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Psychometric Properties of the Turkish Version of the ChatGPT Usage Scale

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Abstract

Artificial Intelligence (AI) tools are actively used by academics and students. ChatGPT stands out among the AI tools most used by undergraduate and graduate students. ChatGPT offers students idea development and academic writing support for their assignments and research. This study examined the validity and reliability of the ChatGPT Usage Scale in Turkish culture. The ChatGPT Usage Scale consists of three subscales: Academic Writing Aid, Academic Task Support, and Reliance and Trust. The study participants consisted of 332 undergraduate and graduate students. Reliability analyses conducted on the ChatGPT Usage Scale show that Cronbach's alpha and McDonald's omega values ranged from .87 to .96. According to the results of the study's Confirmatory Factor Analysis (CFA), the fit indices of the ChatGPT Usage Scale were determined to be good. The results of the scale's item discriminant analysis and item-total correlation values were found to be at acceptable levels. Furthermore, the scale's high item factor loadings and convergent validity demonstrate its construct validity. All research findings demonstrate that the Turkish version of the ChatGPT Usage Scale is reliable and valid. Therefore, this scale is expected to make significant contributions to future studies on the integration of AI and ChatGPT into the Turkish education system.

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ChatGPT Kullanım Ölçeği'nin Türkçe Versiyonunun Psikometrik Özellikleri

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Özet

Yapay Zeka (YZ) araçları, akademisyenler ve öğrenciler tarafından aktif olarak kullanılmaktadır. Lisans ve lisansüstü öğrencilerinin en çok kullandığı AI araçları arasında ChatGPT ön plana çıkmaktadır. ChatGPT, öğrencilere ödevlerinde ve araştırmalarında fikir geliştirme ve akademik yazım desteği sunmaktadır. Bu çalışmada, ChatGPT Kullanım Ölçeği'nin Türk kültüründe geçerlilik ve güvenilirliği incelenmiştir. ChatGPT Kullanım Ölçeği, Akademik Yazım Yardımı, Akademik Ödev Desteği ile Bağlılık ve Güven olmak üzere üç alt boyuttan oluşmaktadır. Araştırmanın katılımcıları, 332 lisans ve lisansüstü öğreciden oluşmaktadır. ChatGPT Kullanım Ölçeği üzerinde yürütülen güvenirlik analizleri, sonuçları Cronbach alfa ve McDonald's omega değerlerinin .87-.96 arasında değiştiğini göstermektedir. Çalışmanın Doğrulayıcı Faktör Analizi (DFA) sonuçlarına göre, ChatGPT Kullanım Ölçeği'nin uyum indekslerinin iyi düzeyde olduğu saptanmıştır. Ölçeğin madde ayırt edicilik analizi sonuçları ve madde toplam korelasyon değerlerinin kabul edilebilir seviyede olduğu görülmüştür. Ayrıca ölçeğin madde faktör yüklerinin yüksek olması ve benzeşim geçerliliğini sağlaması, yapı geçerliliğini sağladığını göstermektedir. Araştırmanın tüm bulguları, ChatGPT Kullanım Ölçeği'nin Türkçe formunun güvenilir ve geçerli olduğunu göstermektedir. Dolayısla, bu ölçeğin Türk eğitim sistemine AI ve ChatGPT'nin entagrasyonu konusunda yapılacak çalışmalara önemli katkılarda bulunması beklenmektedir.

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INTRODUCTION

AI applications are used in many fields as auxiliary resources, such as translation tools, recommendation systems, or personal assistants in the creation of course materials (Janiesch et al., 2021). AI systems offer the opportunity to examine and interpret complex data sets using statistical models and algorithms (Ghahramani, 2015; Mitchell, 2019). The potential of AI technology to provide answers to questions/problems in many areas of society can be considered one of its greatest advantages (Yılmaz et al., 2023). AI is described as the most impactful technology of the coming years due to its ability to augment human capabilities at a limited cost (Chen, 2017; Lester et al., 2004; Schwab, 2017). The ability to connect and integrate with AI systems is rapidly becoming a necessary skill in the modern world. This also suggests that it may necessitate people changing careers or upgrading their skills (Wang et al., 2022; Carolus et al., 2023). People's intense interest in AI triggers both promising expectations and potential drawbacks. The general public's views on AI are mixed; some see its advantages, while others are ambivalent or even fearful of these developments. Given the increasing integration of AI technologies into daily activities, understanding the public's thought processes and perspectives on the adoption and development of these technologies is necessary (Araujo et al., 2020; O'Shaughnessy et al., 2023; Zhang & Dafoe, 2019). In this context, the perception of human acceptance of AI technology has become a central topic of current AI research.

ChatGPT is one of the applications that has facilitated the acceptance and widespread use of AI technologies. ChatGPT, an AI-powered conversational assistant, is the most widely used AI application in many sectors. ChatGPT boasts a variety of features, including the ability to answer questions on various topics, solve problems, generate and analyze data, generate text, and participate in conversations. Because of these features, it is used by people of all ages and professions for various purposes. In this context, artificial intelligence is the development of algorithms capable of imitating human intelligence in thinking, learning, and suggesting actions (Jackson, 2019). The emergence of artificial intelligence began with the envisioning of a more comprehensive and useful machine learning process using diverse data, just like humans (Luger & Chakrabarti, 2017). It currently seems impossible to imagine how far the application limits of AI can extend. However, recently, AI has reached the potential to accomplish much more complex and sophisticated tasks in line with generative language models. This process, defined as deep learning in AI, has made it possible to generate much more novel and realistic content from raw data (Banh & Strobel, 2023). In this context, generative AI applications like ChatGPT are used by many different segments of society for various purposes. Furthermore, recent studies have also reported that students effectively utilize ChatGPT in academic tasks and transactions (Athanassopoulos et al., 2023).

Artificial intelligence applications in higher education institutions have a wide range of uses, from preparing assignments or presentations to serving as digital assistants for ideation. The use of artificial intelligence applications in universities has increased significantly in recent years (Michel-Villarreal et al., 2023). As the useful nature of artificial intelligence and its contribution to deep learning processes increase, it is highly likely that its use will become much more widespread and effective in universities and higher education institutions. In this context, ChatGPT, one of the most widely used artificial intelligence applications, is reported to serve multiple purposes simultaneously in universities (Su & Yang, 2023). However, there are also approaches advocating for limits or bans on the use of artificial intelligence in higher education institutions (TheTab, 2023). This approach argues that artificial intelligence triggers violations of ethical rules. Indeed, this view argues that academic integrity and the dignity of student labor become questionable when AI applications are actively used. Another approach emphasizes that, considering the assumption that AI applications are

a new reality in the scientific world, instead of imposing bans or limits, how they can be used within a constructive, effective, and ethical framework should be addressed. This approach points to the need to publish a framework or guideline for how students can use AI in academic processes (UCL, 2025). Similarly, instead of banning AI in higher education institutions in Türkiye, studies are underway to identify ways AI can be used as a supplementary resource in an ethical and auditable manner (YOK, 2024).

While AI is a significant resource in academic processes, it also has some significant limitations. Firstly, its potential impact on critical thinking skills and academic risks such as plagiarism are significant concerns. Therefore, establishing a clear policy and framework for the responsible integration of AI applications into teaching and learning processes should constitute the urgent action plans of universities and higher education institutions (Michel-Villarreal et al., 2023). However, while AI can dramatically reduce the learning load, it should also be noted that it can undermine students' deep understanding and comprehension (Farrokhnia et al., 2023). Furthermore, AI also provides educators with significant advantages and convenience in processes such as creating course materials, determining effective teaching methods, and identifying robust assessment techniques (Rahman & Watanobe, 2023). In the near future, artificial intelligence could introduce much more consistent and advanced measurement tools into scientific processes for determining and evaluating teaching methods and techniques (Rahman & Watanobe, 2023). Previous studies report that ChatGPT can be a powerful and effective tool for students with diverse language backgrounds in multicultural classrooms (Athanassopoulos et al., 2023). All these results provide further evidence that artificial intelligence can be an unpredictable facilitator in active learning and teaching.

Despite the positive contributions provided by artificial intelligence technologies, it should not be overlooked that they also carry some potential risks. While AI applications contribute to mental health and learning to a certain extent, sheer information overload and a lack of human interaction can increase stress and anxiety levels (Velastegui et al., 2023). This result suggests that AI's ability to provide individuals with the opportunity to acquire extensive knowledge can negatively impact the deep learning process. Similarly, AI can also trigger negative psychological outcomes by limiting social interaction. Furthermore, chatbots, which emulate real human responses through advanced technological infrastructure systems through AI, have recently become more actively used. However, the risk of clients overconfidence in chatbots and the observed deficiencies in their emotional intelligence point to the limitations of AI applications developed in this field (Denecke et al., 2021). In conclusion, these results point out the strengths and weaknesses of artificial intelligence and reveal the need for a healthy evaluation of its advantages and disadvantages.

The theoretical and empirical findings above indicate that applications like ChatGPT are actively and effectively used in many areas of life. The ability of these applications to evaluate and respond to increasingly complex and sophisticated data with meaningful integrity will dramatically impact both the scope and frequency of use. The contribution of AI applications to educational processes at universities is also increasing. Furthermore, the question of the limits of AI regarding ethical violations in the production of academic publications is expected to be a challenge in the near future. As AI applications become more integrated into higher education institutions, examining this process with valid and reliable measurement tools becomes a critical need. These measurement tools are also expected to shed light on the role of AI assistants in academic research.

Purpose of The Research

The aim of this study is to adapt the ChatGPT Usage Scale, developed by Nemt-Allah et al. (2024) to Turkish culture. The original study was tested on a sample of university students and demonstrated adequate psychometric properties. The ChatGPT Usage Scale consists of three subscales: Academic Writing Aid, Academic Task Support, Reliance, and Trust. No studies specifically addressing the validity and reliability of AI in academic writing were found in Türkiye. Given that AI will increasingly become more functional in academic writing, adapting the ChatGPT Usage Scale to Turkish is of critical importance.

METHOD

This scale adaptation study was designed using a cross-sectional survey model (Karasar, 2012). This section includes demographic information about the study's participant group and evidence of validity and reliability for the ChatGPT Usage Scale used as the data collection tool.

Research Participants

The sample of the study consists of 364 university students continuing their education in the 2024-2025 academic year. However, as the sample group's responses to the scale items included missing data and duplicate responses, 32 participants were excluded from the data analysis process, and analyses were conducted on 332 participants. In determining the sample group, a convenience sampling technique, a non-probability sampling method, was used. Because it is practical and feasible in terms of time, resources, and cost (Creswell & Creswell, 2017). Table 1 presents the sociodemographic characteristics of the participants:

Table 1. *Sociodemographic Characteristics of Participants*

Variables	Categories	n	%
Gender	Male	82	22.5
	Female	282	77.5
Socioeconomic Level	Low	62	17.1
	Medium	287	78.8
	High	15	4.1
Students' Grade Level	1. Grade	47	12.9
	2. Grade	4	1.17
	3. Grade	54	14.8
	4. Grade	162	44.5
	Master's Degree	76	20.9
	Doctorate	21	5.8
	Total	364	100

When Table 1 is examined, it is seen that 22.5% of the participants are male and 77.5% are female. 17.1% of the participants perceived their income level as low, 78.8% as medium, and 4.1% as high. 12.9% of the participants were first-year students, 1.17% were second-year students, 14.8% were third-year students, 44.5% were fourth-year students, 20.9% were master's students, and 5.8% were doctoral students.

Data Collection Tool

ChatGPT Usage Scale: The ChatGPT Usage Scale, developed by Nemt-allah et al. (2024), consists of three subscales: Academic Writing Aid, Academic Task Support, and Reliance and Trust. The scale consists of 15 items: Academic Writing Aid (7 items), Academic Task Support (4 items),

and Reliance and Trust (4 items). The scale uses a 5-point Likert-type rating system. Reliability coefficients for the original scale demonstrate good internal consistency (Cronbach's α=0.848, McDonald's ω=0.849) and composite reliability (CR=0.855), while the high average explained variance (AVE=0.664) supports convergent validity.

Language Content Validity

To adapt the scale to the Turkish sample and culture, the authors were first contacted via e-mail, and the necessary permissions were obtained. Ethical approval for the study was then obtained from the Siirt University Scientific Research and Publication Ethics Board (08.11.2024-7900). At the beginning of the adaptation process, the researchers examined the scale and its items. It was determined that the ChatGPT Usage Scale and its items were appropriate for the targeted sample. The translation steps of the scale were carried out using the method recommended by Brislin et al. (1973). The items in the scale were translated into Turkish by three field experts who are fluent in both Turkish and English. The translation was reviewed by two field experts for clarity of the questions and cultural appropriateness of the sentence structures. The translated scale was translated into English by two faculty members from the English department for grammatical analysis. It was observed that the translation procedures did not cause any loss of meaning. The suitability of the measurement tool for Turkish was checked by two Turkish teachers. Necessary corrections were made based on feedback. The prepared scale was administered to 13 students studying in the Turkish Language Teaching department. It was determined that there were no unclear items. In the final phase, the scale was administered to 364 university students accessed through online platforms via Google Forms.

Analysis process

The scores provided by 364 participants were examined to ensure the reliability of the data set. The research data were analyzed using SSPS 27 and AMOS programs. Statistical significance was determined as $p<0.05$. For validity analyses, first-level multifactor confirmatory factor analysis, convergent validity, item discrimination, and language and content validity were examined. Cronbach's Alpha and McDonalds Omega reliability coefficients, and composite reliability (CR) values were used to determine the reliability of the scale. Model fit criteria, comparative fit indices, absolute fit values, and residual fit values were used for CFA. The second-order confirmatory factor analysis was performed for the ChatGPT Usage Scale, and the fit values for X^2/df, CFI, IFI, AGFI, GFI, RMSEA, NFI, and TLI were examined. For the internal validity of the scale, the item mean scores between the bottom 27% and the top 27% groups were tested using a t-test. Because the scale yields a total score, it was evaluated both on the scale as a whole and within each subscale. Additionally, Pearson correlation coefficients were calculated between the overall scale and its dimensions to test the construct validity of the scale.

FINDINGS

In this section of the research, descriptive statistics, validity and reliability results of the adapted ChatGPT Usage Scale are included.

Table 2. *Descriptive Statistics and Item Analysis Results of the ChatGPT Usage Scale Items*

Items	Mean	Sd	Skewness	Kurtosis	Item Total Correlations	Common Factor Variances
Item 1	3.06	1.39	-.14	-1.20	.77	.77
Item 2	3.13	1.32	-.16	-1.03	.83	.84
Item 3	3.19	1.43	-.24	-1.23	.84	.87
Item 4	2.81	1.40	.12	-1.23	.77	.79
Item 5	3.07	1.43	-.16	-1.28	.80	.83
Item 6	3.39	1.41	-.55	-.98	.86	.91
Item 7	3.16	1.39	-.23	-1.16	.79	.84
Item 8	3.11	1.41	-.21	-1.25	.86	.87
Item 9	3.27	1.35	-.39	-1.02	.90	.94
Item 10	3.45	1.39	-.54	-.96	.84	.86
Item 11	3.28	1.31	-.37	-.92	.86	.89
Item 12	3.46	1.37	-.42	-1.04	.39	.64
Item 13	3.07	1.16	-.24	-.69	.63	.79
Item 14	3.07	1.31	-.19	-1.09	.65	.84
Item 15	3.29	1.24	-.33	-.80	.75	.80

According to Table 2, the corrected item-total correlation values range from .39 to .90. The values should be above .30 (Büyüköztürk, 2018). Common variance values range from .64 to .94. These should be above .20 (Büyüköztürk et al., 2014). The skewness and kurtosis values of the items range from -1.28 to .12. According to Kline (2011), for the normality assumption to be met, the skewness and kurtosis values must be less than 3.

Findings Regarding the Validity Analysis of the ChatGPT Usage Scale

The 15-item and three-factor structure of the ChatGPT Usage Scale was tested with CFA. The measurement values of the CFA results confirming the three-factor structure of the scale are shown in Figure 1. Factor loadings for Academic Writing Aid ranged from .77 to .91, for Academic Task Support from .86 to .94, and for Reliance and Trust from .41 to .84. The validity of the confirmatory factor analysis results was assessed using model fit indices (X^2 /sd, CFI, NFI, RFI, IFI, RMSEA, GFI, AGFI). References cited by Tabachnick and Fidell (2007), Bayram (2013), and Karagöz (2017) were taken into account when interpreting the model fit values. Table 3 below shows the good and acceptable fit values obtained from the CFA result.

Table 3. *Fit Values of the ChatGPT Usage Scale's Measurement Model*

	X^2/df	CFI	IFI	AGFI	GFI	RMSEA	NFI	TLI
Good Fit	≤3	≥.95	≥.95	≥ .90	≥.90	≤.05	≥.95	≥.95
Acceptable Fit	3<X^2/sd<5	≥.90	≥.90	≥.85	≥.85	≤.08	≥.90	≥.90
ChatGPT Usage Scale Fit Values	3.61	.95	.95	.85	.89	.08	.94	.94

Table 3 reveals that the X^2/df (3.61) value is below 5 and the values for other fit indices are CFI=.95, IFI=.95, AGFI=.85, GFI=89, RMSEA=.08, NFI=.94, and TLI=.94. In the measurement model, the CFI and IFI values indicate a good fit, while the X^2/df, GFI, TLI, NFI, AGFI and RMSEA values indicate an acceptable fit.

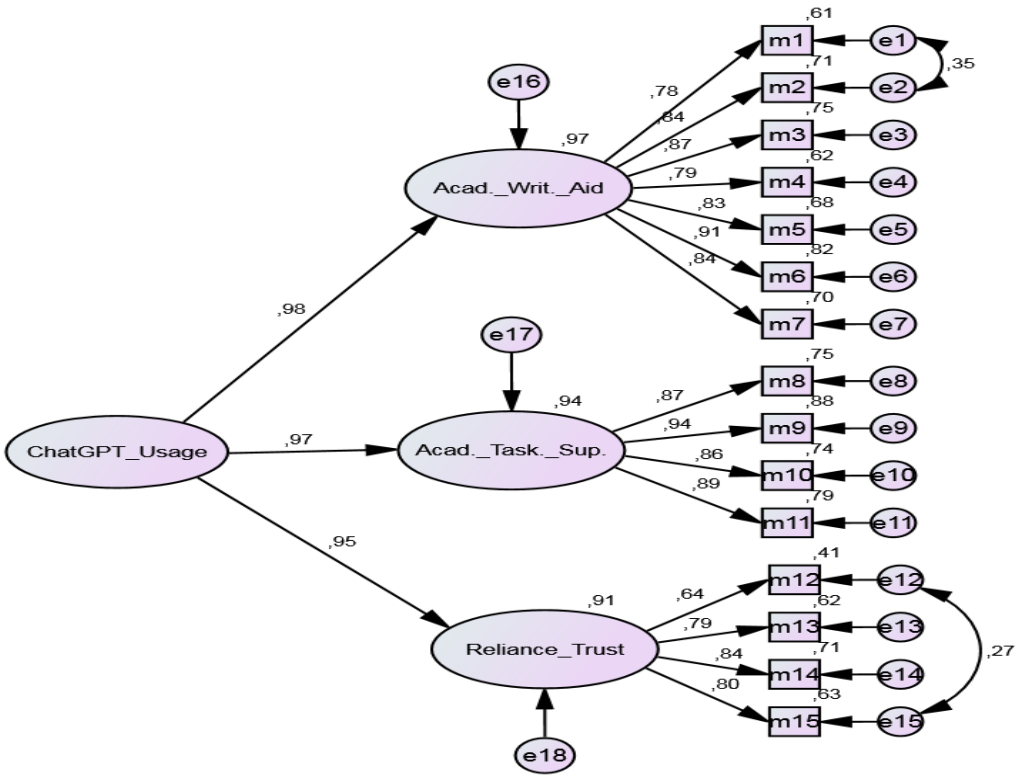

Figure 1. *Second Order Confirmatory Factor Analysis Model of ChatGPT Usage Scale*

Convergent Validity: For convergent validity, the composite reliability (CR) value and the average explained assumption (AVE) value are considered. Some sources require an AVE value above .50 (Shrestha, 2021) and the CR > AVE condition (Hair et al., 2014). However, convergent validity is considered to be achieved if the AVE value is less than .50 and the CR value is greater than .60 (Fornell & Larcker, 1981; Shrestha, 2021).

Table 4. *ChatGPT Usage Scale's Convergent Validity*

Dimensions	CR	AVE
Academic Writing Aid	.94	.70
Academic Task Support	.94	.80
Reliance and Trust	.80	.52
ChatGPT Usage Scale	.96	.68

As seen in Table 4, CR values exceed .80 for the overall scale and all dimensions. High CR values for the overall scale and its subdimensions indicate good internal consistency reliability. Furthermore, AVE values ranged from .52 to .80, supporting the scale's convergent validity. Based on these results, it can be said that ChatGPT Usage scale achieved convergent validity.

Item Discriminativeness

One method for examining the reliability of a data collection tool is to compare upper and lower groups. The test is expected to distinguish between participants who possess and do not possess the desired characteristic. For this purpose, total scores are ranked from highest to lowest, and the 27% groups are divided into lower and upper groups. To assess the scale's internal validity, an independent samples t-test was used to examine the significance of the differences between the lower and upper 27% groups. The means of these two groups were then compared using an independent samples t-test.

A significant analysis indicates that the test has high discriminative power (Can, 2020). In this study, the 90 participants with the lowest and highest scores were divided into lower and upper groups. For the ChatGPT Usage Scale, the mean score for the upper group was 66.63, and the mean score for the lower group was 25.19.

Table 6. *Independent Samples t-Test for Lower and Upper Groups of the ChatGPT Usage Scale*

Scale	Group	n	mean	sd	t	p
ChatGPT Usage	Lower Group	90	25.19	7.81	-42.20	00*
	Upper Grup	90	66.63	5.06		

$N_{Alt\ \%27}=90$ *ve* $N_{Üst\ \%27}=90$

When Table 6 is examined, it was found that there was a statistically significant difference between the ChatGPT Usage Scale scores of the lower and upper groups (p<.01). In this context, the scale can be considered highly reliable.

Correlation Analysis

To assess the criterion validity of the Chatgpt Usage Scale, data collected from a sample of 332 participants were examined. In this context, the relationships between the total Chatgpt Usage Scale score and its three subscales (Academic Writing Aid, Academic Task Support and Reliance and Trust) were examined using Pearson correlation analysis.

Table 7. *Descriptive Statistics and Correlation Analysis Results of Chatgpt Usage Scale*

Variables	N	Mean	Sd	1	2	3	4
1.Academic Writing Aid	332	21.12	7.53				
2. Academic Task Support	332	12.22	4.14	.85**			
3. Reliance and Trust	332	12.11	4.30	.69**	.79**		
4. Scale Total	332	45.46	14.78	.95**	.94**	.86**	

*p<0.05, **P<0.01

Table 7 reveals a positive and significant relationship between the Chatgpt Usage Scale and its subscales: Academic Writing Aid (r = .95), Academic Task Support (r = .94), and Reliance and Trust (r = .86). These findings indicate that the Chatgpt Usage Scale meets criterion validity.

Findings Regarding Reliability Analyses of the ChatGPT Usage Scale

McDonald's Omega and Cronbach's Alpha internal consistency tests were used to determine the reliability of the adapted scale. The findings are presented in Table 8.

Table 8. *ChatGPT Usage Scale Cronbach's Alpha and McDonald's Omega Values*

Dimensions	Cronbach Alfa (a)	McDonalds Omega (ω)
Academic Writing Aid	.95	.95
Academic Task Support	.87	.87
Reliance and Trust	.90	.90
Scale Total	.96	.96

Table 8 reveals that Cronbach's alpha and McDonald's Omega values for all dimensions are 0.87 and above. These measurement results demonstrate that the ChatGPT Usage Scale is a reliable measurement tool.

DISCUSSION

ChatGPT, which is used extensively by Turkish students, provides convenience in many academic subjects. Therefore, there is a need to deeply understand the reasons and consequences of students' ChatGPT use. This study aimed to adapt the ChatGPT Usage Scale (Nemt-allah et al., 2024) to Turkish. The results of the study, which included undergraduate and graduate students, showed that the ChatGPT Usage Scale can be used in Turkish culture. According to the results of the reliability

analysis conducted in the study, Cronbach's alpha and omega values for all of the Academic Writing Aid, Academic Task Support, and Reliance and Trust subscales of the scale varied between .87 and .95. The Cronbach's alpha and omega values of the ChatGPT Usage Scale were also found to be .96. Consistent with these findings, the Cronbach's alpha and McDonald's omega values were found to be .84 in the original study of the scale (Nemt-allah et al., 2024). Therefore, the analysis results indicate that the ChatGPT Usage Scale has a reliable structure.

According to the analyses conducted regarding the construct validity of the ChatGPT Usage Scale, item factor loadings were found to be in the range of .41-.94. The item-total correlation values of the scale ranged between .39-.90. These values being above .30 indicate an acceptable level (Büyüköztürk, 2018). The convergent validity results of the ChatGPT Usage Scale were observed to be high for both the subdimensions and the overall scale (AVE=.52-.80, CR=.80-.96). The CFA results conducted in the study also proved that the fit indices of the scale were at an acceptable level. In addition, according to the findings of the 27% sub-upper group analysis, it was observed that the scale item discrimination was at a good level (Can, 2020). The results of all analyses performed on the scale show that the Turkish form of the ChatGPT Usage Scale, consisting of 15 items and 3 subdimensions, is reliable and valid.

Correlation analyses conducted in the study found significant positive correlations between the overall ChatGPT Usage Scale score and its subdimensions. Furthermore, the total score for both the subdimensions and the overall scale can be obtained. Therefore, the subdimensions can be used independently in studies using this scale. ChatGPT is known to be the most actively used AI tool in academia. Used particularly by graduate students, ChatGPT makes significant contributions to academic writing areas such as idea generation, argument development, and drafting (Hartley et al., 2024). Furthermore, the prerequisites for effective and efficient use of ChatGPT are individuals' AI acceptance, trust, and self-efficacy (Batuk et al., 2025; Huallpa, 2023; Türk et al., 2025). Individuals' level of trust in AI tools, their acceptance of them, and their level of competence in using AI determine their likelihood of using ChatGPT. Students who use ChatGPT in their academic tasks state that ChatGPT makes it easier to overcome writer's block and organize their thoughts (Nemt-allah et al., 2024).

There are a limited number of scales related to the use of ChatGPT in the Turkish artificial intelligence literature. These scales appear to be related to specific issues such as the use of ChatGPT in mathematics education (Mazı et al., 2025), its use in language learning (Çobanoğulları, F., & Özbek, Ö., 2025), and its problematic use (Maral et al., 2025). The ChatGPT scale developed by Taktak and Bafrali (2025) covers general opportunities and challenges related to the use of ChatGPT. The ChatGPT scale adapted in this study differs from other ChatGPT scales in that it focuses on the use of ChatGPT by students in academic writing. From this perspective, the adaptation of the ChatGPT Usage Scale into Turkish is expected to facilitate a deeper understanding of how undergraduate and graduate students use and trust ChatGPT in academia.

This study, which adapted the ChatGPT Usage Scale to Turkish culture, has some limitations. The majority of the participating students were undergraduates. Given that graduate students use ChatGPT more frequently for academic writing tasks, future studies could focus solely on graduate students. Furthermore, because ChatGPT is actively used at other levels of education, studies on its use could be conducted with middle and high school students. This would allow the scale to be used with a wider audience. Another limitation is that the study's data was collected using self-report instruments. Qualitative research techniques were used in the data collection process to avoid

problems such as established method bias. Various analyses were conducted to ensure validity and reliability in the study. However, the structure of the scale can be strengthened by using Mokken analysis and measurement invariance analyses in future studies. Another limitation of this study is the absence of a scale for criterion validity. Future studies on the ChatGPT usage scale could also examine its criterion validity. The ChatGPT Usage Scale was developed with an Egyptian sample and adapted with a Turkish sample. Future adaptation studies in Western countries could ensure global use of the scale.

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