



To What Extent Does AI Companionship Impact Human Emotional Well-being and Loneliness?

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ABSTRACT

Artificial Intelligence has increased in its usage by humans, especially applications such as AI Companionship. AI Companions have been created by humans to support and help humans emotionally and has become one of the most used AI features. The increase in the usage of AI Companionship brings many benefits, but also can have multiple negative consequences. This review paper analyzes studies about the effects of AI Companions on different generations (Gen Z, Millennials, Gen X, and Baby Boomers), different genders, and its overall positive and negative impacts on humans. It shows how AI Companionship mostly impacts all ages in similar ways besides a few differences and how females tend to be more emotionally reliant on it compared to males who are more sexually dependent on it. While AI Companionship can help humans by providing emotional support without judgement, it can also cause them isolation from real-world relationships. Explaining these topics about AI Companionship is important in helping humans understand its characteristics and can be efficiently used by people to decide whether or not having an AI Companion is the best choice for them.

Introduction

There are many people that use technology such as AI or Artificial Intelligence in their daily lives for many personal tasks. In recent years, members of the younger population, particularly Generation Z (Gen Z), are highly using AI or Artificial Intelligence. Artificial Intelligence is a technological tool that focuses on building machines with human intelligence to perform tasks like learning, reasoning, problem-solving, perception, and language understanding. (19) Be it using applications and websites made through AI for entertainment such as YouTube to utilize AI for academic work through apps like ChatGPT, the majority of teenagers have used AI in some way in their lives. One of the most used AI applications that has gained recent popularity is AI Companionship. AI Companionship is a term used for applications, AI technology, or a digital entity such as chatbot that is designed to provide companionship, emotional support, and are typically human-like conversations that aim at providing emotional support for humans that use them. (18) There are many AI Companionship applications such as Replika or Woebot that offer advice and companionship for users. (16) However, humans have still yet to completely uncover the extreme effects of AI companionship, especially how it affects humans mentally, emotionally, and psychologically.



For users who are emotionally unwell and need emotional help and support, one of the most popular applications that they will turn to is AI Companionship. However, even after knowing that applications such as AI Companionship are used by users to help them for emotional support and well-being, a user is still unsure of AI Companionship's eligibility and reliance as there isn't enough proof to confirm whether AI Companionship is effective and about what psychological impact it has on humans emotionally. This review paper answers the question of "What Psychological Impacts Does AI Companionship Have On Human Emotional Well-being And Loneliness?" by going in depth about AI Companionship, its positive and negative effects, and will come to a conclusion of whether AI Companionship has more of a beneficial or negative impact on a human's emotional health.

This review paper can be significantly important in helping people decide how to handle their emotional health and to understand whether AI Companionship is effective and influential in helping their emotional health prosper. Through this review paper, people that are emotionally unwell and are suffering through emotional problems such as loneliness or depression will gain an understanding of how AI Companionship works and whether it will be beneficial or the right choice for them.

How Different Age Groups Are Affected By AI Companionship?

It is a huge misconception that the Baby Boomer Micro-Generations, usually around the ages of 60 and above, have disinterest in Artificial Intelligence as it is usually quite the opposite. Although the majority of the human population that is using Artificial Intelligence is Gen Z (Generation Z), other generations of different ages such as Millennials, Gen X, and Baby Boomer Generation all tend to use AI in their daily lives. (1) As the use of AI has increased in Generation Z, there is also an increase in the usage of applications with the purpose of providing AI Companionship.

AI Companionship can be described as a tool where people can have conversations and chat with AI generated systems about their feelings and emotions. Such applications that provide AI Companionship include "CHAI", "Character.AI," or "Replika". These platforms tend to be shown as AI friends or consultants that listen to the feelings of people and "provide validation" to them. Research has shown that approximately "around 72% of teenagers or Gen Z's tend to have used AI Companionship at least once in their lives." Usually, the younger teenagers around the ages of 13-14 tend to trust AI Companionship applications and services more than the older teenagers of around the ages 15-17. (2) The younger generation such as Gen Z tend to use AI Companionship the most due to factors such as the younger teenagers and even children forming strong emotional attachments to AI Companionship which can impact their physical and emotional development. (3) There are many Gen Z's typically highschoolers that have positive opinions about the usefulness of AI Companionship applications with them believing that it helps in "providing advice and friendship." These highschoolers tend to appreciate and support these applications due to these applications having the ability to give validation to them without being judgemental which real humans tend to do. (4)

Although, these teenagers and highschoolers think positively about AI Companionship and its impacts, a study conducted by Michael Robb, a researcher at Common Sense, analyzed many popular AI Companions in a risk assessment, where they found many concerns such as these AI Companions having the ability to increase mental health risks, encourage poor life choices, share harmful information, and expose teens to inappropriate sexual content. (5) While the younger Generation Z tends to have huge reliance and trust in AI Companionship, the older Gen Z of around 17 and older tend to have more trust issues and are less likely to believe in the effectiveness of AI Companionship. This leads to the older Generation Z tending to use AI Companionship much less and are more aware about the negative sides of it as they have less trust in AI Companionship. (2)

AI Companionship seems to have taken over millennials as well with a significant portion of millennials, specifically those that are mostly online, believing AI to have the ability to replace human romantic relationships, and with some even expressing willingness to have an AI partner. (6) A study showed that millennials preferred AI Companionship for emotional support more than pets as they believed it was more effective. This can be attributed



to sophisticated systems dominating their everyday life and the ease in using Artificial Intelligence for different purposes. (9)

Although, dependence on AI Companionship can reduce loneliness, this can potentially negatively affect the millennial generation as they will have difficulty communicating and forming relationships with real humans due to their high dependence on AI Companionship. (7) According to Nature, individuals can develop unhealthy emotional attachments to AI companions, mirroring dysfunctional human relationships and potentially leading to anxiety and obsessive thoughts. (8) Although AI Companionship affects all generations (Gen Z, Millennials, Gen X, and Baby Boomers) in the similar ways with it helping reduce loneliness and also having negative impacts like high dependence and increase mental health risks, there tends to be more harm for younger generations like Gen Z and Millennials as they are less mature and tend to use AI in higher rates compared to Gen X and Baby Boomers as these older generations are less likely to use AI in high amounts and are more emotionally and mentally developed to not be negatively affected by AI Companionship. (10)

How AI Companionship Works Differently For Different Gender Groups?

Artificial Intelligence tends to impact each person differently with it affecting some more in negative ways than others. AI Companionship tends to have different effects on people of different ages, however, this goes the same for gender too. AI, specifically AI Companionship, tends to impact each gender differently.

For the female gender, they tend to have different expectations from AI Companions compared to male. Females tend to have more emotional connections with AI Companions with women usually preferring their AI Companion to have personalities that are polite, caring, and intelligent rather than superior or posh. (12) More girls (about 45%) that are AI Companion users have said that they applied social skills practiced with AI Companions to real-life situations compared to boys (around 34%) who were less likely to use their skills. (2) A study conducted by Family Studies showed that “men are more open to AI friendships than women” and “young men are more likely to believe that AI has the potential to replace real-life romantic relationships.” (6)

While females tend to use AI Companionship for emotional support, men tend to mostly use AI Companionship for sexual desires. AI Companions such as “naturalistic humanoid sex robots Roxxy and Harmony in the US” have been designed as “female companions to satisfy male users’ needs for intimacy, romance, or sex.” (13) There is a higher proportion of male individuals interacting with AI romantic companions for sexual purposes. This study conducted by family studies showed that overall men preferred AI relationships over real relationships. (14) Men are twice as likely as women to consider an AI companion in the future due to factors such as the high dependence of male gender on AI compared to female, women being more suspicious of technology compared to men, and due to “technology in these areas being shaped by men who have a very particular set of assumptions, motivations, priorities, and goals.” (15)

How Can AI Companionship Have Positive & Negative Impacts on Individuals?

AI Companionship is designed to provide emotional support for humans and is primarily used to help reduce loneliness in individuals. AI Companionship provides services such as listening to concerns, offering advice, and providing validation with intent of providing support without judgement. (11) These services and support of AI Companionship helps people by providing personal advice, emotional support, and everyday decision-making and problem-solving. Also, teenagers tend to highly use AI Companions due to their ability to give validation to them without being judgemental and also provide feedback that aligns with what these people want to hear. (4) These AI Companions and their AI friendships are designed to stimulate real-life experience and stimulate real human



connections. “These digital friends provide comfort, companionship, and a sense of connection, making them an appealing solution for loneliness or social anxiety.” There are many applications such as Replika or Woebot that offer advice and companionship for users.

The benefits of these applications are that they provide consistent support for 24 hours, offer judgement-free opinions, can personalize their speech and opinions based on person, and provide a low-stress environment to reduce social anxiety. (16) Some helpful functions of these AI Companions is their ability to recall past conversations, ask follow-up questions, and offer guidance without judgement. “These AI Companions have the potential to empower users by helping them overcome social anxiety through the art of initiating communication or by encouraging them to open up about their personal experiences and emotional vulnerabilities.” Some of these AI Companion applications also have the ability to detect instances of health concerns and can immediately alert emergency health services and provide immediate assistance. (17)

Other than these benefits, there are a lot of negative impacts of AI Companionship on individuals. These negative impacts can include over-reliance/dependence on AI friendships, isolation from real-world interactions, difficulty in forming real-life relationships, and emotional disconnection due to lack of empathy and emotional understanding. (16) Some of these AI Companionship applications can cause distress or sentimental harm to people due to its pre-programmed language as it is programmed to mimic supportive behaviors without understanding them. The judgement-free behavior of these applications can be unhealthy and harmful because at times, some empathetic pushback and critical feedback is important. (17) AI Companionship tends to have both positive and negative aspects, but it depends on the way these applications are used that makes a difference.

Conclusion

This review paper portrays the positive and negative impacts of AI Companionship on the mental and emotional health of humans. It goes deep in depth about the impacts of AI Companionship on the different ages of humans and how differently it impacts males and females. This review paper combines and summarizes the findings of other scientists and researchers which causes this paper to not go over all of the different positive or negative features of AI Companionship, but it still provides an efficient understanding of what AI Companionship is, what are some ways in which it can help humans, and how in some ways it can cause humans harm.

The world of Artificial Intelligence and its aspects such as AI Companionship is vast and requires an in-depth study of its many characteristics and features. Due to this review paper having multiple limitations, it is advised for all the readers to do additional research and use these AI Companionship applications based on their own requirements while keeping the benefits and disadvantages in mind. As the paper goes over the topics of how different age and gender groups are affected by AI Companionship and its many positive and negative impacts, the understanding of these topics and AI Companionship can be evolved by the research of new topics. This review paper can further be studied through the introduction and studying of other topics such as how emotional dependence on AI Companionship might lead to a person’s inability to form relationships or deteriorate already existing relationships with other humans. Exploring other new topics such as the one stated can help in improving this review paper and can broaden the knowledge of humans about AI Companionship.



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