

Factor Structure and Psychometric Characteristics of the Turkish Adaptation of Sussex-Oxford Compassion Scales (SOCS)*

Sussex-Oxford Şefkat Ölçeklerinin (SOCS) Türkçe Uyarlamasının Faktör Yapısı ve Psikometrik Özellikleri

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Abstract

The original Sussex-Oxford Compassion Scales (SOCS) developed by Gu et al. (2020) support a five-factor structure for both compassion for others (SOCS-O) and self-compassion (SOCS-S). They assess compassion through five dimensions: recognizing suffering, understanding it as a universal experience, emotionally connecting with the sufferer, tolerating distress, and being motivated to alleviate suffering and offer a solution to the gap in existing measures of compassion, which often lack robustness and comprehensiveness. The purpose of this study is to validate the Turkish translations of both scales utilizing a cross-sectional and using a methodological design. The data for this study has been collected digitally from 654 Turkish participants for the SOCS-S and 660 Turkish participants for the SOCS-O. Confirmatory Factor Analysis and reliability assessments were completed to examine the psychometric properties of the SOCS. Results supported the five-factor structure of both scales, with high internal consistency (Cronbach's alpha values ranged from 0.70 to 0.93 across subscales). Criterion validity was established through significant correlations with established measures of self-compassion and emotional affect, further affirming the scales' validity in Turkish contexts. Research findings suggest that the Turkish versions of SOCS are reliable and valid scales for measuring compassion in two levels.

Keywords: Compassion, compassion for others, self-compassion, structure properties, scale adaptation

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Öz

Gu ve arkadaşları (2020) tarafından geliştirilen orijinal Sussex-Oxford Şefkat Ölçekleri (SOCS), hem başkalarına yönelik şefkat (SOCS-O) hem de öz-şefkat (SOCS-S) için beş faktörlü bir yapıyı desteklemektedir. Şefkati, acıyı tanıma, bunu evrensel bir deneyim olarak anlama, acıyı yaşayan kişiyle duygusal bağ kurma, sıkıntıya tahammül etme ve acıyı hafifletme motivasyonu ile mevcut ölçüm araçlarındaki eksikliklere çözüm sunma gibi beş boyut üzerinden değerlendirmişlerdir. Bu çalışma, SOCS-O ve SOCS-S'nin Türkçe çevirilerinin geçerliliğini test etmeyi amaçlamaktadır. Kesitsel ve metodolojik bir tasarım benimsenen bu çalışmada, SOCS-S için 654 Türk katılımcı ve SOCS-O için 660 Türk katılımcı çevrimiçi platformlar aracılığıyla değerlendirilmiştir. Ölçeklerin psikometrik özelliklerini değerlendirmek için Doğrulamalı Faktör Analizi (DFA) ve güvenilirlik testleri uygulanmıştır. Sonuçlar, hem SOCS-S hem de SOCS-O'nun beş faktörlü yapısını desteklemiş ve yüksek iç tutarlılık (alt ölçekler arasında Cronbach alfa değerleri 0.70 ile 0.93 arasında) göstermiştir. Kriter geçerliliği, öz-şefkat ve duygusal etkiyle ilgili yerleşik ölçümlerle anlamlı korelasyonlar yoluyla doğrulanmış ve ölçeklerin Türk bağlamında geçerliliği daha da pekiştirilmiştir. Araştırma bulguları, Türkçe SOCS-S ve SOCS-O'nun başkalarına yönelik şefkat ve öz-şefkati değerlendirmek için güvenilir ve geçerli araçlar olduğunu göstermektedir.

Anahtar Kelimeler: Şefkat, diğerlerine yönelik şefkat, öz-şefkat, yapı özellikleri, ölçek uyarlaması

Geniş Özet

Giriş

Dini ve kültürel öğretilerde sürekli yer alan şefkat, günümüz psikolojisinde giderek daha fazla önem kazanan temel bir insani değerdir. Son yıllarda, Budizm, Hristiyanlık ve İslam gibi inanç sistemlerinde erdem olarak kabul edilen bu kavram, insanların ruh sağlığı üzerindeki etkileri nedeniyle bilimsel olarak araştırılmaktadır (Gilbert & Procter, 2006, Neff, 2003a). Şefkat, başkalarının acısını fark etme, bu acının evrensel bir deneyim olduğunu anlama, acı çekenle duygusal bir bağ kurma, acıya dayanabilme ve acıyı dindirmeye yönelik istek gibi beş temel boyutta ele alınmaktadır (Goetz vd., 2010, Strauss vd., 2016). Literatürde şefkat, öz-şefkat (bireyin kendi acısına duyarlılığı) ve başkalarına yönelik şefkat olarak iki ana boyutta değerlendirilmektedir. Çeşitli çalışmalar, şefkatin farkındalık, duygusal düzenleme ve mutluluk seviyesini artıran olumlu etkiler oluşturduğunu göstermektedir; ayrıca, şefkat temelinde yürütülen müdahale programlarının kaygıyı azalttığı ve duygusal dengeyi güçlendirdiği saptanmıştır.

Bununla birlikte, güncel olarak kullanılan şefkat ölçekleri, iç tutarlılık, yapı geçerliliği ve test-tekrar test güvenilirliği gibi psikometrik faktörler açısından yetersiz bulunmaktadır. Bu eksikliklerin üstesinden gelmek için Gu vd. (2020), Sussex-Oxford Şefkat Ölçekleri (SOCS), şefkati bilişsel, duygusal ve davranışsal süreçleri de kapsayacak şekilde tanımladı. SOCS, kendine yönelik şefkat (SOCS-S) ve başkalarına yönelik şefkat (SOCS-O) olarak iki ölçektir ve her biri beş faktör içeren bir yapıya sahiptir. Farklı kültürler (Kore, İtalya, İzlanda, Slovakya, Hollanda, İsveç, İran ve İspanya) bu ölçekleri başarılı bir şekilde uyarlanmış ve güvenilirlik ve geçerlilik açısından olumlu sonuçlara ulaşmıştır. Araştırmanın amacı, Türkçe Sussex-Oxford Şefkat Ölçeklerinin (SOCS) uyarlanmasını ve psikometrik özelliklerini incelemektir. Bu ölçekler, şefkatin bireysel ve toplumsal düzeydeki

yansımalarının sistematik olarak ölçülmesini sağlar. Bu girişim, Türkiye’de şefkat araştırmalarının ilerlemesine katkıda bulunacaktır.

Yöntem

Bu araştırma, Sussex-Oxford Şefkat Ölçeklerinin (SOCS) Türkçe’ye uyarlanması amacıyla gerçekleştirilmiş bir tanımlayıcı ölçek uyarlama çalışmasıdır (Büyükoztürk vd., 2019). Çalışma, Marmara Üniversitesi Etik Kurulu’ndan alınan onayla (06. 10. 2022 – 414697), birinci yazarın doktora tezi kapsamına ölçeğin uyarlanma süreci yürütülmüştür. Araştırma için ulaşılan örneklem, SOCS-S için 654 ve SOCS-O için 660 olmak üzere toplam 1314 katılımcıdan oluşmaktadır. Katılımcılar, kolayda örnekleme yöntemi kullanılarak ulaşılmış olup, yaş aralıkları 18 ile 82 arasında değişiklik göstermektedir. SOCS-S katılımcılarının %80,7’si ve SOCS-O katılımcılarının %83,6’sı kadınlardan oluşmaktadır.

Veri toplama aşamasında demografik bilgi formu ile SOCS ölçekleri kullanılmıştır. Gu ve arkadaşları (2020) tarafından geliştirilmiş olan bu iki ölçek, Strauss vd. (2016) beş boyutlu şefkat teorisine dayanmaktadır. Her iki ölçek de 20 madde içermekte ve 5 dereceli Likert tipi bir ölçekleme sistemi ile değerlendirilmektedir. Ölçeklerin orijinal çalışması sırasında, Cronbach’s α değerleri SOCS-S için. 93 ve SOCS-O için. 94 olarak rapor edilmiştir.

Bulgular

Veriler, Google Forms aracılığıyla çevrimiçi olarak toplanmış; anket linki sosyal medya ve çevreden yayımlanmıştır. Ölçeklerin dilsel eşdeğerliği, 32 iki dilli katılımcı üzerinde incelenmiş; Türkçe ve İngilizce formlar arasında anlamlı bir farklılık tespit edilmemiş ve yüksek bir korelasyon elde edilmiştir ($r=.897, p<.001$). Ölçeklerin test-tekrar test güvenilirliği de 4 hafta aralıklarla yeniden uygulama yöntemiyle değerlendirilmiştir.

Kriter geçerliliği değerlendirmeleri Öz-Şefkat Ölçeği ve PANAS ile yapılmıştır. SOCS-S ile Öz-Şefkat Ölçeği arasında ($r=.692, p<.001$) ve PANAS’ın pozitif alt boyutu ile ($r=.449$) pozitif ilişkiler gözlenmiştir. Ancak SOCS-O ile Öz-Şefkat Ölçeği arasında anlamlı bir ilişki bulunmamıştır. Bu bulgular, özellikle SOCS-S ölçeğinin kriter geçerliliğini desteklemektedir.

Çalışmada, Sussex-Oxford Şefkat Ölçekleri için Türkçeye uyarlanmış formların geçerlilik ve güvenilirlik analizleri gerçekleştirilmiştir. İlk olarak, üst ve alt %27’lik gruplar arasında anlamlı skor farklılıkları belirlenmiş, bu da ölçeklerin ayırt edici özelliğini desteklemiştir ($p<.01$). Madde Tepki Kuramı ile yapılan incelemelerde, her iki ölçek için maddelerin çoğunun yüksek ayırt edicilik katsayılarına sahip olduğu, yalnızca bazı maddelerde nispeten düşük değerler bulunduğu ancak bunların genel yapı içinde kabul edilebilir seviyede kaldığı tespit edilmiştir.

Güvenirlik analizlerinde, SOCS-S için Cronbach’s α ve McDonald’s ω katsayıları sırasıyla. 70–.89 ve .71–.90 arasında; SOCS-O için ise. 76–.93 aralığında ölçülmüş ve bu durum, ölçeklerin iç tutarlılık açısından yeterli olduğunu göstermiştir. Hem alt boyutlar hem de genel puan düzeyinde ölçeklerin güvenilirliği tespit edilmiştir.

Doğrulayıcı Faktör Analizi (DFA) uygulandığında, her iki ölçeğin beş faktörlü özgün yapılarına dair doğrulama sağlanmıştır. SOCS-S'nin KMO değeri. 940, SOCS-O'nun ise. 903 olarak hesaplanmış ve Bartlett testlerinin sonuçları istatistiksel olarak anlamlıdır. Çoklu normallik varsayımının sağlanmadığı durum nedeniyle analizler ADF yöntemi aracılığıyla gerçekleştirilmiştir. Her iki modelde de RMSEA, CFI, NFI, GFI gibi uyum indeksleri kabul edilebilir seviyelerde elde edilmiştir (örneğin, RMSEA=. 062). Regresyon katsayıları, her iki modelde istatistiksel açıdan anlamlı çıkmış ve tüm maddelerin faktör yapılarıyla uyumlu olduğu tespit edilmiştir.

Sonuç ve Tartışma

Bu çalışmada, Sussex-Oxford Şefkat Ölçeklerinin (SOCS-S ve SOCS-O) Türkçe versiyonları için geçerlilik ve güvenilirlik analizleri gerçekleştirilmiş ve her iki ölçeğin beş faktörlü yapılarının Türk örnekleminde korunduğu sonucuna varılmıştır. Bu bulgular, Gu ve arkadaşlarının (2020) tanımladığı şefkatin beş boyutunun farklı kültürel bağlamlarda değerlendirilebileceğini göstermektedir.

Madde Tepki Kuramı çerçevesinde yapılan incelemelerde, çoğu maddede yüksek ayırt edicilik katsayısının mevcut olduğu gözlemlenmiştir. Bazı maddelerin ayırt edicilik düzeyi nispeten düşük olsa da, toplam puana olan katkılarıyla ölçeğin genelinde anlamlı farklılıkların sağlandığı belirlenmiştir. Ek olarak, Cronbach's Alfa ve McDonald's Omega katsayıları ölçeklerin iç tutarlılığını güçlü bir şekilde desteklemiş ve geçmiş kültürel uyarlama çalışmalarıyla paralellik göstermiştir. Türkçe uyarlanan formların sonuçları, daha önce Kore, İsveç, İtalya ve İspanya gibi ülkelerden elde edilen psikometrik verilerle kıyaslandığında benzerlik arz etmektedir. Bunun yanı sıra, bazı araştırmalar SOCS-S'in iki faktörlü yapı ile daha iyi açıklanabileceğini öne sürmüş olsalar da bu çalışmada beş faktörlü orijinal yapının geçerliliği devam ettirilmiştir. Kriter geçerliliği analizleri, SOCS-S'in olumlu duygularla güçlü ilişkiler kurduğunu ortaya koyarken, SOCS-O ile ilişkilerin daha zayıf olduğunu göstermiştir. Bu durum, ölçümlenen yapıların öz-şefkat ve başkasına duyulan şefkat açısından ayrışmasından kaynaklanıyor olabilir. Ayrıca, Türk kültürünün kolektivist yapısının da bu farklılıklar üzerinde etkili olabileceği düşünülmektedir.

Örneklemin genel olarak kadınlardan oluşması, bu çalışmanın dikkate alınması gereken önemli bir sınırlılığını teşkil etmektedir. İleride yapılacak araştırmalarda cinsiyet dengesine özen gösterilmesi ve özellikle erkeklerin şefkat algılarına yönelik daha fazla veri toplanması tavsiye edilmektedir. Ayrıca çalışmanın örneklemini yetişkin bir gruptan oluşmaktadır. Gelecek çalışmalar, ölçeklerin geçerlilik ve güvenilirliğini farklı yaş grupları ile tekrar ölçüp daha geniş gruplara uygunluğunu inceleyebilir.

Sonuç olarak, bu araştırma, Sussex-Oxford Şefkat Ölçekleri ölçeklerinin Türk kültürüne uyumlu, geçerli ve güvenilir ölçüm araçları sunduğunu ortaya koymakta ve şefkat temalı çalışmalar için önemli bir katkı sağlamaktadır. Sussex-Oxford Şefkat Ölçekleri, güvenilirlik ve geçerlilik açısından oldukça güçlü bir yapıya sahiptir ve literatüre önemli katkılar sağlamaktadır. Sussex-Oxford Şefkat Ölçeklerinin dayandığı 5 faktörün tamamı teorik olarak güçlü bir temel sunmaktadır ve bu ölçeklerin kullanımı, şefkat temalı çalışmalarda işlevsel ve etkili sonuçlar elde edilmesini desteklemektedir. Sussex-Oxford Şefkat Ölçekleri, Türk alan yazınında şefkat temalı çalışmalar için güncel ve geçerli bir ölçme aracı olarak tercih edilebilir. Ölçeklerin esnek kullanımı sayesinde, Sussex-Oxford Şefkat

Ölçekleri hem bir arada hem de ayrı ayrı uygulanabilir. Bu da çalışmaları planlarken esneklik sağlayabilmektedir.

Introduction

Compassion is not a novel concept in our lives. It is considered one of the essential virtues for human, especially in Buddhism, Christianity, and Islam (Gilbert & Procter, 2006). Although the origins of compassion date back to ancient times, researchers have shown an increasing interest in investigating compassion in more depth, particularly over the past two decades (Neff, 2003a). The concept of compassion is mainly understood as being aware of the suffering experienced by another person and the desire to alleviate the feeling of suffering (Goetz et al., 2010). In the literature, compassion has been looked at in five basic dimensions based on some common elements (Heidary et al., 2021). These five basic dimensions are recognizing the pain of another, understanding the suffering, showing interest and empathy towards the suffering person, being able to tolerate the distress experienced during this suffering, and motivation to reduce or ease suffering (Strauss et al., 2016).

The concept of compassion can be addressed in two basic dimensions. These dimensions are self-compassion and compassion for others. While self-compassion is defined as an individual's understanding and compassionate attitude towards his/her suffering and difficulties (Neff, 2003a), compassion for others is defined as showing sensitivity to the suffering of other individuals and possessing a willingness to help them (Gilbert & Procter, 2006). Compassion may have positive impact on mental wellbeing in ways such as awareness, emotional regulation, psychological and social wellbeing, improvement in emotional regulation skills, self-soothing, and increased happiness levels stand out as important indicators (Mongrain et al., 2011; Fredrickson et al., 2013; Gu et al., 2020; Kim & Seo, 2021). One study found that self-compassion has a negative correlation with vulnerability to stressful events in life and mental disorders (López et al., 2018; MacBeth & Gumley, 2012). Studies found that individuals who received compassion-based interventions showed greater emotional balance and less anxiety, which supports the idea that compassion is an important factor when it comes to psychological well-being. (Kirby, 2016; Strauss et al., 2016).

While compassion is an important topic in literature, existing compassion measurement tools have some limitations as they are not comprehensive, more specifically limited to certain populations and inadequate in terms of scope (de Krijger et al., 2022). In the article titled "What is compassion and how can we measure it? A review of definitions and measures"; Straus et al. (2016) conducted research in three databases that Web of Science, PsycInfo and Medline. As a result of the data obtained from these searches, nine scales were examined and evaluated in terms of quality. They ranged the qualities from 2 to 7 out of 14 – which is average to below the average. Reasons for low scores are the low internal consistency of subscales, insufficient evidence regarding factor structure and/or floor-ceiling effects, failure to evaluate features such as test-retest reliability and discriminant validity.

Furthermore, the underlying reasons for the comprehensive aspects of compassion cannot be adequately assessed include that some existing compassion measurement tools contain items that

are incompatible with the response scale, have the risk of creating bias in people by using the word “compassion” directly, are derived from related concepts such as “empathy”, exhibit low internal consistency, and are based on an inadequately supported factor structure (Strauss et al., 2016). The extensive use of such measurement tools can pose a significant problem in scientific studies on compassion as the present tools can cause invalid or misleading findings for the research. Because of these reasons, it is vital that new scales should be created to assess compassion more broadly with solid psychometric properties (Kim & Seo, 2021).

Gu et al. (2020) developed the Sussex-Oxford Compassion Scales (SOCS) based on a new definition that addresses compassion as a cognitive, emotional, and behavioral process (Gunnarsdóttir, 2023). They concentrated on the five core principles of compassion outlined by Strauss et al. in 2016, that is also mentioned earlier in this article. Their definition explains compassion as a process composed of the following components: “recognizing the suffering of others, understanding that this suffering is a common human experience, establishing an emotional bond with the suffering individual, tolerating the difficult emotions that arise, and helping the person or being motivated to help” (Strauss et al., 2016). Looking at these elements, Gu et al. (2020) created SOCS with two versions; one is to be used by the individual and the other one is to be used by others, to address the lack of robust and comprehensive measures of compassion. Findings support the five-factor structure for both the SOCS-O and SOCS-S. Scores on both scales proved adequate internal consistency, interpretability, floor/ceiling effects, and convergent and discriminant validity.

The psychometrics assessments for the SOCS in different cultural contexts has been evaluated through translation in various languages such as Korean, Italian, Icelandic, Slovak, Dutch, Swedish, and Persian (Halamová & Kanovsky, 2021; Heidary et al., 2021; Gunnarsdóttir, 2023; Kim & Seo, 2021; Krijger et al., 2022; Lucarini et al., 2022; Sarling et al., 2024). It is very important for a scale like SOCS that has been proven to show strong validity to be also adapted to Turkish to be used in Turkish literature. The adaptation of these scales, which align with the criteria for compassion established by Straus et al. (2016) and are both current and widely utilized in international literature with strong psychometric properties, hold significant importance for the advancement of Turkish academic literature.

The SOCS scales were adapted to Korean by Kim and Seo in 2021 and applied to 859 participants. The findings provided evidence for the five-factor hierarchical model of both scales. Moreover, psychometric properties of SOCS-S and SOCS-O, such as measurement invariance, interpretability, internal consistency, floor/ceiling effects, and convergent/divergent validity, were sufficient (Kim & Seo, 2021). Slovak versions of the SOCS scales were investigated by Halamová and Kanovský (2021) with 1080 Slovak adults. In that study, the findings prove that the factor structure of the SOCS-O was appropriate. Yet, Halamová and Kanovský (2021) proposed that separating the factors would be more appropriate for SOCS-S into rational and emotional/behavioral compassion. The Persian version was adapted by Heidary et al. in 2021. Unlike the original study their participants were 302 youth between the ages of 12 to 18. Results revealed that the SOCS scales were reliable and valid when tested with Iranian adolescents.

In 2022, the Dutch version of the SOCS-S scale was applied to 1059 Dutch adults. Krijger et al. (2022) provided proof for the five-factor model of the SOCS-S across three different samples of crisis line volunteers, military personnel, and nursing students. The results shows that psychometric properties of the SOCS-S is acceptable across different samples. Furthermore, it was determined that the SOCS-S explained additional variance in mental health compared to a widely used self-compassion scale. In the same year, a study conducted on Italian populations with 723 individuals revealed that the Italian version of the SOCS-O had five-factor model, adequate internal consistency and demonstrated both convergent and divergent validity (Lucarini et al., 2022).

Swedish version of the adaptation was applied to 402 participants in Sweden by Sarling at el. in 2022. This study demonstrated evidence for the five-factor models of both SOCS-O and SOCS-S and demonstrated that the Swedish versions of both scales were reliable and valid measurement tools. The results confirmed that these scales can be used to assess compassion in general adult populations in Sweden and Finland. Finally, another study conducted by Gunnarsdóttir in Iceland in 2023 and SOCS scales were adapted to Icelandic. The findings revealed that the Icelandic SOCS scales had good psychometric properties. However, factor analysis provided evidence for a three-factor solution compared to the five-factor structure suggested by the original scales. This result is inconsistent with the original scales (Gunnarsdóttir, 2023). Lastly, Sansó et al. adapted the SOCS-O into Spanish. Their study included 683 individuals with a mean age of 22.74 years, of whom 83.46% were women. Alongside compassion for others, the researchers also measured mindfulness. The findings confirmed that the Spanish form of the SOCS-O had solid psychometric reliability.

The main purpose of this current study was to adapt the SOCS into Turkish and then to evaluate its' psychometric properties. Based on the literature, the SOCS scales have been accepted as validated tools for measuring compassion in individuals. The fact that the SOCS can be used with a wide population and provide strong evidence for the theoretical framework of compassion, enabled limitations of existing compassion scales (Sarling et al., 2022). The SOCS scales only include items that directly measure self-compassion or compassion for others, making the scales more useful compared to other compassion scales (MacBeth & Gumley, 2012). The adaptation of this scale will provide an in-depth overview of compassion in the Turkish society, and this can be used as an important data for future studies.

Method

Model

This research a scale adaptation study conducted with the descriptive survey design of quantitative research. Research such as skill and attitude scales that have been developed or adapted fall into the descriptive research group (Büyüköztürk et al., 2019). "Ethics Committee of Marmara University" granted approval for the research (Date & Number: 06.10.2022 – 414697). The scale adaptation was carried out as part of first authors Doctoral Thesis.

Study Design and Sample

The present study has total sample size of 1.314. 654 participants for the SOCS-S and 660 participants for the SOCS-O. The sample sizes suggested by Comrey and Lee (2013) for factor analysis were taken into consideration and a sample of “500 or more” was evaluated as very good. According to the sample size of the research, number of participants meets the criteria necessary for conducting robust factor analysis. The sample for the study was selected through convenience sampling, focusing on accessibility and ease of recruitment. For SOCS-S; 80.7% of participants were female ($n = 528$) and 19.3% were male ($n = 126$). Participants’ ages ranged from 17 to 82, with a mean age of 36.21 ($SD = 11.745$). For SOCS-O; 83.6% of participants were female ($n = 552$) and 16.4% were male ($n = 108$). Participants’ ages ranged from 18 to 77, with a mean age of 36.53 ($SD = 8.503$).

Measurement Tools

Demographics

The demographic data form that was used in this research was meticulously designed to collect comprehensive information about the demographics of participants. The reason for this was that this scale adaptation study was carried out within the scope of a larger thesis.

Sussex-Oxford Compassion Scales

“The Sussex-Oxford Compassion Scales” were developed by Gu et al. (2020) and were based on the 5 basic characteristics of self-compassion suggested by Strauss et al. (2016) as a theoretical framework. These are “recognizing suffering”, “understanding the universality of suffering”, “empathizing with the person who is suffering”, “tolerating uncomfortable emotions”, and “taking action to relieve the suffering”. Therefore, both SOCS-S and SOCS-O have 5 factors following the theory. Both scales include 20 items and are rated using a five-point Likert scale, with 1 representing “not at all true” and 5 representing “always true”. An increase in the score indicates a higher level of compassion. Each scale demonstrates adequate internal consistency. Also, the scale has sufficient convergent and discriminant validity within the scope of psychometric analyses. Gu et al. (2020) assessed the internal consistency of SOCS using Cronbach’s alpha coefficients and total omega. According to their findings, the coefficients, ranging from .61 to .97, are situated at the upper and lower boundaries of the recommended range. For the SOCS-S, Cronbach’s alpha was reported to be 0.93, and for SOCS-O Cronbach’s alpha was reported to be 0.94 (Gu et al., 2020).

To support the psychometric properties of the scales some tests were run such as factor structure, interpretability, internal consistency, floor/ceiling effects, and convergent/divergent validity. These tests were run with a sample of 1319 healthcare professionals and 371 university students. Cronbach’s alpha values ranged from 0.75 to 0.93 for SOCS-S total and subscale scores and from 0.74 to 0.94 for SOCS-O total and subscale scores, indicating adequate construct validity in both samples (Gu et al., 2020). These findings demonstrated that both scales had a five-factor structure related to compassion and exhibited high internal consistency. The scales had internal consistency and validity properties, supporting interpretability with no floor/ceiling effects (Gu et al., 2020). Turkish psychometric

analyses of the scale were completed by the authors within the scope of the first authors Doctoral Thesis and are detailed in the results part.

Data Collection

Data was collected systematically by disseminating the scale prepared on Google Forms through social media. The survey link was distributed among individuals in the researchers' immediate social circles, and participants were encouraged to share the invitation with their networks. consents were collected from the introduction part of the survey. Such practices align with ethical guidelines in research, emphasizing transparency and respect for participants' autonomy.

Data Analysis

Language Adaptation

To assess linguistic equivalence, analyses were conducted using SPSS 27 with a sample of 32 individuals. The sample consisted of 23 females and 9 males. The average age of sample is 28.04. Both the original English versions and the Turkish translations of the SOCS-S and SOCS-O scales applied to the participants. Participants were proficient in both English and Turkish. To assess the equivalence of the two forms, paired sample t-tests and Pearson correlation coefficient analyses were conducted both in item level and total score. The findings indicate that there was no significant difference between Turkish and English forms (SOCS-S: $t=1.443$, $p>0.05$; SOCS-O: $t = 0.635$, $p > 0.05$). This finding suggests that the scale has linguistic equivalence. Moreover, the correlation test results showed a strong correlation between the Turkish and English forms ($r = 0.897$, $p < 0.001$). These findings confirm that the scale provides similar results in both languages and are similar in terms of linguistics.

Test-Retest Reliability

Both the original English versions and the Turkish translated versions of the SOCS-S and SOCS-O scales were completed by 32 people at 4-week intervals. A pre-application was conducted after the language adaptation process to test the comprehensibility of the Turkish form of the scale. In addition, the scale was re-administered to the same group of participants at a four-week interval to assess test-retest reliability. This process was a critical step to assess the consistency and stability of the scale items over time.

Criterion Validity of the Scales

“Self-Compassion Scale”, created by Neff (2003a), is a five-point Likert scale comprising 26 items. 1 represents “never” and 5 represents “always”. There are 6 sub-dimensions within the original scale. These are self-kindness/self-judgment, awareness of shared humanity/isolation and mindfulness/over-identification. The scale's overall Cronbach's alpha was determined to be .92, while its test-retest reliability coefficient was reported as .93. The Turkish version of the scale, adapted by Deniz, Kesici, and Sümer (2008), demonstrated a valid one-factor structure. In addition to this, the item correlation

level of the two items was determined to be .30 during the exploratory factor analysis. Items that were not functional were removed from the scale, and it was finalized with 24 items. As a result, the internal consistency coefficient of the scale was reported as .89, and it's the test-retest correlation was determined to be .83 (Deniz et al., 2008).

“The Positive and Negative Affect Schedule (PANAS)” is an assessment tool developed by Watson et al. in 1988 that is designed to measure positive and negative emotions. The findings of Turkish version of the PANAS indicated reliability coefficients of .88 for positive subscale and .87 for negative subscale. The Turkish adaptation and psychometric evaluation of the scale were carried out by Gençöz in 2000. The Turkish version comprised 20 items and utilized a 5-point Likert scale, ranging from 1 “very little or none” and 5 “extremely” same as the original one. Factor analysis confirmed the two-factor structure of the scale and accounted for 44% of the total variance. The scale's internal consistency coefficient was .86 for positive and .83 for negative emotions. Cronbach's alpha reliability coefficient was determined to be .79 for positive effects and .83 for negative effects.

Criterion-Related Validity

To assess the criterion-related validity of the SOCS, the Turkish versions of the SOCS-S and SOCS-O scales were investigated in relation to the Self-Compassion Scale and PANAS. Criterion-Related Validity analyses were conducted with a sample of 62 participants which were collected through an online platform. The participants in the sample group, consists of 62 adults with an average age of 37.32. There were 33 female (53.2%) and 29 male (46.8%) participants. The results demonstrated a significant positive correlation between SOCS-S and the Self-Compassion Scale ($r = .692, p < .001$). Considering the correlation between PANAS and SOCS-S, a positive correlation was determined with the positive subscale of the PANAS ($r = .449, p < .001$), while a negative correlation was determined with the negative subscale of the PANAS ($r = -.427, p < .001$). Furthermore, results show no correlation was determined between SOCS-O and Self-Compassion Scale ($r = .107, p > .05$). A weak positive correlation ($r = .440, p > .05$) was determined between SOCS-O and the positive subscale of PANAS and a weak negative correlation ($r = -.077, p > .05$) was determined with the negative subscale of PANAS. Consequently, the results can be presented as evidence supporting criterion-related validity, especially for SOCS-S.

Results

The results section includes detailed explanations of the findings from various analyses, including discriminant validity, reliability assessment and confirmatory factor analysis (CFA).

Findings on the Discriminant Validity of the SOCS

The discriminant validity of the scale was analyzed separately for the total score and each item. For SOCS-S; considering at the Unrelated T Test findings regarding the analysis of score comparisons between the top 27% group with the highest scores on the scale and the top 27% group with the lowest scores presented a statistically significant difference ($t = -.35.67, sd = 192.12, p < .01$). For SOCS-O,

statistically significant difference was found as well ($t = -.35.56$, $sd = 218$, $p < .01$). Item Response Theory (IRT) was applied to examine the discrimination of each of the scale items. According to Baker (2001), an α value of 1 and above indicates that the item is discriminatory. Based on this criterion, all items except for five were identified as highly discriminative.

Findings on the Reliability of the SOCS

The scale's reliability was evaluated by calculating the Cronbach's alpha and McDonald's Omega coefficients for its sub-dimensions and overall score. McDonald's ω ranged from .71 to .90 and Cronbach's α ranged from .70 to .89, demonstrating the SOCS-S psychometric robustness. For SOCS-O outcomes allied to the reliability of the scale revealed high internal consistency, with McDonald's ω ranging from .76 to .93 and Cronbach's α ranging from .76 to .93.

Findings on the Confirmatory Factor Analysis (CFA) for the SOCS-S

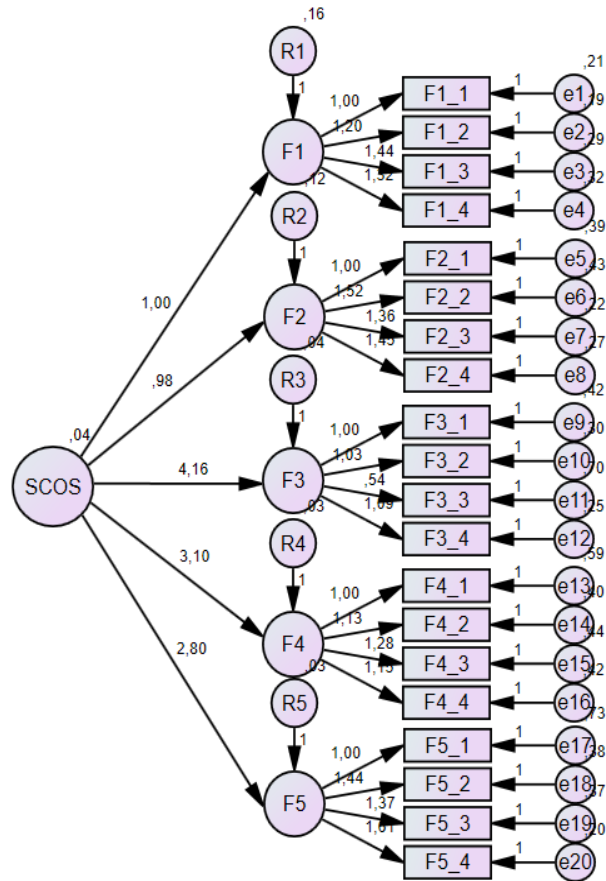
For CFA, the suitability of the scale data for factor analysis was tested with KMO and Bartlett sphericity analysis, and the suitability for CFA was tested with multiple normality tests. The KMO value exceeds .60 (KMO=.940) and the Bartlett test result is significant ($X^2=7206.660$; $p=.000$). Based on these results, it was decided that the data was appropriate for factor analysis.

The skewness and kurtosis values, along with their critical ratios, revealed that while the majority of items fell within acceptable thresholds for univariate normality, certain items (e.g., F2_1, F2_2, and F2_3) displayed pronounced skewness and kurtosis, indicating notable deviations from normality. It was evaluated that the structure did not meet multiple normality because the multivariate kurtosis value was 128.476 and the Multivariate critical ratio of 20 items was 55.378. Therefore, the asymptotically distribution-free method (ADF) was used.

To evaluate the model's goodness of fit, the fit indices were used. The values obtained for this model were $\chi^2=576.777$, $df=165$, $\chi^2/df=3.514$, RMSEA = .062, NFI = .920, CFI = .942, GFI = .912, and AGFI = .888. These results indicated a good model fit, with χ^2/df falling within the acceptable range ($3 \leq \chi^2/df \leq 5$) and RMSEA below the threshold of .08. Furthermore, NFI, CFI, and GFI meet the good fit criteria while AGFI, although slightly lower from the threshold for a good fit, remains within an adequate range. The goodness-of-fit values and fit indices obtained from the DFA test were presented. As an outcome of the CFA analysis conducted to test whether the SOCS-S, whose factor structures were created with EFA, formed a holistic structure or not, it was interpreted that the model fit goodness indicators obtained were within the reference ranges established in the literature and the model was statistically appropriate.

Hair et al. (2010) emphasize that the study sample and the number of factors, constructs, and variables (number of questions) evaluated in the study can affect the fit indices. The numerous structures within the model, along with the increase in both observed and latent variables, contribute to the difficulty in achieving satisfactory fit indices. Improvements made to the covariances between the measured and underlying variables are shown through error terms (Torun, 2017). The results of

the analysis showed that no modification was required on the items to improve the suitability of the fit indices. The standardized path diagram derived from DFA is presented below.



$$\chi^2 = 576,777; df = 165; \chi^2/df = 3,514; p = .000; RMSEA = .062; CFI = .942$$

Figure 1. Standardized Path Diagram for the CFA Results of the SOCS-S

The figure shows the measurement model used for SOCS-S and the path diagrams illustrating the relations between latent and observed variables. In the path diagram developed by using the AMOS graphic menu, standardized values are anticipated to approximate .70 and less than 1.00 (Jöreskog, 2004).

The standardized regression coefficients between the factor and the item are associated with range from .538 to .974 and are statistically significant ($p < .001$). Furthermore, the critical value, which is statistically accepted as 1.96, is significantly above this value. The analysis indicated that all the parameters that explains the structure are significant. In the CFA analysis, each item is expected to correlate with the scale factors at a certain level of .70 and above, or close to .70. The lowest

acceptable regression load is identified as .50 (Hair et al., 2009). The regression loads of the scale items meet the required criteria, and the lowest load is .538. The standardized regression weights of the scale fall within acceptable ranges and significant at $p < 0.001$ level.

Consequently, the CFA of the SOCS-S revealed that the scale's variance and covariance values fell within acceptable ranges and were statistically acceptable at the $p < 0.001$ level. Hence, the CFA analysis was performed to assess whether the factors of the SOCS-S formed a holistic structure among themselves. It was found that all items in the scale aligned with the same structure, confirming its five-factor model. Following these steps, Internal consistency analyses (Cronbach's Alpha) were performed to evaluate the scale's reliability with values ranging from .769 to .851 for the sub-dimensions and were calculated to be .924 for the overall scale. This value supports that SOCS-S has sufficient reliability.

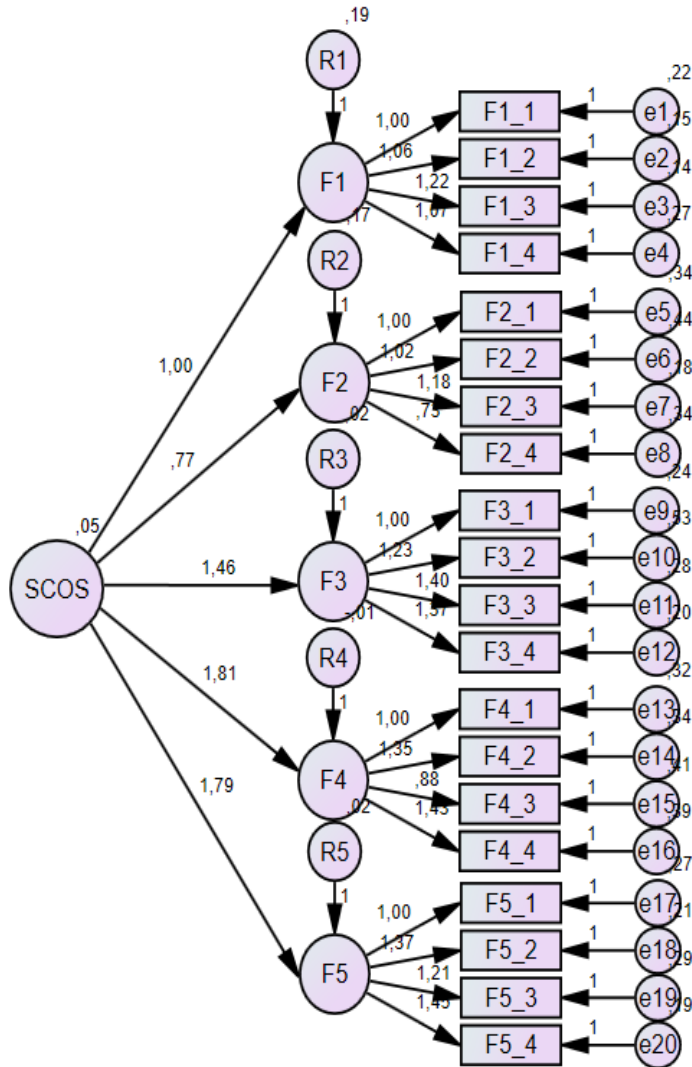
The findings from the Confirmatory Factor Analysis (CFA) for the SOCS-O

To check SOCS-O's suitability for CFA multiple normality tests run. The outcomes specified that the KMO value exceeded .60 (KMO = .903) and the Bartlett's test result was statistically significant ($X^2 = 5216.543$, $p = .000$). Based on these values, the data was deemed appropriate for the factor analysis.

The skewness and kurtosis values, along with their critical ratios, indicated that while most items exhibit acceptable levels of univariate normality, certain items (e.g., F2_4, F2_3, and F2_2) display significant deviations from normality as reflected in their high critical ratios, and the multivariate kurtosis value (99.525, critical ratio = 43.095) confirms that the multivariate normality assumptions was not met. It was found that the structure did not meet multiple normality because the Multivariate critical ratio was 43.095 for 20 items. Therefore, the asymptotically distribution-free method (ADF) was used.

According to the fit indices, the values obtained for this model were $\chi^2 = 588.710$, $df = 165$, $\chi^2 / df = 3.568$, RMSEA = .062, NFI = .903, CFI = .917, GFI = .915, and AGFI = .892. Based on the fit indices, χ^2 / df was within the good fit range ($3 \leq \chi^2 / df \leq 5$), RMSEA was less than .08, and NFI, CFI, and GFI fell within the good fit thresholds. While the AGFI value (.892) was slightly below the good fit range, it remained good and acceptable. The goodness-of-fit values and fit indices derived from the DFA test were reported. Following the CFA analysis to test whether the SOCS-O, whose factor structures were created with EFA, formed a holistic structure or not, it was understood that the model was statistically suitable.

Hair et al. (2010) emphasize that the research sample and the number of factors, constructs, and variables (number of questions) evaluated in the study can affect the fit indices. The model's complexity, resulting from the increased number of structures and variables, complicates achieving ideal fit indices. Adjustments in covariances are represented by error terms (Torun, 2017). Based on the results of the analysis no modification was required for the items to increase the sufficiency of the fit indices. The diagram of the standardized path from DFA is presented below.



$\chi^2 = 588,710$; $df = 165$; $\chi^2/df = 3,568$; $p = .000$; $RMSEA = .062$; $CFI = .917$

Figure 2. Standardized Path Diagram for the CFA Results of the SOCS-O

The figure shows the measurement model used for the SOCS-O, and in the path diagram produced from “AMOS” graphic menu, the standardized values between the latent and observed variables should be close to .70 but less than 1.00 (Jöreskog, 2004).

The standardized regression weights between the factor and the item that is associated with are in the range of .515 to .926 meaning that they are statistically significant ($p < .001$). Furthermore, the critical value, which is statistically considered as 1.96, is significantly above this value. The results indicated that each parameter explaining the structure is statistically significant. In the CFA analysis,

each item is expected to correlate with the scale factors at a level of .70 and above, or close to .70. The lowest acceptable regression load is identified as .50 (Hair et al., 2009). The regression loads of the scale items meet the required criteria, and the lowest load is .515. In this case, it can be concluded that the construct validity and structure of the scale have been validated. The standardized regression weights of the scale fall within acceptable ranges and significant at $p < 0.001$ level.

The CFA of the SOCS-O revealed that the variance and covariance values of the scale were within acceptable limits and statistically significant at the $p < 0.001$ level. It was also confirmed that all items in the scale aligned with the same structure, supporting the five-factor model of the scale. Internal consistency analyses (Cronbach's Alpha) were conducted to evaluate the reliability of the scale. The internal consistency values for the sub-dimensions ranged from .648 to .851, while the overall scale had a value of .886. While the subscales vary in reliability, with some falling closer to the acceptable threshold ($\alpha = .648$), the overall scale exhibits a strong internal consistency. This value points to the fact that the scale demonstrates an adequate level of reliability.

Discussion

The results will be interpreted in relation to the existing literature, highlighting their implications for understanding self-compassion and compassion for others, as well as offering insights to inform future research in this field. These findings support that the five-factor structure and psychometric integrity of the Turkish versions. This adaptation expands on the work by Gu et al. (2020), illustrating that the conceptual dimensions of compassion – recognizing suffering, understanding suffering as a universal experience, emotionally connecting, tolerating distress, and being motivated to alleviate suffering – can be consistently assessed across different cultural contexts. These findings of this study offer compelling evidence supporting the validity and reliability of the Turkish adaptations of the SOCS-S and SOCS-O.

Item Response Theory (IRT) was used to investigate the discriminative power of each item in the SOCS. SOCS-S and SOCS-O scales were analyzed separately. Considering the α values for items in the SOCS-S scale, it was proven that majority of the items exhibited strong discriminative power. Although items 1, 2, 7, 12, and 17 demonstrated lower discriminative values, they provided acceptable results in the total score. Similarly, for the SOCS-O scale, most items determined to have high discriminative power based on their α values while items 1, 2, 6, 12, and 16 yielded suitable results in the total score despite lower discriminative values. Items with higher discrimination coefficients are more sensitive to the measured construct and better reflect individual differences, indicating that these items provide more consistent information about the measured construct.

In the process of adapting the scales, the discriminatory power of the total scale score holds significant importance in terms of general reliability and validity. High discriminative power in the total score suggests that all 20 items in the SOCS work together effectively in representing the targeted construct. To evaluate the discriminatory power of the total score, the difference between the scores of the lower and upper 27% groups checked. The analysis revealed statistically meaningful differences for SOCS-S ($t = -35.67$, $sd = 192.12$, $p < .01$) and SOCS-O ($t = -35.56$, $sd = 218$, $p < .01$).

These results offer evidence for the capacity of the total scale score to discriminate the measured construct.

The reliability of the SOCS were evaluated using Cronbach's Alpha and McDonald's Omega coefficients. In the original study conducted by Gu et al. (2020), Cronbach's Alpha was reported as .94 and Omega as .97 for the SOCS-S in a sample group consisting of 1319 participants. Again, Cronbach's Alpha was .97 and Omega was .96 for the SOCS-S in the sample group of consisting of 371 participants. Cronbach's Alpha was .90 and Omega was .89 in the Turkish population and the scale appeared to have high reliability in this regard. Considering the original results for SOCS-O, Cronbach's Alpha was .93 and Omega was .97 in the sample consisting of 1319 participants. In the sample group of consisting of 371 participants, Cronbach's Alpha was .91 and Omega was .967. Cronbach's Alpha and Omega coefficients were calculated as .93 and .893, respectively in the Turkish population, confirming the scale's robust reliability within the Turkish context.

The strong internal consistency found for both the SOCS-S and SOCS-O scales in this study aligns with findings from previous adaptation studies conducted in different languages and cultural contexts. In a study on the Korean version, the five-factor hierarchical structure provided evidence for both the SOCS, and the adequacy of psychometric properties such as measurement invariance, interpretability, internal consistency and convergent/divergent validity was confirmed (Kim and Seo, 2021). Similarly, an adaptation study conducted by Sarling et al (2024) in Sweden with 402 adult participants provided evidence for the five-factor models of the SOCS, revealing that the Swedish versions of both scales were reliable and valid measurement tools.

It was determined that some researchers preferred evaluating the SOCS scales separately. For example, Krijger et al. (2022) investigated only the SOCS-S scale in three separate samples (crisis line volunteers, military personnel, and nursing students) and confirmed the robustness of the SOCS-S. On the other hand, the work belonging to Italian culture was only adapted to SOCS-O in the adaptation articles (Lucarini et al., 2022). This study, conducted with 723 people, revealed that SOCS-O was consistent with the original study by Gu et al. (2020) and supported its five-factor hierarchical structure with sufficient psychometric properties (Lucarini et al., 2022). In conclusion, Sansó et al. adapted the Spanish version of the SOCS-O and tested it with group of nursing students in Spain, finding that it exhibited strong psychometric properties (Sansó et al., 2024). This validation study not only confirmed a robust internal factor structure and criterion validity but also established the SOCS-O as a reliable tool for assessing compassion in Spanish-speaking regions.

In addition to studies supporting the SOCS scales, there are also critical studies. A study conducted by Halamová and Kanovský (2021) with 1080 Slovak adult participants. The findings indicated that only the factor structure of the SOCS-O was appropriate. This finding proposes for SOCS-S that self-compassion may be more appropriately conceptualized into two dominant factors as Rational Compassion (Recognizing Suffering and Understanding Suffering as Universal) and Emotional/Behavioral Compassion (Feeling for the Suffering Person, Tolerating Distressing Emotions, and Being Motivated to Alleviate Suffering). In addition to these, Sarling et al. (2024)

tested both unidimensional and correlated three-factor models that accounted for components such as being compassionate and empathic toward the suffering person, tolerating the distress from observing the suffering of others, while being driven to alleviate that suffering through a universal latent variable. Sarling et al. (2024) reported low fit indices in the models they tested, both unidimensional and with three interrelated factors. However, considering the Turkish adaptation of the scales, this study supports the five-factor model for both SOCS-O and SOCS-S, aligning with the original study.

To evaluate the criterion-related validity of the SOCS, the Turkish versions of the SOCS-S and SOCS-O scales were examined in relation to the Self Compassion Scale and PANAS measures. The results revealed a significant positive correlation between SOCS-S and PANAS. However, no significant correlation was found between SOCS-O and Self Compassion Scale. Additionally, SOCS-O showed a weak positive correlation with the positive subscale of PANAS and a weak negative correlation with its negative subscale. The weaker associations observed for SOCS-O may be attributed to content-related differences. The Self Compassion Scale primarily focuses on individuals' self-directed compassion, whereas the SOCS-O scale assesses compassion toward others. Additionally, the PANAS measure evaluates individuals' positive and negative emotions experienced over the past week. In the context of Turkish culture, individuals tend to report more positive emotions toward others and are generally less inclined to focus on or disclose their negative emotional experiences. In Turkish culture, individuals are "we-conscious", and this is a general characteristic of collectivist cultures (Hosftede, 2011). Turkish society adopts an attachment model based mainly on relationships and interpersonal relationships are shaped more towards relationships and interdependence rather than individuality (Kağıtçıbaşı, 2005). SOCS-O will be more correlation with scales with less individuality-oriented content.

Although the SOCS scales are primarily implemented with adult participants, Heidary et al. (2021) carried out a study with 302 young participants, finding that the SOCS was a reliable and valid tool for measuring Iranian adolescents aged 12–18 years. They indicated its potential for use in younger age groups (Heidary et al., 2021). Assessing self-compassion in these age groups may provide valuable insights to support intervention studies. It is recommended that participants from diverse age groups be included in future study samples. Additionally, it is suggested that the scales be administered across various age groups and contexts to enhance the understanding of the concept of compassion.

A key limitation of this study is that the sample was predominantly composed of women. For this reason, the generalizability of the findings to broader populations may be limited. Thus, it would be useful to select a more homogeneous group of participants in future studies, especially when the goal of the study is to generalize the findings across genders. In this study, for the SOCS-O scale, 16.4% of participants were male, and 83.6% were female; for the SOCS-S 19.3% of the participants were male, while 80.7% were female. As similarly observed in former studies; this study also had higher number of female participants. To exemplify, in the original study by Gu et al. (2020), there were 1140 females and 179 males among 1319 participants. Similarly, the Swedish adaptation included 355 female and 42 male participants. Halamová and Kanovský (2021) reported the gender imbalance in their sample

as a limitation. Also, they highlight the potential to limit generalizability. Future studies may use more balanced gender distributions were examined to assess the consistency of results across genders and explore gender-based differences in levels of compassion. There is a lack of sufficient research in the literature focusing on men's perceptions of compassion. In the Turkish literature, the study conducted by Deniz and Birni (2022) on fear of compassion reported that 33.6% of the participants were male—a relatively high proportion compared to many other studies in the field. According to the findings, men exhibited greater fear than women regarding showing compassion to themselves, expressing compassion to others, and receiving compassion from others (Deniz & Birni, 2022). Studies with a more balanced gender distribution are likely to provide valuable contributions to the existing literature.

In conclusion, the psychometric evaluation results indicate that the SOCS scales are valid and reliable instruments for measuring compassion within the Turkish population. The five underlying factors of the Sussex-Oxford Compassion Scales offer a robust theoretical foundation, and their use is likely to facilitate the generation of functional and meaningful findings in studies focused on the concept of compassion. On the other hand, one of the strengths of the study is the large sample of participants, as CFA is a statistical method that is sensitive to the sample size. The number of participants is above the suggested sample size for a CFA model, which is 100 participants for each factor in the original scale (Kline, 2011). The Sussex-Oxford Compassion Scales have a very strong structure in terms of reliability and validity and provide important contributions to the literature. The scales will provide great benefits to researchers in terms of reaching correct answers. Thanks to the flexible use of the scales, the SOCS can be applied both together and separately. In this study, the SOCS were adapted to Turkish, and their validity and reliability were established for adult groups. Taken together, the rigorous development process appeared in the current research and emergent psychometric properties of the SOCS-O and SOCS-S support their use in compassion research and practice.

Etik Kurul İzni: Çalışma, Marmara Üniversitesi Bilimsel Araştırma ve Yayın Etiği Kurulu'ndan etik onay almıştır (Tarih-Sayı: 06.10.2022 – 414697). Ölçeğin sahibinden e-posta yoluyla izin alınmıştır. Araştırma, Helsinki Deklarasyonu'nda belirtilen ilkeler doğrultusunda yürütülmüş olup, etik standartlara uygun bir şekilde gerçekleştirilmiştir (Dünya Tıp Birliği, 2013). Etik ilkeler kapsamında, katılımcıların bilgilendirilmiş onamları alınmış ve gizlilikleri titizlikle korunmuştur.

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