https://doi.org/10.54141/psbd.1437210

PAMUKKALE JOURNAL OF SPORT SCIENCES
ISSN: 1309-0356 dergipark.org.tr/en/pub/psbd

Pamukkale J Sport Sci, 15(2), 349-365, 2024 Research Article

The Psychometric Properties of the Perceived Available Support in Sport Questionnaire: Validity and Reliability of the Turkish Version

Ender ŞENEL[1] Derya SAKALLI[1*]

[1]*Faculty of Sport Sciences, Muğla Sıtkı Koçman University, Muğla, Türkiye.*

Keywords
Emotional support,
Esteem support,
Information support,
Perceived support,
Social support,
Tangible support

Article History
Received 14 February 2024
Revised 14 May 2024
Accepted 21 July 2024
Available Online 28 August 2024

[*] **Corresponding Author**:
Derya SAKALLI
E-mail Address:
deryasakallii@gmail.com

ABSTRACT

Social support research in sports has attracted considerable attention in recent years. There are limited sport-specific support perception measurements to measure Turkish athletes' support perceptions. The present study was conducted to adapt the Perceived Available Support in Sport Questionnaire developed by Freeman et al. (2011) into Turkish and examine the measurement's psychometric properties. A total of 300 athletes aged between 18-22 years were included in the study. The factor structure of the measurement was tested using confirmatory factor analysis. The obtained data revealed significant factor loadings and produced acceptable fit indices. Both internal consistency and composite reliability values were found to be high, thus supporting the validity and reliability of the measurement. The results show that the measurement retains its original structure consisting of 4 dimensions (esteem support, emotional support, information support, and tangible support) and 16 items, each containing four items. Accordingly, it was concluded that the Perceived Accessible Support in Sport Questionnaire is a valid and reliable measurement tool for Turkish athletes.

Citation: Şenel, E. and Sakallı, D. (2024). The Psychometric Properties of the Perceived Available Support in Sport Questionnaire: Validity and Reliability of the Turkish Version. *Pamukkale Journal of Sport Sciencses, 15*(2), 349-365. https://doi.org/10.54141/psbd.1437210

INTRODUCTION

Social support research in sports emphasises the importance of social support in overcoming various challenges athletes face. Lu and Hsu (2013) found that increasing the perception of hope and strengthening social support during rehabilitation improved athletes' rehabilitation behaviours and subjective well-being. Yang et al. (2010) found that injured collegiate athletes trusted coaches, athletic trainers, and physicians more for social support and were more satisfied, suggesting that athletic trainers play a vital role in meeting these needs. In addition, it was also found that social support has a critical role in quitting sports and that athletes expect attention and understanding from family and peers, who are the most important sources of support (Brown et al., 2018). Social support is crucial in optimal functioning in various performance contexts in sports, workplace, school, and home (Fletcher & Sarkar, 2012; Freeman & Rees, 2009; Sarkar & Fletcher, 2014). Indeed, the research emphasises the importance of supportive families, coaches, and social networks in athletes' talent development (Rees et al., 2016). This support from meaningful interpersonal relationships (coaches, parents, peers) in sports is an essential resource for athletes. These interpersonal relationships provide necessary social support to athletes and shape their sports experiences positively and negatively (Sheridan et al., 2014).

In sports, athletes believe they can receive social support from people they consider significant others in their environment. It also refers to the emotional, tangible, informational, and esteem support that individuals or groups provide in the context of sports (Hartley et al., 2020). Emotional support refers to others being there for comfort and safety, thus making the person feel loved and cared for; tangible support refers to others providing material and instrumental help. Esteem support means that others support one's sense of competence or self-esteem, and informational support indicates that others offer advice or guidance (Cutrona & Russell, 1990). Social support is a broad term that includes positive (i.e., encouragement, personal growth, improved mental health) and negative (i.e., conflict, loss of individuality, and social pressure) aspects of relationships and is a coping resource for psychological adjustment (de la Haye et al., 2014; Holahan et al., 1997). Therefore, the contextual dynamics of the concept should be considered when defining social support (Ladin et al., 2019; Williams et al., 2004).

Research shows that athletes experience all four dimensions of social support (emotional, informational, esteem, and tangible; Newman & Weiss, 2017; Rees & Hardy, 2000;

Sullivan et al., 2022). Emotional support entails making athletes feel supported regardless of performance outcomes, whereas esteem support encourages the belief among athletes that they are talented. Informational support is a type of support that suggests strategies to cope with competition anxiety. In contrast, tangible support involves providing practical assistance to athletes, such as transporting them to competitions by car or helping them prepare their equipment (Hartley et al., 2020).

Some measures of perceived available support used in sports psychology were initially developed to measure support in social psychology (Cohen et al., 1985; Sarason et al., 1983; Zimet et al., 1988). The adequacy of these measures in sports has been questioned due to their limited resemblance, as they predominantly evaluate generic everyday support concerns and fail to address support issues that might be particularly pertinent to elite athletes (Rees et al., 1999). Measurement tools that measure Turkish athletes' perceptions of social support are limited. Adopting a sport-specific measurement is essential for measuring social support perception in sports. One of these measurement tools is the TASS-Q: The Team-Referent Availability of Social Support Questionnaire, which was developed by Coffee et al. (2017) to determine the sources and types of support available to athletes in a team environment and adapted into Turkish by Şenel et al. (2018). In addition, the Social Support in Physical Activities Scale (Farias et al., 2014) was adapted to Turkish culture (Küçükibiş & Eskiler, 2019). Among the studies on social support in Turkey, the perception of support for physical activity in the school environment was also addressed (Akgül & Karafil, 2021).

The social support literature advises that social support assessments must be suitable for the specific target population and the situational context in which they are applied (Bianco & Eklund, 2001; Wills & Shinar, 2000). The research has been constrained by the necessity for a measure of perceived available support in sports that is context-specific and psychometrically robust (Holt & Hoar, 2006). For this reason, examining and clarifying the dimensions, providers, and contexts of social support, which is widely accepted as necessary in the sports field, can significantly contribute to our knowledge of how we can support athletes (Katagami & Tsuchiya, 2017). In this sense, comparing a measurement adapted to Turkish with international studies is better, and it allows for more effective analysis and comparison of studies conducted in different cultures on similar topics. Therefore, there is a need for sport-specific measurement tools to assess the perception of support in the sports environment more accurately, to increase social support research in Turkish literature, and to examine the support sources and dimensions of Turkish athletes. As a result, this study aimed

to explore the psychometric properties of the Perceived Available Support in Sport Questionnaire, developed by Freeman et al. (2011), to measure the perception of sport-specific general social support.

METHODS

Participants

While researchers recommend at least 300 independent samples for cross-case validation (Tabachnick et al., 2013), participant selection in structural equation modelling (SEM) studies emphasises analysing power (Muthén & Muthén, 2002). Choosing between insignificant statistical results or incorrect model assumptions may be challenging if statistical power is low. However, in the case of high statistical power, it may not be necessary (Moshagen & Erdfelder, 2016). Moshagen and Erdfelder (2016) proposed balancing with a fixed error probability α and α=β to strike a balance between false positive and negative results.

The power analysis was performed when the desired power was 80%, the error probability α was 0.05%, the effect measure was RMSEA, and the effect size was 0.05, and showed that the required sample size was 164 (Moshagen & Bader, in press). Three hundred athletes were included in the study, which is higher than recommended in the power analysis. Considering this situation, the calculation was made again, and it was determined that the latent power was 0.98 for a sample of 300 people. Overall, these results suggest that the model has low alpha and beta error rates, a high power, and an excellent fit to the model with specific measures of influence.

The research was approved by the higher education institution's social and humanities research ethics committee (230143/134, 04/12/2023). Participants aged 18 and 22 ($\bar{X}$age 19.97± 1.43; 130 females and 170 males). The participants reported they competed in soccer (n=70, 23.3%), basketball (n = 70, 23.3%), handball (n = 50, 16.4%), volleyball (n = 70, 23.4%) and hockey (n = 40, 13.6%).

Procedure

Athletes were asked to indicate their age, gender, and sport for demographic information. The original version of Perceived Available Support in Sport Questionnaire (PASS-Q) was developed by Freeman et al. (2011) in two related studies. The measurement has four dimensions consisting of 16 items: Emotional support (4 items), esteem support (4

items), information support (4 items), and tangible support (4 items). Participants prefixed each item of the measurement with the statement "If needed, to what extent would someone..." and rated it on a measurement of 0 (not at all) to 4 (very much). There are no reverse-scored items in the measurement. The emotional support dimension refers to the emotional support such as comfort, safety, and care that the athlete believes he/she can reach (...always be there for you?). Esteem support increases the confidence, competence, and self-esteem the person believes he/she can reach (...enhance your self-esteem?). Information support includes tactical advice, constructive criticism, and feedback on performance (...give you tactical advice?). Tangible support is the type of support that the individual believes he/she can obtain to access the necessary opportunities to continue with the sport (...help with travel to training and matches?). The analyses conducted with the original version of the original measurement tool had excellent fit indices [Satorra-Bentler $\chi 2$ (100) = 185.52, $p < .01$; RMSEA = 0.07; SRMR = 0.08; CFI = 0.91; NNFI = 0.89] and the final [Satorra-Bentler $\chi 2$ (98) = 120.56, $p < .01$; RMSEA = 0.04; SRMR = 0.04; CFI = 0.98; NNFI = 0.98] (Freeman et al., 2011).

Data Analysis

In this study, confirmatory factor analysis (CFA) was used to test the factor structure of the PASS-Q Turkish. Research suggests using CFA as a more appropriate approach for testing previously developed or discovered models (Fabrigar et al., 1999; Hurley et al., 1997; Kline, 2023). CFA is a statistical strategy designed to identify and explore hypothetical constructs and test detailed hypotheses using a deductive approach (Hoyle, 2000). This method allows researchers to determine the number of principal factors and verify the pattern of item-factor relationships (Brown, 2015). In this stage, a CFA was conducted using maximum likelihood estimation with IBM SPSS Amos (Version 24) to confirm the factor structure of the PASS-Q Turkish. The missing data analysis of the raw data showed no missing data. After that, it was examined whether the data met the assumption of normal distribution. For this, Mardia's multivariate average distribution coefficient was taken into consideration. Since Mardia's multivariate normality coefficient showed that the data did not meet the assumption of normal distribution, the bootstrap method was applied (Mardia coefficient: 320.137).

Chi-square statistic ($\chi 2$), comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), and standardised root mean square residual (SRMR) are recommended indices for reporting model fit (Hu & Bentler, 1999). However, research has shown that the chi-square value is sensitive to sample sizes (Brown, 2015).

Therefore, this index was used to calculate the $\chi 2/df$ value. Research suggests the following scores for model fit indices: CFI and TLI ≥0.95 = good fit, 0.90-0.95 = acceptable fit; RMSEA ≤0.05 = good fit, 0.05-0.08 = acceptable fit, 0.08-0.10 moderate fit; SRMR<0.06 excellent fit (Bentler, 1990). Reliability values of scales and sub-dimensions are generally assessed through Cronbach's alpha coefficient. In cases where errors are independent and certain assumptions are met, Cronbach's Alpha internal consistency coefficient can be calculated accurately. However, when these assumptions are unmet, Cronbach's Alpha internal consistency coefficient may be biased and different from the universal coefficient (Rae, 2006). Thurber and Bonynge (2011) argue that composite reliability may be a more appropriate alternative. Composite reliability is usually calculated using factor loadings and error variances obtained from CFA (Yang & Green, 2011). This method is a measure used to assess the overall reliability of the measurement.

Translation and Content Validity

Invitations were sent via e-mail to academics specialised in their fields to assess the translation and content validity of the research. For the translation process, the method of Beaton et al. (2000) was followed, and two academics were invited, one who was informed (T1) and one who was not informed (T2). While T1 studied abroad in English and specialised in sports and exercise psychology based on sports sciences, T2 was from the field of English language education. For the back translation process, a similar approach was followed by experts who knew the concept (BT1) and experts who did not (BT2).

After T1 and T2 translated the items, the authors examined two Turkish translations and included the appropriate ones in the synthesis form (T12). The synthesis form was then sent for back translation. After the back translation process was concluded, T1, T2, BT1, BT2, and T12 forms were sent to the academics, and feedback on the process and measurement items was asked for. After this stage, the measurement items were scored for content validity by the same expert included in the evaluation process of the forms. Experts were also sent the sub-dimensions (emotional, esteem, information, and tangible) and definitions of perceived available support. Six expert academics with international sports psychology studies were invited to assess the measurement's content validity. These experts independently rated the measurement's items 1 and 2 (not appropriate), 3 and 4 (appropriate) in line with the target feature.

The experts gave each item a score between 1 and 4 on the form prepared by the researchers. Scores 1 and 2 on this form indicate that the relevant item is inappropriate for assessing the related aspects of social support. In contrast, scores of 3 and 4 indicate that the item is appropriate for evaluating social support. The experts were requested to provide feedback for the items with scores of 1 and 2, while the request for feedback for the items with scores of 3 and 4 was left to the experts' preference.

The Universal Agreement Calculation Method was used to calculate the Content Validity Index (CVI) (Lynn, 1986; Waltz & Bausell, 1981). This method calculates item-level Content Validity Index (I-CVI) and scale-level Content Validity Index (S-CVI). The C-VI is calculated by dividing the agreement of the experts on the item by the number of experts. The average of the I-CVIs determines the S-CVI/average. Another method used is the ratio of the number of items on which the experts agree to the number of items. If the experts give an item a score of 3 or 4, it indicates complete agreement. Another method, the Content Validity Ratio (CVR), involves experts' ratings of the importance of each item in the measurement instrument. A higher score represents a greater agreement among experts. The CVR is calculated by a formula that subtracts the number of experts rating an item as "important" from half of the total number of experts and divides by half (Ayre & Scally, 2014; Lawshe, 1975) should be explained in this part. In the section, the statistical methods used in the research, the software used, content analysis, etc., should be described explained in detail.

RESULTS

Content Validity

The authors prepared a synthesis form after the invited experts translated the items. This synthesis form was returned to the experts for feedback, and the content validity of the translations was evaluated. All experts stated that the items were translated correctly and rated between 1 and 4. The results obtained are presented in Table 1.

Table 1 includes the results of the PASS-Q Turkish content validity analysis. When the content validity index (I-CVI) values of the items are examined, it is seen that the values vary between 0.83 and 1.0. These values indicate that items have content validity. According to the standards recommended in research, an I-CVI value higher than 0.79 indicates that an item is appropriate for measuring the relevant trait. In contrast, a value below 0.78 suggests that the item should be revised and the relevant item should be removed. In this context, the values in this study are at a level that meets the recommended standards (Davis, 1992). Since the index

obtained for TAN 3 in the tangible support dimension was partially low, it was adjusted based on expert evaluation and feedback. The content validity (S-CVI/Ave) value was calculated as 0.97, indicating that the measurement has high content validity. In addition, the content validity (S-CVI/UA) calculated by the Universal Agreement Calculation Method was found to be 0.83. These results indicate that the measurement has excellent content validity (S-CVI/UA ≥ 0.8 and S-CVI/Ave ≥ 0.9; Shi et al., 2012). These values indicate that the measurement has content validity.

Table 1
Content Validity Analysis Results of the Perceived Available Support Questionnaire in Sport

Item	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Number of Agreement	I-CVI
EM 1	3	4	4	2	4	3	5	0.83
EM 2	3	3	4	3	4	3	6	1
EM 3	3	4	4	3	4	3	6	1
EM 4	3	4	4	3	4	3	6	1
EST 1	3	4	3	3	3	4	6	1
EST 2	4	3	4	4	4	2	5	0.83
EST 3	3	4	3	4	4	4	6	1
EST 4	3	3	3	4	3	3	6	1
INF 1	4	3	3	4	3	4	6	1
INF 2	3	4	4	4	4	4	6	1
INF 3	3	4	3	2	3	4	5	0.83
INF 4	3	4	4	4	4	4	6	1
TAN 1	2	3	4	4	3	3	5	0.83
TAN 2	3	2	1	3	4	3	4	0.66
TAN 3	3	3	4	3	3	4	6	1
TAN 4	3	3	4	4	3	3	6	1
							S-CVI/Ave	0.93
							Agreements	11
							S-CVI/UA	0.68
							CVR	0.90

Note. I-CVI: Item-level content validity index; S-CVI: Scale-level content validity index; CVR: Content Validity Ratio, EM: Emotional Support, EST: Esteem Support, INF: Information Support, TAN: Tangible Support

Construct Validity

CFA results confirmed the factor structure in the original instrument. The analysis revealed statistically significant factor loadings and produced acceptable fit indices [$\chi 2$ = 321.85, df = 98, $\chi 2/df$ = 3.28, CFI = 0.95, TLI = 0.93, RMSEA = 0.08 (95%CI: 0.07-0.09), SRMR = 0.05, n = 300]. No adjustment was needed since the factor loadings were relatively high ($\lambda i>0.55$).

Table 2 presents the factor structure, mean, standard deviation, composite reliability, and internal consistency values of the Perceived Available Support in Sports (PASS-Q Turkish). This tool aims to measure perceived support elements in

sports in four dimensions. The factors defined as emotional support (F1), esteem support (F2), information support (F3), and tangible support (F4) constitute the basic building blocks. Internal consistency coefficients (Cronbach Alpha) for each dimension were relatively high (Emotional Support: 0.93; Esteem Support: 0.89; Information Support: 0.88; Tangible Support: 0.91). These results show that each dimension and the measured elements are evaluated consistently and reliably. Composite reliability coefficients range from 0.77 to 0.93. Additionally, when the mean and standard deviation values were examined, it was revealed that the participants perceived these support elements at a high level (Tangible Support mean: 4.37, standard deviation: 0.77). When the composite reliability and convergence values are examined, it is seen that the composite reliability of all dimensions and the total value is high, supporting the general validity and reliability. Pearson correlation coefficients between the factors are high (emotional - esteem: 0.88; emotional - information: 0.73; emotional - tangible: 0.63; esteem - information: 0.77; esteem - tangible: 0.65; information - tangible: 0.67).

Table 2
Factor Structure, Mean, Standard Deviation, Composite Reliability, and Internal Consistency Values of PASS-Q Turkish

	Items	Error Variances	F1	F2	F3	F4	CR	α	$\bar{X}$	SD	Skew.	Kurt.	AVE
Emotional Support	1	0.39	0.78 (.86)	r=0.88	r=0.73	r=0.63	0.93	0.93	4.34	0.93	-1.65	2.39	0.78
	2	0.20	0.89 (.92)										
	3	0.11	0.94 (.94)										
	4	0.13	0.93 (.94)										
Esteem Support	1	0.24		0.87 (.88)	r=0.77	r=0.65	0.89	0.89	4.32	0.89	-1.60	2.26	0.67
	2	0.27		0.85 (.88)									
	3	0.34		0.81 (.87)									
	4	0.45		0.74 (.83)									
Information Support	1	0.69			0.55 (.74)	r=0.67	0.87	0.85	4.31	0.88	-1.70	2.90	0.63
	2	0.22			0.88 (.88)								
	3	0.24			0.87 (.86)								
	4	0.26			0.86 (.87)								
Tangible Support	1	0.36				0.80 (.72)	0.91	0.91	4.37	0.77	-2.02	4.80	0.68
	2	0.34				0.81 (.76)							
	3	0.15				0.92 (.81)							
	4	0.20				0.89 (.80)							

Note. Mean score = 4.33, standard deviation: 0.77, PASS-Q Turkish α = 0.94, CR = 0.97; AVE = 0.69 F1: Emotional Support, F2: Esteem Support, F3: Information Support, F4: Tangible Support. *Item-factor correlations are displayed in brackets under each factor column.

DISCUSSION

In sports studies, the effect of social support on sports performance is increasingly understood, and studies on this subject are becoming increasingly important. In this context, existing measurement tools to measure perceived attainable support in sports have some limitations. This research was conducted to adapt the PASS-Q, developed by Freeman et al. (2011), to Turkish to meet the need for a valid and reliable measurement tool that will measure the level of generally accessible social support perceived as context-specific in the sports environment and the psychometric analysis was carried out to examine its properties.

PASS-Q Turkish examines perceived social support in the sports environment in four sub-dimensions: emotional, concrete, esteem, and information support, and it consists of a total of 16 items. In adapting the measurement to Turkish, its content validity was first tested, and, in line with expert opinions, it was found that the measurement was both suitable for the sports environment and understandable by the athletes. PASS-Q Turkish factor structure was examined with CFA. The sample size must be sufficient for CFA (Tabachnick & Fidell, 2007). Since it was stated in the original measurement that the low number of samples could affect the power and stability of the analysis (Freeman et al., 2011), a sufficient number of athletes for factor analysis were included in the current study. CFA results revealed statistically significant factor loadings for the measurement.

Additionally, it was determined that the fit indices were at an acceptable level. It was found that the internal consistency coefficients for each dimension varied between 0.88 and 0.93, and the composite reliability coefficients varied between 0.77 and 0.93. The correlation values for the factors included in the model tested in the current research were calculated at medium to high levels. The correlation values between the dimensions in the original measurement were medium to high, and the internal consistency and composite reliability coefficients were determined to exceed 0.70 (Freeman et al., 2011). The data shows that the measurement maintains its original structure, consisting of 4 dimensions and 16 items.

Social support encompasses the presence of social connections and the interconnections between them. Functional support pertains to the distinct roles fulfilled by interpersonal relationships, with perceived and actual support being its two facets (Wills & Shinar, 2000). Perceived support often stems from personal evaluation processes rather than specific supportive behaviours (Kaul & Lakey, 2003). This perception of support revolves around the potential access to social support, involving a subjective judgment that individuals

in the environment (such as friends, family, teammates, and coaches) will offer assistance when needed. Support received generally denotes the specific aid provided by these individuals over time. Support constructs typically exhibit low to moderate correlations and may have distinct associations with outcome variables (Barrera, 1986; Uchino, 2009).

Due to this, scholars (Holt & Hoar, 2006) propose the importance of precision in conceptualising and gauging social support. Creating scales that effectively evaluate social support is also deemed crucial for addressing theoretically significant inquiries (Cohen et al., 2000). Furthermore, it is emphasised that these measurements should be tailored to the specific target population and the situational context in which they are applied (Bianco & Eklund, 2001; Wills & Shinar, 2000).

PASS-Q Turkish assesses athletes' general perceptions of current support without specifying the sources of their social support. Moreover, it exclusively evaluates perceived support and does not encompass other social support constructs, such as the structural aspects of social networks or recently received functional support (Freeman et al., 2011). Bianco (2001) underscores the importance of understanding the impact of social support from specific sources. Wills and Shinar (2000) argue that measurements gauging general support from various sources can predict significant outcomes, but they need to identify the sources of support. Perceptions of supportive behaviours may also vary depending on the context in which they occur, influenced by factors such as the characteristics of the support provider, the provider-recipient relationship (Lakey & Drew, 1997), and the broader cultural environment (Badr et al., 2001). Burleson and MacGeorge (2002) contend that the same supportive behaviour often serves multiple functions, and different supportive behaviours can achieve similar goals. There is usually an overlap between support dimensions in natural settings (Cohen & Wills, 1985). For instance, an attempt to provide advice and guidance (informational support) can also be interpreted as a display of care (emotional support). These complexities can make it challenging to isolate the distinct effects of various support dimensions on performance. In this context, the current study employed a measurement tool that captures aggregate evaluations of perceived support. However, the instructions of the measurement tool can also be used by specifying a specific source of social support (family, coach, manager, peer). In this way, whether the measurement tool shows different structural features can be tested according to the mentioned support sources. At the same time, PASS-Q Turkish can be applied to a group at various times, and thus, athletes' time-dependent evaluations of a particular source of social support can be measured.

CONCLUSION

The analyses carried out to adapt the Perceived Available Support in Sports Questionnaire, which was prepared based on the findings and suggestions in the literature, into Turkish showed that the measurement is a valid and reliable measurement tool that can be used to investigate the effects of perceived available support in sports contexts. Interpersonal relationships and interactions may affect the perception of social support. For this reason, future studies can also examine the quality of interpersonal relationships or the role of expectations in interpersonal relationships in the perception of social support. In addition, since perceived social support can affect essential variables such as mental health and performance outside the sports environment, these variables can also be addressed in the sports environment.

This research involves adapting the measurement tool developed to fill an essential gap in evaluating social support dimensions in the sports environment. Although content and structure validity analyses were performed in the study, criterion-related (convergent and divergent) validities are missing. Future studies can conduct various validity and reliability analyses of the measurement tool by considering this limitation. Additionally, the participants included in the study were team athletes. The structure of the measurement tool can also be tested in different groups of athletes. Additionally, measurement equivalence analysis was not included in this study. Future research can report the characteristics of the measurement tool in Turkish culture by examining structural characteristics between groups such as team and individual sports, men, and women.

Acknowledgements

The authors acknowledge the study's participants who voluntarily participated in this research.

Authors' contribution

The first author contributed to the conception and design of the research, data collection, data analysis and interpretation, drafting of the article and the critical interpretation of the final draft. The second author took part in the conception and design of the study, drafting the article and its critical revision, and approval of the final draft.

Declaration of conflict interest

The authors declare that they have no conflict of interest.

Ethics Committee

The research was approved by Mugla Sıtkı Kocman University Social and Humanities Research Ethics Committee (230109/120, 14/12/2023).

REFERENCES

Akgül, M. H., & Karafil, A. Y. (2021). Ortaokul öğrencilerinin fiziksel aktiviteye yönelik sosyal destek algılarının psikolojik iyi oluş üzerindeki etkisinin incelenmesi. *Spormetre Beden Eğitimi ve Spor Bilimleri Dergisi*, *19*(3), 164–175. https://doi.org/10.33689/spormetre.891172

Ayre, C., & Scally, A. J. (2014). Critical values for Lawshe's content validity ratio: revisiting the original methods of calculation. *Measurement and Evaluation in Counseling and Development, 47*(1), 79–86. https://doi.org/10.1177/0748175613513808

Barrera Jr., M. (1986). Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology*, *14*(4), 413-445.

Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*, *25*(24), 3186–3191.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, *107*(2), 238-246.

Bianco, T. (2001). Social support and recovery from sport injury: Elite skiers share their experiences. *Research Quarterly for Exercise and Sport, 72*(4), 376–388. https://doi.org/10.1080/02701367.2001.10608974

Bianco, T., & Eklund, R. C. (2001). Conceptual considerations for social support research in sport and exercise settings: The case of sport injury. *Journal of Sport & Exercise Psychology*, *23*(2), 85–107. https://doi.org/10.1123/jsep.23.2.85

Brown, C., Webb, T., Robinson, M., & Cotgreave, R. (2018). Athletes' experiences of social support during their transition out of elite sport: An interpretive phenomenological analysis. *Psychology of Sport and Exercise*, *36*, 71–80. https://doi.org/10.1016/j.psychsport.2018.01.003

Brown, T. A. (2015). *Confirmatory factor analysis for applied research (2nd ed.)*. New York, NY: The Guilford Press.

Coffee, P., Freeman, P., & Allen, M. S. (2017). The TASS-Q: The team-referent availability of social support questionnaire. *Psychology of Sport and Exercise*, *33*, 55–65. https://doi.org/10.1016/j.psychsport.2017.08.003

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*(2), 310-357. https://doi.org/10.1037/0033-2909.98.2.310

Cohen, S., Gottlieb, B. H., & Underwood, L. G. (2000). Social relationships and health. In S. Cohen, L. G. Underwood, & B. H. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 3–25). Oxford University Press.

Cohen, S., Mermelstein, R., Kamarck, T., & Hoberman, H. M. (1985). Measuring the functional components of social support. In: Sarason, I. G., Sarason, B. R. (Eds.), *Social support: Theory, Research and Applications* (pp. 73–94). Springer.

Cutrona, C. E., & Russell, D. W. (1990). Type of social support and specific stress: Toward a theory of optimal matching. In B.R. Sarason, I.G. Sarason, & G.R. Pierce (Eds.), *Social support: An interactional view* (pp. 319–366). Wiley.

Davis, L. L. (1992). Instrument review: Getting the most from a panel of experts. *Applied Nursing Research*, *5*(4), 194–197. https://doi.org/10.1016/S0897-1897(05)80008-4

de la Haye, K., de Heer, H. D., Wilkinson, A. V., & Koehly, L. M. (2014). Predictors of parent-child relationships that support physical activity in Mexican-American families. *Journal of Behavioral Medicine, 37*(2), 234-244. https://doi.org/10.1007/s10865-012-9471-8

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, *4*(3), 272–299.

Farias, J. C. D., Mendonça, G., Florindo, A. A., & Barros, M. V. G. D. (2014). Reliability and validity of a physical activity social support assessment scale in adolescents-ASAFA Scale. *Revista Brasileira de Epidemiologia*, *17(02)*, 355–370.

Fletcher, D., & Sarkar, M. (2012). A grounded theory of psychological resilience in Olympic champions. *Psychology of Sport and Exercise*, *13*(5), 669–678. https://doi.org/10.1016/j.psychsport.2012.04.007

Freeman, P., & Rees, T. (2009). How does perceived support lead to better performance? An examination of potential mechanisms. *Journal of Applied Sport Psychology, 21*(4), 429–441. https://doi.org/10.1080/10413200903222913

Freeman, P., Coffee, P., & Rees, T. (2011). The PASS-Q: The perceived available support in sport questionnaire. *Journal of Sport and Exercise Psychology*, *33*(1), 54–74. https://doi.org/10.1123/jsep.33.1.54

Hartley, C., Haslam, S. A., Coffee, P., & Rees, T. (2020). Social Support. In: S.A. Haslam, K. Fransen, F. Boen (Eds.), *The New Psychology of Sport and Exercise: The social identity approach* (pp. 245–264). SAGE Publications.

Holahan, C., Moos, R., & Bonin, L. (1997). *Social Support, Coping, and Psychological Adjustment* (pp. 169-186). Springer.

Holt, N. L., & Hoar, S. D. (2006). The multidimensional construct of social support. In S. Hanton & S. D. Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 199–225). Nova Science.

Hoyle, R. H. (2000). Confirmatory factor analysis. In *Handbook of applied multivariate statistics and mathematical modeling* (pp. 465–497). Academic Press.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 16–55. https://doi.org/10.1080/10705519909540118

Hurley, A. E., Scandura, T. A., Schriesheim, C. A., Brannick, M. T., Seers, A., Vandenberg, R. J., & Williams, L. J. (1997). Exploratory and confirmatory factor analysis: Guidelines, issues, and alternatives. *Journal of Organizational Behavior*, 18, 667–683.

Katagami, E., & Tsuchiya, H. (2017). Effects of Received Social Support on Athletes' psychological well-being. *International Journal of Sport and Health Science*, *15*, 72–80. https://doi.org/10.5432/ijshs.201612

Kaul, M., & Lakey, B. (2003). Where is the support in perceived support? The role of generic relationship satisfaction and enacted support in perceived support's relation to low distress. *Journal of Social and Clinical Psychology*, *22*(1), 59-78. https://doi.org/10.1521/jscp.22.1.59.22761

Kline, R. B. (2023). *Principles and practice of structural equation modeling*. Guilford publications.

Küçükibiş, H. F., & Eskiler, E. (2019). Fiziksel Aktivitelerde Sosyal Destek Ölçeği (FASDÖ): Türkçeye uyarlama, geçerlik ve güvenirlik çalışması. *Cumhuriyet Universitesi Journal of Economics & Administrative Sciences (JEAS)*, *20*(2), 117–127.

Ladin, K., Marotta, S., Butt, Z., Gordon, E., Daniels, N., Lavelle, T., & Hanto, D. (2019). A Mixed-Methods Approach to Understanding Variation in Social Support Requirements and Implications for Access to Transplantation in the United States. *Progress in Transplantation*, 29, 344–353. https://doi.org/10.1177/1526924819874387

Lakey, B., & Drew, J. B. (1997). A social-cognitive perspective on social support. In *Sourcebook of Social Support and Personality* (pp. 107-140). Springer.

Lawshe, C. H. (1975). A quantitative approach to content validity. *Personnel Psychology, 28*(4), 563–575.

Lu, F., & Hsu, Y. (2013). Injured athletes' rehabilitation beliefs and subjective well-being: the contribution of hope and social support. *Journal of Athletic Training, 48*(1), 92–98. https://doi.org/10.4085/1062-6050-48.1.03

Lynn, M. R. (1986). Determination and quantification of content validity. *Nursing Research, 35*(6), 382–385.

Moshagen, M., & Bader, M. (in press). semPower: General Power Analysis for Structural Equation Models. *Behavior Research Methods* https://doi.org/10.3758/s13428-023-02254-7

Moshagen, M., & Erdfelder, E. (2016). A new strategy for testing structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal*, *23*(1), 54–60. https://doi.org/10.1080/10705511.2014.950896

Muthén, L. K., & Muthén, B. O. (2002). How to use a Monte Carlo study to decide on sample size and determine power. *Structural Equation Modeling, 9*(4), 599–620. https://doi.org/10.1207/S15328007SEM0904_8

Newman, N., & Weiss, W. M. (2017). Relationship between demographic variables and collegiate athletes' perceptions of social support from head coaches. *International Journal of Sports Science & Coaching, 13*(3), 343-348. https://doi.org/10.1177/1747954117737981

Rae, G. (2006). Correcting Coefficient Alpha for Correlated Errors: Is a K a Lower Bound to Reliability? *Applied Psychological Measurement January, 30*(1), 56–59. https://doi.org/10.1177/0146621605280355

Rees, T., & Hardy, L. (2000). An Investigation of the Social Support Experiences of High-Level Sports Performers. *The Sport Psychologist, 14*(4), 327–347. https://doi.org/10.1123/tsp.14.4.327

Rees, T., Hardy, L., Güllich, A., Abernethy, B., Côté, J., Woodman, T., Montgomery, H., Laing, S. & Warr, C. (2016). The great British medalists project: a review of current knowledge

on the development of the world's best sporting talent. *Sports Medicine*, *46*(8), 1041–1058. https://doi.org/10.1007/s40279-016-0476-2

Rees, T., Ingledew, D. K., & Hardy, L. (1999). Social support dimensions and components of performance in tennis. *Journal of Sports Sciences, 17*(5), 421–429. https://doi.org/10.1080/026404199365948

Sarason, I. G., Levine, H. M., Basham, R. B., & Sarason, B. R. (1983). Assessing social support: The Social Support Questionnaire. *Journal of Personality and Social Psychology, 44*(1), 127–139. https://doi.org/10.1037/0022-3514.44.1.127

Sarkar, M., & Fletcher, D. (2014). Psychological resilience in sport performers: a review of stressors and protective factors. *Journal of Sports Sciences*, *32*(15), 1419–1434. https://doi.org/10.1080/02640414.2014.901551

Sheridan, D., Coffee, P., & Lavallee, D. (2014). A systematic review of social support in youth sport. *International Review of Sport and Exercise Psychology*, 7(1), 198–228. https://doi.org/10.1080/1750984X.2014.931999

Shi, J., Mo, X., & Sun, Z. (2012). Content validity index in scale development. *Zhong nan da xue bao. Yi xue ban= Journal of Central South University. Medical sciences*, *37*(2), 152–155. https://doi.org/10.3969/j.issn.1672-7347.2012.02.007

Sullivan, L., Ding, K., Tattersall, H., Brown, S. G., & Yang, J. (2022). Social support and post-injury depressive and anxiety symptoms among college-student athletes. *International Journal of Environmental Research and Public Health, 19*(11), 6458. https://doi.org/10.3390/ijerph19116458

Şenel, E., Yildiz, M., & Ulaş, M. (2018). Takima İlişkin Elde Edilebilir Sosyal Destek Ölçeği: Türkçe uyarlaması, geçerlik ve güvenirlik çalışması. *Spormetre Beden Eğitimi ve Spor Bilimleri Dergisi, 16*(4), 21–36. https://doi.org/10.1501/Sporm_0000000391

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2013). *Using multivariate statistics* (Vol. 6, pp. 497-516). Pearson.

Tabachnick, B.G., & Fidell, L.S. (2007). *Using multivariate statistics.* Allyn & Bacon.

Thurber, S., & Bonynge, M. (2011). SEM-based composite reliability estimates of the Crisis Acuity Rating Scale with children and adolescents. *Archives of Assessment Psychology*, *1*(1), 1–9.

Uchino, B. N. (2009). Understanding the links between social support and physical health: A life-span perspective with emphasis on the separability of perceived and received support. *Perspectives on Psychological Science*, *4*(3), 236-255. https://doi.org/10.1111/j.1745-6924.2009.01122.x

Waltz, C. F., & Bausell, B. R. (1981). *Nursing research: design statistics and computer analysis.* Davis Fa.

Williams, P., Barclay, L., & Schmied, V. (2004). Defining Social Support in Context: A Necessary Step in Improving Research, Intervention, and Practice. *Qualitative Health Research, 14*(7), 942–960. https://doi.org/10.1177/1049732304266997

Wills, T.A., & Shinar, O. (2000). Measuring perceived and received social support. In S. Cohen, L.G. Underwood, & B.H. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 86–135). Oxford University Press.

Yang, J., Peek-Asa, C., Lowe, J. B., Heiden, E., & Foster, D. T. (2010). Social support patterns of collegiate athletes before and after injury. *Journal of Athletic Training*, *45*(4), 372–379.

Yang, Y., & Green, S. B. (2011). Coefficient Alpha: A Reliability Coefficient for the 21st century? *Journal of Psychoeducational Assessment, 29*(4), 377–392. https://doi.org/10.1177/0734282911406668

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, *52*(1), 30-41. https://doi.org/10.1207/s15327752jpa5201_