

Research Article | Araştırma Makalesi

Reliability Generalisation Meta-Analysis of the Communication Skills Assessment Scale İletişim Becerilerini Değerlendirme Ölçeğinin Güvenirlik Genelleme Meta-Analizi



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Abstract

Communication skills, which play a central role in interpersonal communication processes, are one of the fundamental areas of study that have been addressed in the literature for a long time and continue to attract the interest of researchers. In this regard, numerous measurement tools have been developed to explain and measure the different dimensions of communication skills; comprehensive studies have been conducted to resolve uncertainties regarding the theoretical and practical aspects of the concept through these tools. Among these measurement tools, the Communication Skills Assessment Scale (CSAS), developed by Korkut (1996) and widely used in the national literature, is noteworthy. This study aims to conduct a meta-analysis of reliability generalisation to systematically examine the reliability of the Communication Skills Assessment Scale, which is frequently used in different samples and research conditions. Within this scope, a total of 88 studies (N = 29,454) that used the CSAS and reported Cronbach's alpha reliability coefficients were included in the meta-analysis. The random effects model was used to combine the Cronbach's alpha coefficients. The aforementioned value was transformed using Bonett's method. The study included reliability generalisation and analyses of heterogeneity, publication bias, forest plots, Analog ANOVA, and meta-regression. Analog ANOVA was applied for categorical variables and meta-regression analyses for continuous variables to explain the variation in reliability coefficients. The study found that the average effect size was 0.895 (95% CI: 0.881-0.908). However, moderator analyses conducted on different variables did not yield any significant results. The findings revealed that the CSAS is a measurement tool that produces consistent and highly reliable scores in different samples and study conditions.

Keywords: Interpersonal Communication, Communication Skills, Meta-Analysis, Reliability Generalisation.

Öz

Kişilerarası iletişim süreçlerinde merkezi bir rol üstlenen iletişim becerileri, literatürde uzun süredir ele alınan ve araştırmacıların sürekli ilgisini çeken temel çalışma alanlarından biridir. Bu doğrultuda, iletişim becerilerinin farklı boyutlarını açıklamak ve ölçmek amacıyla çok sayıda ölçme aracı geliştirilmiş; söz konusu araçlar aracılığıyla kavramın kuramsal ve uygulamalı yönlerine ilişkin belirsizliklerin giderilmesine yönelik kapsamlı çalışmalar yürütülmüştür. Bu ölçme araçları arasında, Korkut (1996) tarafından geliştirilen ve ulusal literatürde yaygın biçimde kullanılan İletişim Becerilerini Değerlendirme Ölçeği (İBDÖ) dikkat çekmektedir. Bu çalışma, farklı örneklem ve araştırma koşullarında sıklıkla kullanılan İletişim Becerilerini Değerlendirme Ölçeği'nin güvenilirliğini sistematik biçimde incelemek amacıyla bir güvenilirlik genelleme meta-analizi gerçekleştirmeyi amaçlamaktadır. Bu kapsamda, İBDÖ'yü kullanan ve Cronbach alfa güvenilirlik katsayısını raporlayan toplam 88 çalışma (N = 29.454) meta-analize dâhil edilmiştir. Cronbach alfa katsayılarının birleştirilmesinde ise rastgele etkiler modeli (random effects model) kullanılmıştır. Söz konusu değer Bonett'in yöntemi ile dönüştürülmüştür. Araştırmada güvenilirlik genellemesi ve heterojenik, yayın yanlılığı, orman grafiği, Analog ANOVA ve meta-regresyon analizleri yapılmıştır. Güvenirlik katsayılarındaki varyasyonu açıklamak amacıyla kategorik değişkenler için Analog ANOVA, sürekli değişkenler için ise meta-regresyon analizleri uygulanmıştır. Araştırma sonucunda ortalama etki büyüklüğü 0,895 olarak hesaplanmıştır (%95 GA: 0,881-0,908). Bununla beraber farklı değişkenler üzerinde yapılan moderatör analizlerde ise anlamlı bir sonuç ortaya çıkmamıştır. Bulgular, İBDÖ'nün farklı örneklem ve çalışma koşullarında tutarlı ve yüksek düzeyde güvenilir puanlar üreten bir ölçme aracı olduğunu ortaya koymuştur.

Anahtar Kelimeler: Kişilerarası İletişim, İletişim Becerileri, Meta-Analiz, Güvenirlik Genellemesi.



Introduction

Communication, one of the fundamental elements of human life (Ruben & Gigliotti, 2017), is defined as ‘a process of message transmission that occurs verbally and non-verbally, with or without an intermediary’ (West & Turner, 2008, p. 8) and is defined as a message transmission process that occurs verbally and non-verbally, with or without intermediaries (Guerrero, Andersen, & Afifi, 2011). ‘Communication, which is absolutely present in all social processes’ (McQuail, 1984, p. 3), serves various functional purposes such as establishing and maintaining social bonds and relationships, exchanging information, and influencing attitudes and behaviours (Rubin, Perse, & Barbato, 1988). The fact that communication lies at the heart of human relationships means that people are significantly affected by the positive or negative outcomes of communicative actions. Consequently, this brings issues related to the quality of communication to the fore. The satisfaction of individuals participating in the communication process with the established interaction, their achievement of desired goals, their ability to create the expected impact, and their ability to find common ground are closely linked to effective communication. The effective expression of a communicative act is mainly made possible by the communication skills of the participants.

Communication skills, or social skills as they are commonly known (Argyle, 1999), are defined as the ability to interact with others in a socially acceptable, meaningful, and mutually beneficial manner within a social context (Combs & Slaby, 1977). Communication skills are also defined as the ability to achieve communicative goals by behaving in a socially appropriate manner when interacting with others (Kelly, Fincham, & Beach, 2003) or as the social behaviour components necessary to enable individuals to achieve their desired outcomes from social interaction (Spence, 1980). In this context, possessing communication skills means having a range of interpersonal competencies, including active listening, positive body language, empathy, self-disclosure, managing emotions, and determining and adapting communication style to the target audience.

Since communication is one of the fundamental human characteristics, communication skills are a concept studied by different disciplines in relation to different variables. For example, communication skills have been studied in relation to performance perception (Şimşek, 2021), intelligence levels (Kayışoğlu et al. , 2014), personality traits) (Dere, 2018), life satisfaction (Demirbilek & Bozanoğlu, 2023), leadership orientations (Beziç et al. , 2022), coping with stress (Bolat & Erdoğan, 2022), emotional intelligence (Begen & Şantaş, 2024; Erigüç et al. , 2014; Karakaya et al. , 2021; Özer et al. , 2018), aggression (Özdemir & Abakay, 2017; Yıldırım & Abakay, 2015) and empathy tendency (Aydın, 2023; Mutlu et al. , 2019; Turhan, 2018), etc. are studied in relation to communication skills.

Numerous measurement tools have been developed to measure communication skills (Baharudin et al. , 2017, 2017; Croucher et al. , 2020; Leal-Costa et al. , 2016; Radziej et al. , 2017; Takahashi et al. , 2006). Similar difference measurement tools have also been developed in Turkey (Akkuzu & Akkaya, 2014; Buluş et al. , 2017; Gülbahar & Aksungur, 2018, s. 3; Karaca et al. , 2019; Yıldız et al. , 2018).

Table 1. Scales on Communication Skills

Full Scale Name (Abbreviation)	Developer(s)	Year	No. of Items	Citations*	Sub-dimensions
Communication Skills Assessment Scale (CSAS)	Fidan Korkut	1996	25	1,700+	Unidimensional (General Communication)

Full Scale Name (Abbreviation)	Developer(s)	Year	No. of Items	Citations*	Sub-dimensions
Communication Skills Inventory (CSI)	K. Ersanlı, S. Balcı	1998	45	1,500+	Cognitive, Emotional, Behavioral
Communication Skills Scale (CSS)	Çetin Çetinkaya	2011	33	450+	Verbal, Non-verbal, Interaction Management
Perceived Communication Skills Scale (PCSS)	H. Ataş Akdemir	2018	15	40 - 60	External Perception, Internal Sharing
Effective Communication Skills Scale (ECSS)	Fatma Nur Doğan	2020	15	10 - 20	Unidimensional

*Citations are based on Google Scholar data as of [December 2025] and are subject to change.

In this context, although numerous scales have been developed in the domestic literature to measure communication skills (see Table 1), the examination of the Communication Skills Assessment Scale (CSAS) developed by Korkut (1996) in this meta-analysis study is based on several reasons. The main rationale for this choice is that the CSAS is one of the most widely used scales for measuring communication skills in the national literature, has been systematically applied in different sample groups for many years, and allows for the collection of a sufficient number of independent studies ($k=88$) required for meta-analysis. Although the scale is widely used on different samples, the reliability coefficients reported in these studies vary considerably. The research aimed to systematically bring together these scattered and individual findings to provide a comprehensive assessment. Furthermore, with its single-factor structure (25 items), the scale provides a systematic basis for directly comparing the internal consistency coefficient (Cronbach's Alpha) across different populations (students and general sample).

Within this scope, the primary objective of this study is to systematically examine the reliability coefficients reported for the Communication Skills Assessment Scale developed by Korkut (1996) and widely used in the national literature under different samples and research conditions, and to obtain a statistically generalisable average of these coefficients. To this end, the study aims to test possible moderator variables that explain the variance in reliability coefficients and to reveal the effects of sample characteristics on measurement consistency. The contributions of this research to the literature can be summarised under three headings:

Firstly, this study systematically brings together studies using the IBDÖ scale and conducted on different samples, providing an evidence-based assessment of the reliability level of the measurement tool in question.

Secondly, it fills a gap in the literature by revealing which variables influence the reliability coefficient, as identified through different moderator analyses.

Thirdly, this research serves as a guide for researchers who will use the IBCS, one of the most widely used interpersonal communication scales in the literature, in the future. In this context, the study will provide a methodological contribution to researchers for studies to be conducted, particularly in the fields of communication and psychology.

Research Methodology

The reliability generalisation meta-analysis method was chosen as the research method. The concept of reliability can be defined as the degree of consistency or stability of a

measurement (Aron et al., 2012). Reliability generalisation is a type of analysis performed on data obtained by combining reliability coefficients acquired through scales (Vacha-Haase, 1998). In this meta-analysis study, the Communication Skills Assessment Scale (CSAS), which is the most frequently cited instrument among the measurement tools developed in the Turkish literature to measure communication skills, was examined. The scale was developed by Korkut (1996). The 5-point Likert-type scale consists of 25 items. Developed based on students, each participant selects one of five options (always, often, sometimes, rarely, never) for each item. Korkut (1996) reported the internal consistency coefficient (Cronbach's alpha) of the scale, which has a single factor, as 0.80.

The reliability generalisation of the Communication Skills Assessment Scale was evaluated using the meta-analysis method. The standard statistic used for measurement reliability is the Cronbach Alpha coefficient, expressed as the internal consistency coefficient (usually denoted by α). The Cronbach Alpha value can range from 0.0 (if no variance is consistent) to 1.00 (if all variance is consistent) (Brown, 2002). Although the level of Alpha value that is sufficient for reliability is a controversial issue in terms of research, it is stated that a value above 0.7 is acceptable in terms of reliability (Nunnally, 1978). The reliability coefficient may vary between studies for various reasons (Caruso, 2000) because it is the measurements themselves, not the measurement tool, that are reliable or unreliable (Vacha-Haase, 1998). Based on this judgement, reliability generalisation, a meta-analysis method proposed by Vacha-Haase (1998), analyses the amount and sources of variability in reliability coefficients across different measurements and studies. In other words, reliability generalisation studies examine whether reliability coefficients differ across studies and whether they provide sufficiently reliable scores. At the same time, reliability generalisation studies are conducted to examine the factors that affect score reliability for a specific test in various samples (Caruso, 2000).

Data Collection and Selection Criteria

The studies to be included in the reliability generalisation meta-analysis were obtained from digital databases. In this context, DergiPark, the Higher Education Council National Thesis Centre (YÖKTEZ) and TR Index were utilised. Additionally, studies to be included in the reliability generalisation meta-analysis were accessed via the Google Scholar search engine. First, direct citation tracking was performed via Google Scholar. Subsequently, searches were conducted. These searches were performed using terms such as 'communication skills,' 'communication skills scale,' 'Communication Skills Scale,' and 'Communication Skills.' The selection criteria for determining the studies to be included in the reliability generalisation meta-analysis within the scope of the research were as follows: Scientific articles, book chapters, full-text conference papers, and theses using the 25-item CSS; studies using the CSS and reporting Cronbach's alpha value for their own study; studies in Turkish and English; and finally, studies conducted between 1996 and 2024.

Data Set, Coding Table

The REGEMA flow diagram of the publications examined within the scope of the research is presented in Figure 1. In this context, the total number of publications examined in our research is 420. Fourteen of the studies examined were duplicate publications, while 228 were excluded from the analysis because they used different methods or did not use the CSAS. Of the remaining 178 publications, 90 were excluded from the analysis due to induction reasons. In total, a reliability generalisation meta-analysis was applied

to 88 publications. The Cronbach's alpha values of the studies examined in the research (N=88) were coded into an Excel file along with other variables. The variables in the code table included the Cronbach's alpha values of the studies, publication year, publication type (article, book chapter, thesis, conference paper), sample size, sample type (student, general, female, male, etc.), number of items used from the CSAS scale, research implementation method (face-to-face survey, online survey, etc.), gender, mean age, and standard deviation. When the variables in the study were examined, 74 articles, 3 book chapters, and 11 theses were found in the publication type category. In the sample type category, 60 studies were conducted on students, while 28 studies were conducted on a general sample type. Regarding the applications of the studies, 5 studies were conducted online, while 35 studies applied the face-to-face CSAS scale. Data from 48 studies in this category could not be accessed. The coding criteria in the study were developed based on similar studies conducted previously (Sen, 2022; Celik, 2023; Dogan, 2024).

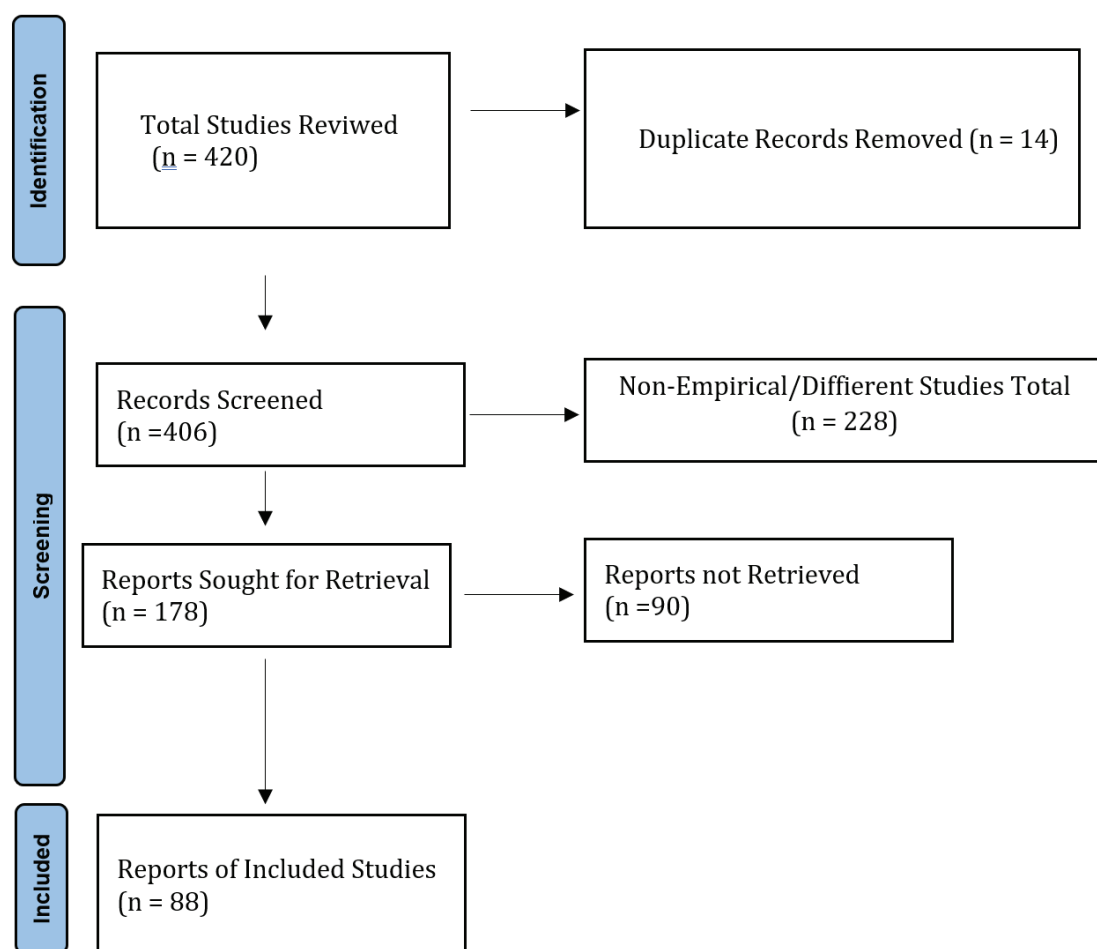


Figure 1. REGEMA Flow Diagram

Data Analysis Techniques

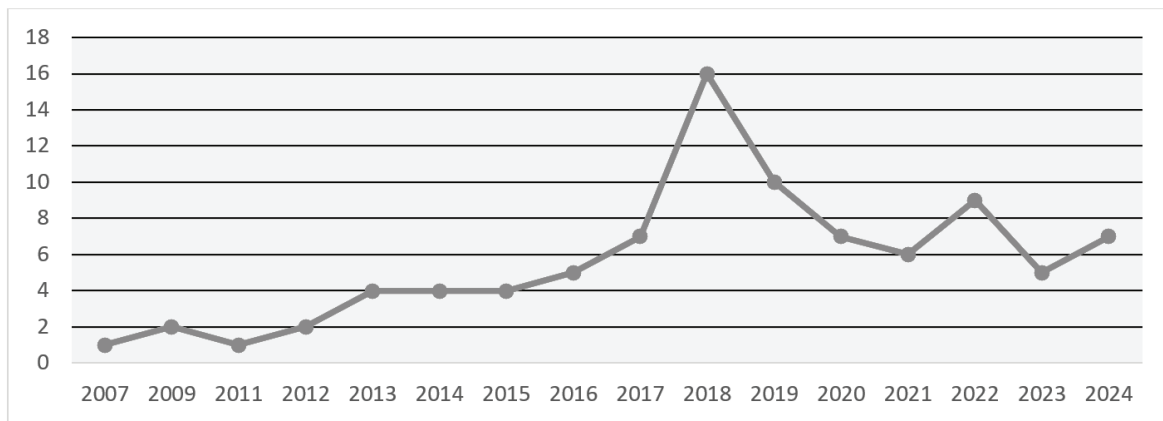
Cronbach's alpha values were used when analysing the data in the study. When generalising the reliability of the CSAS, calculations were made based on an average value. Bonnet's (2002) random effects model was preferred in the transformations used to calculate the average effect size ($T = \ln(1-|\alpha|)$). In the study, where the funnel plot was examined to look at publication bias, ANOVA and meta-regression analyses were also performed to examine the relationship between categorical and continuous variables and

the Cronbach's alpha coefficient. The data collected in the study were first entered into the Excel spreadsheet programme, and the analyses were performed using the R package programme.

Findings

The distribution of studies examined within the scope of the research by year is shown in Table 2. According to this, the number of studies using the CSAS and reporting Cronbach's alpha values showed an upward trend until 2018, but has shown a more irregular trend since 2019. Prior to 2007, no studies suitable for analysis within the scope of this research were found.

Table 2. Number of Studies Using CSAS by Year



Reliability Generalisation and Heterogeneity

Within the scope of the research, the random effects model analysis of the raw coefficients of the studies (N=88) subjected to reliability generalisation meta-analysis yielded an average value of 0,88. Furthermore, the reliability coefficients of the studies examined within the scope of the research were converted using the Bonnet (2002) transformation. The reliability coefficient obtained as a result of the analysis using the random effects model was 0.895. Heterogeneity was calculated as $Q(df = 87) = 5763.0546$, $p < .0001$. This result is statistically significant ($p < 0.001$). The I² value obtained from the research result was 98.38%. This indicates that the heterogeneity in the study is quite high. The forest plot of the studies examined is presented in Figure 2.

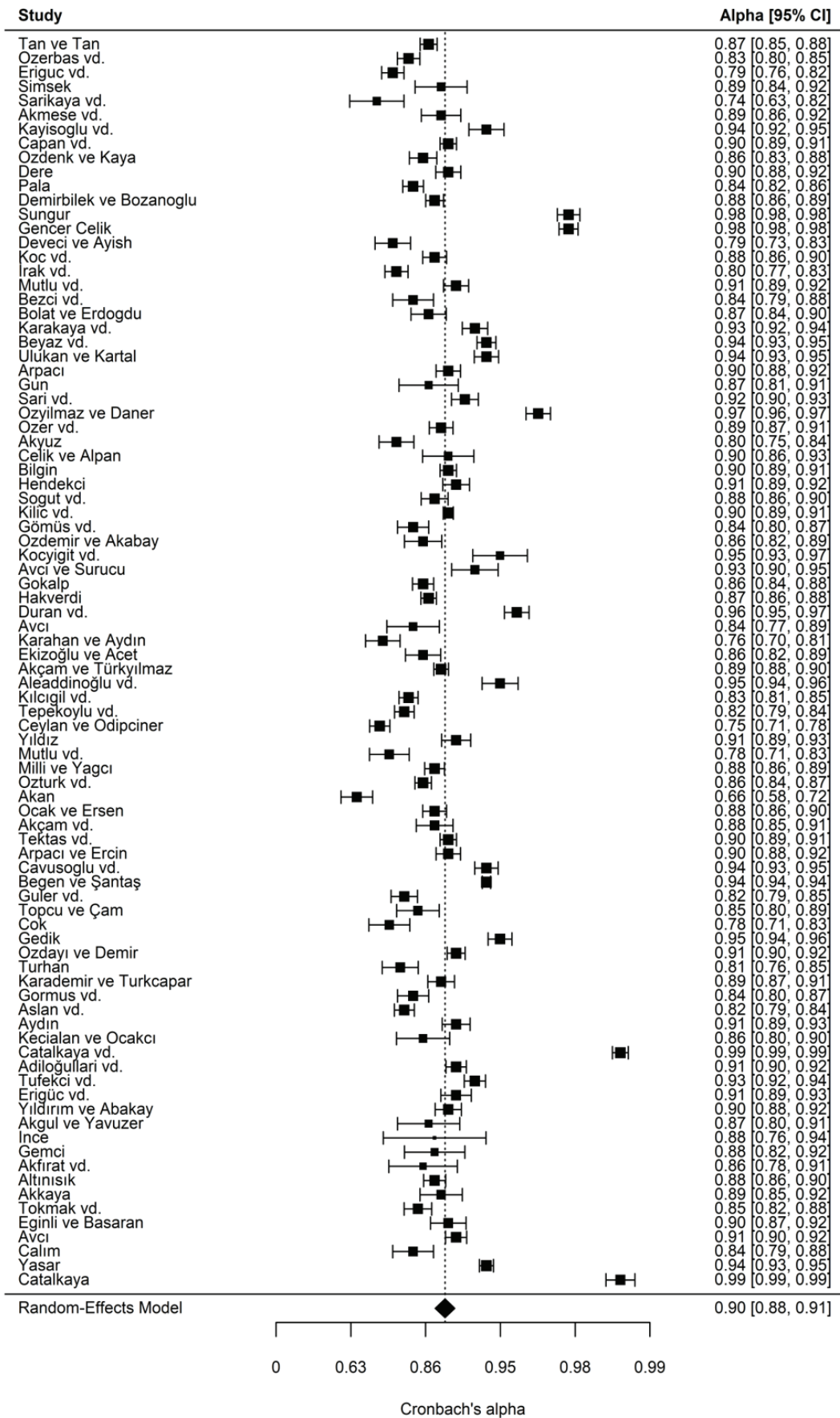


Figure 2. Forest Graph

Moderator Analyses

In this study, which conducted a meta-analysis of the reliability generalisation of studies using the CSAS scale, moderator analyses were performed to explain heterogeneity. Within this scope, analogue ANOVA was performed for categorical variables, and meta-regression tests were performed for continuous variables. First, looking at the results of the analogue ANOVA test performed on categorical variables, the analyses were conducted in the categories of publication type, scale sampling application type, and sample type explaining the composition of the sample (Table 3). Upon examination of the analysis, the results emerging in categorical variables are not statistically significant. However, the QW (Within-Group Q Statistic) values explaining within-group heterogeneity are significant ($p < 0.05$). Analog ANOVA results for publication type: $F(3,84) = 3.1427$, $p = 0.370$; $R^2 = 0.31$; $QW(84) = 5581.0180$, $p < 0.0001$; for application type; $F(2,85) = 1.4916$, $p = 0.4744$; $R^2 = 0$; $QW(85) = 5645.7011$, $p < 0.0001$; for sample type, $F(1,86) = 2.1186$, $p = 0.1455$; $R^2 = 1.24$; $QW(86) = 5582.1795$, $p < 0.0001$.

Table 3. Results of Categorical Moderators (Analogue ANOVA)

Variable	Category	k	N	$\alpha+$	%95 CI		ANOVA Result
					L	U	
Publication type*	Article	74	25,473	,89	,84	,93	$F(3,84) = 3,1427$, $p = 0,370$; $R^2 = 0,31$; $QW(84) = 5581,0180$, $p < 0,0001$
	Thesis	11	3,190	,92	,87	,95	
Application type*	Face to face	35	12,452	,88	,82	,92	$F(2,85) = 1,4916$, $p = 0,4744$; $R^2 = 0$; $QW(85) = 5645,7011$, $p < 0,0001$
	Online	5	1,428	,91	,81	,95	
	N/A**	48	15,438	,90	,88	,82	
Sample type	Student	59	19,520	,89	,87	,90	$F(1,86) = 2,1186$, $p = 0,1455$; $R^2 = 1,24$; $QW(86) = 5582,1795$, $p < 0,0001$
	General	29	9,934	,91	,86	,94	

* Due to the low number of studies in the 'conference paper' and 'book chapter' options in the 'Publication Type' category, they were not included in the Analog ANOVA test for moderator analyses.

** Not available.

On the other hand, meta-regression analysis was performed on continuous variables. The analyses were performed based on the variables of publication year, sample size, and gender (Table 4). The meta-regression results for publication year were $b_j = 0.0034$, $F = 4.85$, $p = 0.002$, $QE = 7925.14$, and $R^2 = 6.2$. On the other hand, for the gender ratio continuous variable, $b_j = -0.0004$, $F = 1.65$, $p = 0.198$, $QE = 4258.57$, $R^2 = 0.87$. The analysis revealed statistically significant results for the publication year continuous variables ($p < 0.05$). The results for the gender variable were not significant. Looking at the publication year variable, it can be seen that the Alpha value of studies conducted in recent years is slightly higher ($b_j = 0.0034$).

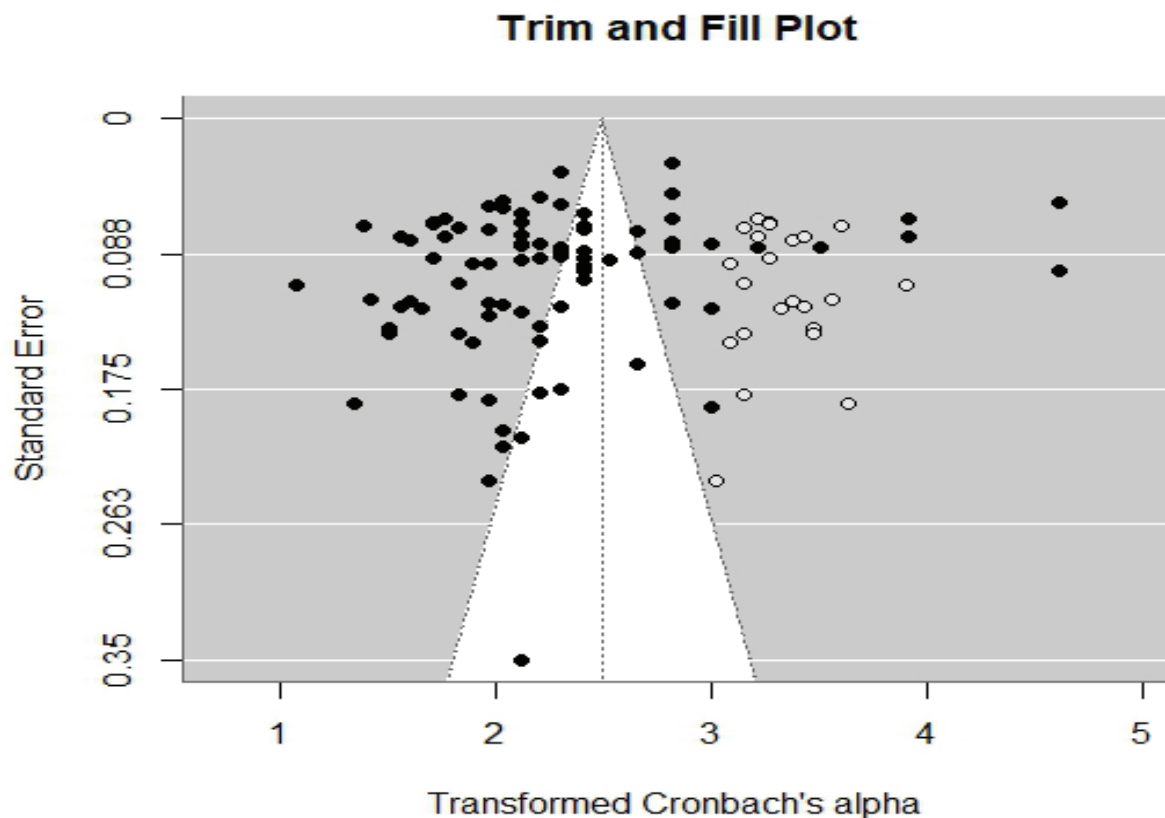
Table 4. Results of Continuous Moderators (Meta-regression)

Variable	k	N	bj	SE	%95 CI		F	p	QE	R2
					L	U				
Publication year	88	29,454	,0034	,0015	,0004	,0064	4,85	,002	7925.14	6,02
Gender (Women %)	76	26,053	-,0004	,0003	-,0010	,0002	1,65	,198	4258.57	0,87

Notes: k = number of studies; N = total sample size; bj = the unstandardised regression coefficient for each predictor; SE = standard error; F = Knapp-Hartung statistic for testing the significance of the moderator variable (the degrees of freedom for this statistic are 1 for the numerator and k - 2 for the denominator); p = probability level for the F statistic; QE = statistic to test for model misfit; R² = proportion of variance explained by the predictor.

Publication Bias

Publication bias was primarily examined using a funnel plot (Figure 3). Upon examining the funnel plot, the estimated number of missing studies on the right side using the trim-and-fill method was calculated as 25 (SE = 6.0708), and the recalculated alpha coefficient was found to be 0.9173 (95% CI [0.9056–0.9275]). This result is statistically significant ($p < 0.001$). There is a difference of 0.02 between the alpha coefficient before the trim-and-fill method was applied (0.8952) and the alpha coefficient after the trim-and-fill method was applied. Furthermore, Begg and Mazumdar's correlation test and Rosenthal and Rosenberg's tests were used to examine publication bias. Upon examining the results, Begg and Mazumdar's test yielded a Tau value of $\tau = -0.0154$ and a p-value of $p = 0.8316$. These results are not significant. When examining Rosenthal and Rosenberg's N values, the average alpha value turned into a statistically insignificant coefficient, with Rosenthal at 2.059231 and Rosenberg at 1.826567, indicating that further research is needed.

**Figure 3.** Funnel Chart

Conclusion

This study conducted a meta-analysis of the reliability generalisation of the 'Communication Skills Assessment Scale,' one of the scales developed by Korkut (1996) and frequently used in the local literature. Looking at the characteristics of studies using the CSAS, the results show that the majority of studies (68.18%) were conducted on students. In terms of the application of the scale, the majority of researchers (39.77%) preferred the face-to-face method. The vast majority of studies using the CSAS scale (84.09%) were published as articles. The internal consistency coefficient of the 25-item scale was found to be 0.80 in a study conducted by Korkut (1996).

A meta-analysis of reliability generalisation conducted on 88 studies using a communication skills assessment scale and reporting Cronbach's alpha coefficient revealed that the average Cronbach's alpha coefficient for these studies was 0.895 (95% CI: 0.880–0.908). This result is higher than the initial reliability coefficient reported by Korkut for the CSAS. Upon reviewing the studies, the lowest Cronbach's alpha coefficient reported among researchers using the CSAS scale was 0.66 (95% CI: 0.58–0.72), while the highest Cronbach's alpha coefficient reported was 0.99 (95% CI: 0.99–0.99). It is observed that the majority of alpha values in the studies are concentrated in the range of 0.80–0.95. This indicates that the scale generally exhibits high and consistent internal consistency across different samples. Based on the data obtained from the studies, it is possible to mention a high level of heterogeneity ($I^2=$; 98.38%). López-Ibáñez and colleagues (2024) examined the extent to which statistical preferences used in reliability generalisation (RG) meta-analyses alter the results. In this regard, they emphasise that the statistical methods chosen for reliability generalisation meta-analyses have significant effects on the results. However, the researchers emphasised that the effect of the transformation method on the mean reliability coefficient is limited and that the main factors determining the results are the choice of statistical model and the level of heterogeneity. The use of the Bonett transformation and the random effects model preferred in this study, along with the high level of heterogeneity obtained, indicates that the statistical methods used were appropriate. The research results show that the CSAS produces high reliability coefficients in different studies. This indicates that the scale demonstrates consistency in studies conducted on different samples. In other words, the Communication Skills Assessment Scale stands out as a reliable measurement tool used in different studies. Moderator analyses were conducted on different variables in studies that used the CSAS and reported Cronbach's alpha coefficients. The analyses revealed that the reliability of the CSAS did not show a significant change in the context of categorical variables. On the other hand, a significant result emerged in the context of the publication year, which is a continuous variable. In this context, it is seen that the alpha coefficient has increased slightly but significantly in studies using the CSAS scale as they approach the present day. It can be said that the time factor affects the reliability of the studies. The main reason for this is thought to be the change in researchers' research paths over the years (such as more systematic data collection methods, access to more balanced and larger samples, and researchers being more careful about reporting reliability coefficients). On the other hand, no statistically significant result emerged in the gender variable. In this context, Shang and colleagues (2024) mention in their RG meta-analysis on L2 listening tests that characteristics such as the type of test and the number of items may have moderating effects. In this regard, it is thought that the lack of meaningful results through categorical moderators in our study may stem from more detailed factors related to the context in which the measurement was carried out, the

conditions of application, and the measurement process. On the other hand, Rodriguez, Williams & Bürkner (2023) mention that in moderator analyses, the assumption that the variance between studies is equal at all group levels is often automatically accepted. They state that this situation can significantly affect statistical results. In our study, this can also be considered a reason for the moderator results appearing meaningless in this context. Although the reliability coefficient that emerged in light of the data collected in our research is high (0.895), the induction problem frequently encountered in meta-analysis studies should not be ignored. The high level of heterogeneity identified in our study ($I^2=$; 98.38%) is an important indicator of this situation, but factors such as sample diversity, the context and conditions in which the measurements were made, and unreported variables affect the generalisability of the average coefficient and the statistical results. The results of the moderator analyses conducted may also be related to the issue defined as reliability induction (Vacha-Haase, 1998) in this context. In addition to the 88 studies examined in this research, there are many studies that use the CSAS scale and do not report the Cronbach's alpha coefficient or report the Cronbach's alpha coefficient of the CSAS scale (see Figure 1). This situation affects the average Cronbach's alpha coefficient in the reliability generalisation meta-analysis.

In this context, it is recommended that researchers who will use the CSAS scale in the future report the Cronbach's Alpha coefficients of their own studies. On the other hand, our study is limited to studies that report only the Cronbach's Alpha coefficient. This is a significant limitation of our study. It is recommended that future studies include studies reporting alternative reliability coefficients, such as McDonald's Omega (ω) or Composite Reliability (CR), in the data set. Again, in the study, a low representation problem was observed in some categorical variables in some moderator analyses. For example, the fact that only five studies were included in the "Online" sub-level of the "Application Form" category constitutes a serious limitation in terms of results. To overcome this situation in future studies, it is recommended that a more comprehensive literature review be conducted and analyses be performed on different and specific moderator variables.

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Reliability Generalisation Meta-Analysis of the Communication Skills Assessment Scale

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Extended Abstract

Communication skills are a fundamental element for individuals to establish and maintain effective relationships in their social lives. Various measurement tools have been developed in order to evaluate these skills, which are discussed in many disciplines, especially in psychology and education. One of the most widely used instruments in the Turkish context is the "Communication Skills Assessment Scale" (CSAS) developed by Korkut (1996) and this study aims to evaluate the reliability level of this scale through meta-analysis.

Within the scope of the study, a total of 88 studies published between 1996 and 2024 and reporting Cronbach's alpha value using the CSAS were analyzed. The reliability coefficients obtained from the studies were analyzed with the transformation method proposed by Bonett (2002) and reliability generalisation, heterogeneity tests, publication bias analysis, analog ANOVA and meta-regression analyses were performed. According to the findings, it was concluded that the CSAS is a highly reliable measurement tool in general. The average Cronbach's alpha value was found to be 0.895. This ratio is above the value of 0.80 reported by Korkut (1996) in the first development study and shows that the scale has a more reliable structure over time.

According to the research findings, it was determined that the reliability coefficients differed significantly between the studies. As a result of the heterogeneity analysis, I^2 value was calculated as 98.38% and this revealed that there was a very high level of difference between the studies. Moderator analyses were applied to explain this high heterogeneity. In the analog ANOVA analyses for categorical variables, no statistically significant effect was found on the reliability coefficients of publication type, implementation type and sample type. However, in the meta-regression analysis on continuous variables, the year of publication variable was statistically significant, indicating that more recent studies reported higher Cronbach's alpha values. On the other hand, the gender variable had no significant effect on the reliability coefficients.

While creating the data set, a total of 420 publications were accessed from various sources such as DergiPark, YÖK Thesis Center, TR Index and Google Scholar, and 88 publications were included in the analysis by eliminating 332 duplicate or inappropriate publications. The coding chart included variables such as year, type of publication, sample characteristics, number of items used, and method of administration. 68.18% of the studies were conducted with student samples, 39.77% were conducted with face-to-face data collection method, and 84.09% were published as articles. The number of items used in the scale generally remains constant at 25 and includes 5-point Likert-type response options.

Within the scope of publication bias analysis, the funnel plot was first used and it was determined that there may be 25 missing studies in the graph and this slightly affected the average alpha coefficient. After the trim-and-fill method, the alpha value was 0,9173

and this value was found to be statistically significant. However, the Begg and Mazumdar test for publication bias did not yield significant results. According to Rosenthal and Rosenberg analyses, it was determined that a sufficient number of studies were required for the assumption of publication bias.

As a result, this study reveals that the CSAS has a high level of reliability in general. In particular, the fact that the average of the studies conducted since the initial development period of the scale shows increasingly higher reliability values confirms that the scale can be used widely and reliably in scientific research. However, the high level of heterogeneity in the research also shows that these reliability levels can vary significantly from study to study. In this context, it is important for researchers to report the Cronbach's alpha values specific to their own studies in order to make more reliable comparisons in the literature.

Moreover, examining different moderator variables in future studies using the CSAS, for example, investigating the effects of factors such as socio-cultural structure, level of education, and type of institution on reliability, will further deepen the knowledge in this field. Finally, methodologically, researchers are recommended to conduct detailed analyses that examine the causes of heterogeneity in meta-analysis studies.

Keywords: Interpersonal Communication, Communication Skills, Meta-Analysis, Reliability Generalisation.

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Bu makale **intihal tespit yazılımlarıyla** taranmıştır. İntihal tespit edilmemiştir.

In this study, the rules stated in the “**Higher Education Institutions Scientific Research and Publication Ethics Directive**” were followed.

Bu çalışmada “**Yükseköğretim Kurumları Bilimsel Araştırma ve Yayın Etiği Yönergesi**” kapsamında uyulması belirtilen kurallara uyulmuştur.

This study was **assisted** by the use of generative artificial intelligence tools. Specifically, (ChatGPT, DeepL) was **used** for language editing and translation.

Bu çalışma, üretken yapay zeka araçlarının kullanımıyla **desteklenmiştir**. Özellikle, (ChatGPT, DeepL) dil düzenleme ve çeviri için **kullanılmıştır**.

The authors' **contribution rates** in the study are equal.

Yazarların çalışmadaki **katkı oranları** eşittir.

Conceptualization: ÖFK, İCD; Methodology: İCD, ÖFK; Software: İCD, ÖFK; Investigation: ÖFK, İCD; Data Curation: İCD, ÖFK; Writing – Original Draft: İCD, ÖFK; Writing – Review & Editing: İCD, ÖFK; Supervision: İCD, ÖFK

There is no **conflict of interest** with any institution or person within the scope of the study.

Çalışma kapsamında herhangi bir kurum veya kişi ile **çıkar çatışması** bulunmamaktadır.