

Reliability and Validity of Turkish Version of Short Form of the Social Role Participation Questionnaire in Patients With Ankylosing Spondylitis

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ABSTRACT

Objectives: This study aims to evaluate the reliability and validity of the Turkish version of the Short Form of the Social Role Participation Questionnaire (s-SRPQ) in Turkish patients with ankylosing spondylitis.

Patients and methods: The Turkish version of s-SRPQ questionnaire was obtained after a translation and back translation process. The study sample included 100 ankylosing spondylitis patients (59 males, 41 females; mean age 42.0±11.0 years; range 19 to 69 years). To assess the test-retest reliability of the Turkish s-SRPQ, the questionnaire was reapplied 15 days after the first interview (interclass correlation coefficient [ICC]). Cronbach's alpha (a) was used to evaluate the internal consistency. The s-SRPQ was compared with Short Form-36 (SF-36) survey, Ankylosing Spondylitis Quality of Life questionnaire (ASQoL), Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI), and Satisfaction With Life Scale (SWLS) for convergent validity.

Results: For s-SRPQ/experienced physical difficulties; the individual item ICC ranged from 0.78 to 1.00 and Cronbach's alpha value ranged from 0.88 to 1.00. For s-SRPQ/satisfaction with role performance; the individual item ICC ranged from 0.93 to 0.98 and Cronbach's alpha value ranged from 0.96 to 0.99. The Turkish version of s-SRPQ/experienced physical difficulties scores correlated with the SWLS and SF-36 sub-parameters negatively; and Ankylosing Spondylitis Disease Activity Index, and BASFI, and ASQoL positively. The SRPQ/satisfaction with role performance scores correlated with the SWLS and SF-36 sub-parameters positively; and BASDAI, and BASFI, and ASQoL negatively.

Conclusion: Turkish version of s-SRPQ has good comprehensibility, internal consistency, and validity and is an adequate and useful instrument for the assessment of participation in Turkish patients with ankylosing spondylitis.

Keywords: Ankylosing spondylitis; Short Form of the Social Role Participation Questionnaire; social role participation; Turkish version; validity and reliability.

Participation in social roles is often important in building and maintaining self-esteem and personal and economic autonomy for the individuals,¹ and can contribute to long-term physical and mental health.² Role participation includes being involved in close relationships (e.g., parenting), social and community interactions, being a student or employee, and participation in leisure pursuits. Roles involve patterns of behavior that are expected, taught, and encouraged within sociocultural contexts.³

Ankylosing spondylitis (AS) is a chronic inflammatory rheumatic disease with a usual onset in the third decade of life, when persons are committed to various social roles that adults fulfil.⁴ When evaluating the outcomes of clinical care, social role participation is an increasingly important outcome, particularly when considering diseases with substantial limitations in physical functioning such as inflammatory rheumatic diseases.²

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Interest in the investigations concerning social role among people with arthritis has been significantly increased in last decades.^{5,6} Social role participation scales have gained importance in patients with arthritis for studies investigating efficacy of new therapy strategies and identification of perceived health status. The first scale, named the “Social Role Participation Questionnaire (SRPQ)” was developed to assess the effect of health on 11 important social roles and four dimensions in populations with arthritis by Gignac et al.³ in 2008. After this study, Davis et al.⁷ has shown that this questionnaire is reliable and valid in assessing social role participation in patients with AS. Recently, Oude Voshaar et al.² developed a Short Form of the SRPQ (s-SRPQ) including six social roles along two dimensions in patients with AS to facilitate data collection in clinical studies and practice. sSRPQ is presented at the end of the article (Appendix). They demonstrated that the s-SRPQ retains the measurement properties of the original SRPQ and seems useful for measuring the effect of AS on participation. A short form of the instrument might be more feasible to use in research settings because redundant items are deleted and the chance of missing or nonapplicable items is minimized. It may also ultimately facilitate routine outcome data collection in clinical practice. This instrument was developed for English-speaking patients, thus translation and adaptation to other languages and cultures are needed. To the best of our knowledge, s-SRPQ has not yet been translated for use in Turkey. Therefore, in this study, we aimed to evaluate the reliability and validity of the Turkish version of the s-SRPQ in Turkish patients with AS.

PATIENTS AND METHODS

The study was conducted at the Department of Physical Medicine and Rehabilitation of Medical Faculty of Ondokuz Mayıs University between March 2017 and October 2017. The study sample included 100 AS patients (59 males, 41 females; mean age 42.0±11.0 years; range 19 to 69 years). The study protocol was approved by the Faculty Ethics Committee (B.30.2.ODM.0.20.08/718). A written informed consent was obtained from each participant. The study was conducted in line with the principals of the Declaration of Helsinki.

The inclusion criteria for the study were fulfilling the modified New York classification criteria of AS⁸ and being over 18 years of age. The exclusion criteria were psychiatric disorders that may affect outcome scores or failure to speak Turkish fluently.

All participants were questioned about age, sex, employment status, education level, duration of disease, received treatment for AS, and duration of medications used. Height, weight, and Body Mass Index (kg/m²) were measured according to international standards. Patients were also evaluated by visual analog scale (VAS, 0-10 cm) for pain. Modified lumbar Schober's test and chest expansion⁹ were assessed in order to measure the spinal movement limitation in participants. All of the evaluations were conducted by a medical doctor.

The s-SRPQ assesses participation across six social roles along two dimensions, “experienced physical difficulties” and “satisfaction with role performance”. Respondents complete the satisfaction and difficulty they experience with the following social roles: planning/engaging social events, travel or vacation, employment, education, intimate relationships, relationships with family. For each dimension, a summary score can be calculated for presenting the average. An overall experienced physical difficulties score is obtained by averaging the six items of the experienced difficulties scale, yielding a score ranging from 1 to 4, with higher scores indicating higher perceived physical participation difficulties. An overall satisfaction with role performance score is obtained by averaging the six items of the satisfaction with role performance scale, yielding a score ranging from 1 to 5 with higher scores indicating higher overall satisfaction.²

To assess the validity of the s-SRPQ, it was compared with Short Form-36 Health Survey (SF-36), Ankylosing Spondylitis Quality of Life Questionnaire (ASQoL), Satisfaction With Life Scale (SWLS), Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), and Bath Ankylosing Spondylitis Functional Index (BASFI).

The SF-36: It is a generic instrument consisting of 36 items and measuring eight different aspects of health status. The items of the SF-36 are grouped into eight subscales: physical functioning (10 items), role limitation due to physical health

problems (four items), bodily pain (two items), general health perception (five items), vitality (four items), social functioning (two items), role limitation due to emotional problems (three items), and mental health (five items). The first four subscales are combined to produce one summary measure: a physical component summary and the second four subscales are combined to produce another summary measure: a mental component summary. These 35 questions are associated with the health status during the period of the last four weeks. The questionnaire also includes a single item that provides information about the assessment of the current health condition in comparison to the health condition a year ago. Items are scored in the range from 0 to 100 and a higher score means a better health status.¹⁰ The reliability and validity of the Turkish form of SF-36 was performed by Kocyigit et al.¹¹

The ASQoL: It is a self-reported questionnaire that assesses quality of life of patients with AS. The ASQoL comprises 18 questions, each with a dichotomous “yes/no” response format, scored “1” and “0,” respectively. Total scores range from 0 to 18, with a higher score indicating poor quality of life.¹² The reliability and validity of the Turkish form of ASQoL was performed by Duruoç et al.¹³

The SWLS: It is a self-reported questionnaire that assesses the overall satisfaction with the respondent’s life. The questionnaire has five items that can be rated on a Likert scale (1 not at all agree to 7 totally agree). Total scores range from 5 to 35, higher scores indicating more life satisfaction.¹⁴ The validity and reliability of the SWLS were performed in the Turkish population.¹⁵

The BASDAI: It is a self-administered questionnaire that assesses disease activity of patients with AS. This questionnaire consists of six questions relating to five major symptoms including fatigue, spinal pain, joint pain/swelling, areas of localized tenderness, and morning stiffness. Morning stiffness is measured in terms of both severity and duration. The patients are asked to mark the degree to which they experienced the aforementioned symptoms over the previous week. Each of the first five questions are answered on 10-cm, unmarked, horizontal VAS excepting the words “none” and “very

severe” at opposite ends, while the scale for degree of morning stiffness is graded every 15 minutes between 0 hour and two hours. The mean of these two scores on morning stiffness is calculated. The total BASDAI score is obtained by converting the overall index (0-50) to a 0-10 scale.¹⁶ The validity and reliability of the BASDAI were performed in the Turkish population.¹⁷

The BASFI: It is a self-administered questionnaire that assesses functional status of patients with AS. This index includes eight items on daily activities and two items assessing the patient’s ability to cope with everyday life. Items on the BASFI are scored on a 10-cm VAS. The VAS is unmarked, except for the words “easy” and “impossible” at either end of the line to indicate the direction of the severity. The mean of the 10 scales yields the total score, ranging between 0 and 10.¹⁸ The validity and reliability of the BASFI were performed in the Turkish population.¹⁹

All subjects were reevaluated two weeks later using an interclass correlation coefficient. In the second examination, s-SRPQ, SF-36, ASQoL, SWLS, BASDAI, and BASFI were asked again for test-retest evaluation.

The s-SRPQ was translated into Turkish by three Turkish medical doctors who were proficient in English. Discrepancies in initial translations were addressed with the assistance of a fourth independent translator. The Turkish version of the s-SRPQ was then translated back into English by two English-speaking language specialists who were blinded to the original scale and the objective of the study. The differences between translated versions were evaluated, and a satisfactory compliance with the original scale was achieved by consensus of the translators. Firstly, ten Turkish AS patients filled the questionnaire and then they were asked whether they could understand all items of the Turkish s-SRPQ. None of the patients in this initial group reported a problem with any item of the s-SRPQ. Then, the 100 patients who constituted the study group completed the s-SRPQ.

Statistical analysis

In this study, the sample size for 0.99 power and $p < 0.05$ was calculated as 100. All data were analyzed with IBM SPSS Statistics for

Table 1. Socio-demographic and clinical characteristics of patients (n=100)

Characteristics	Mean±SD	Median	Min-Max
Age (year)	42.0±11.0	42	19-69
Body Mass Index (kg/m ²)	28.2±6.5	27	17-63
Disease duration (years)	7.3±6.2	5	1-30
Duration of biologic agents used (months)	45.0±34.4	36	3-144
Pain (Visual Analog Scale, 0-10 cm)			
Activity	4.3±2.6	4	0-10
Rest	4.4±2.5	4	0-10
Chest expansion (cm)	4.2±0.9	4	1-5
Modified Schober's test (cm)	4.1±0.9	4	1-5
Bath Ankylosing Spondylitis Disease Activity Index (0-10)	3.5±2.3	3.4	0.2-8.6
Bath Ankylosing Spondylitis Functional Index (0-10)	2.0±2.5	0.6	0-8.3
Short Form of The Social Role Participation Questionnaire			
Experienced physical difficulties (6-24)	1.9±0.7	1.9	1-3.5
Satisfaction with role performance (6-30)	3.1±1.3	3	1-5
Ankylosing Spondylitis Quality of Life Questionnaire (0-18)	5.5±5.4	4	0-18
Satisfaction With Life Scale (5-35)	22.9±6.7	24	10-35
Short Form-36 Health Survey			
Physical functioning	71.2±27.5	75	0-100
Physical role limitations	44.8±48.5	0	0-100
Bodily pain	64.7±23.6	66	10-100
General health	48.2±22.0	50	5-95
Vitality/energy	60.5±20.7	65	5-100
Social functioning	71.2±27.8	75	0-100
Emotional role	77.1±40.4	100	0-100
Mental health	68.8±16.9	72	16-96

SD: Standard deviation; Min: Minimum; Max: Maximum.

Windows, Version 20.0 software (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to characterize the sample. The Kolmogorov-Smirnov test was used to analyze normal distribution assumption of the quantitative

outcomes and all parameters were not normally distributed. Non-parametric statistical tests were used because of the ordinal nature of the outcome measures. Nonparametric tests for independent samples were used to test differences in s-SRPQ

Table 2. Comparison of the Short Form of the Social Role Participation Questionnaire scores of patients (n=100)

	n	s-SRPQ							
		Experienced physical difficulties			p	Satisfaction with role performance			
		Mean±SD	Median	Min-Max			Mean±SD	Median	Min-Max
Sex					0.010**				0.002**
Female	41	2.1±0.7	2.1	1-3.5		2.6±1.2	2.5	1-5	
Male	59	1.7±0.7	1.5	1-3.5		3.4±1.3	3.8	1-5	
Marital status					0.022*				0.084
Married	82	1.9±0.7	2	1-3.5		3.0±1.3	1.1	1-3	
Other	18	1.5±0.6	2.8	1-5		3.6±1.2	3.8	1.1-5	
Education					0.001**				0.001**
Primary education	65	2.0±0.8	2.1	1-3.5		2.8±1.3	1.3	1-3.1	
Secondary education + college	35	1.5±0.6	2.6	1-5		3.7±1.1	3.8	1.1-5	
Employment status					0.001**				0.000**
Housewife	33	2.2±0.6 ^a	2.2	1-3.5		2.3±1.0 ^a	2.4	1-4.5	
Retired	9	1.9±1.1 ^{ab}	1.4	1-3.5		3.1±1.5 ^{ab}	3.6	1.1-5	
Working	28	1.5±0.6 ^b	1.1	1-3.1		3.7±1.2 ^b	3.9	1-5	
Officer	10	1.4±0.5 ^b	1.2	1-2.3		3.9±1.1 ^b	4	2-5	
Other	20	1.8±0.7 ^{ab}	1.8	1-3		3.1±1.3 ^{ab}	3	1-5	
Disease activity					0.000**				0.000**
Low (BASDAI <4)	58	1.6±0.7	1.2	1-3.5		3.6±1.2	4	1-5	
High (BASDAI ≥4)	42	2.2±0.6	2.2	1-3.1		2.3±0.9	2.2	1-4	

s-SRPQ: Short Form of The Social Role Participation Questionnaire; SD: Standard deviation; Min: Minimum; Max: Maximum; BASDAI: Bath Ankylosing Spondylitis Disease Activity Index; * Significant p<0.05; ** Significant p<0.01; a, b, ab: Same letters denote that there is no significant difference between the groups.

Table 3. Internal consistency and test-retest reliability of Turkish Short Form of the Social Role Participation Questionnaire

s-SRPQ questions	ICC	Cronbach alpha
Experienced physical difficulties		
1 st question	0.99	0.99
2 nd question	0.98	0.99
3 rd question	1.00	1.00
4 th question	0.96	0.98
5 th question	0.96	0.98
6 th question	0.78	0.88
Satisfaction with role performance		
1 st question	0.98	0.99
2 nd question	0.98	0.99
3 rd question	0.96	0.98
4 th question	0.97	0.98
5 th question	0.93	0.96
6 th question	0.97	0.98

s-SRPQ: Short Form of the Social Role Participation Questionnaire; ICC: Intraclass correlation coefficient.

scores between groups (Mann-Whitney U test for two groups or the Kruskal-Wallis one-way analysis of variance for three or more groups). For group comparison, Kruskal-Wallis test with the Bonferroni correction was used for multiple comparisons of continuous variables.

Internal reliability of s-SRPQ was evaluated by calculating the Cronbach's alpha coefficient (alpha ≥ 0.70 was considered significant) for the whole scale. Test-retest reliability was assessed by the intraclass correlation coefficient (ICC) between scores obtained in the main survey and follow-up (ICC ≥ 0.85 was considered). For test-retest reliability assessment, 100 patients were assessed twice with a two-week interval by the same researcher.

Construct validity was evaluated by exploratory factor analysis. The internal structure of s-SRPQ was examined by factor analysis, first by using principal component analysis with varimax rotation, then by using oblique rotation to assess inter-correlation between factors, and finally by specifying a single factor solution to determine the unity of the scale. The Kaiser-Meyer-Olkin (KMO) test was performed to evaluate sample adequacy. The number of components was determined according to the eigenvalue.

Convergent validity was assessed by examining the correlation between s-SRPQ and other parameters. Correlation was assessed by Spearman's correlation analysis. P value of

Table 4. Internal consistency and test-retest reliability of Short Form of the Social Role Participation Questionnaire

s-SRPQ	Median	Range	Cronbach's alpha	ICC (95%CI)	Test-retest reliability (95%CI)
Experienced physical difficulties	2	2.5	0.99	0.99 (0.99-0.99)	0.99 (0.98-0.99)
Satisfaction with role performance	3	4	0.99	0.98 (0.98-0.99)	0.98 (0.98-0.99)

s-SRPQ: Short Form of the Social Role Participation Questionnaire; ICC: Intraclass correlation coefficient; CI: Confidence interval.

Table 5. Correlations between Short Form of the Social Role Participation Questionnaire and other scales (n=100)

	s-SRPQ scores	
	Experienced physical difficulties	Satisfaction with role performance
	r	r
Bath Ankylosing Spondylitis Disease Activity Index	0.58**	-0.61**
Bath Ankylosing Spondylitis Functional Index	0.75**	-0.71**
Ankylosing Spondylitis Quality of Life Questionnaire	0.78**	-0.79**
Satisfaction With Life Scale	-0.50**	0.50**
Short Form-36 Health Survey		
Physical functioning	-0.78**	0.77**
Bodily pain	-0.73**	0.70**
General health	-0.38**	0.40**
Vitality/energy	-0.64**	0.66**
Social functioning	-0.34**	0.38**
Emotional role	-0.64**	0.64**
Mental health	-0.73**	0.72**

s-SRPQ: Short Form of the Social Role Participation Questionnaire; r: Spearman's correlation coefficient; * Significant p<0.05; ** Significant p<0.01.

Table 6. Results of factor analysis of each Turkish Short Form of the Social Role Participation Questionnaire item

s-SRPQ Experienced physical difficulties			
	Indicators	Factor load	Communality
Item 1	Social events	0.86	0.75
Item 2	Travel or vacation	0.83	0.69
Item 3	Employment	0.88	0.78
Item 4	Education	0.93	0.87
Item 5	Intimate relationships	0.88	0.78
Item 6	Relationship with family	0.86	0.75
Kaiser-Meyer-Olkin test	0.90		
Eigenvalues	4.64		
Explained variance	77.38		
Cronbach's alpha	0.937		
s-SRPQ Satisfaction with role performance			
	Indicators	Factor load	Communality
Item 1	Social events	0.90	0.82
Item 2	Travel or vacation	0.88	0.77
Item 3	Employment	0.90	0.80
Item 4	Education	0.92	0.86
Item 5	Intimate relationships	0.88	0.78
Item 6	Relationship with family	0.91	0.83
Kaiser-Meyer-Olkin test	0.89		
Eigenvalues	4.89		
Explained variance	81.55		
Cronbach's alpha	0.954		

s-SRPQ: Short Form of the Social Role Participation Questionnaire.

less than 0.05 was considered as statistically significant.

RESULTS

Socio-demographic and clinical characteristics of the patients were provided in Table 1. The mean age of participants was 42.0±11.0 years (range 19 to 69 years) and disease duration was 7.3±6.2 years (range 1 to 30 years). The study population consisted of AS patients using biological agents. Comparison of the s-SRPQ scores of the patients according to the demographic features and disease activity were presented in Table 2. The Turkish s-SRPQ/experienced physical difficulties scores were significantly higher and the s-SRPQ/satisfaction with role performance scores were significantly lower in female subjects, in primary education level, and in subjects who had a high disease activity (p<0.05). Married participants had statistically higher s-SRPQ/experienced physical difficulties scores (p<0.05), but s-SRPQ/satisfaction with

role performance scores were not statistically significant in terms of marital status (p>0.05). The s-SRPQ/experienced physical difficulties scores of housewives were higher and their s-SRPQ/satisfaction with role performance scores were lower than workers or officers (p<0.01) (Table 2).

Internal consistency and test-retest reliability of Turkish s-SRPQ were provided in Table 3. For s-SRPQ/experienced physical difficulties; the individual item ICC ranged from 0.78 to 1.00 and Cronbach's alpha value ranged from 0.88 to 1.00. For s-SRPQ/satisfaction with role performance; the individual item ICC ranged from 0.93 to 0.98 and Cronbach's alpha value ranged from 0.96 to 0.99 (Table 3).

Test-retest correlation coefficients of s-SRPQ/experienced physical difficulties and s-SRPQ/satisfaction with role performance were also found as 0.99 and 0.98, respectively, which indicated high test-retest reliability (Table 4).

Correlations between the s-SRPQ and other scales were given in Table 5. The Turkish version of s-SRPQ/experienced physical difficulties

scores negatively and strongly correlated with the SWLS and SF-36 sub-parameters scores (except general health ($r=-0.38$) and social functioning ($r=0.40$) ($p<0.01$). There were also strong positive correlations between s-SRPQ/experienced physical difficulties scores and BASDAI, BASFI, and ASQoL scores ($p<0.01$). Strong positive correlations were detected between the SRPQ/satisfaction with role performance scores and SWLS and SF-36 sub-parameters scores (except general health ($r=-0.34$) and social functioning ($r=0.38$) ($p<0.01$). There were also strong negative correlations between s-SRPQ/satisfaction with role performance scores and BASDAI, BASFI, and ASQoL scores ($p<0.01$) (Table 5).

Factor analysis of the six items in s-SRPQ/experienced physical difficulties and s-SRPQ/satisfaction with role performance revealed one factor above eigenvalue of 1, which was more prominent (Table 6). Each item was represented in factor analysis. At the end of the analysis, KMO values were determined as 0.90 and 0.89, which were observed to be suitable values for the analysis of essential variables in the s-SRPQ/experienced physical difficulties and s-SRPQ/satisfaction with role performance, respectively. The matrix variance was 77% and 81% for factor load in the s-SRPQ/experienced physical difficulties and s-SRPQ/satisfaction with role performance, respectively. As a result, the construct validity of our translated questionnaire was evaluated as satisfactory (Table 6).

DISCUSSION

Oude Voshaar et al.² developed the s-SRPQ to evaluate the social role participation of patients with AS, in 2016. They demonstrated that s-SRPQ retains the reliability and construct validity of the original version, and reported that the current brief version is more “user friendly” and can be used in both clinical and research settings. It is known that the cross-cultural validation of original instruments is important to facilitate international comparisons and multinational studies. The goal of the present study was to evaluate the validity and reliability of a Turkish language version of s-SRPQ scale.

Cronbach's α coefficient provides us with internal consistency of the scale tested where

values over 0.80 are accepted as a higher index of consistency.²⁰ In this study, the analysis of internal validity of the Turkish s-SRPQ revealed that the scale individual items presented adequate internal consistency (Cronbach's α value for s-SRPQ/experienced physical difficulties ranged from 0.88 to 1.00 and for s-SRPQ/satisfaction with role performance ranged from 0.98 to 0.99). In the original study by Oude Voshaar et al.,² reliability coefficient determined for the s-SRPQ/experienced physical difficulties was 0.91 and s-SRPQ/satisfaction with role performance was 0.86. In the current study, the internal consistency results of the Turkish s-SRPQ were similar to the original questionnaire.

Test-retest reliability was estimated using ICCs.²¹ Test-retest reliability of the original s-SRPQ has not been evaluated. In the current study, ICC was determined as 0.99 and 0.98 for two dimensions of s-SRPQ. This result indicates that Turkish SRPQ has good reliability, which means that it is a consistent questionnaire from one time to another.

Factor analysis is a collection of methods used to examine how underlying constructs influence the responses on a number of measured variables.²² The Bartlett's test value was determined before the assessment of factor construct and found to be suitable for factor analysis ($p=0.001$). The internal structure of the original SRPQ scale was examined by factor analysis. The KMO is used to compare an observed correlation coefficient and the partial correlation coefficient. In this study, KMO values were 0.90 and 0.89 for two dimensions of the s-SRPQ, which may be considered adequate.

Convergent validity was assessed by reviewing the magnitude and direction of the correlation of Turkish s-SRPQ scores to other scores on other measures. In the current study, two dimensions of s-SRPQ were strongly correlated with SWLS, ASQoL, and most of the SF-36 sub-parameters. The weak relationship between s-SRPQ and SF-36 general health and social functioning sub-parameters may be due to SF-36 being a general instrument evaluating health status and not being disease specific. Strong correlations were also found between two dimensions of s-SRPQ and BASDAI, and BASFI. These results indicated that lower SRPQ/experienced physical difficulties and higher SRPQ/satisfaction with role

performance scores were associated with lower disease activity, more independent functional status, and better quality of life and life satisfaction. Oude Voshaar et al.² demonstrated a similar pattern of correlations between the original s-SRPQ and SF-36, and SWLS. Convergent validity of the Turkish s-SRPQ was shown to be comparable to the original as evidenced by similar results of both studies. Results of the current study indicated a strong correlation between the Turkish s-SRPQ and the gold standard criteria for clinical evaluation of AS.

In line with the original s-SRPQ,² it was found that the Turkish version of s-SRPQ was able to distinguish the difference between low (BASDAI<4) and high (BASDAI≥4) disease activity among patients with AS. The effect of socio-demographic data (sex, marital status, education, and employment status) on original s-SRPQ has not been assessed. In our study, female patients and patients with lower education level had more experienced physical difficulties but had poor satisfaction with role performance. Married patients had higher s-SRPQ/experienced physical difficulties scores. The experienced physical difficulties of housewives were more than workers or officers and their satisfaction with role performance was lower. These results indicate that AS patients with female sex, low education level, and high disease activity may have more difficulty in social role participation. Social participation in AS patients who are married and housewives appears to be adversely affected.

To the best of our knowledge, this is the first study to evaluate the Turkish version of the s-SRPQ in patients with AS. Present study translated the s-SRPQ into Turkish, and further tested several aspects of its validity among patients with AS. We observed that the Turkish version of s-SRPQ was easily understood and applied in a short time by patients with AS. The internal reliability, test-retest reliability, and concurrent validity indicate that the Turkish s-SRPQ has good clinimetric characteristics for Turkish AS patients. Although the s-SRPQ was developed for use in patients with AS, its items represent general roles and were not restricted to any AS-specific area. It would therefore be interesting for future studies to assess its performance in other disease groups.

In conclusion, the findings of this study confirm that Turkish s-SRPQ has good reliability and validity as a measure of social role participation such as perceived physical participation difficulties and life satisfaction in Turkish AS patients. Turkish s-SRPQ may be an important instrument for the assessment of social health status both in research and clinical practice.

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APPENDIX

Sosyal Rol Katılım Anketi Kısa Formu (k-SRKA)			
Kişiler zamanlarını farklı yollarla geçirirler. Biz sağlığımızın hayatınızı nasıl etkilediğini öğrenmek istiyoruz. Aşağıda, hayatınızın çeşitli alanlarına yönelik sorular mevcuttur. Sizin cevaplarınıza göre, bu alanların her birinin sizin için ne kadar önemli olduğu, sağlığımızın bu alanlara katılımınıza ilişkin sorunlar çıkartıp çıkartmadığı ve bu alanlara katılımınızdan memnuniyetiniz değerlendirilmeye çalışılacaktır. Lütfen cevabınızı yuvarlak içine alınız.			
Tecrübe edilen fiziksel zorluklar ölçeği	Yanıt seçenekleri	Rol performans doyum ölçeği	Yanıt seçenekleri
Sosyal etkinlikleri planlarken veya sosyal etkinliklere katılırken ne kadar fiziksel zorluk çekiyorsunuz?	(1) Zorluk yok (2) Biraz zorluk (3) Çok zorluk (4) Yapılamıyor	Tercih ettiğiniz sosyal etkinlik türlerini planlama veya iştirak becerinizden ne kadar memnunsunuz?	(1) Hiç memnun değil (2) Biraz (3) Kısmen (4) Çok (5) Fazlasıyla memnun
Seyahatte ya da tatile giderken ne kadar fiziksel zorluk çekiyorsunuz?	(1) Zorluk yok (2) Biraz zorluk (3) Çok zorluk (4) Yapılamıyor	Tercih ettiğiniz tatil türü veya seyahat deneyimlerinizden ne kadar memnunsunuz?	(1) Hiç memnun değil (2) Biraz (3) Kısmen (4) Çok (5) Fazlasıyla memnun
İşinizde çalışırken ne kadar fiziksel zorluk çekiyorsunuz?	(1) Zorluk yok (2) Biraz zorluk (3) Çok zorluk (4) Yapılamıyor	Sahip olabildiğiniz ücretli işin türünden ne kadar memnunsunuz? (örn, eğitim/becerilerinize ihtiyaç duyan bir iş)	(1) Hiç memnun değil (2) Biraz (3) Kısmen (4) Çok (5) Fazlasıyla memnun
Okula giderken veya eğitime devam ederken ne kadar fiziksel zorluk çekiyorsunuz?	(1) Zorluk yok (2) Biraz zorluk (3) Çok zorluk (4) Yapılamıyor	Tercih ettiğiniz çalışmalara/ eğitime katılımınızdan ne kadar memnunsunuz?	(1) Hiç memnun değil (2) Biraz (3) Kısmen (4) Çok (5) Fazlasıyla memnun
Partneriniz, eşiniz veya sevgilinizle yakın ilişkinizde ne kadar fiziksel zorluk çekiyorsunuz?	(1) Zorluk yok (2) Biraz zorluk (3) Çok zorluk (4) Yapılamıyor	Eşinizle/ partnerinizle sahip olabildiğiniz ilişki tipinizden ne kadar memnunsunuz?	(1) Hiç memnun değil (2) Biraz (3) Kısmen (4) Çok (5) Fazlasıyla memnun
Aile üyeleriyle katıldığınız aktivitelerde ne kadar fiziksel zorluk çekiyorsunuz?	(1) Zorluk yok (2) Biraz zorluk (3) Çok zorluk (4) Yapılamıyor	Aile üyeleri ile kurabildiğiniz ilişki şekli ne kadar memnunsunuz?	(1) Hiç memnun değil (2) Biraz (3) Kısmen (4) Çok (5) Fazlasıyla memnun
<i>Tecrübe edilen fiziksel zorluklar skoru:</i> 1 ile 4 arasındadır ve Tecrübe Edilen Fiziksel Zorluklar Ölçeğine ait 6 maddenin ortalaması alınarak elde edilir, yüksek skorlar yüksek fiziksel katılım zorluğu algınıza işaret eder.			
<i>Rol performans memnuniyet skoru:</i> 1 ile 5 arasındadır ve Rol Performans Doyum Ölçeğine ait 6 maddenin ortalaması alınarak elde edilir, yüksek skorlar yüksek genel doyumunu gösterir.			