Journal Website

Article history:
Received 01 August 2024
Revised 20 September 2024
Accepted 03 October 2024
Published online 12 October 2024

International Journal of Education and Cognitive Sciences

Volume 5, Issue 5, pp 76-85

E-ISSN: 3041-8828

Predicting Wisdom Based on Peer Relationships and Presence in Virtual Spaces

Alaa Sabah Mohammed. Alnuaimi[1], Zahra. Yousefi[2*], Ali Enad Zamil. Aayedi[3], Mohsen. Golparvar[4]

[1] PhD student in Educational Psychology, Faculty of Educational Sciences and Psychology, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran
[2] Assistant Professor, Department of Clinical Psychology, Faculty of Education and Psychology, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran
[3] College of Education for Human Sciences. Department of Educational and Psychological Sciences. Educational Psychology. Wasit University, Iraq
[4] Professor of Psychology, Center for Community Health Research, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

*** Corresponding author email address**: z.yousefi@khuisf.ac.ir

A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Alnuaimi, ASM., Yousefi, Z., Aayedi, AEZ., Golparvar, M. (2024). Predicting Wisdom Based on Peer Relationships and Presence in Virtual Spaces. *International Journal of Education and Cognitive Sciences*, *5*(5), 76-85.
https://doi.org/10.61838/kman.ijecs.5.5.9

A B S T R A C T

Purpose: This study aimed to investigate the relationship between wisdom, peer relationships, and the time spent in virtual spaces among university students.

Methods and Materials: A descriptive-correlational research design was used. The sample consisted of 350 students from Wasit University, selected via convenience sampling. Participants completed three questionnaires: the Ardelt Wisdom Scale (2003) to assess wisdom, the Peer Relationship Questionnaire (Hudson, 1997) to evaluate peer interactions, and a single-item measure of time spent in virtual spaces. Pearson correlation analysis was conducted to explore relationships between variables, and stepwise regression analysis was used to identify predictors of wisdom. Data were analyzed using SPSS-27.

Findings: The results revealed a significant positive correlation between peer relationships and wisdom ($r = 0.581$, $p < 0.001$), indicating that stronger peer interactions are associated with higher wisdom levels. Conversely, time spent in virtual spaces showed a significant negative correlation with wisdom ($r = -0.725$, $p < 0.001$), suggesting that more time online is linked to lower wisdom scores. Stepwise regression analysis demonstrated that time spent in virtual spaces was the strongest predictor of wisdom, explaining 52.6% of the variance, while peer relationships accounted for an additional 3.3%.

Conclusion: The study concludes that peer relationships play a crucial role in the development of wisdom, whereas excessive online engagement may detract from it. The findings highlight the need for balanced digital engagement and strong peer interactions to foster cognitive, reflective, and emotional growth. Future research should explore the quality of online interactions and the role of various types of relationships in wisdom development.

Keywords: *Wisdom, Peer Relationships, Virtual Spaces, University Students, Digital Engagement, Social Interaction*

1. Introduction

In recent years, the increasing role of technology in social interactions has profoundly impacted individuals, particularly adolescents and young adults. With the advent of social media platforms, instant messaging, and online communities, young people today are spending a significant amount of time in virtual spaces. While the benefits of virtual engagement, such as enhanced connectivity and access to information, are well-documented, there are growing concerns about the potential negative consequences of excessive online activity, especially in the context of social and psychological development (Asadi Rajani, 2023; Gong et al., 2022; Öztop et al., 2024; Sadat Mousavi & Ebrahimi, 2024). One area of increasing scholarly interest is the potential impact of online behaviors and peer relationships on the development of wisdom, a multifaceted construct that involves cognitive, reflective, and affective dimensions (Ardelt, 2003).

Wisdom has long been regarded as a key attribute for personal growth and social harmony, yet its development is influenced by various social and cognitive factors (Ghorbani & Khormaei, 2018). In their research on the causal model of wisdom, Ghorbani and Khormaei (2018) highlight the importance of coping strategies and personality in shaping wisdom (Ghorbani & Khormaei, 2018). However, the rapid changes in social structures, particularly with the rise of virtual communication, necessitate a re-evaluation of these traditional determinants. The extent to which peer relationships, which have long been known to influence emotional and social development (Johnson, 2022; Roubinov et al., 2020), and online behaviors impact wisdom development remains an open question.

The quality of peer relationships during adolescence and young adulthood is a critical factor in socio-emotional development. Positive peer interactions foster emotional regulation, empathy, and social competence, all of which contribute to the cultivation of wisdom (Babaei-Monqari et al., 2022; Fink & Rosnay, 2023). Peer relationships also provide a context in which individuals learn to navigate social dynamics, manage conflicts, and develop prosocial behaviors, which are essential components of wisdom (Nejatifar et al., 2021; Rejali & Yousefi, 2021). For instance, Bianchi et al. (2020) found that social anxiety, when coupled with low-quality peer communication, can hinder the development of social skills, which in turn affects an individual's capacity for reflective thinking and empathy—two dimensions of wisdom (Ardelt, 2003).

Moreover, peer learning and social interactions within educational settings have been shown to directly influence cognitive development (Barzegar et al., 2021). Babaei-Monqari et al. (2022) explored the relationship between peer learning and self-regulation, finding that students who engaged more frequently in collaborative learning activities were better able to regulate their cognitive and emotional processes. This enhanced self-regulation is closely related to the reflective dimension of wisdom, which involves introspection and self-awareness. Positive peer interactions, therefore, not only contribute to emotional well-being but also play a crucial role in the development of wisdom's cognitive and reflective dimensions (Babaei-Monqari et al., 2022).

The increasing time spent in virtual spaces raises important questions about how online interactions influence the development of wisdom. George and Odgers (2015) argue that while mobile technologies offer unprecedented opportunities for communication and learning, they also present risks, particularly in the form of online addiction and social isolation (George & Odgers, 2015). Cohen-Almagor (2018) further explores the negative effects of online environments, highlighting issues such as cyberbullying, which can erode social trust and undermine the quality of peer relationships (Cohen-Almagor, 2018). These challenges are particularly relevant for adolescents, who are more susceptible to the negative social influences of online spaces (Zhu et al., 2015). The impact of virtual space presence on wisdom is likely to be multifaceted, with both positive and negative consequences depending on the nature of online interactions.

One key concern is the relationship between time spent online and cognitive development. Excessive online activity has been linked to lower levels of reflective thinking and reduced capacity for deep, critical thought (Schreurs & Vandenbosch, 2023). This is problematic, as reflective thinking is a core component of wisdom. Studies on internet gaming addiction, for example, have shown that adolescents who spend excessive time playing online games exhibit higher levels of impulsivity and lower levels of cognitive flexibility, which can impede the development of wisdom (Xie et al., 2023; Yang et al., 2023). Gong et al. (2022) also report that smartphone addiction among parents can negatively affect adolescent smartphone use, leading to diminished emotional regulation and social skills—both of which are critical for wisdom development (Gong et al., 2022).

E-ISSN: 3041-8828

Despite these concerns, virtual spaces also provide opportunities for positive social interaction and learning. Online communities and educational platforms can foster the exchange of ideas and promote empathy and understanding across diverse groups (Öztop et al., 2024; Said, 2023). For instance, Vania et al. (2022) found that peer relationships formed in online learning environments can enhance academic motivation and engagement, which are indirectly related to the development of wisdom through improved cognitive functioning and social awareness (Vania et al., 2022). Additionally, online platforms that promote mindfulness and resilience can contribute to the affective dimension of wisdom by helping individuals manage stress and develop emotional intelligence (Golestanibakht et al., 2022; Kütük et al., 2022).

The relationship between peer interactions and online behaviors is complex, with each influencing the other in significant ways. Peer relationships can either buffer or exacerbate the effects of virtual engagement on wisdom development. For example, Gong et al. (2022) found that positive parent-child relationships can mitigate the negative effects of smartphone addiction, suggesting that strong offline relationships may help individuals manage their online behaviors more effectively (Gong et al., 2022). Similarly, Rodgers et al. (2021) report that peer and family teasing can lead to unhealthy behaviors such as disordered eating, indicating that negative peer interactions may amplify the detrimental effects of online environments on emotional and psychological well-being (Rodgers et al., 2021).

Conversely, supportive peer relationships can enhance the positive effects of virtual engagement. Schreurs and Vandenbosch (2023) found that active peer mediation in social media use led to increased social media literacy and reduced negativity bias, suggesting that peers can play a role in helping individuals navigate the complexities of online spaces. This highlights the potential for peer interactions to foster wisdom development by encouraging critical thinking and emotional regulation in virtual environments (Schreurs & Vandenbosch, 2023).

Wisdom is not only a cognitive and reflective construct but also involves affective components such as empathy and compassion (Ardelt, 2003). The development of these traits is heavily influenced by social interactions, both online and offline. Cohen-Almagor (2018) emphasizes the importance of social responsibility in online behavior, arguing that promoting positive, prosocial behavior in virtual spaces is crucial for mitigating the negative effects of cyberbullying and other harmful online activities (Cohen-Almagor, 2018). This aligns with the work of Bianchi et al. (2020), who found that empathy and perspective-taking play a critical role in moderating the relationship between social anxiety and peer communication quality during adolescence (Bianchi et al., 2020).

The cultivation of empathy and compassion through peer relationships is essential for the development of the affective dimension of wisdom. Studies on mindfulness and wisdom in educational settings have shown that students who practice mindfulness exhibit higher levels of emotional intelligence and positive emotions, which contribute to the development of wisdom (Barzegar et al., 2021; Shoghi et al., 2023). Moreover, empathy training programs, such as those explored by Öztop et al. (2024), have been found to improve peer relationships and enhance emotional understanding, further supporting the link between social interaction and wisdom development (Öztop et al., 2024). This study aims to explore the relationship between peer relationships, presence in virtual spaces, and wisdom, building upon existing literature on social interaction and cognitive development.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a descriptive-correlational design to examine the relationships between peer interactions, time spent in virtual spaces, and the wisdom levels of university students. The research population included all students at Wasit University during the 2023-2024 academic year. To determine the appropriate sample size, we used Tabachnick and Fidell's (2013) recommendation of 15 individuals per variable and sub-variable. Given the nature of the study, with variables including total wisdom, dimensions of executive function, personality, and attachment, the required sample size was calculated to be 285 individuals. However, to account for potential participant attrition and incomplete responses, the sample size was increased to 350. Convenience sampling was used to select participants from various faculties at Wasit University.

Participants were eligible for inclusion in the study if they were at least 18 years old, had no severe physical disabilities, and were in stable mental health as assessed by an initial screening. Participants were excluded if they had severe mental health issues identified in the preliminary interview, outlier scores on the administered surveys, or a history of drug addiction, which was assessed through a self-report

E-ISSN: 3041-8828

question at the beginning of the survey. The final sample included 350 students who were invited to complete the questionnaires. Surveys were distributed in group settings, and participants were instructed to answer the questions honestly and completely before returning the completed forms.

2.2. Measures

2.2.1. Wisdom

Wisdom was assessed using the Ardelt Wisdom Scale (2003), a well-validated instrument consisting of 34 items across three dimensions: cognitive, reflective, and affective wisdom. Responses were rated on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree." Items were scored in such a way that higher scores indicated greater wisdom in each of the three dimensions, and the overall wisdom score was derived by averaging the scores of these dimensions. Previous research in Iran demonstrated acceptable reliability for the scale, with Cronbach's alpha values of 0.71, 0.75, and 0.66 for the cognitive, reflective, and affective dimensions, respectively, in student samples (Rejali & Yousefi, 2021). In the current study, the scale demonstrated good internal consistency, with Cronbach's alphas above 0.70 across all subscales.

2.2.2. Peer-Relationship

Peer relationships were measured using Hudson's (1997) Peer Relationship Questionnaire, consisting of 25 items designed to assess the severity and extent of peer-related problems. This scale provides an overall assessment of peer communication, with scores being categorized as either indicating no clinical issues or suggesting the presence of aggressive problems in peer interactions. Responses were recorded on a 7-point Likert scale, and prior studies in Iran have reported an internal consistency reliability of 0.86 for this scale (Babaei-Monqari et al., 2022).

2.2.3. Virtual Space Usage

The extent of time spent in virtual spaces was measured by asking participants to report their average number of hours spent online daily. This straightforward measure provided an estimate of virtual engagement, which was used as an independent variable in the analysis.

2.3. Data Analysis

Data analysis was conducted using SPSS, employing both multiple regression and stepwise regression techniques to explore the relationships between wisdom, peer relationships, and time spent in virtual spaces. These analyses allowed for the identification of significant predictors and the extent to which each variable contributed to the prediction of wisdom in the sample.

3. Findings and Results

In this section, the findings of the study are presented in the form of descriptive statistics, correlation coefficients, and regression analysis results. Initially, the descriptive data of the key study variables are provided, followed by correlation analysis to assess the relationships between wisdom, peer relationships, and time spent in virtual spaces. Finally, the results of the stepwise regression and one-way ANOVA are reported to highlight the predictors of wisdom.

The descriptive statistics for the study variables, including wisdom, peer relationships, and presence in virtual spaces, are shown in Table 1:

Table 1

Mean and Standard Deviation of the Study Variables (N=347)

Variables	Mean	Standard Deviation
Wisdom	90.55	4.09
Peer Relationships	126.88	36.18
Presence in Virtual Spaces	3.53	2.54

The mean score for wisdom was 90.55, with a standard deviation of 4.09, indicating a relatively high level of wisdom among the participants. Peer relationships had a mean of 126.88 with a large standard deviation of 36.18, reflecting a wide range of experiences among the participants. The average time spent in virtual spaces was 3.53 hours, with a standard deviation of 2.54, suggesting variability in participants' online engagement.

Next, Pearson correlation coefficients were calculated to examine the relationships between wisdom, peer

E-ISSN: 3041-8828

relationships, and virtual space presence. The results are presented in Table 2:

Table 2

Correlation Coefficients Between Wisdom and Predictor Variables

Predictor Variables	Wisdom	Significance Level
Peer Relationships	0.581	0.000
Presence in Virtual Spaces	-0.725	0.000

The results show a significant positive correlation between wisdom and peer relationships ($r = 0.581$, $p < 0.001$), indicating that stronger peer relationships are associated with higher levels of wisdom. Conversely, there was a significant negative correlation between wisdom and time spent in virtual spaces ($r = -0.725$, $p < 0.001$), suggesting that more time spent in virtual environments is related to lower wisdom levels.

To further investigate the predictive power of peer relationships and time spent in virtual spaces on wisdom, a stepwise regression analysis was performed. The results are summarized in Table 3:

Table 3

Stepwise Regression Analysis for Predicting Wisdom Based on Peer Relationships and Presence in Virtual Spaces

Step	Variables Entered	Regression Coefficient	R^2	Adjusted R^2	F	df1	df2	Significance
1	Presence in Virtual Spaces	0.725	0.526	0.526	345.85	1	345	0.000
2	Peer Relationships	0.748	0.559	0.033	12.59	1	344	0.000

At the first step, time spent in virtual spaces entered the equation, accounting for 52.6% of the variance in wisdom ($R^2 = 0.526$, $F = 345.85$, $p < 0.001$). In the second step, peer relationships entered the model, contributing an additional 3.3% to the explained variance ($R^2 = 0.559$, $F = 12.59$, $p < 0.001$). This shows that both variables are significant predictors of wisdom, with the presence in virtual spaces being the stronger predictor.

The significance of the predictors was further assessed using one-way ANOVA. The results are presented in Table 4:

Table 4

One-Way ANOVA for Predicting Wisdom Based on Predictor Variables

Variable	Source	Sum of Squares	df	Mean Square	F	Significance
Presence in Virtual Spaces	Regression	3046.66	1	3046.66	316.91	0.000
	Residual	2744.98	345	7.95		
	Total	5791.65	346			
Peer Relationships	Regression	3240.06	1	3240.06	156.26	0.000
	Residual	2551.59	344	7.41		
	Total	5791.65	346			

The results of the ANOVA further confirm the significant contribution of both predictor variables. Time spent in virtual spaces significantly predicted wisdom ($F = 316.91$, $p < 0.001$), as did peer relationships ($F = 156.26$, $p < 0.001$).

Finally, the coefficients from the regression analysis, both standardized and unstandardized, are presented in Table 5:

E-ISSN: 3041-8828

Table 5

Unstandardized and Standardized Coefficients for Predicting Wisdom

Variable	Unstandardized Coefficient (B)	Standard Error	Beta	T	Significance
Constant	88.28	1.27	-	69.15	0.000
Presence in Virtual Spaces	-0.715	0.105	-0.445	-6.79	0.000
Peer Relationships	-0.038	0.007	0.335	5.10	0.000

The regression equation indicates that for every one unit increase in time spent in virtual spaces, wisdom decreases by 0.715 units ($B = -0.715$, $p < 0.001$). Similarly, peer relationships positively predict wisdom, with a B value of -0.038 ($p < 0.001$), highlighting the complexity of the relationship between these variables.

4. Discussion and Conclusion

This study sought to examine the relationship between wisdom, peer relationships, and the time spent in virtual spaces among university students. The findings from this study reveal several important insights into how peer interactions and virtual engagement affect the development of wisdom. Specifically, the results show a significant positive relationship between peer relationships and wisdom, suggesting that stronger peer connections are associated with higher wisdom scores. Conversely, the amount of time spent in virtual spaces was negatively related to wisdom, indicating that increased online activity may detract from the development of wisdom. These findings align with and extend previous research on the social and cognitive determinants of wisdom, as well as the emerging literature on the psychological effects of digital environments.

The positive correlation between peer relationships and wisdom underscores the importance of social interactions in fostering cognitive, reflective, and affective dimensions of wisdom. As Ardelt (2003) conceptualizes wisdom, it involves not only cognitive competencies but also reflective and affective qualities such as empathy and compassion (Ardelt, 2003). Peer relationships provide a critical social context in which individuals can engage in reflective thinking, practice empathy, and develop emotional intelligence. This finding is consistent with prior research demonstrating the role of peer learning and social interactions in promoting cognitive development and emotional well-being (Babaei-Monqari et al., 2022; Fink & Rosnay, 2023). Barzegar et al. (2021) also highlight that peer interactions contribute to the development of wisdom by fostering mindfulness and emotional regulation, which are essential for the reflective and affective dimensions of wisdom (Barzegar et al., 2021).

Moreover, the significant negative relationship between time spent in virtual spaces and wisdom provides further evidence of the potentially detrimental effects of excessive online engagement on cognitive and emotional development. This finding is consistent with the work of George and Odgers (2015), who argued that excessive use of mobile technologies, particularly social media, can lead to reduced opportunities for deep, reflective thinking and meaningful social interactions, both of which are necessary for the development of wisdom (George & Odgers, 2015). Cohen-Almagor (2018) also points out the risks of digital environments, including cyberbullying and the erosion of social responsibility, which can negatively affect individuals' social and emotional well-being (Cohen-Almagor, 2018). The present study adds to this literature by showing that online engagement may detract from the development of wisdom, particularly its reflective and affective components.

Interestingly, while virtual spaces offer opportunities for learning and connection, the negative association with wisdom suggests that the quality and nature of online interactions may play a more critical role than the mere amount of time spent online. Previous studies have shown that online environments can promote empathy and social responsibility when used in prosocial ways (Öztop et al., 2024; Said, 2023). For example, Vania et al. (2022) found that online peer relationships can enhance academic motivation and social engagement, suggesting that positive online interactions can contribute to cognitive and emotional development (Vania et al., 2022). However, the negative correlation observed in this study may reflect the tendency for online spaces to foster superficial, low-quality interactions that do not contribute to the deep reflective thinking required for wisdom. Schreurs and Vandenbosch (2023) caution that while digital literacy is essential, the unstructured nature of online environments can lead to negative psychological outcomes, such as a decreased capacity for reflective thinking and critical engagement with information (Schreurs & Vandenbosch, 2023).

E-ISSN: 3041-8828

The findings from the stepwise regression analysis further emphasize the complex interplay between peer relationships and virtual engagement in predicting wisdom. While time spent in virtual spaces was the strongest predictor of wisdom, peer relationships also made a significant contribution to the variance in wisdom scores. This suggests that although online behaviors may detract from wisdom development, strong peer connections can buffer these effects to some extent. Gong et al. (2022) highlight the importance of supportive relationships in mitigating the negative impacts of digital environments, particularly among adolescents and young adults who are more vulnerable to the psychological effects of online behaviors (Gong et al., 2022). Similarly, Johnson (2022) found that peer relationships can moderate the effects of avoidant attachment on social and emotional outcomes, further supporting the idea that positive peer interactions are crucial for emotional regulation and cognitive development (Johnson, 2022).

This study's results are in line with the research by Bianchi et al. (2020), which found that social anxiety and poor peer communication negatively affect emotional development, thus impacting wisdom. The present study similarly highlights the importance of peer quality and suggests that peer learning and social interaction help improve cognitive and reflective dimensions of wisdom (Bianchi et al., 2020). Likewise, Ghorbani and Khormaei (2016) explain how successful intelligence and coping mechanisms are linked to wisdom, providing further context for the association between strong interpersonal relationships and the development of cognitive capacities (Ghorbani & Khormaei, 2018).

The significant negative relationship between time spent in virtual spaces and wisdom is also supported by other findings. George and Odgers (2015) explored how digital engagement affects cognitive skills and highlighted how an excess of online interaction can limit reflective thinking (George & Odgers, 2015). This study extends their findings by showing that virtual space involvement negatively predicts wisdom even when controlling for peer relationships, suggesting that the distractions and potentially superficial nature of online interactions may impede the development of deeper cognitive traits such as wisdom. Research by Yang et al. (2023) on internet gaming addiction also supports this, showing that excessive digital engagement can increase impulsivity and decrease reflective capacity, thereby hindering the cognitive aspects of wisdom (Yang et al., 2023).

However, several limitations should be acknowledged. First, the study relied on self-reported data, which may introduce biases such as social desirability or inaccurate reporting of time spent in virtual spaces. Future studies could benefit from using more objective measures of online activity, such as digital tracking tools, to provide a more accurate assessment of participants' online behaviors. Additionally, the cross-sectional nature of the study limits the ability to make causal inferences. While the findings suggest a relationship between peer relationships, online engagement, and wisdom, it is not possible to determine the direction of these relationships. Longitudinal research would be needed to explore how these factors interact over time and whether changes in peer relationships or virtual engagement lead to changes in wisdom development.

Another limitation is the study's focus on a specific population—university students from Wasit University. While this population is relevant for understanding the developmental trajectories of wisdom in young adults, the findings may not be generalizable to other age groups or cultural contexts. Wisdom is influenced by cultural, social, and educational factors (Ghorbani & Khormaei, 2018), and it is possible that the relationships observed in this study may differ in populations with different cultural or educational backgrounds. Future research should consider exploring these dynamics across diverse populations to enhance the generalizability of the findings.

Future research should address the limitations outlined above by incorporating longitudinal designs that can better assess the causal relationships between peer relationships, online engagement, and wisdom. By following participants over time, researchers could gain a clearer understanding of how these variables interact and whether changes in one domain lead to corresponding changes in wisdom. Additionally, future studies could explore the quality of online interactions in more detail. While this study focused on the quantity of time spent in virtual spaces, it would be beneficial to investigate how the nature and quality of these online interactions (e.g., meaningful versus superficial engagement) affect wisdom development. Researchers could also examine the role of digital literacy and online etiquette in promoting or hindering wisdom.

Another important area for future research is the exploration of how different types of peer relationships (e.g., friendships, romantic relationships, or family relationships) impact wisdom development. While this study focused broadly on peer interactions, it would be valuable to differentiate between various relationship types and examine

E-ISSN: 3041-8828

whether certain types of relationships have a stronger influence on wisdom. For example, research by Cui et al. (2020) has shown that maternal and peer socialization can have different effects on emotional development, suggesting that the influence of family relationships on wisdom may differ from that of peer relationships (Cui et al., 2020). Exploring these dynamics could provide a more nuanced understanding of how social interactions contribute to wisdom development.

The findings of this study offer several practical implications for educators, psychologists, and policymakers. First, given the positive relationship between peer relationships and wisdom, educational institutions should prioritize social learning opportunities that promote meaningful peer interactions. Group work, peer tutoring, and collaborative learning environments can help students develop reflective thinking, empathy, and emotional intelligence, all of which contribute to the development of wisdom (Babaei-Monqari et al., 2022; Barzegar et al., 2021). Schools and universities should also consider incorporating programs that teach students how to cultivate and maintain healthy peer relationships, particularly in the digital age, where online communication can sometimes replace face-to-face interactions.

Additionally, educators and parents should be mindful of the potential negative effects of excessive time spent in virtual spaces. While online platforms offer opportunities for learning and connection, it is important to encourage balanced use of digital technologies and to promote activities that foster deep, reflective thinking. Programs that teach digital literacy, mindfulness, and time management could help students better manage their online behaviors and reduce the risk of digital addiction (Golestanibakht et al., 2022). Parents and educators should also encourage offline activities that promote social interaction and emotional well-being, such as group discussions, community service, or mindfulness exercises.

Finally, policymakers should consider developing guidelines for digital media use that emphasize the importance of balancing online and offline activities. As digital engagement becomes an increasingly central part of everyday life, it is crucial to develop policies that protect individuals, particularly young people, from the negative effects of excessive online activity. These guidelines could include recommendations for time limits on social media use, as well as the promotion of educational programs that teach responsible online behavior and emotional regulation. By fostering a more mindful and balanced approach to digital engagement, we can help individuals develop the cognitive, reflective, and affective dimensions of wisdom necessary for personal and societal well-being.

In conclusion, this study highlights the complex relationships between peer relationships, virtual space presence, and wisdom. While peer interactions are a critical factor in the development of wisdom, excessive time spent in virtual environments may hinder this development. By promoting positive peer relationships and encouraging balanced digital engagement, we can support the cultivation of wisdom in young adults.

Authors' Contributions

All authors significantly contributed to this study.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We hereby thank all individuals for participating and cooperating us in this study.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent.

References

Ardelt, M. (2003). Empirical Assessment of a Three-Dimensional Wisdom Scale. *Research on Aging*, *25*(3), 275-324. https://doi.org/10.1177/0164027503025003004

E-ISSN: 3041-8828

Asadi Rajani, M. (2023). Investigating the Performance of Selective Attention and Working Memory in Adolescents Recovered from Acute Covid-19 with Normal Adolescents. *International Journal of Education and Cognitive Sciences*, *3*(4), 44-51. https://doi.org/10.22034/injoeas.2023.357896.1036

Babaei-Monqari, M. M., Hamednia, M., & Abedi Qelich Qashlaki, M. (2022). Modeling the Relationship Between Motivational Strategies and Metacognitive Self-Regulation with Peer Learning in High School Students. *Journal of Psychology*, *1*(26), 91-99. https://www.researchgate.net/publication/325228817_Modeling_the_relationship_between_motivational_beliefs_cognitive_learning_strategies_and_academic_performance_of_teacher_education_students

Barzegar, M., Ghadampour, E., & Gholamrezai, S. (2021). Investigation of the Relationship of Cognitive Abilities and Mindfulness with Teache rs' Wisdom: The Mediating Role of Positive Emotions. *Research in Educational Science*, *15*(52), 88-99. https://www.jiera.ir/article_134022_en.html?lang=en

Bianchi, D., Lonigro, A., Baiocco, R., Baumgartner, E., & Laghi, F. (2020). Social Anxiety and Peer Communication Quality During Adolescence: The Interaction of Social Avoidance, Empathic Concern and Perspective Taking. *Child & Youth Care Forum*, *49*(6), 853-876. https://doi.org/10.1007/s10566-020-09562-5

Cohen-Almagor, R. (2018). Social responsibility on the Internet: Addressing the challenge of cyberbullying. *Aggression and Violent Behavior*, *39*, 42-52. https://doi.org/10.1016/j.avb.2018.01.001

Cui, L., Criss, M. M., Ratliff, E., Wu, Z., Houltberg, B. J., Silk, J. S., & Morris, A. S. (2020). *Longitudinal links between maternal and peer emotion socialization and adolescent girls' socioemotional adjustment*American Psychological Association.

Fink, E., & Rosnay, M. d. (2023). Examining Links Between Affective Empathy, Cognitive Empathy, and Peer Relationships at the Transition to School. *Social Development*. https://doi.org/10.1111/sode.12685

George, M. J., & Odgers, C. L. (2015). Seven Fears and the Science of How Mobile Technologies May Be Influencing Adolescents in the Digital Age. *Perspectives on Psychological Science*, *10*(6), 832-851. https://doi.org/10.1177/1745691615596788

Ghorbani, R., & Khormaei, F. (2018). The Examining Causal Model of Wisdom: Explaining Effect of Personality and Coping Self-Efficcy. *Social Psychology Research*, *8*(31), 33-50. http://www.socialpsychology.ir/article_87484_d6101f8a67c555c4b1692ba5db26517a.pdf?lang=en

Golestanibakht, T., Babaie, E., & Mostaed Hesari, S. (2022). The Effects of Positive Psychology Training on Wisdom, Resilience, and Cognitive Flexibility of Students. *Positive Psychology Research*, *8*(2), 83-100. https://doi.org/10.22108/ppls.2022.131504.2225

Gong, J., Zhou, Y., Wang, Y., Liang, Z., Hao, J., Su, L., Wang, T., Du, X., Zhou, Y., & Wang, Y. (2022). How parental smartphone addiction affects adolescent smartphone addiction: The effect of the parent-child relationship and parental bonding. *Journal of affective disorders*, *307*, 271-277. https://doi.org/10.1016/j.jad.2022.04.014

Johnson, S. (2022). *Effects of Peer Relationships on the Relationship between Avoidant Attachment and Romantic Intimacy among Adolescents* University of the Pacific]. https://search.proquest.com/openview/412f57c7e91304274ca27b53b9c713d3/1?pq-origsite=gscholar&cbl=18750&diss=y

Kütük, H., Hatun, O., Ekşi, H., & Ekşi, F. (2022). Investigation of the Relationships Between Mindfulness, Wisdom, Resilience and Life Satisfaction in Turkish Adult Population. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*. https://doi.org/10.1007/s10942-022-00468-w

Nejatifar, S., Rahimi Pordanjani, S., & Aghaziarati, A. (2021). Investigating the Relationships of Dimensions of Wisdom with the Academic Vitality and Psychological Well-Being in Gifted Female Students. *Journal of Assessment and Research in Applied Counseling*, *3*(2), 50-59. https://www.magiran.com/paper/2304569

Öztop, F., Bilač, S., & Kutuk, Y. (2024). Improving Empathy and Peer Relationships in Adolescents: A Social Cognition Training Approach. *International Journal of Education and Cognitive Sciences*, *5*(2), 23-30. https://doi.org/10.61838/kman.ijeas.5.2.4

Rejali, H., & Yousefi, Z. (2021). Prediction of the relationship with the spouse based on wisdom and thought control strategies and the moderating role of the dimensions of family relationships and triangulation in married women. *Applied Family Therapy Journal (AFTJ)*, *2*(1), 126-142. http://journals.kmanpub.com/index.php/aftj/article/view/412

Rodgers, R. F., Simone, M., Franko, D. L., Eisenberg, M. E., Loth, K., & Neumark-Sztainer, D. (2021). The longitudinal relationship between family and peer teasing in young adulthood and later unhealthy weight control behaviors: The mediating role of body image. *International Journal of Eating Disorders*, *54*(5), 831-840. https://doi.org/10.1002/eat.23492

Roubinov, D. S., Boyce, W. T., & Bush, N. R. (2020). Informant-specific reports of peer and teacher relationships buffer the effects of harsh parenting on children's oppositional defiant disorder during kindergarten. *Development and Psychopathology*, *32*(1), 163-174. https://doi.org/10.1017/S0954579418001499

Sadat Mousavi, S., & Ebrahimi, A. (2024). Structural Model of the Effect of Psychological Capital on Innovative Behavior in Teaching: The Mediating Role of Conscientiousness Personality Trait. *International Journal of Education and Cognitive Sciences*, *4*(4), 1-10. https://doi.org/10.61838/kman.ijecs.4.4.1

Said, T. S. (2023). The Adaptation of Malay Philosophy Values Through Maritime Education Preservation and Conservation Wisdom. *Bio Web of Conferences*, *79*, 06001. https://doi.org/10.1051/bioconf/20237906001

Schreurs, L., & Vandenbosch, L. (2023). Investigating the longitudinal relationships between active parental and peer mediation and adolescents' social media literacy on the positivity bias. *Mass Communication and Society*, 1-25. https://doi.org/10.1080/15205436.2022.2159432

Shoghi, B., Mohammadi, A., & Pirkhaefi, A. (2023). The Mediating Role of Mindfulness in the Relationship between Cognitive Abilities and Wisdom in Students. *Sociology of Education*, *8*(2), 262-273. https://doi.org/10.22034/ijes.2023.707076

Vania, I. G., Yudiana, W., & Susanto, H. (2022). Does Online-Formed Peer Relationship Affect Academic Motivation During Online Learning? *Journal of Educational Health and Community Psychology*. https://doi.org/10.12928/jehcp.v11i1.21970

Xie, Y., Yang, Q., & Lei, F. (2023). The Relationship of Internet Gaming Addiction and Suicidal Ideation Among Adolescents: The Mediating Role of Negative Emotion and the Moderating Role of Hope. *International journal of environmental research and public health*. https://doi.org/10.3390/ijerph20043375

E-ISSN: 3041-8828

Yang, X., Ebo, T. O., Wong, K., & Wang, X. (2023). Relationships Between Psychological Flexibility and Internet Gaming Disorder Among Adolescents: Mediation Effects of Depression and Maladaptive Cognitions. *PLoS One*, *18*(2), e0281269. https://doi.org/10.1371/journal.pone.0281269

Zhu, J., Zhang, W., Yu, C., & Bao, Z. (2015). Early adolescent Internet game addiction in context: How parents, school, and peers impact youth. *Computers in human Behavior*, *50*, 159-168. https://www.sciencedirect.com/science/article/pii/S0747563215002800

E-ISSN: 3041-8828