Journal of Islamic Psychology and Behavioral Sciences
Vol. 4 No. 3 2026, 307-320
Publisher: CV. Doki Course and Training
E-ISSN: 2985-8070 | P-ISSN: 2986-7762

"ChatGPT" Interaction and its Relationship with Loneliness and Social Connection in Young Adult Workers

Aprilia Mega Puspitasari[1], Muhammad Firas Akram[2], Putri Balqist Shahnaztasya[3], Zainun Mu'tadin[4]
Persada Indonesia University YAI[1,2,3,4]
Corresponding email: aprilia.2465290056@upi-yai.ac.id

ARTICLE INFO

Article History
Submission: 26-05-2026
Review: 02-06-2026
Revised: 11-06-2026
Accepted: 11-06-2026
Published: 23-06-2026

Keywords
Artificial Intelligence
ChatGPT
Young Adult Workers
Loneliness
Social Connectedness

ABSTRACT

Today, AI-based technologies such as ChatGPT are becoming increasingly widespread. This development presents a new form of communication between humans and digital systems that resembles interpersonal interaction and may be associated with various psychological outcomes that can potentially affect individual psychological aspects, especially feelings of loneliness and social connectedness because it is considered to provide emotional support, information, and alternative social interactions. The main focus of this study is to examine the relationship between interaction with ChatGPT and feelings of loneliness and social connectedness among young adult workers aged 20–35 who had used ChatGPT for at least one month. The research approach used a quantitative method with a non-experimental correlational design and statistical analysis of the relationships among variables. The sample was obtained using a purposive sampling technique. Data were analyzed using Pearson Correlation and Linear Regression. The results showed that interaction with ChatGPT has no significant relationship or influence on respondents' levels of loneliness ($p = 0.317$). This occurs because interactions with AI tend to be utilitarian and functional, making them unable to replace emotional intimacy between humans. Conversely, interactions with ChatGPT had a very strong positive relationship ($r = 0.986$), explained 97.1% of the variance in social connectedness. These findings suggest that ChatGPT functions more as a cognitive aid and social facilitator that enhances individuals' confidence and readiness to interact in real-life environments, rather than as an emotional substitute for overcoming social isolation.

Introduction

Loneliness is becoming an increasingly prominent psychological issue in young adulthood, particularly among workers aged 20 to 35. Individuals face complex

Journal of Islamic Psychology and Behavioral Sciences
Vol. 4 No. 3 2026, 307-320

developmental demands, including career adjustments, expanding social relationships, and fulfilling personal and professional responsibilities. This situation, coupled with the increasing use of digital communication, can impact the quality of social interactions and contribute to feelings of loneliness, a subjective state where affective needs are not met despite being in a busy social environment.

Loneliness is subjective and not necessarily related to the number of social interactions, but rather to an individual's assessment of the quality of their interpersonal relationships (Mann et al., 2022). Cacioppo and Cacioppo (2021) explain that loneliness arises when an individual feels emotionally disconnected from their social environment despite being physically present with others. This is influenced by cognitive processes regarding social acceptance and the emotional need to feel loved and valued (Lim et al., 2020). Loneliness in the modern era is largely influenced by the lack of meaningful relationships that provide emotional validation (Ta et al., 2020). Nakao and Kato (2022) emphasize that an individual's inability to establish adequate interpersonal communication can increase feelings of isolation. Therefore, it can be concluded that loneliness is a psychological experience that arises from the perceived inadequacy of one's need for social closeness and relationships.

Changes in the digital context through the development of artificial intelligence (AI) are increasingly influencing the dynamics of modern social relationships. ChatGPT, a text-based conversational agent, is beginning to be used not only as a source of information but also as a medium for emotional expression and a space for sharing personal experiences. These usage patterns indicate a shift in interaction behavior, where individuals establish functional forms of connectedness with non-human systems to meet emotional needs. ChatGPT is the world's most popular AI chatbot, capturing nearly 50% of the entire AI web traffic market and boasting over 900 million weekly users. It holds a traffic share roughly four times larger than its closest competitors, like Google Gemini and Microsoft Copilot. ChatGPT is an artificial intelligence model that generates human-like conversational responses through context understanding and coherent language construction (Kalla et al., 2023). Interactions with ChatGPT can be informative, emotional, or instrumental, allowing users to express feelings or seek support without fear of judgment. These interactions provide a sense of being heard, emotional validation, and social presence, potentially reducing loneliness and increasing social connectedness

Previous studies have shown that AI-based conversational agents can help students reshape negative thought patterns to be more adaptive and constructive (Lesmana, Amran, & Deliati, 2025). Other findings suggest that context-sensitive textual responses can foster closeness and emotional attachment (Ta et al., 2020). In a study by Vandhika and Sharani (2025), loneliness is more common among adolescents socially. This trend continues to increase across the late adolescence and early adulthood age groups.

Lee et al. (2001) identified four main aspects of social connectedness: emotional closeness, social acceptance, social support, and a sense of belonging to the social

environment. These four aspects reflect the quality of interpersonal relationships perceived by individuals. Individual factors such as empathy and mental health influence social connectedness (Cacioppo and Cacioppo, 2014). Environmental factors, including family support and the quality of interactions within social groups, also strengthen feelings of connectedness (Cohen and Wills, 1985). The use of technology can expand social networks, but it also has the potential to create shallow interactions that decrease connectedness (Primack et al., 2017). Cultural factors determine how individuals value social relationships, whether they are more community-oriented or individualistic.

However, previous studies have produced mixed findings regarding the psychological role of AI-based conversational agents. Some studies suggest that AI interactions may provide emotional support and enhance perceived social connectedness, while others argue that AI remains primarily a functional tool that cannot replace authentic human relationships. Furthermore, most existing studies have focused on students or the general population, with limited attention given to young adult workers who experience unique socio-emotional and occupational demands while simultaneously engaging intensively with digital technologies. This gap highlights the need for further investigation into the relationship between ChatGPT interaction, loneliness, and social connectedness among young adult workers. Therefore, this study aims to examine the relationship between interaction with ChatGPT and levels of loneliness and social connectedness in this population. Academically, this research contributes to the growing literature on human-AI interaction within social psychology. Practically, the findings are expected to provide a better understanding of the potential benefits and limitations of ChatGPT as a form of digital social support.

Method

This study employed a quantitative approach with a non-experimental correlational design to examine the relationship between interaction with ChatGPT, loneliness, and social connectedness. This was done to obtain an empirical picture of the relationship between interaction with ChatGPT, loneliness, and social connectedness. Respondents were recruited through purposive sampling. The criteria were active workers aged 20–35, who had used ChatGPT for at least the past month, and who were willing to participate by completing a complete questionnaire. Young adult workers were selected as the target population because they represent a demographic group characterized by intensive digital technology use while simultaneously facing developmental challenges related to career establishment, interpersonal relationships, and emotional adjustment. These characteristics make them a relevant population for examining the psychological implications of interaction with AI-based conversational systems such as ChatGPT. This group was selected because they have a high level of digital technology use and tend to utilize AI-based services for work, entertainment, and emotional support. The sample size was set at a minimum of 300

Journal of Islamic Psychology and Behavioral Sciences
Vol. 4 No. 3 2026, 307-320

respondents to meet the requirements for quantitative analysis and ensure the reliability of the research results (Hair et al., 2020).

Respondent data was collected through an online questionnaire using the Google Forms platform, which was shared through social media, online communities, and the respondents' professional networks to reach a wider range of young adult workers from diverse backgrounds. Before completing the questionnaire, respondents were asked to read and agree to an informed consent form explaining the research objectives, procedures, and data confidentiality. The questionnaire, used as the main research instrument, was pre-tested on 30 respondents to determine item reliability and quality. Based on the pilot test results, items with low item-total correlation values were removed to improve the validity and internal consistency of the instrument. One item from the Social Connectedness Scale was excluded because it did not meet the acceptable validity threshold.

Table 1.
Operational Definition and Validity & Reliability Test Results

Variable	Dimension	Item No.	Item Statement	Reliability	Validity
ChatGPT Usage (McLean & Osei-Frimpong. 2019)	Hedonic benefits	1	I find using the ChatGPT application very enjoyable.	0.884	0.696
		3	I enjoy using ChatGPT to complete various tasks.		0.649
		9	I enjoy spending my time using ChatGPT.		0.557
		10	I like spending my time using ChatGPT.		0.652
	Utilitarian benefits	2	I feel that using ChatGPT can be a practical way to manage my time.		0.540
		4	I find completing tasks easier when using ChatGPT.		0.557
		5	I feel that completing tasks with ChatGPT makes my time more efficient.		0.652
	Social presence	6	I feel that my interaction with ChatGPT is similar to interacting with a human.		0.696
		7	When interacting with ChatGPT. I feel as though I am interacting directly with someone.		0.540
	Social attraction	8	I feel that ChatGPT can be my companion.		0.649
Social Connectedness SCS-R From Lee & Robbins (1995)	Companionship	11	I feel connected to the world around me.	0.877	0.681
		12	I feel close to people.		0.545
		13	I feel disconnected from the world around me.		0.642
		16	I feel understood by people I know.		0.681

	Affiliation	14	I do not feel that I belong. even among people I know.		0.550
		17	I am able to relate well with my friends.		0.545
		18	I feel little sense of togetherness with my friends.		0.642
		19	I feel actively involved in other people's lives.		0.550
	Connectedness	15	I see myself as an outsider.		0.652
		20	I feel that I have lost my sense of connectedness with society.		0.652
		21	I feel disconnected from most people.		0.314
Loneliness UCLA Loneliness Scale Ver. 3 (Russell. 1996)	Lonely items	22	I feel that I lack companionship.	0.976	0.961
		23	I feel that there is no one I can turn to for help.		0.961
		24	I feel alone.		0.961
		26	I feel separated from others.		0.961
		27	I feel that no one really knows me.		0.961
		28	I feel that my social relationships are less meaningful.		0.961
	Non-lonely items	25	I feel part of a group of friends.		0.961
		29	I feel close to other people.		0.758
		30	I feel that I can find friends when I need them.		0.746
		31	I feel that there are people who understand me.		0.749
		32	I feel that there are people I can talk to.		0.730
		33	I feel that there are people I can share my burdens with.		0.775

The validity test showed that all retained items met the acceptable item-total correlation threshold after the removal of one item with a low validity coefficient. The final instrument demonstrated satisfactory internal consistency for all variables used in this study. The reliability coefficient for the loneliness scale was notably high ($\alpha = 0.976$), indicating excellent internal consistency among the retained items. Nevertheless, such a high reliability value may also suggest similarity among several items measuring closely related aspects of loneliness. In addition, respondents were assured that all responses would remain anonymous and confidential throughout the study to minimize potential response bias.

Results and Discussion

This study was conducted to analyze the relationship between interaction with ChatGPT and feelings of loneliness and social connectedness among young adult workers. The study involved 308 respondents, recruited through purposive sampling. The respondents

Journal of Islamic Psychology and Behavioral Sciences
Vol. 4 No. 3 2026, 307-320

were active workers aged 20-35, had used ChatGPT for at least one month, and were willing to complete a complete questionnaire. This group of respondents was selected based on the characteristics of the early adult generation, which is highly engaged with digital technology and tends to utilize artificial intelligence for various needs, such as work, information seeking, entertainment, and emotional assistance or support.

Based on descriptive analysis, the majority of respondents were aged 25-30, with a predominance of female respondents. Female respondents accounted for 96.4% of the sample, indicating that the findings predominantly reflect the experiences of female young-adult workers who use ChatGPT. Most respondents worked as private sector employees, entrepreneurs, or freelancers, indicating that ChatGPT use was highly prevalent among workers with intensive digital activity demands. In terms of usage duration, the majority of respondents used ChatGPT for 30-60 minutes per day, followed by those using it for 15-30 minutes. These findings indicate that ChatGPT has become part of the respondents' daily activities, both to support their work and other personal needs. Furthermore up-to-date, the research results show that ChatGPT is used not only for completing professional tasks and searching for information, but also for engaging the discussions, exploring ideas, and for entertainment. The majority of respondents even use ChatGPT for a combination of multiple purposes, reflecting the flexibility of AI technology in everyday life. Respondent demographics are presented in Table 2.

Table 2.
Respondent Demographics

Characteristics	Category	Frequency (n)	Percentage (%)
Age	20–25 years	101	32.8
	25–30 years	162	52.6
	30–35 years	45	14.6
Gender	Male	11	3.6
	Female	297	96.4
Occupation	Civil Servant (PNS/ASN)	39	12.7
	Private Employee	111	36.0
	Private Employee, Healthcare Worker	1	0.3
	Private Employee, Entrepreneur/Freelancer	1	0.3
	Student/College Student	1	0.3
	Healthcare Worker	28	9.1
	Educator (Teacher/Lecturer)	48	15.6
	Entrepreneur/Freelancer	77	25.0
	Entrepreneur/Freelancer, Healthcare Worker	2	0.6
Usage Duration	Less than 15 minutes	10	3.2
	15–30 minutes	106	34.4
	30–60 minutes	131	42.5
	1–2 hours	51	16.6
	More than 2 hours	10	3.2
Purpose of Use (Multiple Choices)	Entertainment or idea exploration	70	12

Assisting with professional work/tasks	153	26
Assisting with academic tasks	97	16
Accompanying discussions or conversations	133	22
Searching for information or general knowledge	139	23
Entertainment or idea exploration	70	12

Based on the results of the formal normality test using Kolmogorov-Smirnov and Shapiro-Wilk, it was found that the significance value (Sig) on the research variables was below 0.05, which literally indicates that the data was not normally distributed. However, considering the large sample size (N) in this study, which reached 308 respondents (N>30), the assumption of normality can practically be considered fulfilled by referring to the Central Limit Theorem. This theorem states that in a large sample size, the sampling distribution of the average value (mean) will automatically approach a normal distribution regardless of the shape of the original distribution of the data in the population (Kwak & Kim, 2017). Therefore, the parametric statistical tests in the form of Pearson Product-Moment correlation analysis and simple linear regression in this study were considered valid and appropriate for further analysis.

Based on the results of the Pearson correlation test presented in Table 2, the variable interaction with ChatGPT has a very strong positive relationship with social connectedness, with a correlation value of r=0.986 and a significance value of p=0.000 (<0.05). This result indicates that interaction with ChatGPT was associated with higher levels of social connectedness perceived by respondents. This correlation is categorized as very strong and statistically significant. Meanwhile, the relationship between interaction with ChatGPT and loneliness shows a correlation value of r=0.057 with a significance value of p=0.317 (>0.05). This result indicates that the relationship between the two variables is very weak and insignificant, so interaction with ChatGPT has no significant relationship with respondents' levels of loneliness. Furthermore, the relationship between social connectedness and loneliness also shows a very weak and insignificant correlation, with values of r=0.059 and p=0.300.

Table 3.
Pearson Correlation Test Results

Variables	r	Sig. (2-tailed)	Interpretation
ChatGPT ↔ Social Connectedness	0.986	0.000	Very strong positive and significant correlation
ChatGPT ↔ Loneliness	0.057	0.317	Very weak positive and non-significant correlation
Social Connectedness ↔ Loneliness	0.059	0.300	Very weak positive and non-significant correlation

It is important to interpret the exceptionally high correlation coefficient (r = 0.986) with caution. Such a value is relatively uncommon in social science research and may reflect

strong conceptual proximity between the measured constructs or the use of self-report measures collected through a single method. Therefore, although the relationship is statistically significant, future studies should employ additional validation procedures and diverse measurement approaches to further confirm these findings.

Based on the results of the simple linear regression test presented in Table 3, a coefficient of determination was obtained of 0.003. This indicates that interaction with ChatGPT only explains 0.3% of the variation in loneliness, with the remainder being influenced by other factors outside the study. A significance value of 0.317 indicates that the relationship between interaction with ChatGPT and loneliness is insignificant, as the significance value is greater than 0.05. Furthermore, a positive regression coefficient indicates a positive relationship between the two variables, but the strength of the association is very weak.

Meanwhile, the results of a simple linear regression analysis to examine the relationship of interaction with ChatGPT on social connectedness among young adult workers yielded a coefficient of determination of 0.971 in the Model Summary table. This indicates that interaction with ChatGPT contributes significantly, accounting for 97.1% of the variation in respondents' levels of social connectedness, while the remaining 2.9% is influenced by other factors outside the research model. Furthermore, in the ANOVA table, the F-count value was obtained at 10366.657 with a significance level of 0.000 ($p < 0.05$), which means this regression model is fit or suitable for use in predicting social connectedness variables. Based on the Coefficients table, the regression coefficient (B) value for the TOTAL_ChatGPT variable was 1.070, the t-count value was 101.817, and the significance value (Sig.) was 0.000 ($p < 0.05$). These findings indicate a positive and significant relationship between interaction with ChatGPT and social connectedness among young adult workers. However, because this study employed a non-experimental correlational design, the findings should not be interpreted as evidence of causality.

Table 4.
Linear regression Result

Variabel	B	Beta	t	Sig.	R Square
Interaksi dengan ChatGPT → Loneliness	0,101	0,057	1,003	0,317	0,003
Interaksi dengan ChatGPT → Social Connectedness	1,070	0,986	101,817	0,000	0,971

Based on the findings, it can be concluded that the first hypothesis is rejected because interaction with ChatGPT does not have a significant relationship with the level of loneliness. This is indicated by a significance value of 0.317, which is greater than 0.05, so the relationship between the two variables is declared insignificant. Conversely, the second hypothesis is accepted because interaction with ChatGPT has a positive and significant relationship with the level of social connectedness. The analysis results show a significance value of 0.000, which is less than 0.05, with a very strong relationship strength. Furthermore,

the third hypothesis is partially accepted. Interaction with ChatGPT was found to have a significant association with social connectedness, but not with loneliness.

The findings of this study demonstrate a unique dynamic regarding the role of artificial intelligence in the psychological realm of early adulthood. Based on the results of the first hypothesis test, it was found that interaction with ChatGPT had no significant association with respondents' levels of loneliness ($p = 0.317$; $p > 0.05$). This finding indicates that the intensity and depth of communication individuals engage in with generative AI technology are not determining factors in the level of loneliness they experience.

Theoretically, loneliness is a form of emotional distress that arises from a gap between desired social relationships and the social relationships an individual actually has (Seemann, 2022). In this context, interaction with ChatGPT appears incapable of bridging this emotional gap. Although ChatGPT is designed with highly adaptive, supportive natural language processing capabilities, even mimicking human conversational styles, individuals in early adulthood still maintain a cognitive awareness that the agent they are interacting with is a non-human entity lacking genuine emotional consciousness.

The results of this study align with previous literature examining the psychological limitations of using artificial intelligence technology. Research conducted by Croes & Antheunis (2021) suggests that interactions with AI agents are often transactional and instrumental, failing to meet the basic human need for deep emotional intimacy. Furthermore, Ta et al. (2020) in their study on AI companionship found that although AI can act as a responsive information provider or conversation partner, its presence does not automatically reduce existential loneliness due to the absence of authentic emotional reciprocity. This finding is reinforced by the findings of Dwivedi et al. (2023), who emphasized that for young digital natives (including early adulthood), interactions with AI are positioned functionally as cognitive or productivity aids, not as a substitute for emotional social networks. Therefore, regardless of the intensity of the interaction, it does not correlate with a significant decrease or increase in individual loneliness.

This insignificant relationship can also be understood through the developmental characteristics of early adulthood. In this phase, individuals actively seek social validation, romantic intimacy, and professional recognition from their real-life social environment (Arvina & Ariana, 2025). Failure or obstacles in achieving these aspects triggers feelings of loneliness, not a lack of conversational stimulation. When individuals turn to ChatGPT, these interactions are generally driven by utilitarian motives, such as seeking academic solutions, solving work problems, or simply exchanging ideas, rather than affective motives to overcome social isolation (Dwivedi et al., 2023). This functional reasoning explains why the ChatGPT interaction variable was independent of the respondents' emotional state of loneliness in this study. These findings confirm that addressing complex psychological issues like loneliness requires fulfilling social needs, still requiring human-to-human interaction involving empathy and genuine closeness, which cannot be replaced by artificial intelligence (Brandtzaeg et al., 2022).

Journal of Islamic Psychology and Behavioral Sciences
Vol. 4 No. 3 2026, 307-320

In contrast to the dynamics of loneliness, the results of the second hypothesis test revealed a contradictory yet highly significant phenomenon. Interaction with ChatGPT was found to have a very strong and significant positive relationship with levels of social connectedness among young adult workers (r = 0.986, p = 0.000). This finding was reinforced by a simple linear regression analysis, which showed that interaction with ChatGPT contributed a massive 97.1% (R2 = 0.971) to the variation in respondents' social connectedness. These findings indicate that individuals who reported higher interaction with ChatGPT also tended to report higher levels of social connectedness.

Psychologically, social connectedness involves subjective feelings of closeness to the social world, including feelings of being valued, understood, and able to participate in the environment (Baek et al., 2025). The very high correlation coefficient observed in this study indicates that, for many young adults, ChatGPT functions not merely as a passive search engine but as a cognitive and social facilitator. Through interactions with ChatGPT, individuals gain communication skills, idea validation, up-to-date information, and even problem-solving solutions, boosting their confidence when interacting in the real world. This phenomenon aligns with Social Information Processing theory in the modern context, where individuals can utilize text-based media to develop in-depth social understanding (Marmat, 2022; Sumner & Ramirez, 2017).

These findings are supported by research by Shahzad et al. (2025), who found that the use of generative AI like ChatGPT significantly increased social self-efficacy in students and young workers, which continuously strengthened their sense of connectedness to academic and professional communities. Furthermore, Delello et al. (2026) explained that it is used to practice arguments, develop communication strategies, and explore new perspectives. When individuals feel more cognitively competent after interacting with AI, they feel more prepared and "connected" to the social ecosystem around them (Zhou & Li, 2026). Therefore, ChatGPT interactions indirectly amplify individuals' sense of belonging and social engagement in their real-world environments.

Based on the dynamics of the two variables above, the results of the third hypothesis test were partially accepted. Interaction with ChatGPT was shown to have a significant association on increasing social connectedness, but had no significant association on changing levels of loneliness. Methodologically, these findings reinforce the conceptualization in social psychology that loneliness and social connectedness are two distinct constructs, not simply opposite poles of the same straight line (Dworschak et al., 2024). Loneliness is rooted in affective-emotional aspects that require interpersonal intimacy (human-to-human connection), while social connectedness is more related to the cognitive-social aspect regarding the extent to which individuals feel functional and integrated within their social systems.

ChatGPT was strongly associated with these cognitive-social aspects by acting as a catalyst for productivity and insight, resulting in respondents' social connectedness scores increasing sharply as interactions increased (Al Mazroui & Alzyoudi, 2024). However,

because ChatGPT lacks the capacity to provide genuine emotional intimacy and authentic affective reciprocity, the interactions failed to address the root causes of respondents' emotional loneliness. This finding provides a new theoretical contribution to the cyberpsychology literature, particularly regarding Artificial Intelligence-Human Interaction (AIHI). It emphasizes that artificial intelligence technology, at its current developmental stage, possesses highly effective tools for exploring and expanding human cognitive-social functions, but has rigid limitations in intervening in the deep affective-emotional realm of psychology.

The finding regarding the large coefficient of determination ($R^2 = 0.971$) for the relationship between ChatGPT interaction and social connectedness requires deeper interpretation. In this study, social connectedness is not defined as emotional closeness between respondents and ChatGPT, as is the case with friendships. In contrast, social connectedness refers more to how interactions with ChatGPT help young adults feel more capable, confident, and prepared for real-life social interactions (Al Mazroui & Alzyoudi, 2024). For young adults, who are digital natives, ChatGPT is no longer seen simply as technology or software, but also as a cognitive aid that supports daily academic and work activities (Bai et al., 2023).

The large contribution of 97.1% indicates that ChatGPT plays a very strong role in helping respondents build their social confidence. Through ChatGPT, respondents can practice how to present arguments, structure communication, find solutions to tasks or work, and even validate ideas in a space that feels safe and free from social judgment (Le et al., 2025). When individuals feel more cognitively prepared after using ChatGPT, they tend to feel more comfortable interacting, contributing, and engaging in their social environment (Bai et al., 2023). This condition likely contributes to the statistically strong relationship between ChatGPT interactions and social connectedness.

Furthermore, the high coefficient of determination may also be influenced by the relatively homogeneous characteristics of the study respondents. All respondents were in the early adulthood age group and had nearly similar technology usage patterns, particularly for academic and professional needs (Rahman & Malik, 2024). The uniformity of respondent characteristics resulted in relatively consistent response patterns with minimal extreme variation, enabling the regression model to demonstrate a very strong relationship between ChatGPT interactions and social connectedness (F. Hair Jr. et al., 2014).

Therefore, this study has several limitations that require consideration when interpreting the results. First, the data were obtained through a self-report method using an online questionnaire, so respondents' responses were highly dependent on each individual's subjective perceptions. Second, an important limitation of this study concerns the gender composition of the sample. Female participants represented 96.4% of the total respondents, whereas male participants accounted for only 3.6%. This substantial gender imbalance limits the generalizability of the findings across genders. Consequently, the results should primarily be interpreted as reflecting the experiences of female young-adult workers who

Journal of Islamic Psychology and Behavioral Sciences
Vol. 4 No. 3 2026, 307-320

use ChatGPT. Future studies are encouraged to recruit a more balanced gender distribution to examine whether the relationships between ChatGPT interaction, loneliness, and social connectedness differ across gender groups. Furthermore, this study used a non-experimental design with data collection at a single point in time, making it impossible to fully explain causal relationships. The very high coefficient of determination for the social connectedness variable also requires careful interpretation, as it is possible that construct proximity between variables and similar measurement methods could increase the statistical relationship between the study variables.

Therefore, these findings should be interpreted cautiously, particularly regarding the exceptionally high coefficient of determination observed in this study.

Although interaction with ChatGPT was found to be positively associated with social connectedness, these findings should be interpreted carefully. AI-based interactions may provide informational support, conversational engagement, and perceived social presence; however, they cannot fully replace authentic interpersonal relationships. Excessive reliance on AI-mediated interaction may also reduce opportunities for direct social engagement. Future research should therefore examine both the positive and potential negative consequences of long-term AI use on real-world social relationships.

Several limitations should be acknowledged. First, the sample was predominantly female (96.4%), which may limit the generalizability of the findings to broader populations of young adult workers. Second, the cross-sectional and correlational nature of the study does not allow causal conclusions to be drawn regarding the relationship between ChatGPT interaction, loneliness, and social connectedness. Future studies are encouraged to use more diverse samples and longitudinal designs.

Conclusion

Based on the findings, interaction with ChatGPT showed a significant relationship with social connectedness among young adult workers but no significant relationship with loneliness. These findings suggest that ChatGPT functions more as a cognitive aid and social support tool than as a substitute for interpersonal relationships in reducing loneliness. Through interaction with ChatGPT, individuals may feel more supported in developing ideas, understanding information, increasing confidence, and preparing for interactions in real social environments.

References

Al Mazroui, K., & Alzyoudi, M. (2024). The role of ChatGPT in mitigating loneliness among older adults: An exploratory study. *Online Journal of Communication and Media Technologies*, *14*(4), e202444. https://doi.org/10.30935/ojcmt/14777

Arvina, N., & Ariana, A. D. (2025). *Hubungan Insecure Romantic Attachment dan Non-Suicidal Self-Injury pada Emerging Adulthood Dalam Hubungan Pacaran : Peran Emotional Dysregulation sebagai Variabel Mediator*. [Universitas Airlangga]. https://repository.unair.ac.id/137077/

Baek, E. C., Pourafshari, R., & Bayer, J. B. (2025). The four conceptualizations of social connection. *Nature Reviews Psychology*, *4*(8), 506–517. https://doi.org/10.1038/s44159-025-00455-9

Bai, L., Liu, X., & Su, J. (2023). ChatGPT: The cognitive effects on learning and memory. *Brain-X*, *1*(3). https://doi.org/10.1002/brx2.30

Brandtzaeg, P. B., Skjuve, M., & Følstad, A. (2022). My AI Friend: How Users of a Social Chatbot Understand Their Human–AI Friendship. *Human Communication Research*, *48*(3), 404–429. https://doi.org/10.1093/hcr/hqac008

Croes, E. A. J., & Antheunis, M. L. (2021). Can we be friends with Mitsuku? A longitudinal study on the process of relationship formation between humans and a social chatbot. *Journal of Social and Personal Relationships*, *38*(1), 279–300. https://doi.org/10.1177/0265407520959463

Delello, J. A., Sung, W., De Giuseppe, T., Mokhtari, K., Hebert, J., & Bronson, A. (2026). Can a machine care? Exploring emotional intelligence and well-being in human artificial intelligence interactions. *Behaviour & Information Technology*, 1–19. https://doi.org/10.1080/0144929X.2026.2654494

Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., … Wright, R. (2023). Opinion Paper: "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, *71*, 102642. https://doi.org/10.1016/j.ijinfomgt.2023.102642

Dworschak, C., Mäder, T., Rühlmann, C., Maercker, A., & Kleim, B. (2024). Examining bi-directional links between loneliness, social connectedness and sleep from a trait and state perspective. *Scientific Reports*, *14*(1), 17300. https://doi.org/10.1038/s41598-024-68045-y

F. Hair Jr, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, *26*(2), 106–121. https://doi.org/10.1108/EBR-10-2013-0128

Kwak, S. G., & Kim, J. H. (2017). Central limit theorem: the cornerstone of modern statistics. *Korean Journal of Anesthesiology*, *70*(2), 144. https://doi.org/10.4097/kjae.2017.70.2.144

Le, H., Shen, Y., Li, Z., Xia, M., Tang, L., Li, X., Jia, J., Wang, Q., Gašević, D., & Fan, Y. (2025). Breaking human dominance: Investigating learners' preferences for learning

feedback from generative <scp>AI</scp> and human tutors. *British Journal of Educational Technology*, *56*(5), 1758–1783. https://doi.org/10.1111/bjet.13614

Lesmana, G., Amran, A., & Deliati, D. (2025). Latihan Reframing Diri dengan Bantuan AI: Tranformasi Pikiran Negatif menjadi Pikiran Positif. *Jurnal Pengabdian Masyarakat Larisma*, 2(1), 8-12.

Marmat, G. (2022). Online brand communication and building brand trust: social information processing theory perspective. *Global Knowledge, Memory and Communication*, *71*(6/7), 584–604. https://doi.org/10.1108/GKMC-12-2020-0195

Seemann, A. (2022). The Psychological Structure of Loneliness. *International Journal of Environmental Research and Public Health*, *19*(3), 1061. https://doi.org/10.3390/ijerph19031061

Shahzad, M. F., Xu, S., & Zahid, H. (2025). Exploring the impact of generative AI-based technologies on learning performance through self-efficacy, fairness & ethics, creativity, and trust in higher education. *Education and Information Technologies*, *30*(3), 3691–3716. https://doi.org/10.1007/s10639-024-12949-9

Sumner, E. M., & Ramirez, A. (2017). Social Information Processing Theory and Hyperpersonal Perspective. In *The International Encyclopedia of Media Effects* (pp. 1–11). Wiley. https://doi.org/10.1002/9781118783764.wbieme0090

Ta, V., Griffith, C., Boatfield, C., Wang, X., Civitello, M., Bader, H., DeCero, E., & Loggarakis, A. (2020). User Experiences of Social Support From Companion Chatbots in Everyday Contexts: Thematic Analysis. *Journal of Medical Internet Research*, *22*(3), e16235. https://doi.org/10.2196/16235

Zhou, X., & Li, C. (2026). Beyond the hype: a psychological perspective on AI chatbots. *Frontiers in Psychology*, *17*. https://doi.org/10.3389/fpsyg.2026.1766427