

# Investigating the Psychometric Properties of the Reysen Likability Scale

## Reysen Beğenilirlik Ölçeği'nin Psikometrik Özelliklerinin İncelenmesi

Tayfun Gürkan  
BOSTANCI<sup>1</sup>



<sup>1</sup>Düzce University, Faculty of Sport Sciences,  
Department of Sports Management, Düzce,  
Türkiye

Mehmet  
HOCaoğlu<sup>2</sup>



<sup>2</sup>Kafkas University, Sarıkamış Faculty of Sport  
Sciences, Department of Sports Management,  
Kars, Türkiye

Ataman  
TÜKENMEZ<sup>3</sup>



<sup>3</sup>Istanbul University- Cerrahpaşa, Faculty of  
Sport Sciences, Department of Sports  
Management, İstanbul, Türkiye



### ABSTRACT

The likability of an individual serves as a tactic for self-presentation and facilitating persuasion of the target audience. The perceived likability of athletes, coaches, managers, and similar figures by sports consumers is a factor that can influence sports marketing activities. In this regard, this study aimed to adapt the Reysen Likability Scale, developed to measure perceived likability, for application within Turkish culture and to test its validity and reliability. A total of 207 participants, including 64 women and 143 men, voluntarily participated in the study. A three-part questionnaire was administered, consisting of the Reysen Likability Scale developed by Reysen, the Desire for Being Liked Scale developed by Kaşıkara and Doğan, and a personal information form designed by the researchers. Confirmatory factor analysis, tests for divergent and convergent validity, composite reliability calculations, and Cronbach's Alpha coefficient were utilized to examine the structural validity and reliability of the scale. The findings confirmed the original single-factor structure with 11 items, demonstrating good fit with data collected from the Turkish sample and high internal consistency of the instrument. The study showed that Reysen Likability Scale was a valid and reliable instrument for measuring perceptions of likability in individuals within Turkish culture.

**Keywords:** Likability, sports, marketing, validity, reliability

### ÖZ

Bir bireyin beğenilir olması kişinin kendini sunması ve hedef kitleyi ikna kolaylığı için kullanılan bir taktiktir. Sporcu, antrenör, yönetici, vb. kişilerin spor tüketicileri tarafından algılanan beğenilirliği spor pazarlama faaliyetlerini etkileyebilecek bir unsurdur. Bu doğrultuda bu çalışmanın amacı algılanan beğenilirliği ölçmek için geliştirilmiş Reysen Beğenilirlik Ölçeği'nin (RBÖ) Türk kültüründe ölçüm yapabilecek şekilde uyarlanarak geçerlik ve güvenilirlik sınavasının yapılmasıdır. Çalışmada gönüllü olarak 64 kadın ve 143 erkek olmak üzere toplam 207 kişi yer almıştır. Katılımcılara Reysen tarafından geliştirilmiş Reysen Beğenilirlik Ölçeği, Kaşıkara ve Doğan tarafından geliştirilmiş Beğenilme Arzusu Ölçeği (BAÖ) ve araştırmacı tarafından oluşturulmuş kişisel bilgi formundan oluşan üç bölümlü anket formu uygulanmıştır. Ölçeğin yapı geçerliğinin sınanması için doğrulayıcı faktör analizi, ıraksak ve yakınsak geçerliğe ilişkin testler yapılmış, güvenilirlik sınavı için kompozit güvenilirlik (CR) hesaplaması ve Cronbach'ın Alpha katsayısından yararlanılmıştır. Araştırmanın bulguları, ölçeğin özgün 11 maddelik tek boyutlu yapısını doğrulamış, Türk örnekleminden toplanan veriyle iyi düzeyde bir uyumda olduğunu ve aracın iç tutarlığının yüksek olduğunu göstermiştir. Türk kültüründe bireylere ilişkin beğenilirlik algısının ölçülmesinde RBÖ'nün geçerli ve güvenilir bir araç olduğu ortaya konmuştur.

**Anahtar Kelimeler:** Beğenilirlik, spor, pazarlama, geçerlik, güvenilirlik

Geliş Tarihi/Received 10.01.2025  
Kabul Tarihi/Accepted 28.03.2025  
Yayın Tarihi/Publication 20.06.2025  
Date

Sorumlu Yazar/Corresponding author:

Tayfun Gürkan BOSTANCI

E-mail:

tayfungurkanbostanci@duzce.edu.tr

Cite this article: Bostancı, T.G., Hocaoglu, M., & Tükenmez, A. (2025).

Investigating the Psychometric Properties of the Reysen Likability Scale.

*Research in Sport Education and Sciences*, 27(2), 143-149.



Content of this journal is licensed under a Creative Commons Attribution-Noncommercial 4.0 International License.

## Introduction

The perceived likability of athletes, coaches, or sports club managers among fans and sports consumers significantly impacts sports marketing and promotional activities. As professional sports become increasingly commercialized, athletes and coaches are often regarded as cultural icons and marketable products by media and corporate sponsors (Gilchrist, 2005; Summer & Johnson Morgan, 2008). The concept of likability has gained prominence as a means to maximize the marketing value of these figures. On the other hand, in recent years, internationally recognized figures in sports have shifted from serving as brand endorsers to creating their own brands or presenting themselves as brands. This transformation necessitates maintaining their likability.

The literature describes likability as both a persuasion tactic and a self-presentation method (Cialdini, 1993; Kenrick et al., 2002). Factors associated with increased likability include physical attractiveness, similarity to oneself, compliments, and associations (Eagly et al., 1991). Numerous studies have investigated the concept of likability, acknowledging that the factors influencing an individual's likability are varied, including attributes such as a pleasant demeanor, emotional expression, knowledge, physical appearance, or age (Reysen, 2006; Geys, 2014; Hubbard, 2018; Knuppenburg & Fredericks, 2021). Different researchers have approached the measurement of this construct from various perspectives, focusing on diverse aspects to understand its complexities (Arai et al., 2013).

Reysen (2005), building on the dual-factor model of attractiveness and expertise proposed by Chaiken and Eagly (1983), conceptualized likability as a single-factor construct. Reysen also designed a model requiring respondents to assess the individual being evaluated as if they were a part of their lives. This model integrates the three elements into a single dimension under the Reysen Likability Scale (RLS). Attractiveness reflects the physical appearance and features of an individual found aesthetically pleasing, extending beyond facial features or physical structure to include facial expressions. Expertise encompasses knowledge, intelligence, and skill. The concept of being part of one's life influences individuals to assess a brand or figure as if it were embedded within their personal experiences, often driven by the degree of familiarity.

While the literature offers a wealth of research on brand image and brand likability within sports branding (Brison et al., 2015; Martínez Cevallos et al., 2020; Yun et al., 2021), there remains a relative scarcity of studies specifically examining the likability of prominent sports figures (Pratt et al., 2018; Kunkel et al., 2019). Determining the likability of individuals such as athletes or coaches, who are at the forefront of sports marketing, is crucial for advancing related marketing research and identifying individuals to be featured in sports marketing. The use of prominent sports figures in marketing campaigns represents an effective strategy for companies aiming to enhance brand visibility and stimulate sales (Kunkel et al., 2019). Therefore, measuring likability could serve as a determinant of how prominent figures in sports are perceived within marketing efforts. In this context, the purpose of this research was to assess the validity and reliability of an instrument capable of predicting how an individual's likability is perceived by others within the Turkish population. This study seeks to make a meaningful contribution to future research in sports marketing by offering the sports marketing sector a novel framework to guide and optimize their strategies and activities.

## Methods

### Ethical Approval

For the study, an ethics committee approval report dated 01 October 2024 and decision number 2024/92 was received from Kafkas University Non-Interventional Clinical Research Ethics Committee. All participants were included on a voluntary basis, and each signed an informed consent form, and this study was conducted in accordance with the Principles of the Declaration of Helsinki.

### Study Design

A combination of descriptive and correlational research methods, along with a quasi-experimental model, was employed in this study. Surveys were used as the primary data collection method for analytical investigations. A review of theoretical frameworks and the current state of the field was conducted through online and offline library searches, and relevant literature was compiled.

## Participants

The study sample consisted of 207 participants (64 women and 143 men), selected through convenience sampling, who resided in various provinces of Turkey and participated in at least one sports activity regularly, either passively or actively. The participants were aged 18 and older. The responses were drawn from 250 distributed surveys, with complete and analyzable data from 207 individuals. Surveys were administered in two separate groups (Group A,  $n = 103$ ; Group B,  $n = 104$ ), as detailed in subsequent sections. The sample size was determined based on the number of participants in the original study for the development of the RLS and Osborne and Costello's (2004) recommendation of a participant-to-item ratio of 10:1 for factor analysis.

## Data Collection Instruments

Data were collected using a two-part survey voluntarily completed by the participants. The survey consisted of a personal information form prepared by the researchers and a standard measurement tool. Before completing the standard measurement tool, the participants were shown a photo of an individual identified as a coach/manager, depending on their assigned group. Responses were provided accordingly. The instruments were distributed to the participants electronically or in person. Furthermore, an additional measurement tool was provided to assess the criterion-based divergent validity of the scale being tested. Details of the forms and the photo are as follows:

### Personal Information Form

A brief questionnaire designed by the researchers to collect demographic data such as gender, education level, and active or passive participation in sports, tailored to the study's topic.

### Fixed image (photo)

Two different photos prepared by the researchers were shown to the participants before completing the scale. Each photo depicted the same individual identified as a coach/manager, presented differently: in one photo, the individual appeared in formal attire and well-groomed, while in the other, they were dressed casually and appeared untidy.

### Reysen Likability Scale (RLS)

Developed by Reysen (2005) to examine and measure factors influencing perceived likability, this single-factor scale consists of 11 items. The participants rated items on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree).

### Desire for Being Liked Scale (DBLS)

Developed by Kaşıkara and Doğan (2017) to measure individuals' desire to be liked by others, this scale has been validated and consists of nine items on a unidimensional, four-point Likert scale (1 = strongly disagree, 4 = strongly agree).

## Scale Translation

The items of the RLS were translated into Turkish and adapted using Brislin's (1976) back-translation and pre-test methods, which rely on logical and reasonable grounds. The process involved contributions from bilingual experts proficient in both source and target languages and academicians specializing in sports marketing. The translated and adapted items were tested on a separate participant group prior to the main study to ensure clarity.

## Data Analysis

The suitability of the RLS data for factor analysis was assessed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. The results indicated that the data were appropriate for factor analysis ( $\chi^2_{(55)} = 2,164.51$ ;  $p < 0.01$ ;  $KMO = 0.962$ ) (Tobias & Carlson, 1969; Kaiser & Rice, 1974). Internal consistency was tested using Cronbach's alpha and composite reliability (CR). The factor structure of the RLS was examined using confirmatory factor analysis (CFA) through covariance matrices analyzed via maximum likelihood estimation. Model fit was assessed using the following criteria: normalized chi-square ( $\chi^2/df$ ), root mean square error of approximation (RMSEA), goodness-of-fit index (GFI), normed fit index (NFI), non-normed fit index (NNFI/TLI), comparative fit index (CFI), and standardized root mean square residual (SRMR). Convergent validity was evaluated through average variance extracted (AVE) calculations and comparisons of responses from the two participant groups (Groups A and B). Divergent validity, due to the unidimensional nature of the scale, was assessed by examining the relationship between responses to the RLS and DBLS using Pearson's product-moment correlation. Distributions of continuous variables were examined for kurtosis and skewness where necessary. Data analyses were conducted using SPSS (version 24) and LISREL (v8.80) statistical software.

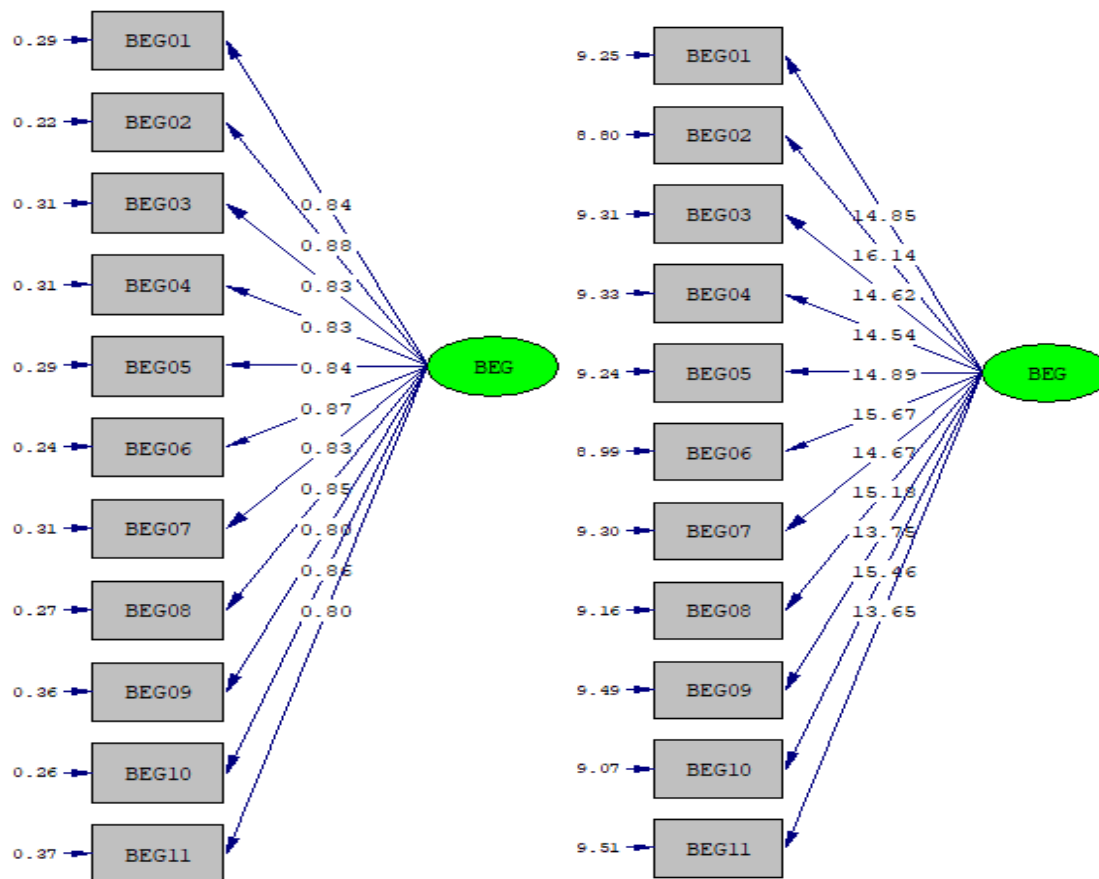
## Results

This section presents descriptive, relational, and factor-analytic findings related to the demographic characteristics of the participants and their responses to the RLS and DBLS. The findings were evaluated at a 0.05 level of statistical significance. Table 1 summarizes the demographic characteristics of the participants and their regular engagement in sports activities.

**Table 1.**  
**Demographic characteristics of the participants**

		Number	Percentage
Gender	Male	143	69.1%
	Female	64	30.9%
Educational level	Pre-university	32	15.4%
	Undergraduate	125	60.5%
	Postgraduate	50	24.1%
Regular participation in sports/physical activity	Active (competitive/recreational)	33	16.0%
	Passive (spectator)	96	46.3%
	Both	78	37.7%

The single-factor structure of the original 11-item RLS and its fit to the collected data were examined using CFA. The findings are presented in Table 2 and Figure 1.



**Figure 1.**

*Diagram of the factor structure of the RLS*

Standardized factor loadings for the items on the RLS ranged between 0.80 and 0.87, with t-values ranging from 13.65 to 16.14, as shown in Figure 1.

**Table 2.**  
**Fit indices for the single-factor measurement model of the RLS**

Model	$\chi^2$	sd	$\chi^2/\text{sd}$	RMSEA	GFI	SRMR	NNFI (TLI)	NFI	CFI
Single-factor model	102.23	44	2.32	0.080	0.92	0.026	0.99	0.98	0.99

RLS: Reysen Likability Scale,  $\chi^2$ : chi-square, sd: standart deviation,  $\chi^2/\text{sd}$ : normalized chi-square, RMSEA: root mean square error of approximation, GFI: Goodness-of-fit index, SRMR: Standardized root mean square residual, NNFI: non-normed fit index, NFI: normed fit index, CFI: Comparative fit index

The findings related to the fit indices of the single-factor model of the scale are summarized in Table 3. A normalized chi-square value between 2.00 and 5.00 indicates an acceptable fit (Wheaton et al., 1977; Tabachnick & Fidel, 2007). An SRMR value of 0.1 or lower and an RMSEA value of 0.08 or lower indicate an acceptable fit, while values of 0.05 or lower indicate good fit (Browne & Cudeck, 1993). CFI, NFI, and NNFI values within the range of 0.90–0.95 signify acceptable fit, whereas values in the range of 0.95–1 indicate good fit (Hu & Bentler, 1999). Based on the presented criteria, the single-factor measurement model demonstrates an acceptable level of fit.

**Table 3.**  
**Results of the t-test for convergent validity of the RLS**

Group	n	Mean	SD	t	p
A	103	5.45	0.57	31.18	.000
B	104	3.06	0.53		

RLS: Reysen Likability Scale, SD: standard deviation

The t-test results in Table 3 show a statistically significant difference in perceived likability between the two groups (A and B), indicating that the scale meets the criterion-based requirements for convergent validity.

**Table 4.**  
**Results for divergent validity, convergent validity, and reliability of the RLS**

RLS	
Correlation with DBLS	-0.060 ( $p=.394$ )
Convergent validity (AVE)	0.70
Composite reliability	0.96
Cronbach's alpha ( $\alpha$ )	0.96

RLS: Reysen Likability Scale, DBLS: Desire for Being Liked Scale, AVE: average variance extracted

An AVE of 50% or higher is deemed sufficient to establish convergent validity (Yaşlıoğlu, 2017). For construct reliability and internal consistency, CR and Cronbach's alpha coefficient values above 0.7 are considered adequate (Nunnally & Bernstein, 1994, Hair et al., 2011). No correlation was observed between the RLS and DBLS ( $r = -0.060$ ;  $p = .394$ ). The findings presented in Table 4 indicate that, based on the referenced criteria, the scale met the standards for divergent and convergent validity as well as reliability.

## Discussion

The fit indices of the single-factor model suggest that the measurement model aligns with acceptable fit ranges for the Turkish sample, as per established criteria in the literature (Browne & Cudeck, 1993; Hu & Bentler, 1999; Tabachnick & Fidel, 2007; Wheaton et al., 1977). Similar to the original scale, all items were loaded onto the relevant factor at satisfactory levels ( $\lambda_{\min} = 0.80 > 0.40$ ) (Hair et al., 2006). Consistent with the study by Reysen (2005), the current study tested the scale's convergent validity through criterion-based methods by analyzing the differences in scores between two participant groups (A and B). The higher perceived likability scores in Group A compared to Group B further support the scale's convergent validity. The AVE value supports the convergent validity ( $AVE = 0.70 > 0.50$ ; Yaşlıoğlu, 2017).

Divergent validity was examined by analyzing the correlation coefficients between the RLS, which measures likability, and the DBLS, which measures a different construct. The lack of correlation between these two scales supports the criterion-based divergent validity of the RLS. Similarly, in Reysen's (2005) study, the divergent validity of the RLS was assessed against Goldberg's (1992) five-factor personality test, and very low correlations were observed between the RLS scores and all factors except one. The CR and Cronbach's alpha coefficients indicate that the RLS demonstrates high internal consistency and construct reliability ( $CR = 0.96$ ,  $\alpha = 0.96$ ; Nunnally & Bernstein, 1994, cited in Hair et al., 2011). In conclusion, the findings establish that the RLS, with its single-factor, 11-item structure, is a valid and reliable measurement tool for assessing perceived likability in the Turkish cultural context.

## Conclusion and Recommendation

This study is based on a reflective measurement model developed within the framework of classical test theory. While the indicators are similar, each addresses distinct aspects of the measured construct. It is assumed that participants' reported scores are sincere, and that observed variability is due to individual differences.

Future research could focus on cross-cultural studies, gender-based measurement invariance analyses, and similar methods to allow for more robust comparisons and a deeper understanding of the scale's effectiveness and reliability. Additionally, developing more sophisticated marketing models that incorporate likability as a key strategy for engaging and influencing target audiences in sports would enhance the field of sports marketing, offering clearer and more targeted avenues for control and strategy.

**Etik Komite Onayı:** Bu çalışma için etik komite onayı Kafkas Üniversitesi Üniversitesi'nden (Tarih: 01 Ekim 2024, Karar No: 7, Protokol No: 81829502.903/87) alınmıştır.

**Hasta Onamı:** Çalışmaya katılan tüm katılımcılardan sözlü onam alınmıştır.

**Hakem Değerlendirmesi:** Dış bağımsız.

**Yazar Katkıları:** Fikir- MH, AT; Tasarım-TGB, MH, AT; Denetleme- TGB; Kaynaklar-TGB, MH, AT; Veri Toplanması ve/veya İşlemesi- AT; Analiz ve/veya Yorum-MH; Literatür Taraması- TGB; Yazıyı Yazan-TGB; Eleştirel İnceleme-TGB, MH, AT

**Çıkar Çatışması:** Yazarlar, çıkar çatışması olmadığını beyan etmiştir.

**Finansal Destek:** Yazarlar, bu çalışma için finansal destek almadığını beyan etmiştir.

**Ethics Committee Approval:** Ethics committee approval was received for this study from the ethics committee of Kafkas University University (Date: 01, October 2024, Decision Number: 7, Protocol No: 81829502.903/87).

**Informed Consent:** Verbal consent was obtained from all the participants.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept- MH, AT; Design- TGB, MH, AT; Supervision-TGB; Resources- TGB, MH, AT; Data Collection and/or Processing- AT; Analysis and/or Interpretation- MH; Literature Search-TGB; Writing Manuscript- TGB; Critical Review- TGB, MH, AT

**Conflict of Interest:** The authors have no conflicts of interest to declare.

**Financial Disclosure:** The authors declared that this study has received no financial support.



## References

- Arai, A., Ko, Y. J., & Kaplanidou, K. (2013). Athlete brand image: Scale development and model test. *European Sport Management Quarterly*, 13(4), 383–403. <https://doi.org/10.1080/16184742.2013.811609>
- Brislin, R. W. (1976). *Translation: Application and research*. Gardner Press.
- Brisson, N. T., Baker III, T. A., & Byon, K. K. (2015). Facebook likes and sport brand image: An empirical examination of the National Advertising Division's Coastal Contacts' Decision. *Journal of Legal Aspects of Sport*, 25, 104–124.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Sage.
- Cialdini, R. B. (1993). *Influence: Science and practice* (3rd ed.). HarperCollins.
- George, D., & Mallery, P. (2010). *SPSS for Windows step by step: A simple study guide and reference* (10th ed.). Pearson Education.
- Geys, B. (2014). Better not look too nice? Employees' preferences towards (un)likeable managers. *The Leadership Quarterly*, 25(5), 875–884. <https://doi.org/10.1016/j.leaqua.2014.02.001>
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, 4(1), 26–42. <https://doi.org/10.1037/1040-3590.4.1.26>
- Gilchrist, P. (2005). Local heroes or global stars. In L. Allison (Ed.), *The global politics of sport: The role of global institutions in sport* (pp. 107–126). Routledge.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Pearson Prentice Hall.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Hubbard, L. N. (2018). *College students' likability ratings of elder lesbians and gay men: The impact of attitudes towards aging and homosexuality* [Doctoral dissertation, Fielding Graduate University]. ProQuest Dissertations and Theses.
- Kaiser, H. F., & Rice, J. (1974). Little jiffy, mark IV. *Educational and Psychological Measurement*, 34(1), 111–117. <https://doi.org/10.1177/001316447403400115>
- Kaşıkkara, G., & Doğan, U. (2017). Desire for being liked scale: Validity and reliability study. *MSKU Journal of Education*, 4(2), 51–60.
- Kenrick, D. T., Neuberg, S. L., & Cialdini, R. B. (2002). *Social psychology: Unraveling the mystery* (3rd ed.). Allyn & Bacon.
- Knuppenburg, R. M., & Fredericks, C. M. (2021). Linguistic affect: Positive and negative emotion words are contagious, predict likability, and moderate positive and negative affect. *Inquiries Journal*, 13(3). <http://www.inquiriesjournal.com/articles/1932/linguistic-affect>
- Kunkel, T., Walker, M., & Hodge, C. M. (2019). The influence of advertising appeals on consumer perceptions of athlete endorser brand image. *European Sport Management Quarterly*, 19(3), 373–395. <https://doi.org/10.1080/16184742.2018.1530688>
- Martínez Cevallos, D., Alguacil, M., & Calabuig Moreno, F. (2020). Influence of brand image of a sports event on the recommendation of its participants. *Sustainability*, 12(12), 5040. <https://doi.org/10.3390/su12125040>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Osborne, J. W., & Costello, A. B. (2004). Sample size and subject to item ratio in principal components analysis. *Practical Assessment, Research, and Evaluation*, 9(1), 11. <https://doi.org/10.7275/ktzq-ig66>
- Pratt, A. N., Tadlock, M. E., Watts, L. L., Wilson, T. C., & Denham, B. E. (2018). Perceptions of credibility and likeability in broadcast commentators of women's sports. *Journal of Sports Media*, 13(1), 75–97. <https://doi.org/10.1353/jsm.2018.0003>
- Reysen, S. (2005). Construction of a new scale: The Reysen likability scale. *Social Behavior and Personality: An International Journal*, 33(2), 201–208. <https://doi.org/10.2224/sbp.2005.33.2.201>
- Reysen, S. (2006). A new predictor of likeability: Laughter. *North American Journal of Psychology*, 8(2), 373–382.
- Summers, J., & Johnson Morgan, M. (2008). More than just the media: Considering the role of public relations in the creation of sporting celebrity and the management of fan expectations. *Public Relations Review*, 34(2), 176–182. <https://doi.org/10.1016/j.pubrev.2008.03.014>
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Pearson.
- Tobias, S., & Carlson, J. E. (1969). Brief report: Bartlett's test of sphericity and chance findings in factor analysis. *Multivariate Behavioral Research*, 4(3), 375–377. [https://doi.org/10.1207/s15327906mbr0403\\_8](https://doi.org/10.1207/s15327906mbr0403_8)
- Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. (1977). Assessing reliability and stability in panel models. *Sociological Methodology*, 8(1), 84–136. <https://doi.org/10.2307/270754>
- Yaşlıoğlu, M. M. (2017). Factor analysis and validity in social sciences: Application of exploratory and confirmatory factor analysis. *Istanbul University Journal of the School of Business*, 46, 74–85.
- Yun, J. H., Rosenberger III, P. J., & Sweeney, K. (2021). Drivers of soccer fan loyalty: Australian evidence on the influence of team brand image, fan engagement, satisfaction and enduring involvement. *Asia Pacific Journal of Marketing and Logistics*, 33(3), 755–782. <https://doi.org/10.1108/APJML-07-2019-0444>