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The Development of Consultation Self-Efficacy Scale for School Counselors in Türkiye

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ABSTRACT

The School Counselor Consultation Self-Efficacy Scale (SCCSES) was developed to determine the levels of consultation self-efficacy of school counselors. The research involved a total of 942 school counselors (Female = 76.74%; Male = 23.25%) across four different study groups. Data analysis employed techniques such as Exploratory Factor Analysis (EFA), Item Validity Analyses, Confirmatory Factor Analysis (CFA), Criterion Validity Analysis, Test-Retest Reliability, and Internal Consistency Analysis. The findings revealed that the SCCSES comprises a 4-factor, 28-item structure, which includes the dimensions of cultural awareness, process, ethics, and communication. This model accounted for 64.21% of the total variance associated with consultation self-efficacy. The Cronbach's Alpha coefficients for the individual factors varied between .81 and.91, with the overall scale reliability found at.95. Test-retest reliability, assessed to provide additional evidence of SCCSES reliability, yielded a correlation of 87 between measurements taken three weeks apart. First and second level confirmatory factor analysis results confirmed the model-data fit. This study was conducted in Türkiye, and the findings are specific to the Turkish context. In addition, the factor structure of the SCCSES was compared with those of similar consultation self-efficacy scales reported in the literature, highlighting both potentially shared (core) and culturally specific features of the construct. Further validation studies are needed to examine the scale's applicability across different cultural and educational systems.

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Consultation is a concept and service used in various fields today, such as business management, economics, healthcare, and law, as well as in education. The application of consultation in different fields and contexts not only demonstrates the importance and functionality of consultation services but also leads to the attribution of different meanings and missions according to the areas in which it is used. From the perspective of the education field, an important area of application for consultation practices is school counseling.

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Consultation in school counseling

The American School Counselor Association (ASCA, 2019) describes consultation as a collaborative and equal partnership in which school counselors collaborate with parents, teachers, administrators, school psychologists, social workers, and healthcare professionals to design and implement strategies aimed at enhancing student success within the educational system.

Consultation is regarded as an essential competency area for school counselors. According to the Comprehensive Developmental Guidance Model (Gysbers et al., 1992), which forms the basis for guidance services in Türkiye today, and the ASCA National Model (ASCA, 2019), consultation is one of the significant types of interventions that school counselors should provide. Additionally, the Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2016), which sets the standards for counseling programs in the United States, requires that school counselors possess knowledge and skills related to the consultation process and the ability to effectively consult with teachers, administrators, parents, and institutions. In addition to these professional organizations, the Turkish Psychological Counseling and Guidance Association, which is the largest professional organization in Türkiye composed of school counselors, recognizes consultation services as one of the essential services and competencies that school counselors should provide to stakeholders for the benefit of the student (Turkish PCGA, 2011).

The role of school counselors in Türkiye's consultation practice

In Türkiye, the provision of school-based mental health and consultation services is primarily the responsibility of school counselors trained in Guidance and Psychological Counseling (GPC) programs. Unlike the U.S., where school counseling and school psychology are separate accredited fields, Türkiye does not currently have formal school psychology programs. As a result, school counselors often fulfill multiple roles, including those typically associated with school psychologists in other countries. These professionals are appointed to schools by the Ministry of National Education and are expected to provide both direct (e.g., individual and group counseling) and indirect (e.g., consultation and collaboration) services. However, despite consultation being listed as a core responsibility in policy documents and practice guidelines, the formal training needed to support this function remains limited (Aslan & Güven, 2019; Bozkur & Kaya, 2021).

Historically, Turkish GPC programs have not offered structured consultation training. The first national initiative to include a course on consultation – "Consultation in Guidance and Counseling" – was implemented in 2018, and even then, it was offered as an elective with varying levels of adoption and

instructional consistency (Council of Higher Education [CoHE], 2018). Reviews of major Turkish university curricula indicate that many programs do not offer this course regularly or at all (e.g., Ankara University, Hacettepe University, Marmara University), and when offered, the course content typically lacks emphasis on critical topics such as ethics, multicultural competence, or process-based skills; such is consistent with prior research on consultation training in the United States (e.g. Hazel et al., 2010; Newman et al., 2015). Furthermore, studies have shown that Turkish school counselors overwhelmingly report not having received formal coursework specifically on consultation during their training, with most encountering the topic only briefly within broader courses (Aslan & Güven, 2019; Güven et al., 2016). These challenges create gaps between role expectations and role preparedness, highlighting the importance of designing reliable and valid tools to assess consultation-related competencies in culturally specific contexts.

Given these systemic differences, it is essential to interpret the role of school counselors in Türkiye as broader and more multifaceted than the typical consultation role of a U.S.-based school psychologist. This contextual nuance was a core justification for developing the SCCSES as a culturally appropriate measure to assess the consultation self-efficacy of Turkish school counselors.

Self-efficacy within the context of Social Cognitive Theory

Bandura (1977) initially introduced the concept of self-efficacy within the context of Social Cognitive Theory. He defined self-efficacy as an individual's belief in their ability to effectively accomplish a specific task. Self-efficacy influences an individual's choices, motivation, and cognitive, and emotional processes related to a task or activity (Bandura, 1993). Individuals with low self-efficacy tend to (a) perceive difficult tasks as threats and withdraw, (b) have weak commitment to their goals, (c) focus more on setting limits rather than planning how to accomplish tasks, (d) attribute failures in challenging tasks to personal inadequacies, and (e) are prone to anxiety, depression, and stress (Bandura, 1993). In contrast, Bandura (1997) notes that individuals with high self-efficacy have a stronger commitment to their goals, motivation, efforts in achieving them, flexibility in facing challenges, and resilience when encountering obstacles. From this perspective, it is considered that the levels of self-efficacy related to consultation, an important area of practice for school counselor, will influence their preferences and success in consultation practices.

Consultation self-efficacy and related studies

Consultation self-efficacy refers to an individual's belief in their ability to effectively execute the skills and behaviors required for successful consultation (Guiney et al., 2014). Since self-efficacy affects goal setting, behavior selection,

motivation, performance, effort, and perseverance (Bandura, 1977), it is thought that school counselors' high perceptions of consultation self-efficacy will lead them to devote more time to consultation services and exert more effort when faced with obstacles during the process. Conversely, low perceptions of self-efficacy might lead to avoidance of consultation work and poor performance. Additionally, consistent with Bandura (1977), school counselors with low self-efficacy will likely have difficulty coping with the challenges they encounter during the consultation process.

Consultation self-efficacy first emerged in a study conducted by Guiney et al. (2014), in which the Consultation Self-Efficacy Scale (CSES) was developed for school psychologists and the consultation self-efficacy of school psychologists was examined in terms of various variables. Guiney et al. (2014) initially conceptualized the Consultation Self-Efficacy Scale as consisting of six key dimensions: (a) communication skills, (b) interpersonal skills, (c) self-awareness, (d) process, (e) cultural competence, and (f) interventions. Following expert recommendations, a seventh dimension – client – was later incorporated into the scale. However, the factor analysis results revealed that consultation self-efficacy is a unidimensional construct. Therefore, researchers suggested that future studies should investigate whether the factor structure of consultation self-efficacy possesses a single and general dimension, similar to constructs like self-confidence or self-esteem. This suggestion has served as a significant source of motivation for the current research.

In examining other scale studies related to consultation self-efficacy, it is evident that the scale developed by Guiney et al. (2014) has undergone adaptation studies across different cultures. In a study conducted by Fan et al. (2020), the scale by Guiney et al. (2014) was examined among school counselors in Taiwan. The results of this study indicated that the original form of the scale was not validated for the Taiwanese sample. Consequently, Fan et al. (2020) conducted a new EFA on the original items of the scale with the participation of 428 school counselors. The new EFA results revealed a five-dimensional structure comprising (a) Client Skills, (b) Process and Awareness, (c) Facilitation, (d) Intervention, and (e) Cultural Sensitivity. Another scale study is the adaptation study conducted by Bozkur and Kaya (2021) on Turkish school counselors. In this study, a CFA was conducted with 787 school counselors. The results indicated that the single-factor model proposed by Guiney et al. (2014) was also validated for the Turkish sample.

In addition to existing international literature, a qualitative study by Aslan and Güven (2025) provided preliminary evidence for the multidimensional structure of consultation self-efficacy. Drawing on the experiences of 60 Turkish school counselors, the study identified key domains such as communication, ethics, cultural awareness, professional competence, collaboration, and coping skills. These findings not only align with Bandura's (1997) Social

Cognitive Theory but also informed the conceptual design of the *School Counselor Consultation Self-Efficacy Scale* in this study.

In this context, the present study aimed to develop the *School Counselor Consultation Self-Efficacy Scale (SCCSES)*, addressing four key needs identified in the literature:

- to capture the multidimensional nature of consultation self-efficacy more accurately,
- to reflect the unique professional context of Turkish school counselors, who assume consultation responsibilities in the absence of school psychology programs,
- to incorporate an ethical dimension, often overlooked in prior scales despite its relevance to professional practice, and
- to contribute a culturally grounded instrument that facilitates cross-national comparisons and supports future research on consultation self-efficacy.

To address above gaps in prior research, the present study adopted a comprehensive approach that incorporated not only international literature and established professional standards but also culturally grounded qualitative findings. The SCCSES developed in this study may offer a meaningful contribution to the field by providing a reliable, culturally responsive, and multidimensional tool for evaluating and supporting school counselors' consultation self-efficacy. It is expected to be useful for both researchers and practitioners, and it may also serve as a foundation for future cross-cultural validation studies and the development of targeted training interventions in counselor education programs.

Method

The development of the Consultation Self-Efficacy Scale for School Counselors (SCCSES) was guided by the systematic procedures outlined by DeVellis (2003) and Erkuş (2014). The multi-stage process included item generation based on theoretical foundations, expert review for content validity, pilot testing, EFA and CFA, as well as criterion-related validity and reliability analyses, including internal consistency and test – retest methods. To ensure the robustness of each stage, data were collected from four distinct samples of school counselors, each contributing to a different phase of the development process. Detailed explanations regarding the process are provided under the following subheadings.

Study groups

A purposive sampling method, which allows for the in-depth investigation of information-rich cases selected based on the purpose of the study (Fraenkel &

Wallen, 2009), was employed to select study groups for the research. According to Erkuş (2014), purposive sampling is the most appropriate method for scale development studies. School counselors, the professional group responsible for providing consultation services in schools in Türkiye, were chosen as the study group.

Data were collected from four distinct study groups comprising school counselors during the scale development process. A total of 942 school counselors were reached during the scale development process. Demographic information about all study groups is provided in Table 1.

Measures

Personal information form

The researcher developed and employed the Personal Information Form to collect demographic data, including gender, type of institution, years of service, and educational level, from the school counselors involved in the development process of the SCCSES.

School counselor self-efficacy scale (SCSES). The SCSES was created by Bodenhorn and Skaggs (2005) and later adapted into Turkish by Balcı (2017). The scale is designed to assess the self-efficacy levels of school counselors. Comprising a total of 37 items, the scale is divided into five sub-

Table 1. Demographic distribution by study groups.

Study Group	Purpose	N	Method	Key Demographic Features
Group 1	Pilot testing of items	52	Face to face	**Gender**: 86.5% female **Institution Type**: Mainly secondary (40.4%) and primary schools (30.7%) **Education Level**: 71.2% Bachelor's, 19.2% Master's, 9.6% Doctorate **Years of Experience**: Mostly 6–10 years (46.2%)
Group 2	Exploratory Factor Analysis – item and construct validity evidence	398	Online	**Gender**: 75.4% female **Institution Type**: Mostly secondary (38.2%) and primary schools (23.9%) **Education Level**: 79.4% Bachelor's, 17.1% Master's, 3.5% Doctorate **Years of Experience**: Mostly 6–10 years (43.0%)
Group 3	Confirmatory Factor Analysis and criterion validity analyses	433	Online	**Gender**: 79.0% female **Institution Type**: Balanced distribution across secondary (28.9%), high schools (27.9%), and primary schools (25.6%) **Education Level**: 74.6% Bachelor's, 23.6% Master's, 1.8% Doctorate **Years of Experience**: Mostly 21+ years (28.2%)
Group 4	Test–retest reliability analysis	59	Online	**Gender**: 77.9% female **Institution Type**: Mainly high schools (32.2%) and primary/secondary (22.0% each) **Education Level**: 67.8% Bachelor's, 32.2% Master's **Years of Experience**: Mostly 21+ years (28.8%)

dimensions: "Personal and Social Development," "Professional and Academic Development," "Leadership and Assessment," "Cultural Acceptance," and "Collaboration." The confirmatory factor analysis results showed that the model fit indices for the scale were $\chi^2/df = 2.922$, RMSEA = .068, SRMR = .073, CFI = .99, IFI = .99, NFI = .94, GFI = .91, and AGFI = .98. These indices indicate that the original five-factor structure of the scale is suitable for the Turkish context. Reliability studies showed that the Pearson correlation coefficient obtained through the test-retest method ranged from 0.75 to 0.83 for the entire scale and its subscales, and the Cronbach Alpha internal consistency coefficient ranged from 0.70 to 0.84, indicating that the scale has adequate reliability. SCSES was used for criterion validity in this study.

School counselor consultation self-efficacy scale (SCCSES)

Based on Bandura's (1977) Social Cognitive Theory, the authors of this article developed the SCCSES to assess the consultation self-efficacy levels of school counselors. The scale development process involved generating items that effectively represented the psychological attribute being measured and determining appropriate response categories to capture participants' reactions (Erkuş, 2014).

Deciding what to measure. A review of the literature on school-based consultation and self-efficacy was conducted to establish the conceptual framework. Bandura (2006) suggested that when developing self-efficacy scales, understanding the specific domain of activity helps determine which aspects of self-efficacy beliefs should be assessed. Based on this, since the activity domain in the developed scale is consultation, the prerequisite competencies and skills for effectively providing consultation services in the literature were examined. Additionally, the educational standards related to school-based consultation established by international professional organizations and associations (CACREP, ASCA, NASP, etc.) were reviewed.

When the literature on school-based consultation is examined, Zins and Erchul (2004) identified the necessary prerequisite competencies for consultation as (a) self-awareness regarding values, (b) good interpersonal and communication skills, (c) cultural sensitivity and awareness, and (d) knowledge of interventions. Rosenfield and Gravois (1993) described these competencies as follows: (a) communication skills including active listening, summarizing, and emotional reflection; (b) knowledge and application of problem-solving steps; (c) expertise in selecting, developing, and assessing interventions; (d) self-evaluation; (e) capability to work effectively in multicultural settings; and (f) an understanding of ethical considerations in consultation. Dougherty (2009) categorized these skills into (a) interpersonal skills, (b) communication skills, (c) cultural diversity skills, (d) problem-solving skills, and (e) ethical and professional conduct skills.

CACREP (2016) emphasizes the "skill and knowledge related to the consultation process and the competence to consult with teachers, administrators, and parents"; while the National Association of School Psychologists (NASP, 2020) highlights "knowledge of mental health, behavioral, and other consultation models" as part of their standards.

The structure of the scale was informed by the Guiney et al. (2014), the first study on consultation self-efficacy, with consultation as a multidimensional construct including (a) interpersonal skills, (b) self-awareness, (c) communication skills, (d) cultural competence, (e) process, and (f) intervention. Additionally, Aslan and Güven's (2025) work on the SCCSES, which was informed by internationally established competencies and context-specific evidence from Turkish practice, informed the present study.

Dimensions of consultation self-efficacy. The comprehensive integration of several sources resulted in conceptualizing consultation self-efficacy with four core dimensions. The *Process* dimension encompasses the activities that need to be performed at various stages and phases of consultation (Dougherty, 2009). These activities include structuring the process as a problem-solving process, utilizing consultation models, designing, implementing, and evaluating intervention plans, and making use of evidence-based practices (CACREP, 2016; Dougherty, 2009; Guiney et al., 2014, NASP, 2010; Rosenfield & Gravois, 1993; Zins & Erchul, 2004). *Communication* is composed of a combination of communication and interpersonal skills from the consultation literature (Dougherty, 2009; Rosenfield & Gravois, 1993; Zins & Erchul, 2004). This integration was conducted based on the recommendation of Guiney et al. (2014). Skills included in this dimension involve initiating, maintaining, and terminating communication, effectively utilizing communication skills, and managing consultation relationships with resistant or difficult individuals. The *Cultural Awareness* dimension consists of the competencies and skills that consultants need when working with parties who have cultural differences in consultation (Ingraham, 2000). According to the recommendations of Guiney et al. (2014) and Arredondo et al. (2004), this dimension combines self-awareness and cultural awareness areas. It includes skills related to consultants being aware of both their own cultural characteristics and those of the consultation participants (consultees and clients), evaluating the impact of these differences on the consultation process, and adapting practices according to the cultural context (Dougherty, 2009; Guiney et al., 2014; Ingraham, 2000). Finally, *Ethics* competencies related to the consultant's ethical and professional behavior in consultation, sensitivity to the rights of consultees and clients, and consideration of legal regulations (ACA, 2014; APA, 2017; Dougherty, 2009; Parsons & Kahn, 2005; Turkish Psychological Counseling and Guidance Association, 2011).

Writing behavioral indicators. Behavioral indicators are concrete manifestations and representative behaviors in real life that reflect the variable intended to be measured, which cannot be directly observed (Erkuş, 2014). Review of relevant research in the field or expert opinions can be utilized to determine behavioral indicators. Following the examination of the literature on school-based consultation and expert opinions, it was decided that the consultation self-efficacy of school counselors can be addressed in four sub-dimensions within the framework of prerequisite competencies/skills related to the activity domain (consultation) in the literature. These four sub-dimensions behavioral indicators were developed and presented in Table 2.

Scale and Items. Consistent with Erkuş (2014), the scale is a self-report scale in which school counselors will evaluate themselves based on the stimuli provided in SCCSES and respond to standard response categories according to their level of consultation self-efficacy. Likert-type rating scales were selected as the most suitable format for capturing the respondents' self-efficacy perceptions (DeVellis, 2003; Kline, 2005). Rating-type items follow response options showing various levels of agreement or endorsement with the presented item stimulus (DeVellis, 2003). Given that self-efficacy scales measure levels of belief in one's capacity to perform a specific task, rating-type items were chosen for assessing consultation self-efficacy.

Table 2. Behavioral indicators related to sub-dimensions of SCCSES.

Sub-dimension	Behavioral indicators	Reference
Process	• Structuring consultation as a problem-solving process • Applying consultation models during the consultation process. • Utilizing intervention knowledge from different developmental areas in the consultation process • Developing, implementing, and evaluating intervention plans in the consultation process • Utilizing evidence-based practices and data collection processes in the consultation process	Rosenfield and Gravois, (1993) Zins & Erchul, (2004) Dougherty, (2009) NASP, 2010 Guiney et al., (2014) CACREP, (2016)
Communication	• Establishing and maintaining the consultation relationship • Using communication skills in the consultation process • Establishing a consultation relationship with resistant individuals	Rosenfield & Gravois, (1993) Zins & Erchul, (2004) Dougherty, Dougherty, (2009) Parsons & Kahn, (2005) Guiney et al., (2014)
Cultural awareness	• Recognizing the impact of own cultural characteristics on consultation practices • Being aware of the cultural characteristics of consultees • Adapting consultation practices according to cultural contexts	Rosenfield & Gravois, (1993) Zins & Erchul, (2004) Guiney et al., (2014) Dougherty, (2009) Ingraham, (2000)
Ethics	• Demonstrating ethical and professional behavior in the consultation relationship • Being sensitive to the rights of consultees in the consultation process • Considering legal regulations in consultation practices	Parsons and Kahn, (2005) Dougherty, (2009) ACA, 2014 APA, 2017 Turkish PCGA, 2011

Determining response categories. In the literature, it is emphasized that response categories for items should encompass the entire response range qualitatively and apply to all items, while also highlighting the need to balance measurement sensitivity with participants' ability to distinguish between response categories (DeVellis, 2003; Nunnally & Bernstein, 1994). Moreover, the literature has explored the optimal number of categories for Likert-type rating scales. Numerous studies suggest that the ideal number of categories in these scales is seven (Lozano et al., 2008; Wakita et al., 2012). Akbaş et al. (2020) also indicated that seven categories are optimal for Turkish culture in their study examining the psychometric properties of Likert-type self-efficacy scales. Furthermore, expert opinions were sought from two faculty members who teach at the doctoral level in scale development and specialize in measurement and evaluation. Based on the literature review and expert opinions, it was decided that seven categories would be used. The descriptive statements for the categories were determined following Bandura's (2006) recommendations as "1 = *Not at all confident*" – "7 = *Completely confident*." Only endpoints were preferred in naming the categories, which is supported by numerous studies advocating for labeling only endpoints. For example, Churchill and Peter (1984) conducted a meta-analysis based on 6484 articles published between 1964 and 1982, concluding that scales labeling only endpoints exhibit higher reliability compared to scales labeling all categories.

Development of scale items. When creating the item pool, the behavioral indicators identified based on the literature, the decided item type and response categories, and DeVellis's (2003) recommendation to write "three to four times the number of items desired in the final scale form" were considered. When writing the items, care was taken to ensure that each item measured a single behavior, included precise statements, was expressed simply, and used positive sentence structures, as specified by Nunnally and Bernstein (1994). In this context, as the goal was to include around 30 items in the final version, the researchers developed a pool of 104 items. All scale items were recreated by the authors although they were formulated through an integration of extant literature.

Obtaining expert opinion. Following the item writing and pool creation phase, expert opinions ($N = 19$) were sought to verify content validity. The distribution of experts according to disciplines was as follows: 9 experts in psychological counseling and guidance, 2 experts in measurement and evaluation, 3 linguists, and 5 school counselors. In total, opinions were gathered from 19 experts. Experts were asked to evaluate the items based on criteria such as (a) representation of the attribute to be measured, (b) clarity/comprehensibility of the item, and (c) appropriateness of the item for the target population (DeVellis, 2003). The opinions and suggestions of the experts were evaluated by the researcher, resulting in the

creation of a pilot form comprising 75 items. During this process, some items were combined, others were divided, wording changes were made to some items, and a few items were removed from the scale.

Pilot study. The pilot application is another important step of the scale development process (DeVellis, 2003). In this study, the pilot application was conducted with the participation of 52 school counselors forming study group 1. As part of this, the items from the item pool were administered face-to-face to study group 1, and they were asked to review these items based on the criteria mentioned above. Participants did not recommend removing any items from the item pool, and the application lasted approximately 15 minutes. However, suggestions were made to improve the clarity of some items, and these suggestions were evaluated in terms of the scope and purpose of the study. The appropriate revisions were made by the researcher to create the final form of the scale.

Participant recruitment and data collection procedure. Following the adjustments made after the pilot application, the items and scale form were prepared for the scale development study. Ethical approval was secured from the ... University Ethics Committee, and implementation permission from the Ministry of National Education. After obtaining the necessary permissions, this study was conducted in four separate data collection phases: pilot, EFA, CFA, and test-retest. The pilot study was conducted face-to-face, while all other phases were conducted online via Google Forms. Participants were contacted through professional networks, social media groups, and e-mail lists related to the field of guidance and psychological counseling. The call for participation was also disseminated through counseling networks, educational forums, and regional psychological counseling communities to ensure geographic diversity. To avoid participant overlap between study groups, data were collected at different time points, and each group received a unique survey link. IP address tracking and clear instructions ensured that participants participated in only one phase of the study. These procedures effectively minimized the possibility of repeated participation across sample groups. Participation was voluntary and anonymous; no incentives were offered. The sample consisted of practicing school counselors employed by the Turkish Ministry of National Education. None of the participants were university students or affiliated with higher education institutions in their capacity as students.

Analyses

We used JASP, SPSS and LISREL software to analyze the research data. We conducted the EFA studies and item validity analyses with study group 2. We conducted the CFA with study group 3. In addition to the EFA and

CFA analyses, we employed network analysis to examine the interrelationships among factors. As a method increasingly utilized in the social sciences, network analysis goes beyond simple correlations by mapping variables as nodes and their associations as edges (Love et al., 2019). Centrality measures play a critical role in identifying the importance of nodes within the network. Specifically, *betweenness* indicates how frequently a node lies on the shortest paths between other nodes; *closeness* refers to the inverse of the total distance from a node to all other nodes; and *strength* captures the total magnitude of a node's connections, highlighting its central position within the network (Wagenmakers et al., 2020). We conducted the network analysis using data obtained from Study Group 3.

To provide additional evidence of SCCSES validity, a criterion validity study was also conducted. As a criterion in this study, the SCSES, adapted to Turkish culture by Balcı (2017) from the original scale developed by Bodenhorn and Skaggs (2005), was used. The criterion validity study was conducted on study group 3.

The reliability evidence for SCCSES was obtained using two different methods across three different study groups. While the internal consistency method (Cronbach's Alpha) was applied to study group 2 and study group 3, the test-retest reliability method was conducted on study group 4.

Results

Preparing data for EFA and item analysis

We reviewed the obtained data from study group 2 while preparing for scale and item analyses. We carried out the consistency of the responses, control of incorrect data entry, determination of missing data, and elimination of outliers (Erkuş, 2014). Box Plot test performed through the SPSS program was used to examine extreme values. Based on the results of this test, data from 15 school counselors were excluded from the dataset, because they were identified as exhibiting extreme values. Then, histogram graphs and skewness-kurtosis coefficients were examined for the normality assumption of the variables, and it was determined that the variables did not deviate from normal. Therefore, EFA of the scale was carried out using the responses from a total of 383 participants. A factor analysis participant-to-item ratio of five-to-one was considered sufficient (Bryman & Cramer, 2005). Kline (2016) proposed that a sample size of 200 participants is adequate, while Nunnally and Bernstein (1994) indicate that 300 participants are sufficient. Considering these criteria in the literature, the sample size reached for the pool of 75 items was considered adequate.

EFA

To test structural validity, EFA was conducted initially on data obtained from Study group 2. Before proceeding, the appropriateness of the data for factor analysis was assessed using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity. According to the results obtained, the KMO value was 0.963, and the Bartlett test statistic was approximately $\chi^2 = 7291.490$ with 378 degrees of freedom and a significance level of $p = .000$. Kaiser (1974) suggests that it is important for the KMO value to be above 0.5. The KMO value of 0.963 obtained in this study meets the recommended criteria, demonstrating that the sample data are suitable for factor analysis. The results of Bartlett's Test of Sphericity are found to be significant ($p < .001$). The significance of the results from Bartlett's Test of Sphericity indicates that the data are suitable for factor analysis and that they come from a normal distribution.

In conducting EFA, the Principal Component method was employed for factor extraction. Given the theoretical assumption that scale items are interrelated, the Promax rotation method, an oblique rotation technique, was employed. The criteria adopted for EFA are as follows: (a) Each factor should have an eigenvalue of at least 1 (Kaiser, 1974), (b) To be represented in any factor, an item's loading on that factor should be at least 0.40 (DeVellis, 2003), (c) Items loading on multiple factors should have loadings differing by at least 0.20 (Howard, 2016), (d) Each factor should include a minimum of 3 items (Comrey, 1988).

After excluding items that did not meet the above criteria individually, the rotation process was repeated using the Promax method. As a result of the analysis, a structure comprising 4 factors with eigenvalues greater than 1 was obtained, consisting of a total of 28 items related to school counselors' consultation self-efficacy. Table 3 presents the factor loadings of the items derived from the exploratory factor analysis, along with the variance explained by each subscale and the total variance accounted for by the scale concerning consultation self-efficacy.

In addition, a scree test was performed to determine the factor structure. The scree plot showed that there was a clear break after the first factor, followed by a gradual decrease in eigenvalues. The eigenvalues of the first four factors were above the Kaiser criterion of 1.0 (13.85, 1.63, 1.45, and 1.05) and collectively explained a significant portion of the total variance. Although the decrease in eigenvalues was evident between the first and second factors, the curve did not flatten immediately, indicating the potential contribution of the second to fourth factors. This pattern, together with the theoretical basis and interpretability of the factors, supported the acceptance of a four-factor model. The decision to determine the number of factors was made in accordance with publications recommending the use of multiple criteria, such as

Table 3. The scale's factor structure, item factor loadings, and explained variances.

AFA item number	DFA item number	Process	Cultural Awareness	Communication	Ethics
51	5	.915			
56	1	.810			
53	9	.642			
71	13	.642			
66	17	.640			
60	21	.637			
64	24	.626			
69	25	.572			
75	26	.519			
68	27	.496			
67	28	.477			
4	2		.853		
9	6		.841		
14	10		.761		
24	14		.754		
19	18		.698		
39	22		.506		
37	3			.967	
42	7			.853	
27	11			.848	
73	15			.560	
32	19			.553	
35	4				.884
50	8				.759
40	12				.713
30	16				.666
5	20				.527
62	23				.508
Eigen value		13.851	1.631	1.450	1.049
Explained variance		49.466	5.824	5.180	3.745
Total explained variance					64.216

eigenvalue thresholds, scree test, and conceptual structure-interpretability, expert opinions (Costello & Osborne, 2005; Fabrigar et al., 1999).

The SCCSES ultimately consisted of 28 items across four subscales. A sample item from each subscale is provided to illustrate the content of each dimension. *Process*: ("Can utilize data collection procedures to make evidence-based decisions during the consultation process."); *Communication*: ("Can use communication skills that engage those who are reluctant to participate in the consultation process."); *Cultural Awareness*: ("Can recognize the cultural needs of the consultee and the students."); *Ethics*: ("Can distinguish the conditions under which confidentiality may be breached in consultation cases."). The full version of the scale is not published here to preserve its intellectual property. However, researchers may request the complete instrument from the corresponding author for academic use.

Inter-factor correlations

To examine the relationships between the four subscales that emerged from the exploratory factor analysis of SCCSES, inter-factor correlation values were

examined. The findings indicated that the process factor has a positive and significant relationship with cultural awareness ($r = .609$, $p < .001$), communication ($r = .706$, $p < .001$), and ethics ($r = .603$, $p < .001$). Additionally, the cultural awareness factor was positively and significantly related to communication ($r = .630$, $p < .001$) and ethics ($r = .573$, $p < .001$), while the communication factor had a positive and significant relationship with ethics ($r = .606$, $p < .001$)

Item validity

Item-total correlations

Corrected item-total correlation values were calculated for each item constituting the four-factor structure resulting from EFA. According to the results obtained, the corrected item-total correlation values for the items in the scale ranged from 0.581 to 0.792 for the "Process" subscale; from 0.626 to 0.756 for the "Cultural Awareness" subscale; from 0.635 to 0.741 for the "Communication" subscale; and from 0.437 to 0.617 for the "Ethics" subscale. All correlation coefficients are positive and significant at the .001 level ($p < .001$).

Item discrimination

We also examined the item discrimination validity of the scale's items to provide additional evidence for item validity. The t-test results regarding item discrimination for the lower and upper 27% groups are presented in Table 4.

All items were subjected to a discrimination index analysis using independent samples t-tests between the upper and lower 27% scoring groups. The results demonstrated that all 28 items had statistically significant t-values, indicating strong item discrimination. Since all items exceeded this threshold with high statistical significance, none were flagged as problematic or removed from the scale. This result supports the retention of all items in the final version of the SCCSES.

CFA

To provide additional evidence of construct validity for SCCSES, whether the 28-item, 4-factor structure identified through EFA will be confirmed using data from a different study group was evaluated using first and second-order CFA conducted with LISREL 8.8 software.

Fit indices used for evaluating model fit

Different fit indices are used to assess model fit in CFA. For this study, Brown's (2015) suggests have been adopted. Specifically, Brown (2015) suggested using at least one index from each of the three categories: parsimony fit indices (RMSEA), comparative fit indices (CFI-IFI, TLI-NNFI), and absolute

Table 4. Results of t-tests for item discrimination.

	Items		*n*	$\bar{X}$	*Ss*	*T*	*p*
Process	51	Lower %27	103	4.174	1.331	18.736	.000***
		Upper %27	103	6.291	.924		
	56	Lower %27	103	4.194	1.252	17.190	.000***
		Upper %27	103	6.038	.895		
	53	Lower %27	103	4.660	.924	25.934	.000***
		Upper %27	103	6.601	.548		
	71	Lower %27	103	4.766	.887	25.309	.000***
		Upper %27	103	6.592	.532		
	66	Lower %27	103	5.009	.868	23.227	.000***
		Upper %27	103	6.660	.534		
	60	Lower %27	103	4.708	.935	22.868	.000***
		Upper %27	103	6.553	.682		
	64	Lower %27	103	4.281	.964	28.239	.000***
		Upper %27	103	6.524	.607		
	69	Lower %27	103	4.553	.825	28.959	.000***
		Upper %27	103	6.640	.623		
	75	Lower %27	103	4.563	.925	23.016	.000***
		Upper %27	103	6.417	.693		
	68	Lower %27	103	4.883	.808	22.561	.000***
		Upper %27	103	6.572	.708		
	67	Lower %27	103	4.873	.812	28.062	.000***
		Upper %27	103	6.728	.488		
Cultural Awareness	4	Lower %27	103	4.902	.955	20.275	.000***
		Upper %27	103	6.514	.624		
	9	Lower %27	103	4.854	1.023	21.430	.000***
		Upper %27	103	6.611	.581		
	14	Lower %27	103	4.747	.882	24.857	.000***
		Upper %27	103	6.553	.555		
	24	Lower %27	103	4.689	.907	25.803	.000***
		Upper %27	103	6.582	.533		
	19	Lower %27	103	4.524	.838	24.753	.000***
		Upper %27	103	6.378	.673		
	39	Lower %27	103	4.864	.875	24.473	.000***
		Upper %27	103	6.621	.544		
Communication	37	Lower %27	103	4.553	.997	19.260	.000***
		Upper %27	103	6.262	.791		
	42	Lower %27	103	4.495	1.056	22.919	.000***
		Upper %27	103	6.466	.638		
	27	Lower %27	103	4.572	.966	24.665	.000***
		Upper %27	103	6.533	.607		
	73	Lower %27	103	4.679	.898	24.081	.000***
		Upper %27	103	6.485	.591		
	32	Lower %27	103	5.203	.973	20.938	.000***
		Upper %27	103	6.757	.430		
Ethics	35	Lower %27	103	6.203	.820	9.000	.000***
		Upper %27	103	6.786	.435		
	50	Lower %27	103	5.883	.921	15.110	.000***
		Upper %27	103	6.902	.297		
	40	Lower %27	103	5.737	.979	16.133	.000***
		Upper %27	103	6.893	.310		
	30	Lower %27	103	5.572	.903	18.333	.000***
		Upper %27	103	6.825	.381		
	5	Lower %27	103	5.718	1.023	14.425	.000***
		Upper %27	103	6.825	.406		
	62	Lower %27	103	5.475	1.037	18.269	.000***
		Upper %27	103	6.873	.361		

Note. All *t* values were significant at $p < .001$.

fit indices (χ^2 , SRMR, RMR). The GFI and AGFI fit indices are not recommended because of their inadequate performance in simulation studies (Hu & Bentler, 1999). Accordingly, the fit indices used and heir expected values are displayed in Table 5.

Table 5. Fit indices used for assessing model fit and their value ranges.

Fit indices	Acceptable Fit Criteria	Good Fit Criteria
[1]*χ2/(df)*	3< *χ2/(df)* ≤5	0≤*χ2/(df)* ≤3
[1]RMSEA	0.05<RMSEA≤0.08	0≤RMSEA≤0.05
[1]RMR	0.05<RMR ≤0.08	0≤RMR≤0.05
[1,2,3]SRMR	0.05<SRMR ≤0.08	0≤SRMR≤0.05
[2,3,4]CFI	0.90≤CFI<0.95	0.95≤CFI<1
[1,5]NFI	0.85≤NFI<0.90	0.90≤NFI<1
[2]NNFI/TLI	0.90≤ NNFI/TLI<0.95	0.95≤ NNFI/TLI <1
[2]IFI	0.90≤IFI<0.95	0.95≤IFI<1

Sources. [1](Marcoulides & Schumacher, 2001), [2](Hu & Bentler, 1999); [3](Kline, 2016); [4](Tabachnick & Fidell, 2013);[5](Bentler & Bonett, 1980.

Preparing data for CFA

The required number of participants for CFA, according to Kline (2005), is at least 10 individuals per parameter. Given that this study's CFA involved 34 parameters, efforts were made to reach a minimum of 340 participants. Following the implementation, demographic information was obtained from 433 school counselors in study group 3. Yuan and Bentler (2001) recommend examining and assessing the distributional characteristics of data prior to conducting analyses based on structural equation modeling. In this context, data preparation for CFA based on structural equation modeling involved checking for erroneous data entry and removing outliers from the dataset obtained from 433 school counselors. A Box Plot test conducted using SPSS identified 24 school counselors' data points as outliers, which were subsequently excluded from the analysis. Histograms and skewness-kurtosis coefficients were examined to verify the normality assumption of variables, confirming that the variables were drawn from a normal distribution. Thus, CFA was performed on data obtained from a total of 409 school counselors.

First-order CFA results

The CFA to validate the structure obtained from SCCSES's EFA was initiated by applying first-level CFA. The fit index results obtained from the first-order CFA are as follows: $\chi^2/df = 3.081$; RMSEA = 0.071; RMR = 0.039; SRMR = 0.049; IFI = 0.98; CFI = 0.98; NFI = 0.97; and NNFI (TLI) = 0.98. Considering the criteria presented in Table 5 for the goodness of fit indices, the χ^2/df and RMSEA fit index values are acceptable, while the remaining indices – SRMR, RMR, CFI, IFI, NFI, and NNFI – indicate good fit. Although the model exhibits an adequate fit, the χ^2/df value is an important reference and influences other fit indices. Modifications suggested by the LISREL program were examined to improve this index from the acceptable range to the good fit range.

Accordingly, the item pair contributing most significantly to the χ^2 value and having the highest Modification Index (M.I = 56.23) was Item 1, which includes the statement "Address the consultation case using the mental health consultation model," and Item 5, which includes the statement "Address the

consultation case using the behavioral consultation model." Both items fall under the *Process* sub-dimension. Additionally, the items are conceptually related, as they both reflect consultation models used for conceptualizing a case. Both items represent conceptual models commonly taught together in school counseling curricula (Dougherty, 2009; Zins & Erchul, 2004). This suggests that participants – Turkish school counselors – may have evaluated these models as closely related strategies within the same operational domain.

Given that both items belong to the same factor and considering their theoretical relevance and potential latent relationship, it was decided to allow a residual correlation between Item 1 and Item 5. According to methodological experts such as Brown (2015) and Kline (2016), such modifications are acceptable under the following conditions: (1) the items share similar content or phrasing, (2) they load on the same latent factor, and (3) there is a strong theoretical rationale for correlating their residuals. In this case, all three conditions were met. Therefore, the decision to correlate the error terms was guided both by statistical criteria and conceptual justification. No additional modifications were made, as no other item pairs satisfied both the empirical thresholds and the theoretical justifications for covariation. The modification was performed by covarying the error terms of these two items. The path diagram of the final first-level CFA model, consisting of 28 items across four factors after modification, is presented in Figure 1.

After the modifications, the fit indices of the final first-order four-factor model of SCCSES were obtained as follows: $\chi^2/df = 2.904$; SRMR = 0.047; RMR = 0.036; RMSEA = 0.068; IFI = 0.98; CFI = 0.98; NFI = 0.97; NNFI (TLI) = 0.98. It is observed that the *χ2/df* value improved from an acceptable range to a good range, meeting the criterion of < 3. Additionally, there was some improvement in the RMSEA, SRMR, and RMR indices. The CFI, IFI, NFI, and NNFI (TLI) fit indices remained within the range indicating good fit.

In addition to fit indices, when examining factor loadings in the final model, factor loadings for items in the Process factor ranged from 0.56 to 0.81, for Cultural Awareness factor from 0.64 to 0.81, for Communication factor from 0.71 to 0.87, and for Ethics factor from 0.60 to 0.72. According to Jöreskog and Sörbom (1993) and Kline (2005), factor loadings should ideally exceed 0.40. This criterion is met by the loadings in this model. Moreover, the t-values determining the significance of each item's parameters ranged from 12.13 to 21.63 ($p < .01$), surpassing the critical values of 1.96 for $p < .05$ and 2.56 for $p < .01$ (Schumacker & Lomax, 2010). Accordingly, the t-values in the model are statistically significant at the 0.01 level.

Considering the overall fit indices, t-values, and factor loadings, it can be concluded that the final first-order four-factor model comprising 28 items for SCCSES has been validated and demonstrates a good fit with the data.

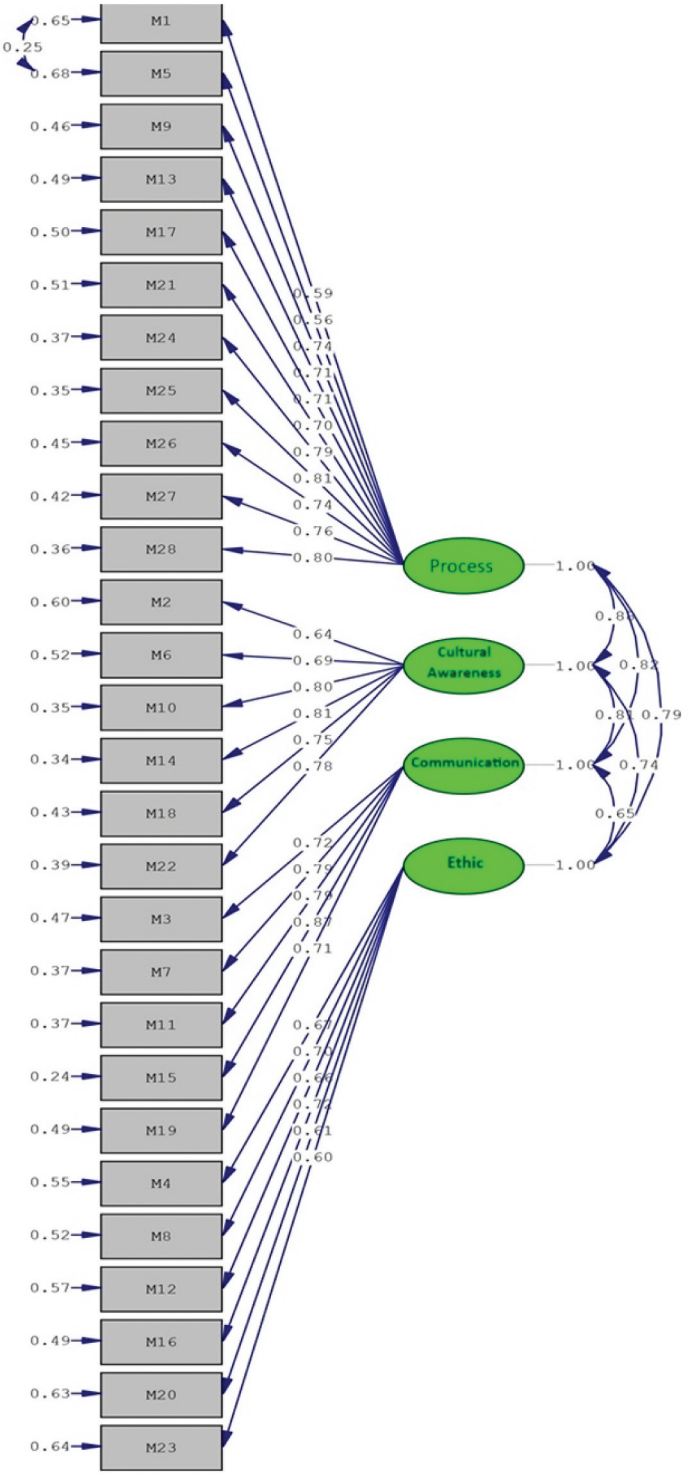

Figure 1. First-order CFA model of SCCSES.

Second-order CFA results

The implementation of a second-order CFA was grounded in a priori theoretical assumptions about the hierarchical structure of consultation self-efficacy. The SCCSES was designed to measure a general latent construct – consultation self-efficacy – manifested through four conceptually interrelated subdomains: Process, Communication, Cultural Awareness, and Ethics.

This structural assumption is consistent with Social Cognitive Theory, which posits that self-efficacy beliefs are both task-specific and hierarchically organized, encompassing multiple domains of functioning (Bandura, 1997, 2006). Previous models of professional self-efficacy – particularly in counseling psychology – have demonstrated similar higher-order structures (Lent & Hackett, 1987; Larson & Daniels, 1998). For instance, Larson and Daniels (1998) emphasized that counselor self-efficacy is composed of distinct sub-skills but functions as a unitary global belief in one's professional capabilities. Furthermore, research on school-based consultation suggests that effective consultation practice requires the integration of diverse yet interconnected competencies (Dougherty, Dougherty, 2009; Rosenfield & Gravois, 1993; Zins & Erchul, 2004). These include the ability to apply consultation models, communicate effectively with stakeholders, remain ethically grounded, and demonstrate cultural responsiveness – all of which were incorporated as distinct dimensions in the SCCSES.

Although the positive inter-factor correlations observed during first-order CFA supported the appropriateness of a second-order model, the decision to test a hierarchical structure was not data-driven, but rather theoretically anticipated. The scale was intentionally constructed to reflect both domain-specific competencies and a unifying construct of consultation self-efficacy. Such an approach aligns with best practices in scale development, particularly when developing tools aimed at capturing complex professional competencies in education and mental health (Brown, 2015; Byrne, 2016; Thompson, 2004).

Accordingly, the second-order CFA was employed to confirm whether the four first-order latent factors could be adequately explained by a single higher-order factor. A second-order four-factor CFA model was established by linking these four factors to the main variable being measured. The fit index values for the second-level CFA model of SCCSES without modification were obtained as follows: $\chi 2/df = 3.095$; SRMR = 0.049; RMR = 0.039; RMSEA = 0.072; IFI = 0.98; CFI = 0.98; NFI = 0.97; NNFI (TLI) = 0.98. Referring to the criteria provided in Table 5 for fit indices, $\chi 2/df$, and RMSEA values are acceptable, indicating that the remaining fit indices (SRMR, RMR, CFI, IFI, NFI, and NNFI) all demonstrate good fit. Thus, taking into account the overall fit indices of the unmodified model, it can be inferred that the model shows a satisfactory fit. The modifications suggested by the LISREL program for the second-order CFA model were examined for the same reasons stated for the first-order CFA model without modifications. Consequently, in alignment with the first-order CFA model and based on the same reasoning, it was

decided to apply a modification between Item 1 and Item 5, which had the highest M.I value (M.I = 55.63). The final second-order four-factor CFA model obtained after the modification is presented in Figure 2.

The goodness-of-fit index values for the final second-order four-factor model, following the modification, are as follows: $\chi^2/df = 2.925$; SRMR = 0.047; RMR = 0.036; RMSEA = 0.069; IFI = 0.98; CFI = 0.98; NFI = 0.97; NNFI (TLI) = 0.98. Upon examining the fit indices for the second-order four-factor final model post-modification, it was observed that the χ^2/df value met the < 3 criterion, indicating an improvement from an acceptable fit to a good fit range. Additionally, a slight improvement was noted in the RMSEA, SRMR, and RMR indices. The CFI, IFI, NFI, and NNFI (TLI) indices maintained their values within the good fit range.

Regarding the factor loadings, the item factor loadings varied from .57 to .81 for the process factor, from .64 to .81 for the cultural awareness factor, from .71 to .87 for the communication factor, and from .60 to .72 for the ethics factor. According to Jöreskog and Sörbom (1993) and Kline (2005), item factor loadings should be above .40. The item factor loadings met this criterion. Furthermore, the t-values examined to determine the significance of the parameter values for each item in the final model ranged from 10.63 to 17.09 ($p < .01$). A t-value above 1.96 indicates significance at the 0.05 level, while a t-value above 2.56 signifies significance at the 0.01 level (Schumacker & Lomax, 2010). Based on these criteria, the t-values for the model were significant at the .01 level. In conclusion, when considering the fit indices, t-values, and item factor loadings obtained post-modification, it can be stated that the second-order four-factor final model of SCCSES was confirmed and provided a good fit with the data.

Network analysis

In addition to the findings from the confirmatory factor analysis, a network analysis was conducted to explore the relational strength and centrality of the SCCSES dimensions. The network visualization (see Figure 3) revealed that the Process dimension demonstrated the highest level of connectedness with other dimensions, as indicated by the thickest and darkest lines representing strong partial correlations. This observation was further supported by the centrality indices. Among the four subscales, Process showed the highest scores in all centrality metrics – betweenness (1.500), closeness (1.269), strength (1.098), and expected influence (1.098) – indicating its pivotal role in the overall structure of consultation self-efficacy.

Criterion validity

Concurrent validity, which is based on the simultaneous application of the criterion and the developed scale, was applied as one of the types of criterion validity (Anastasi, 1982). The SCSES scale was determined as a criterion in order to determine the self-efficacy levels of school

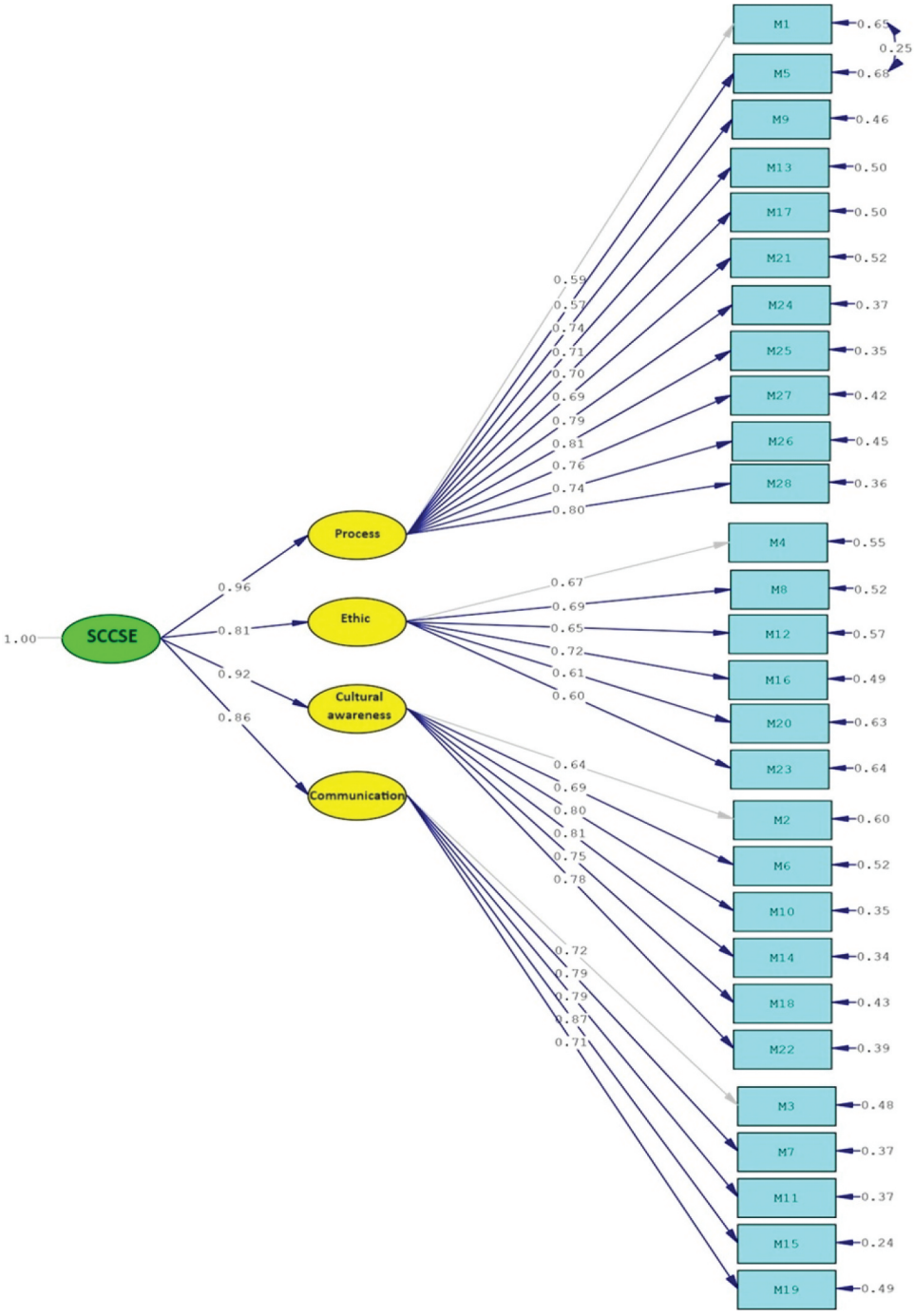

Figure 2. Second-order CFA model of SCCSES.

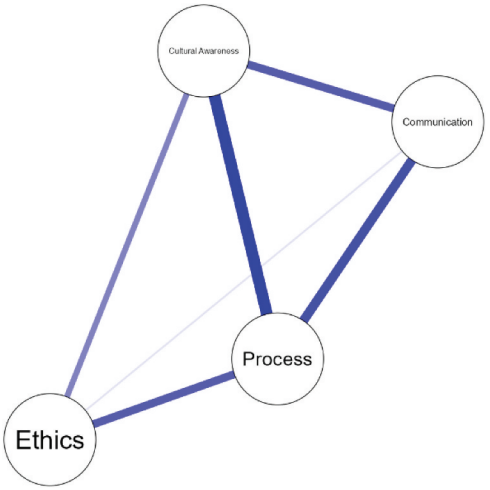

Figure 3. Network analysis of dimensions.

counselors. The decision to use SCSES as a criterion was based on the results of its validity and reliability studies, its measurement of a similar attribute (self-efficacy) as the developed scale, and its applicability to the same sample group (school counselors). Therefore, SCSES was used as the criterion for the developed SCCSES, and data indicated correlation coefficients of .727 ($p < .001$) with Process, .653 ($p < .001$) with Cultural Awareness, .662 ($p < .001$) with Communication, .499 ($p < .001$) with Ethics, and .737 ($p < .001$) with the overall SCCSES.

Reliability studies of the scale

Test-retest reliability

Literature suggests varying optimal intervals for test-retest reliability measurements: Peirce (1995) proposes 2–4 weeks, Erkuş (2014) recommends intervals of 10–15 days. Considering these recommendations, the test-retest reliability study of SCCSES was conducted with 59 school counselors from study group 4, a different sample group, by applying the scale twice with a three-week interval. As a result, the Pearson correlation coefficient between the responses given by school counselors in the initial and final applications was obtained as .870 ($p < .001$).

Internal consistency analysis

Internal consistency analyses were conducted using both Cronbach's alpha and McDonald's omega coefficients to evaluate the reliability of the scale and its subdimensions in the study groups where EFA and CFA were performed. The results indicate that the scale and its subdimensions demonstrated high internal consistency across both samples. The findings are presented in Table 6.

Table 6. Internal consistency analysis results for the entire scale and subdimensions.

	Number of Items	EFA		CFA	
Dimensions		Cronbach's α	McDonald's ω	Cronbach's α	McDonald's ω
Process	11	.931	.931	.917	.916
Cultural Awareness	6	.914	.915	.883	.883
Communication	5	.876	.880	.885	.887
Ethics	6	.811	.813	.819	.821
Overall Scale	28	.960	.962	.956	.957

Discussion

The validity and reliability of the new factor structure, named SCCSES, were evaluated and investigated to accurately and reliably measure school counselors' consultation self-efficacy levels. The findings obtained are discussed below within the framework of relevant research in both the psychometric literature and the consultation literature.

Psychometric results

The exploratory factor analytic findings support the construct validity of the SCCSES by indicating a theoretically coherent multidimensional structure underlying school counselors' consultation self-efficacy. The identification of four conceptually meaningful dimensions – process, cultural awareness, communication, and ethics – suggests that consultation self-efficacy is best conceptualized as a composite belief system encompassing multiple core competency areas rather than a single undifferentiated construct. From a psychometric perspective, the adequate functioning of items within this structure indicates that the SCCSES items effectively represent their intended domains, consistent with established criteria for sound scale development and evaluation (DeVellis, 2003). Taken together, these findings suggest that the SCCSES captures both the complexity and adequate structural representation of consultation self-efficacy, supporting its use as a multidimensional assessment tool in school-based consultation research.

The pattern of associations observed among the SCCSES subdimensions provides important insight into the scale's structural organization. The presence of moderate and theoretically meaningful relationships among the factors suggests that the dimensions represent related yet distinguishable aspects of consultation self-efficacy. From a measurement perspective, the fact that inter-factor correlations remained below the commonly accepted threshold of .90 indicates that the subscales are conceptually associated without exhibiting problematic overlap or redundancy (Field, 2013). This balance between conceptual relation and distinguishability is a desirable feature of multidimensional tools, and SCCSES appears to possess this characteristic

The item – total relationships observed in the SCCSES provide further evidence regarding the adequacy of item functioning within the scale. The fact that all items exceeded the commonly accepted threshold of .30 for item – total correlations suggests that individual items contribute meaningfully to the measurement of consultation self-efficacy, consistent with established psychometric guidelines (Field, 2013). This pattern indicates that the SCCSES items adequately represent the underlying construct at the item level and supports the interpretability of the scale scores in assessing school counselors' consultation self-efficacy.

The item discrimination findings provide further support for the measurement quality of the SCCSES. The fact that all items met the commonly accepted criterion of exceeding a t-value of 1.96 for satisfactory discrimination indicates that the items are capable of distinguishing between individuals with relatively higher and lower levels of consultation self-efficacy, in line with established item analysis guidelines (DeVellis, 2003). This pattern suggests that the SCCSES items function effectively at the item level and contribute meaningfully to capturing individual differences in consultation self-efficacy, thereby offering additional evidence for the item-level validity of the scale.

Considering the first and second-order CFA results, conducted to examine whether the structure obtained from EFA can be confirmed with data from a different sample group, along with the fit indices in Table 5, the 28-item, 4-factor structure obtained from EFA has been confirmed with data from a different sample group. The four subdimensions (i.e., Process, Cultural Awareness, Communication, and Ethics), which are interrelated, measure a latent variable that can be conceptualized as SCCSE, and the structure is confirmed and shows good fit. The second-order CFA results confirm the structure, and it therefore can be concluded that a total score can also be derived from the scale. These conclusions, derived from the second-order CFA, provide strong evidence that while SCCSES consists of four distinguishable domains, they collectively reflect a unified construct of consultation self-efficacy. The SCCSES is a 7-point Likert-type scale that yields both a total score and four subscale scores. These subscales reflect self-efficacy levels across different domains of the consultation process. Importantly, all four subfactors are associated with a higher-order construct. Results from the second-order confirmatory factor analysis demonstrated that the four first-order factors loaded significantly onto a single higher-order factor – school counselor consultation self-efficacy. This finding supports the interpretation of the SCCSES as both multidimensional and unified in structure (Brown, 2015; Byrne, 2016). Accordingly, researchers and practitioners can conduct nuanced analyses at the subscale level or use the total score for a more global assessment of consultation self-efficacy.

In addition to CFA, network analysis was conducted to better understand the structural relationships among the SCCSES subdimensions. The analysis

revealed that the Process dimension holds the most central position in the network, demonstrating the highest scores across all centrality metrics – betweenness, closeness, strength, and expected influence – indicating that this domain is the conceptual core of consultation self-efficacy. This indicates that competencies associated with the Process domain – such as consultation goal setting, intervention planning, and problem conceptualization – serve as the conceptual and structural hub of the consultation self-efficacy construct. These findings are consistent with previous conceptualizations of procedural consultation skills forming the backbone of effective consultation (Dougherty, Dougherty, 2009; Rosenfield, 2002; Sheridan & Kratochwill, 2008). Moreover, the network visualization revealed strong partial correlations between the Process dimension and both the Communication and Cultural Awareness domains, suggesting that process competencies may serve as a bridge that integrates relational and contextual competencies in consultation. In contrast, the Ethics dimension, while conceptually significant and theoretically grounded (e.g., APA, 2017; ACA, 2014; Turkish PCGA, 2011), exhibited the lowest centrality indices. This suggests that ethical competencies, though essential, may function more independently in shaping overall consultation self-efficacy beliefs. Overall, the network analysis supports a multidimensional and interconnected understanding of consultation self-efficacy, underscoring the dominant role of process-related competencies and providing empirical justification for the SCCSES's structural composition. These insights can inform targeted training efforts, emphasizing not only foundational process skills but also the integration of communication, cultural, and ethical dimensions into consultation training programs.

Taken together, the evidence regarding criterion-related validity and reliability supports the SCCSES as a psychometrically sound measure of consultation self-efficacy. Criterion validity was established through its associations with an established measure of school counselor self-efficacy (SCSES), indicating that the SCCSES captures a conceptually related construct within the broader self-efficacy framework. In terms of reliability, the SCCSES demonstrated robust measurement quality across multiple indicators. Specifically, the scale met the commonly accepted threshold of .70 for internal consistency, as evidenced by both Cronbach's alpha and McDonald's omega coefficients, which together provide complementary information regarding score reliability (DeVellis, 2003; Kline, 2016). In addition, evidence of test – retest reliability indicates that SCCSES scores remain stable across measurement occasions, supporting the temporal consistency of the construct being assessed. The convergence of internal consistency and test – retest evidence suggests that the SCCSES yields dependable, stable, and interpretable scores for assessing school counselors' consultation self-efficacy in both research and applied contexts.

When all the psychometric conclusions obtained for SCCSES are considered together, it can be stated that the SCCSES is a valid and reliable tool for measuring school counselors' consultation self-efficacy in a multidimensional way. The conclusions not only demonstrate the psychometric soundness of the SCCSES, but also contribute to the literature by providing a contextually developed instrument that can advance research and practice in school-based consultation. The multidimensional yet integrative structure of the SCCSES reflects the complexity of consultation practice and enables differentiated assessment of self-efficacy across process, communication, cultural awareness, and ethical dimensions. The results are consistent with previous conceptualizations of multidimensional self-efficacy (e.g., Bandura, 1997) and respond to the ongoing need for reliable, culture-specific instruments in consultation (e.g., Guiney et al., 2014; Newman et al., 2015). This scale has the potential to serve multiple functions in future research and applied settings. For researchers, the SCCSES offers a robust framework for examining the predictors and outcomes of consultation self-efficacy and for evaluating the effectiveness of consultation training programs. For practitioner training, the scale can help identify developmental needs and assess growth over time in key consultation competencies. The second-order factor structure further allows for both specific subscale analyses and global assessment of consultation self-efficacy, facilitating flexible application depending on the goals of the study or intervention. Overall, the SCCSES fills a significant gap in the literature by operationalizing consultation self-efficacy in a comprehensive and context-sensitive manner, and it holds promise for advancing both empirical scholarship and professional practice in school-based psychological services.

Results in the context of consultation self-efficacy

The Consultation Self-Efficacy Scale was originally conceptualized by Guiney et al. (2014) as comprising six dimensions: (a) communication skills, (b) interpersonal skills, (c) self-awareness, (d) process, (e) cultural competence, and (f) interventions. A seventh dimension, client, was subsequently added based on expert feedback. However, this seven-dimensional structure, theoretically defined by Guiney et al. (2014), did not show consistency with the factor analysis results, which revealed a unidimensional structure. Consequently, Guiney et al. (2014) suggested that further studies should examine whether consultation self-efficacy is a multidimensional or unidimensional construct. As a result of the current research conducted with four different study groups and data obtained from a total of 942 school counselors, the SCCSES was developed. The SCCSES revealed a four-dimensional structure of consultation self-efficacy consisting of (a) process, (b) cultural awareness, (c) communication, and

(d) ethics. Thus, the multidimensional theoretical structure of consultation self-efficacy, as expressed by organizations and associations that establish educational standards (CACREP, ASCA, NASP) and the literature defining the prerequisite competencies and skills necessary for consultation (Dougherty, Dougherty, 2009; Ingraham, 2000; Rosenfield & Gravois, 1993; Zins & Erchul, 2004), has been empirically validated through the development of the SCCSES.

The SCCSES includes all the dimensions of the CSES developed by Guiney et al. (2014). The process dimension of the SCCSES encompasses the process, intervention, and consultee dimensions of the CSES; the cultural awareness dimension includes the cultural competence and self-awareness dimensions of the CSES; and the communication dimension covers the communication and interpersonal skills dimensions of the CSES. This aggregation of dimensions was carried out in accordance with the suggestions provided by Guiney et al. (2014). Additionally, while the CSES features a cultural competence dimension, the SCCSES includes a cultural awareness dimension. However, unlike the CSES, the SCCSES also has an ethics dimension. This additional dimension indicates that the SCCSES is more comprehensive than the CSES, and recognizes ethics as a critical area for consultation (ACA, 2014; APA, 2017; Parsons & Kahn, 2005; Turkish PCGA; 2011). Additionally, while the CSES developed by Guiney et al. (2014) measures consultation self-efficacy with 45 items, the SCCSES measures the same construct with 28 items. Given that the SCCSES can validly and reliably measure the construct with fewer items, it is considered more practical due to the reduced application time and the ease of application, scoring, and interpretation.

The results of the EFA supported a four-factor structure for the SCCSES, aligning with theoretical models that view consultation as a multifaceted professional activity (Dougherty, Dougherty, 2009; Ingraham, 2000; Rosenfield & Gravois, 1993; Zins & Erchul, 2004). Following recommendations by Fabrigar et al. (1999) and Costello and Osborne (2005), we used multiple criteria in determining the number of factors. While the scree plot revealed an initial sharp decline in eigenvalues, the gradual slope following the first factor and the interpretability of item clusters across the four domains provided empirical justification for retaining multiple factors (Costello & Osborne, 2005; Fabrigar et al., 1999).

Each factor displayed high internal consistency ($\alpha = .81$ to .93), and items loaded significantly on their intended constructs with minimal cross-loadings. Furthermore, although correlations between factors were moderate ($r = .57$ to .70), they did not indicate construct redundancy. As Brown (2015) and Tabachnick and Fidell (2013) emphasize, such intercorrelation levels are expected in complex psychological constructs and support the presence of conceptually distinct but related subdimensions. These findings further justify

a higher-order latent factor model rather than a unidimensional one. Although Guiney et al. (2014) reported a single-factor solution for the CSES, their findings also revealed substantial inter-factor overlap and acknowledged a multidimensional conceptualization. Moreover, Fan et al. (2020) demonstrated that the adapted version of the CSES yielded a multidimensional structure in the Taiwanese context, further highlighting the role of cultural context in shaping factor structures. Our differing results may thus be attributed to contextual and cultural distinctions in the role and function of school counselors in Türkiye, as well as differences in scale content, particularly the inclusion of ethics-related items. These contextual factors may have facilitated greater differentiation between domains, as has been noted in cross-cultural scale development literature (Van de Vijver & Tanzer, 2004). In sum, the four-factor structure of the SCCSES is supported both theoretically and empirically, and provides a valid, reliable, and nuanced assessment of consultation self-efficacy among Turkish school counselors.

The four-factor structure of the SCCSES, including process, communication, cultural awareness, and ethics, aligns with theoretical domains previously proposed in the consultation literature (e.g., Guiney et al., 2014). Although these dimensions were derived in the Turkish educational context, their conceptual overlap with existing international models suggests that they may reflect core consultation dimensions that extend across cultural contexts. This finding may indicate that school counselors, regardless of national context, perceive similar domains as central to their consultation self-efficacy. Future cross-cultural studies are needed to explore this hypothesis and further examine the cross-national invariance of these factors.

When scale studies on consultation self-efficacy are examined, it is evident that the Consultation Self-Efficacy Scale (CSES) developed by Guiney et al. (2014) has been subject to adaptation studies across different cultural contexts (e.g., Bozkur & Kaya, 2021; Fan et al., 2020). In their study conducted with a Taiwanese sample, Fan et al. (2020) performed a new exploratory factor analysis on the items originally developed by Guiney et al. (2014) and identified a five-dimensional structure consisting of Cultural Sensitivity, Facilitation, Process and Awareness, Intervention, and Client Skills. Although these findings are important in demonstrating the multidimensional nature of consultation self-efficacy, the CSES item set appears limited and does not adequately capture certain core competency domains of consultation, such as ethics. In contrast, the School Counselor Consultation Self-Efficacy Scale (SCCSES) not only encompasses items representing all subdimensions of the CSES but also incorporates essential competency domains, including ethics, thereby offering a theoretically more comprehensive structure. Moreover, compared to the structure identified by Fan et al. (2020), the SCCSES demonstrates greater practical utility by measuring the same construct with fewer items. Findings from the Turkish adaptation of the CSES by Bozkur and Kaya (2021) supported the one-factor

structure originally proposed by Guiney et al. (2014). However, given that the CSES was developed based on the professional roles of American school psychologists and that there is no equivalent professional position corresponding to school psychologists in Türkiye, this contextual mismatch may partially explain the inability to capture the multidimensional structure of consultation self-efficacy within the Turkish context. In this regard, the fact that all stages of the scale development process for the SCCSES were conducted with school counselors practicing in Türkiye suggests a closer alignment with the school-based consultation service model in the Turkish educational system. Furthermore, a qualitative study conducted by Aslan and Güven (2025) provides important contextual evidence supporting the factor structure of the SCCSES; specifically, themes such as professional knowledge, intervention skills, collaboration, and coping mechanisms were represented within the process dimension of the SCCSES, while other themes were reflected in separate subscales. Therefore, the study conducted by Aslan and Güven (2025) was considered as an important contextual reference point in the development of SCCSES, along with other sources in the international literature. Taken together, these findings indicate that the SCCSES is a comprehensive measurement tool that assesses consultation self-efficacy in the Turkish cultural and professional context in a valid, reliable, multidimensional, and functionally efficient manner.

Another significant contribution of this study is the explicit inclusion of the ethics dimension as a core component of consultation self-efficacy. While previous scales, such as the one developed by Guiney et al. (2014), did not structurally incorporate ethical competencies, our findings indicate that ethical principles – such as confidentiality, respect, and professional boundaries – play a fundamental role in effective consultation processes. This finding aligns with professional ethical standards, including those outlined by the APA (2017), ACA (2014), and the Turkish Psychological Counseling and Guidance Association (2011), and further supports the emphasis placed on the central role of ethics in consultation by Parsons and Kahn (2005).

Limitations and suggestions for future research

Due to the absence of school psychologist positions in Türkiye, the current study was conducted with school counselors. Consequently, the findings have limitations in terms of generalizability to samples from countries with school psychologist positions, such as the USA. Therefore, it is recommended that CFA procedures be applied to school psychologists to determine whether the current structure of the SCCSES is validated. A notable limitation of the study at least in terms of generalizability to other countries is its cultural specificity. The SCCSES was developed using data exclusively from Turkish school counselors, and the items were created in the Turkish language. Consequently, the generalizability of the scale to other cultural or linguistic contexts is unknown.

Cross-cultural validation studies are necessary to determine its applicability elsewhere. Additionally, since voluntariness in accessing data was established as a significant criterion in the scale development processes, it is likely that the school counselors in the study groups are individuals who are interested in consultation practices, frequently provide consultation services, and seek opportunities for consultation practices. It is recommended that researchers ensure diversity in future studies to address this issue.

The current study, like all self-report research, is subject to the possibility that participants may not accurately or realistically assess their own self-efficacy levels. In other words, participants may have evaluated themselves as more competent than they actually are. Therefore, it is suggested that future studies include the social desirability variable and assess the levels of consultation self-efficacy obtained from the SCCSES alongside actual consultation performance, as well as consultee and client satisfaction, to achieve more objective results.

In future studies on consultation self-efficacy, the SCCSES can be utilized to assess the effectiveness of school-based consultation training programs. Additionally, variables affecting consultation self-efficacy, such as various methods and techniques used in the training and various professional and personal characteristics of consultants, can be identified. Based on the findings, adjustments and adaptations to the training can be made. Furthermore, it can be investigated whether there are significant differences in consultation self-efficacy levels and sub-dimensions between more experienced school counselors and novice counselors, as well as among school counselors who have received different types and amounts of consultation training.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Author Contributions

The first author designed the study, conducted the data collection process, performed the data analysis, and wrote the manuscript. The second author provided academic supervision for the study and made significant contributions to the revision of the manuscript.

Ethical approval

This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of Gazi University (No. 91,610,558-302.08.01).

Informed consent

Informed consent was obtained from all individual participants included in the study.

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