, the study is not the accurate representation of the whole universe. Lack of time was another limitation since the study had to be conducted within 6 months.

CONCEPTUAL FRAMEWORK

ARTIFICIAL INTELLIGENCE

Artificial Intelligence refers to the capability of computer systems and digital technologies to perform tasks that normally require human intelligence, such as learning, reasoning, decisionmaking, and problem-solving. AI applications include chatbots, virtual assistants, recommendation systems, learning platforms, and social media algorithms. These technologies are widely used by the younger generation for education, communication, entertainment, and information access. AI plays a significant role in shaping daily routines, learning patterns, and behavioural responses by providing personalized, automated, and data-driven interactions.

BEHAVIOURAL CHANGES

Behavioural changes refer to modifications in an individual's habits, attitudes, social interactions, and decision-making patterns over time. The increased use of AI-based applications has led to noticeable behavioural changes among the younger generation, including reliance on digital tools for problem-solving, reduced face-to-face interactions, attention, and changes in learning behaviour. These changes influence how young individuals manage time, and adapt to social and academic environments.

AI DEPENDENCY

AI dependency refers to the extent to which individuals rely on Artificial Intelligence technologies for learning, decision-making, problem-solving, communication, and daily activities. The younger generation increasing the uses of AI-powered applications to obtain information, complete assignments, generate ideas, and manage tasks. While AI improves efficiency and convenience, excessive reliance may reduce independent thinking, creativity, and critical reasoning abilities.

AI USAGE AMONG THE YOUNGER GENERATION

Artificial Intelligence (AI) has become an integral part of the daily lives of the younger generation. The rapid advancement of digital technologies has increased the accessibility and popularity of AI-powered applications among young people. From education and communication to entertainment and social networking, AI technologies are widely used to simplify tasks, enhance productivity, and improve user experiences. The younger generation is considered one of the most active users of AI because of their familiarity with digital devices and willingness to adopt emerging technologies.

AI has transformed the way young people learn, communicate, make decisions, and access information. The increasing use of AI-powered platforms has created both opportunities and challenges, influencing various aspects of health, behaviour, and lifestyle. The major areas of AI usage among the younger generation are discussed below.

1. **AI Usage in Education**

   One of the most significant applications of AI among young people is in the field of education. AI-powered learning platforms provide personalized educational experiences based on the individual needs and learning abilities of students. These systems can identify learning gaps, recommend study materials, and offer customized feedback to improve academic performance.

2. **AI Usage in Communication**

   Communication has been greatly influenced by AI technologies. Young people frequently use AI-powered messaging applications, chatbots, virtual assistants, and social media platforms for communication and exchange of facts. These technologies enable instant responses, language translation, voice recognition, and personalized interactions.

3. **AI Usage in Social Media**

   Social media platforms extensively utilize Artificial Intelligence to personalize content and improve user engagement. AI algorithms analyze user behaviour, interests, and preferences to recommend videos, posts, advertisements, and social connections. Young people spend a considerable amount of time on AI-driven social media platforms, which provide personalized content based on their activities. These recommendation systems increase engagement and make social media experiences more enjoyable.

4. **AI Usage in Entertainment**

   Entertainment is another area where AI has become highly popular among the younger generation. Streaming services, gaming platforms, music applications, and videosharing websites use AI technologies to recommend personalized content. AI analyses viewing and listening habits to suggest movies, television programs, songs, and online content that match individual preferences. Gaming applications use AI to create intelligent virtual opponents and enhance user experiences.

5. **AI Usage for Information Access**

   AI has revolutionized the way young people search for and access information. AIpowered search engines, virtual assistants, and conversational AI tools provide quick and accurate answers to user queries. Students and young professionals use AI systems to gather information, conduct research, solve problems, and obtain explanations on various topics. The ability to access information instantly has improved learning efficiency and productivity.

BENEFITS OF AI USAGE AMONG YOUNGER GENERATION

- **Personalized Learning**

  One of the most significant benefits of AI is its ability to provide personalized learning experiences. AI-powered educational platforms analyze students' learning styles, strengths, and weaknesses to deliver customized content and recommendations. This allows students to learn at their own pace and receive support based on their individual needs. Personalized learning enhances academic performance and encourages independent learning.

- **Easy Access to data and resources**

  AI technologies enable young people to access any kind of datas and resources quickly and efficiently. Through AI-powered search engines, virtual assistants, and intelligent learning platforms, users can obtain answers to their questions within seconds. This improves knowledge acquisition, research capabilities, and overall learning efficiency.

- **Improved Productivity**

  AI helps automate routine and repetitive tasks, allowing young people to complete their work more efficiently. Students can use AI tools for note-taking, summarizing content, scheduling tasks, and organizing study materials. This saves time and increases productivity in both academic and personal activities.

- **Enhanced Creativity**
  AI-powered tools support creativity by assisting with writing, graphic design, video editing, music creation, and content generation. Young people can explore innovative ideas and develop creative projects more effectively with the support of AI technologies. This encourages innovation and artistic expression.
- **Career Readiness**
  The growing demand for AI-related skills in the job market makes AI knowledge highly valuable. Exposure to AI technologies helps young people develop technical skills and adaptability, preparing them for future careers in a technology-driven world.

CHALLENGES OF AI USAGE AMONG YOUNGER GENERATION

- **Excessive Dependency on AI**
  One of the major challenges associated with AI usage is the growing dependency on AI-powered tools and applications. Many young people rely on AI for completing assignments, solving problems, obtaining information, and making decisions. While this dependence improves efficiency and convenience, excessive reliance may reduce independent thinking and self-learning abilities. Young users may become accustomed to receiving instant solutions rather than developing their own analytical and problemsolving skills.
- **Reduced Critical Thinking Skills**
  AI technologies provide quick answers and automated solutions, which can discourage young people from engaging in deep thinking and independent analysis. When users depend heavily on AI-generated responses, they may spend less time evaluating information, questioning assumptions, and developing logical reasoning abilities. Over time, this may weaken critical thinking skills, which are essential for academic success and personal development.
- **Increased Screen Time**
  Most AI applications are accessed through digital devices such as smartphones, tablets, and computers. As a result, the use of AI often leads to prolonged screen exposure. Excessive screen time may reduce participation in physical activities and increase the risk of technology addiction. Spending long hours interacting with AI-powered platforms can also affect concentration, productivity, and overall well-being.

- **Privacy and Security Risks**

AI systems often collect and analyse large amounts of personal data to provide personalized services. Young users may unknowingly share sensitive information through AI-powered applications and digital platforms. This creates concerns regarding privacy and unauthorized access to personal information.

- **Physical Health Problems**

  Prolonged use of AI-enabled devices may negatively affect physical health. Common health problems include eye strain, headaches, neck pain, back pain, sleep disturbances, and fatigue. The sedentary lifestyle associated with excessive technology use may also contribute to obesity and other health-related issues. These physical challenges highlight the importance of maintaining healthy technology usage habits.

DATA ANALYSIS AND INTERPRETATION

FREQUENCY ANALYSIS

Table: Frequency Table Representing the Demographic Factors of Age, Gender, and Education

	Option	Frequency	Percentage
AGE	Below 15	1	1
	15-18	4	4
	19-22	78	78
	23-25	9	9
	Above 25	8	8
	Total	**100**	**100**
GENDER	Male	22	22
	Female	78	78
	Total	**100**	**100**
EDUCATION	School	8	8
	Undergraduate	33	33
	Postgraduate	53	53
	Professional course	6	6
	Total	**100**	**100**

INTERPRETATION

The table reveals that the majority of the respondents (78%) belong to the 19-22 years age group. It also shows that the majority of the respondents (78%) are female. Regarding educational qualification, the majority of the respondents (53%) are postgraduates. This indicates that the study is mainly represented by female respondents aged 19-22 years with postgraduate education.

DESCRIPTIVE ANALYSIS

Table: Mean and Standard Deviation of the Health and behavioural Changes Due to AI Usage

Particulars	Mean	Standard Deviation	Rank
AI usage has reduced my face-to-face social interactions.	4.17	.888	I
I find it difficult and strain myself to concentrate without AI assistance.	4.03	.915	III
I frequently use AI tools which gives disturbed sleep and tiredness in the morning.	3.92	1.070	V
I am physically active compared to my screen time.	4.09	.866	II
AI influence my decision-making process	3.95	1.086	IV
I feel stressed when I cannot access AI tools.	3.77	1.127	VII
I feel anxious about depending too much on AI.	3.86	1.172	VI

INTERPRETATION

It is inferred that AI usage has reduced face-to-face social interactions ranked first, followed by being physically active compared to screen time in second place. Difficulty concentrating without AI assistance ranked third, AI influencing decision-making ranked fourth, disturbed sleep and morning tiredness due to AI use ranked fifth, anxiety about AI dependency ranked sixth, while stress when unable to access AI tools ranked last.

CHI-SQUARE TEST

Table: Relationship Between Education and the Reason for Dependency on AI Technology

Null Hypothesis (H_0): There is no significant association between education and the reason for dependency on AI technology.

Alternative Hypothesis (H_1): There is a significant association between education and the reason for dependency on AI technology.

Particulars	Saves Time	Improves Accuracy	Convenience	Multiple Benefits	Total
School	2	0	1	5	**8**
Undergraduate	10	5	3	15	**33**
Postgraduate	16	12	11	14	**53**
Professional course	3	1	11	1	**6**
Total	**31**	**18**	**16**	**35**	**100**

	Value	DF	Asympototic Significance (2-Sided)
Person Chi-Square	9.285[a]	9	.411

INTERPRETATION

The table reveals that 35% of the respondents depend on AI for its multiple benefits, followed by 31% of the respondents feel AI saves time. Although postgraduate respondents form the largest group, the Chi-square test ($p = 0.411 > 0.05$) indicates no significant association between education and the reason for dependency on AI technology. The respondents' level of education does not significantly influence their reason for depending on AI.

MAJOR FINDINGS

- It is observed that 78% of the respondents belong to the 19-22 years age group, 78% are female, and 53% are postgraduates.
- It is observed that AI usage has reduced face-to-face social interactions ranked first, followed by reduced physical activity, difficulty concentrating, AI influenced decisionmaking, disturbed sleep, anxiety about AI dependency, and stress without AI access.
- It is found that 35% of the respondents depend on AI for its multiple benefits, while 31% use it to saves time. The Chi-square test ($p = 0.411 > 0.05$) indicates that there is no significant relationship between educational qualification and AI dependency.

SUGGESTIONS

- Encourage the responsible and balanced use of AI among the younger generation by promoting AI as a supportive learning tool rather than a complete replacement for independent thinking and problem-solving
- Create awareness about the physical and behavioural effects of prolonged AI and screen usage through seminars, workshops, and digital well-being campaigns conducted by educational institutions and organizations.
- Promote healthy digital habits by encouraging users to follow regular screen breaks, maintain proper posture, reduce continuous screen exposure, and engage in physical activities to minimize eye strain, fatigue, headaches, and other health-related issues.
- Encourage educational institutions to integrate critical thinking, creativity, and analytical skill development into the learning process so that students use AI as a supplement to learning rather than relying on it entirely for academic tasks.

CONCLUSION

The study concludes that Artificial Intelligence (AI) is mainly used by the younger generation for educational purposes. AI helps us to save time, understand difficult topics, and complete academic and work-related tasks more easily. However, excessive reliance on AI may reduce face-to-face social interaction and increase dependence on AI, making it difficult for the younger generation to concentrate without AI support. The study also shows that long hours of screen usage with AI tools have a greater impact on health issues such as eye strain, tiredness, headaches, fatigue and simultaneously it leads to reduced physical activities. In addition,

younger generations are our respondents who do not take regular breaks while using digital devices, which may cause serious health disorders. Therefore, AI should be used wisely and moderately so that people can enjoy its benefits while maintaining good physical health, social interaction, and overall well-being.

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