

Adaptation of The Real and Electronic Communication Skills Questionnaire to Turkish Samples: Validity and Reliability Study

Bahtiyar ERASLAN ÇAPAN^a, Sami KIRTEKE^b, & Fuad BAKİOĞLU^{*c}

a Assoc. Prof. Dr., Faculty of Education, Anadolu University, Türkiye, <http://orcid.org/0000-0001-5000-7321>

b PhD Student, Anadolu University, Türkiye, <http://orcid.org/0000-0002-5980-2185>

c Assoc. Prof. Dr., Faculty of Education, Karamanoğlu Mehmetbey University, Türkiye, <http://orcid.org/0000-0002-9905-6199>

* fuadpdr@gmail.com

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Abstract

The aim of this research is to adapt the Real and Electronic Communication Skills Scale (RECS) to Turkish samples. The study consists of two stages. In the first stage, linguistic validity, exploratory factor analysis, Cronbach's alpha coefficient, test-retest, and item analysis studies were conducted with 680 adolescents. In the second stage, confirmatory factor analysis (CFA) and concurrent validity were carried out with 409 participants. The findings obtained in the first stage indicated that the Real Communication Skills (RCS) subscale and the Electronic Communication Skills (ECS) subscale explained 60.64% and 58% of the total variance, respectively. It was determined that item factor loads varied between .62 and .89 for RCS and between .55 and .89 for ECS. The internal consistency coefficient and test-retest values were good. As a result of the CFA performed in the second stage, the goodness of fit indexes of the scale were good ($\chi^2=803.43$; $df=451$; $\chi^2/df=1.78$; $p=0.00$; $RMSEA=.044$; $SRMR=.04$; $GFI=.90$; $AGFI=.85$; $CFI=.98$; $NFI=.95$; $IFI=.98$; $RFI=.95$). The concurrent validity analyses indicated that it had significant relationships with the Social Skills Scale, the Communication Skills Scale, and the Shyness Scale. As a result, it can be said that the Turkish Form of RECS can be used by researchers and practitioners, validity, and reliability.

Keywords: Communication skills, validity, reliability, scale adaptation.

Gerçek ve Elektronik İletişim Becerileri Envanterinin Türk Örneklemine Uyarlaması: Geçerlik ve Güvenirlilik Çalışması

Öz

Bu araştırmanın amacı, Gerçek ve Elektronik İletişim Becerileri Ölçeği'ni (GEİBÖ) Türkiye örnekleme uyarlamaktır. Araştırma iki aşamadan oluşmaktadır. İlk aşamada dil geçerliği, açımlayıcı faktör analizi, Cronbach alfa katsayısı, test-tekrar test ve madde analizi çalışmaları 680 ergen ile yapılmıştır. İkinci aşamada doğrulayıcı faktör analizi (DFA) ve uyum geçerliği çalışması 409 katılımcı ile yapılmıştır. Birinci aşamada elde edilen bulgular, Gerçek İletişim Becerileri (RCS) alt ölçeğinin ve Elektronik İletişim Becerileri (ECS) alt ölçeğinin sırasıyla toplam varyansın %60.64'ünü ve %58'ini açıkladığını göstermiştir. Madde faktör yüklerinin RCS için .62 ile .89 arasında, ECS için .55 ile .89 arasında değiştiği belirlenmiştir. İç tutarlılık katsayısı ve test-tekrar test değerleri iyi düzeyde bulunmuştur. İkinci aşamada yapılan DFA sonucunda ölçeğin uyum iyiliği indeksleri iyi bulunmuştur ($\chi^2=803.43$; $df=451$; $\chi^2/df=1.78$; $p=0.00$; $RMSEA=.044$; $SRMR=.04$; $GFI=.90$; $AGFI=.85$; $CFI=.98$; $NFI=.95$; $IFI=.98$; $RFI=.95$). Uyum geçerlik analizleri, Sosyal Beceriler Ölçeği, İletişim Becerileri Ölçeği ve Utangaçlık Ölçeği ile anlamlı ilişkileri olduğunu göstermiştir. Sonuç olarak RECS'nin Türkçe Formunun araştırmacılar ve uygulayıcılar tarafından kullanılabilir geçerlik ve güvenilir olduğu söylenebilir.

Anahtar kelimeler: İletişim becerileri, geçerlik, güvenilirlik, ölçek uyarlama.

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INTRODUCTION

In the last 30 years, developments in the field of technology have also led to changes in the communication and socialization styles of people. Today, face-to-face interaction and communication have been replaced by forms of communication in the electronic environment. As the environment in which people interact has shifted from real life to the electronic environment, the problems they experience have also changed.

Internet use in the fields of social media, WhatsApp, messaging, social networking, e-mail, and instant messaging is increasing rapidly among young people in Turkey as well as all over the world (Brown, 2013; DeVito et al., 2015; Jin & Park, 2012; Sampathirao, 2016). Adolescents tend to socialize in virtual environments to go beyond the boundaries of communication (Uçar, 2012), exchange ideas (Karaca, 2007), and socialize (Göker et al., 2010; Subrahmanyam et al., 2008; Yegen, 2013). One of the main reasons for intensive internet use among young people is seen as socialization (Sanchez et al., 2015). For this reason, Social Enhancement Theory and Social Compensation Theory (McKenna et al., 2002; Valkenburg et al., 2005), which explains the relationship between internet use and social skills, has emerged in recent years.

According to the Social Enhancement Theory, individuals with social competencies in real life use the Internet to further improve their social connections (Valkenburg et al., 2005). These people establish rich relationships by maintaining their real-life social networks in the electronic environment. According to the Social Compensation Theory, individuals who have difficulties in establishing and maintaining healthy interpersonal relationships in real life and with inadequate social communication networks try to compensate for these inadequacies with more comprehensive online social networks (McKenna et al., 2002; Valkenburg et al., 2005). These people, who are unable to socialize in real life, try to meet their social and emotional needs through social networks in the electronic environment. In short, although the functioning of both theories is different, they intend to meet the needs of people by strengthening their social ties in the electronic environment. Such theories increase the interest in how behaviors exhibited in real life and the electronic environment affect people. Research has shown that the happiness level of individuals who can communicate well in real life increases (Can, 1997; Karabela, 2020) and that they feel emotionally safe (Erözkan, 2009), while it is seen that individuals who cannot communicate in a healthy way experience feelings of worthlessness and inadequacy and become introverted (Erten-Sarıkaya, 2021). On the contrary, it is seen that individuals who are shy (Crapparo et al., 2014; Eldeleklioğlu & Vural, 2013), have social anxiety (Caplan, 2006), have low self-confidence (Mitchell, 1999), have weak social relationships (Sanders et al., 2000), and are anxious (Shalom et al., 2015) prefer to communicate in electronic environments rather than in face-to-face communication environments in daily life (Yiğit, 2015), and they try to establish the relationships that they cannot establish and the sociality that they cannot have in daily life on the Internet (Celkan, 2005). In short, studies supporting both theories have been found.

It is seen that individuals who communicate in a healthy way through electronic means can use their rights effectively, criticize others or ideas, face the consequences of their behaviors, are determined to cooperate with others, display a constructive attitude in their sharing, and are extroverted and open to new experiences (Çubukcu & Bayzan, 2013; Konuk, 2019). Individuals who cannot communicate in a healthy way in the electronic environment prefer to criticize and argue with the other person instead of understanding them, resort to lies, use bad words (swearing, slang, etc.) and expressions during communication (Karaca, 2007; Utma, 2019). In addition, it is stated that these individuals give false information about themselves, are far from ethical rules, have a violent and aggressive attitude, and tend to harm others (Ceyhan & Ceyhan, 2008). It is seen that individuals who cannot use their electronic communication skills in a healthy way are alienated from people by moving away from the purpose of socialization (Orta, 2009). Moreover, it is stated that these individuals experience negative emotional states, such as fear, depression, anxiety, and loneliness (Ceyhan, 2011; Konuk, 2019; Şahin & Gülnar, 2016; Yang & Tung, 2007).

In summary, the results of the research show that having healthy communication skills, both in real life and in the electronic environment, is the most basic element for meeting the socialization needs of individuals. Emotions, thoughts, and behaviors that affect individuals' ability to take a place in society, exhibit behaviors appropriate to the social environment, and communicate positively with other individuals are called social skills (Samancı & Uçan, 2017). Mutual sincerity, active listening, effective feedback, empathy, respect, and transparency stand out as important skills in connecting with others (Altay, 2012; Barnett, 1990; Erdem, 2013; Kaya, 2014; McKay et al. 2012; Sabuncuoğlu & Gümüş, 2008; Voltan-Acar, 1995; Yuksel, 2004). In short, sociability, self-disclosure, emotion decoding, and acting effectively are the core of social skills.

With technological development, studies on socialization and social skills tend to reveal the behaviors exhibited both in real life and in the electronic environment. These studies generally focus on evaluating

individuals' real-life social skills and how they affect internet use. In other words, only real-life social skills have been equated to electronic social skills in most studies. Due to the characteristics of real life and the electronic environment, there can be differences in the forms of social skills exhibited by individuals. So far, no tool has been found to measure social skills by separating them according to real-life and electronic contexts. As a matter of fact, existing scales related to social skills are intended to measure social skills in real life (Aksoy & Baran, 2020; Durualp, 2009; Kılıç & Güngör-Aytar, 2017; Kortut Owen & Bugay, 2014; Tepeli & Arı, 2011). Today, individuals spend a lot of time in electronic environments, and they meet their needs such as communication and socialization in these environments. Therefore, measuring communication skills in both real life and virtual environments simultaneously can facilitate the understanding of individuals' behaviors in both.

Purpose of the Research

In this research, it is aimed to adapt the Real and Electronic Communication Skills Scale (Mantzouranis et al. 2019) to Turkish. The research was carried out in two studies. The research was conducted in two stages. The stages of the research are given in order below.

METHOD

Study 1

Linguistic Validity

The standard procedure was followed in adapting the scale to Turkish (Beaton et al., 2000). Firstly, permission was obtained from the first author who developed the scale before the research was conducted. The language of the original version of the scale is English. The English-Turkish translation of the scale was done by two bilingual experts in psychology. Turkish-English back translation was done by two different bilingual experts in psychology. Finally, after the Turkish and English forms completed by two different field experts were compared and the translation conformity of the items was checked, the final form of the scale to be applied in the study was determined.

Participants

At this stage, the sample consisted of 680 volunteer high school students (50.1% females [n=341], 49.9% males [n=339]). The ages of the participants ranged from 15 to 18 (16.23±1.03). Of the high school students, 211 (31.0%) were 9th-grade, 193 (28.4%) were 10th-grade, 186 (27.4%) were 11th-grade, and 90 (13.2%) were 12th-grade students.

Data Collection

Real and Electronic Communication Skills Questionnaire (RECS). RECS was developed by Mantzouranis et al. (2019) to determine the social skills levels that adolescents have in daily life and on social platforms. The questionnaire consists of two sub-scales: Real Communication Skills (RCS), comprising 18 items and four sub-dimensions (sociability, self-disclosure, emotion decoding, and assertiveness), and Electronic Communication Skills (ECS), comprising 18 items and four sub-dimensions (sociability, self-disclosure, emotion decoding, and assertiveness). The questionnaire is rated on a 5-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree) with the total scale score ranging from 36 to 180. The higher the score on the scale is, the higher the level of social skills is.

As a result of the analysis for the validity of the English version of the scale, item factor loads varied between .50 and .78 for the RCS and between .32 and .80 for the ECS, respectively. The total explained variance was calculated 51.23% for RCS and 48.45% for ECS. As a result of CFA, the fit indices were calculated for RCS (CFI=0.947; RMSEA=0.037; SRMR=0.047 and $\chi^2/df=1.36$) and for ECS (CFI=0.924; RMSEA=0.052; SRMR=0.057 and $\chi^2/df=1.63$) and for RECS (CFI=0.819; RMSEA=0.053; SRMR=0.071 and $\chi^2/df=1.60$). Cronbach's alpha internal consistency coefficients for RCS ($\alpha=.75$) and ECS ($\alpha=.78$) were calculated for the reliability of the scale. In the concurrent validity study of the scale, significant positive correlations were found between RECS and Social Skills Inventory.

Data Analysis

In the first stage, linguistic validity, exploratory factor analysis (EFA), Cronbach's alpha coefficient, test-retest, reliability, and item analysis studies were conducted. The IBM SPSS 26.0 software package was used for analysis.

Study 2

Participants

The sample consisted of 409 volunteer high school students (47.7% females [n=195], 52.3% males [n=214]) in the second stage. The ages of the participants ranged from 15 to 19 (16.51 ± 1.24). Of the high school students, 117 (28.6%) were 9th grade, 92 (22.5%) were 10th grade, 94 (23.0%) were 11th grade, and 106 (25.9%) were 12th- grade students.

Data Collection

Communication Skills Scale (CSS). The 25-item CSS was used to assess communication skills (Korkut Owen & Bugay, 2014). The CSS items are rated on a 5-point Likert-type scale from 1 (never) to 5 (always) with scale total scores ranging from 25 to 125. Higher scores indicate higher communication skills. Cronbach's alpha coefficient was good ($\alpha=.88$) and test re-test was good ($r=.81$). Cronbach's alpha obtained in the present study was good, too ($\alpha=.90$).

Shyness Scale (SS). The 20-item SS was used to assess shyness (Cheek & Melchior, 1990; Güngör, 2001). The SS items are rated on a 5-point Likert-type scale from 1 (has nothing to do with me) to 5 (has a lot to do with me) with scale total scores ranging from 20 to 100. Higher scores indicate higher shyness levels. Cronbach's alpha coefficient was good ($\alpha=.90$) and test re-test was good ($r=.88$). Cronbach's alpha obtained in the present study was good, too ($\alpha=.88$).

Social Skills Scale (SSS). The 90-items SSS was used to assess social skills (Riggio, 1989; Yüksel, 1997). The SSS items are rated on a 5-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree) with scale total scores ranging 90-450. Higher scores indicate higher social skill levels. Cronbach's alpha coefficient was good ($\alpha=.94$) and test re-test was good ($r=.92$). Cronbach's alpha obtained in the present study was good, too ($\alpha=.96$).

Data Analysis

In the second stage, CFA was performed to determine if the structure of the scale obtained from the EFA was validated. Moreover, the concurrent validity analysis has been carried out. The IBM SPSS 26.0 and AMOS Graphic 23.0 software packages were used for analysis.

Research Ethics

Before this research was conducted, the necessary ethics committee permissions were obtained from a state university in Turkey. The research was conducted face-to-face with volunteer participants. A voluntary consent form was obtained from the participants. During the applications, information about the purpose of the research and its anonymity were explained to the participants.

FINDINGS

Study 1

Exploratory Factor Analysis

EFA was performed separately for the RECS form of RCS and the ECS form. The Kaiser-Meyer-Olkin (KMO) coefficient (KMO for RCS=.87 and for ECS=.85) of the questionnaire and the Bartlett sphericity test (for RCS $\chi^2=4361.14$, $sd=153$; for ECS $\chi^2=4507.99$, $sd=153$) results were examined before EFA was performed, and the results showed that factor analysis could be done. Varimax orthogonal rotation method was used for EFA, and a four-dimensional structure was obtained for each of the RCS and ECS subscales. The EFA results and factor load values are presented in Table 1.

As a result of the analysis, item factor loads ranged from .62 to .89 for the RCS subscale and from .55 to .89 for the ECS subscale. The four-factor structures of the RCS and ECS subscales explained 60.64% and 58.00% of the total variance, respectively (Table 1).

Table 1. EFA Results of The Scale

	Item	Sociability	Self-disclosure	Emotion decoding	Assertiveness
	1	.69	.04	.03	.15
	5	.74	.13	.10	.01
	9	.74	.07	.24	.06
	13	.79	.12	.01	.06
	16	.77	.15	.10	.07
	2	.12	.72	.01	.07
	6	.16	.70	.07	.05
	10	.01	.62	.23	.13
	14	.14	.77	.05	.01
	17	.07	.72	.26	.16
RCS	3	.18	.11	.70	.14
	7	.04	.13	.73	.13
	11	.21	.05	.73	.01
	15	.16	.14	.76	.16
	18	.10	.12	.73	.07
	4	.07	.04	.14	.89
	8	.10	.14	.19	.81
	12	.10	.15	.09	.77
	Eigenvalue	5.43	2.01	1.89	1.59
	% of variance explained	%30.16	%11.17	%10.50	%8.82
	% of total variance explained	%60.64			
	Item	Sociability	Self-disclosure	Emotion decoding	Assertiveness
	1	.62	.10	.14	-.01
	5	.65	.02	-.10	.08
	9	.60	.18	.08	.05
	13	.67	.12	.21	.01
	16	.68	.10	.21	.01
	2	.14	.77	.08	.02
	6	.04	.55	.03	.05
	10	.06	.66	.18	-.07
	14	.08	.71	.08	.08
	17	.17	.69	.08	.05
ECS	3	.07	.15	.71	.06
	7	.09	.10	.78	.17
	11	.15	.09	.80	.21
	15	.14	.18	.77	.20
	18	.15	.02	.73	.15
	4	.10	.07	.28	.87
	8	-.02	.01	.12	.89
	12	.09	.07	.23	.86
	Eigenvalue	5.11	2.36	1.57	1.40
	% of variance explained	%28.38	%13.11	%8.74	%7.77
	% of total variance explained	%58.00			

Reliability Analysis

The Cronbach's alpha coefficient was calculated to determine the reliability of the scale. The reliability indexes of each of the RCS and ECS subscales were found to be equally good (Table 2). The test-retest reliability of the RCS and ECS subscales was determined by administering the same scale to 41 participants with 21 days' interval. All test-retest coefficients were good.

Table 2. Internal Consistency Reliability and Test-retest Results for RCS and ECS

Variables	RCS		ECS	
	<i>a</i>	<i>r</i>	<i>a</i>	<i>r</i>
Total	.86	.93	.84	.90
Sociability	.83	.93	.69	.88
Self-disclosure	.78	.88	.73	.90
Emotion decoding	.82	.88	.85	.85
Assertiveness	.81	.87	.90	.94

Item Analysis

The result of the item analysis, item-total correlations, arithmetic mean and standard deviation values were found as .49-.75, 2.41-3.46 and 1.17-1.35 for the RCS sub-scale and as .35-.83, 2.17-3.21, and 1.03-1.26 for the ECS sub-scale, respectively. The item analysis results of the scale are given in Table 3.

Table 3. Corrected Item-total Correlation, Arithmetic Mean and Standard Deviation Values for RCS and ECS

Variables	Item	RCS			ECS		
		<i>r</i>	\bar{x}	SD	<i>r</i>	\bar{x}	SD
Sociability	1	.62	3.05	1.26	.43	2.18	1.03
	5	.61	2.49	1.22	.36	2.43	1.17
	9	.64	2.72	1.26	.42	2.17	1.05
	13	.63	2.73	1.24	.49	2.36	1.12
	16	.65	2.70	1.23	.51	2.43	1.11
Self-disclosure	2	.53	2.66	1.19	.60	2.50	1.14
	6	.54	2.41	1.17	.35	2.46	1.15
	10	.49	3.01	1.26	.48	2.42	1.21
	14	.60	2.68	1.20	.51	2.33	1.14
	17	.62	2.79	1.24	.51	2.34	1.12
Emotion decoding	3	.60	3.41	1.29	.59	3.21	1.24
	7	.59	3.16	1.20	.69	3.19	1.26
	11	.60	3.46	1.25	.73	3.01	1.15
	15	.68	3.38	1.21	.71	3.09	1.19
	18	.60	3.33	1.18	.61	3.09	1.25
Assertiveness	4	.75	2.67	1.17	.83	2.84	1.20
	8	.65	2.69	1.35	.73	2.80	1.25
	12	.57	2.64	1.27	.83	2.85	1.21

Study 2

Confirmatory Factor Analysis

The CFA was performed, and it was evaluated whether the structure obtained as a result of the EFA performed in the first stage was confirmed. It is seen that all goodness-of fit indices of the RCS subscale were at a good level ($\chi^2=240.56$, $df=129$, $\chi^2/df=1.86$, $p=0.00$; RMSEA=.044, SRMR=.04, GFI=.94, AGFI=.92, CFI=.98, NFI=.96; IFI=.98; RFI=.95). In addition, the CFA model was found to be significant as a result of the analysis. Regression coefficients for RCS ranged from .43 to .92, and item factor loading values ranged from .59 to .93. All goodness-of-fit indexes of the ECS subscale were at a good level ($\chi^2=164.18$, $df=129$, $\chi^2/df=1.27$, $p=0.00$; RMSEA=.026, SRMR=.03, GFI=.96, AGFI=.94, CFI=.99, NFI=.96; IFI=.99; RFI=.96). Regression coefficients for the ECS ranged from .44 to .95, and item factor loading values ranged from .58 to .93. It is seen that all goodness of fit indices for the total RCS were at a good level ($\chi^2=803.43$, $df=451$, $\chi^2/df=1.78$, $p=0.00$; RMSEA=.044, SRMR=.04, GFI=.90, AGFI=.85, CFI=.98, NFI=.95; IFI=.98; RFI=.95). As a result of the analysis, the CFA model was found to be significant, and it can be said that the RCS structure was confirmed.

Concurrent Analysis

The Shyness Scale (SS), Communication Skills Scale (CSS) and Social Skills Scale (SSS) were used for the concurrent validity of the scale. Pearson correlation values between the scales are presented in Table 4.

Table 4. Pearson Correlation Values

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. RECS Total	-												
2. ECS Total	.83**	-											
3. Sociability	.55**	.60**	-										
4. Disclosure	.59**	.60**	.47**	-									
5. Decoding	.54**	.73**	.19**	.11*	-								
6. Assertiveness	.41**	.57**	.03	.01	.37**	-							
7. RCS total	.91**	.52**	.39**	.45**	.29**	.21**	-						
8. Sociability	.66**	.38**	.38**	.38**	.11*	.14**	.73**	-					
9. Disclosure	.62**	.29**	.25**	.35**	.12*	.05	.73**	.31**	-				
10. Decoding	.66**	.46**	.16**	.16**	.45**	.33**	.67**	.33**	.33**	-			
11. Assertiveness	.48**	.28**	.21**	.27**	.16**	.06	.53**	.12*	.25**	.23**	-		
12. SS	.21**	.16**	.09	.12*	.10*	.08	.21**	.08	.17**	.18**	.15**	-	
13. CSS	.29**	.26**	.11*	.03	.26**	.23**	.25**	.08	.10*	.36**	.19**	.35**	-
14. SSS	.14**	.07	.21**	.24**	-.11*	-.11*	.16**	.17**	.15**	.01	.07	.01	.06

Note: ** $p < .001$, * $p < .05$

As a result of the concurrent validity of the scale, a significant positive correlation was found between RECS and shyness ($r=.21$), communication skills ($r=.29$) and social skills ($r=.14$). There was a positive correlation between ECS and shyness ($r=.16$) and communication skills ($r=.26$); A significant positive correlation was found between RCS and shyness ($r=.21$), communication skills ($r=.25$) and social skills ($r=.16$). Moreover, significant correlations were found between ECS and RCS sub-dimensions and shyness, communication skills and social skills.

DISCUSSION & CONCLUSION

This study was conducted to adapt the RECS developed by Mantzouranis et al. (2019) to Turkish culture. The scale adaptation study was carried out with high school adolescents. The study was carried out in two stages by considering the scale adaptation stages.

In the first stage, linguistic validity was performed by making the English-Turkish translation of the RECS. EFA was performed to reveal the structure of the Turkish form of the RECS. As a result of the EFA, a four-factor structure (sociability, self-disclosure, emotion decoding, assertiveness) was obtained for the RCS and the ECS separately. The RCS and ECS explained 60.64% and 58.00% of the total variance, respectively. The item factor load values of the scale were found to vary between .62 and .89 for the RCS and between .55 and .89 for the ECS. The results obtained appear to be similar to those of the original form (Mantzouranis et al., 2019). Moreover, the total variance values explained in the scale are expected to be 30% or higher (Büyüköztürk, 2007). Item factor load values of 0.45 and above are considered adequate (Büyüköztürk, 2007; Floyd, & Widaman, 1995).

The Cronbach's alpha coefficient for the scale's reliability was found to be $\alpha=.86$ for RCS and $\alpha=.84$ for ECS. The values obtained in this study were found to be higher than the values obtained from the original scale (RCS $\alpha=.75$, ECS $\alpha=.78$; Mantzouranis et al., 2019). Cronbach's alpha value obtained as a result of the analysis is expected to be .70 and above (Kılıç, 2016; Nunnally, 1978). As a result of test-retest analysis, it was calculated as .93 for RCS and .90 for ECS. The results of the analysis revealed that the scale had a stable and consistent structure.

In the second stage, CFA was performed. As a result of the analysis, it was concluded that the scale had 36 items and a good level of fit indices confirming the four-factor structure. The fit index values obtained from each model indicated good fit (Hu & Bentler 1999; Kline 2015; Şimşek, 2007). The results showed that the form of the RECS used for Turkish adaptation was validated. It was observed that the corrected item-total correlation values obtained within the scope of reliability studies were between .49 - .75 for the RCS and between .35 - .83 for the ECS.

Finally, concurrent validity studies were conducted in the research. Within the scope of the study, the RECS and the Shyness Scale, the Communication Skills Scale, and the Social Skills Scale were used, and the correlation coefficients obtained were found to be significant. In other words, positive significant relationships were found between the RECS and shyness, communication skills, and social skills. A review of the literature indicated that the results of this study were consistent with the results of previous studies (Aksoy & Baran, 2020; Durualp, 2009;

Kılıç & Güngör-Aytar, 2017; Korkut Owen & Bugay, 2014; Tepeli & Arı, 2011). There were positive correlations between the ECS and shyness and communication skills, and positive significant correlations between the RCS and shyness, communication skills and social skills.

Many scales have been developed in the literature to determine the level of social skills (Akçamete & Avcıoğlu, 2005; Avcıoğlu, 2007; Kabakçı & Owen, 2010; Atas, et al., 2016). However, the RECS, which was adapted into Turkish, differs from other scales in that it includes social skills exhibited in the face-to-face communication process, as well as measuring the social skills used in the communication process carried out in the electronic environment where communication has gained a new dimension with the developing technology and has its own communication rules. Therefore, the RECS allows the measurement of communication skills both in the virtual environment and in real life at the same time.

As a result of the analysis, the RECS, which was intended to be adapted to Turkish culture, is thought to be a valid and reliable measurement tool to determine the social skill levels of individuals both in daily life and in the electronic environment. Despite the strengths of this research, there are also limitations. First, the scale was adapted to adolescents, who are high school students. It can be adapted to individuals of different age groups. Second, gender-based analyses were not performed in this study. Also, studies in which women and men make up separate study groups can be conducted. Third, this is a self-report scale. So, it may involve response bias error. Moreover, comparative studies can be conducted by adapting the scale into different cultures.

Statements of Publication Ethics

The ethics committee report of this research was obtained from Anadolu University, social and human sciences scientific research and publication ethics committee (Date: 29/09/2020; Decision no:39950). All participants who took part in the study provided informed consent.

Researchers' Contribution Rate

In this study, each of the authors contributed equally to each stage.

Authors	Literature Review	Method	Data Collection	Data Analysis	Results	Conclusion
Sami Kırteke	☒	☒	☒	☒	☒	☒
Bahtiyar Eraslan-Çapan	☒	☒	☒	☒	☒	☒
Fuad Bakioğlu	☒	☒	☒	☒	☒	☒

Conflict of Interest

The authors declare that there is not conflict of interest.

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