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THE TRANSLATION, RELIABILITY, AND CONSTRUCT VALIDITY OF THE SOCIAL ROLE PARTICIPATION QUESTIONNAIRE FOR PEOPLE WITH RHEUMATOID ARTHRITIS

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Abstract

The social participation of people with rheumatoid arthritis is assessed using the Social Role Participation Questionnaire. The aim of this study was to translate the Social Role Participation Questionnaire into the Serbian language, and to investigate its reliability and validity for Serbian people with rheumatoid arthritis. Questionnaires were satisfactorily completed by 126 participants with rheumatoid arthritis, during 2021. Test-retest reliability, internal consistency reliability, and construct validity of the Serbian version of the Social Role Participation Questionnaire were evaluated using the intraclass correlation coefficient, Cronbach's alpha, and Spearman's correlation coefficient, respectively. Some single item scores showed floor and/or ceiling effects. This was particularly evident in the physi-

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cal difficulty items, which showed a floor effect in 20-80% of participants. The high intraclass correlation coefficient score (0.913–0.959) suggested a very high test-retest reliability. The Cronbach's alpha coefficient, ranging from 0.706 to 0.926, was reliable for the majority of internal consistency. With the exception of the Social Role Participation Questionnaire subscale role importance at the first measurement, the construct validity of this instrument was confirmed. In assessing the social participation of Serbian people with rheumatoid arthritis, the Serbian translation of the Social Role Participation Questionnaire is a trustworthy and valid instrument.

Key words: reliability, rheumatoid arthritis, Serbian version, SRPQ, validity.

ПРЕВОД, ПОУЗДАНОСТ И КОНСТРУКТИВНА ВАЛИДНОСТ УПИТНИКА О УЧЕШЋУ У ДРУШТВЕНИМ УЛОГАМА ЗА ОСОБЕ СА РЕУМАТОИДНИМ АРТРИТИСОМ

Апстракт

Социјална партиципација особа са реуматоидним артритисом може се проценити помоћу Упитника о учешћу у друштвеним улогама. Циљ овог истраживања је био да се Упитник о учешћу у друштвеним улогама преведе на српски језик и да се испита његова поузданост и валидност код особа са реуматоидним артритисом. Упитнике је на задовољавајући начин попунило 126 особа са реуматоидним артритисом, током 2021. године. Тест-ретест поузданост, интерна конзистентност и конструктивна валидност српске верзије Упитника о учешћу у друштвеним улогама процењени су применом коефицијента интракласне корелације, Кронбахове алфе и Спирмановог коефицијента корелације. Неки резултати појединачних ставки су показали ефекте пода и/или плафона. Ово је посебно било видљиво у ајтемима који су се односили на физичке потешкоће где је дошло до ефекта пода код 20-80% испитаника. Висока вредност коефицијента интракласне корелације (0.913–0.959) указује на одличну тест-ретест поузданост. Када се ради о унутрашњој конзистентности поузданости, већина Кронбаховог алфа коефицијента била је јака (0.706–0.926). Конструктивна валидност упитника је потврђена, са изузетком субскале Значај улоге при првом мерењу. Српска верзија Упитника о учешћу у друштвеним улогама се показала као поуздан и валидан упитник који врши процену социјалне партиципације особа са реуматоидним артритисом.

Кључне речи: поузданост, реуматоидни артритис, српска верзија, SRPQ, валидност.

INTRODUCTION

The most typical type of inflammatory rheumatism is rheumatoid arthritis (RA), a systemic, chronic, autoimmune illness with unknown causes. RA affects multiple body systems, the joints of hands, wrists, feet, ankles, knees, shoulders and elbows (Long et al., 2022). In the world, between 0.5 and 1% of the adult population suffers from this disease (e.g. Frazzei, van Vollenhoven, de Jong, Siegelaar, & van Schaardenburg, 2022; Wilburn et al., 2015), while the annual prevalence is 1.3% in the

population of people younger than 25 (Lawrence et al., 1998). In the Republic of Serbia, in relation to gender and age, the standardized prevalence of RA is 0.34% for the entire population (in a ratio of 3:1 for women) (Zlatković-Švenda, Stojanović, Šipetić-Grujičić, & Guillemin, 2014).

Early detection and diagnosis are crucial to alleviate RA symptoms, in order to increase the remission rate, slow down and reduce the appearance of permanent damage. In most patients, however, RA is a serious disease in which joint damage progresses, and the ability to work and care for oneself is weakened or lost, leading to disability. Social participation, which can be defined by the individual's social roles, is closely related to the occurrence of disability. In this sense, the degree to which a person can play a certain function in society is considered when defining their level of social participation, as well as how important the participation in the role is for the individual themselves, and not whether the activity required by that role is carried out (Davis, Wong, Badley, & Gignac, 2009; Gignac et al., 2008). Having the above explanation in mind, Gignac et associates (2008) suggest that when assessing social participation, one should take into account personal preferences as well as the importance an individual attaches to a certain role. Also, the way and time the person wants to spend in the role are equally important. Participation and presence in the family, school or work is different for each individual. With increasing age, social support is demonstrably an important factor that contributes to social participation and quality of life (e.g. Drljan, Vuković, Dragaš Latas, & Mihajlović, 2021). Measuring social participation is important for improving a person's health, well-being, and quality of life (Devrimsel & Serdaroğlu Beyazal, 2021). In the available literature, various instruments are found for the assessment of social participation, that is, for the assessment of different aspects of social participation – e.g. The ICF-Measure of Participation and Activities Screener (IMPACT-S; Post, de Witte, Reichrath, Verdonschot, Wijlhuizen, & Perenboom, 2008), the Keele Assessment of Participation (KAP; Wilkie, Peat, Thomas, Hooper, & Croft, 2005), and Participation survey/mobility (PARTS/M; Gray, Hollingsworth, Stark, & Morgan, 2006)). In essence, these instruments should shed light on the degree of social participation so that it can be used for further rehabilitation and health promotion. The Social Role Participation Questionnaire (SRPQ) is an instrument for evaluating a variety of responsibilities (more precisely, 12 roles) through different dimensions (Davis, Palaganas, Badley, Gladman, Inman, & Gignac, 2011). The goal of applying SRPQ is to assess the individual's perception of: (1) the importance of participation in various social roles; (2) the limitations of participation in social roles; and (3) satisfaction with participation in social roles. The questions are designed in a way that prompts individuals to think about their health in general, or about specific conditions (e.g. knee pain related to arthritis) through their responses. Among other things, par-

ticipants are also asked whether they are currently employed, whether they attend school, whether they are in an intimate relationship or have children or grandchildren (Gignac et al., 2008). According to the available literature, for people with Ankylosing Spondylitis (AS) and osteoarthritis in Canada (Gignac, Backman, Davis, Lacaille, Cao, & Badley, 2013), as well as Dutch and Chinese AS people (Davis et al., 2011), the English version of the SRPQ has been proved to be a valid and reliable tool (van Genderen, 2018). However, this instrument has not been validated for participants with RA. Also, its translation and adaptation into the Serbian language has not been carried out.

In this study, the aim was to translate the SRPQ into Serbian, cross-culturally adapt it, and assess its psychometric properties, with a focus on the version's validity and reliability.

METHODS

Translation and Cross-cultural Adaptation

The original SRPQ was translated and cross-culturally adapted in accordance with global standard (Beaton, Bombardier, Guillemin, & Ferraz, 2000). Two bilingual translators who were native speakers of Serbian first translated the original SRPQ into the first Serbian version. One of the translators had a background in medicine, whereas the other was untrained in medicine and was unaware of the aim of the study. Second, the authors combined the translation, and the differences between the initial Serbian versions were fixed by coming to an agreement between the two translators. Third, two additional bilingual experts who were native English speakers back translated the Serbian version SRPQ into English in order to correct errors. The translation and reverse translation were both completed twice. In order to attain a pre-final version of the Serbian version of SRPQ, we organised an expert committee that compared the back translation with the initial Serbian version and the original English version item by item. This committee also fixed any contradictions or other issues. To ensure that every item in the pre-final version was understandable, this consensus version was completed by 28 Serbian outpatients with RA. Following corrections made in response to the input, the final Serbian version of SRPQ was created. The final version, which the expert group unanimously approved, was subsequently put through additional psychometric testing.

Sample

The minimal sample size for this study's calculations was determined to be 121 for 0.95 and p 0.05 (Faul, Erdfelder, Lang, & Buchner, 2007). In total, 126 individuals with RA were recruited from the Institute of Rheumatology in Belgrade during 2021. The research was conditioned

by the epidemiological situation caused by the COVID-19 pandedmic. People with malignancy, heart failure classified as NYHA Classes III or IV, severe cases receiving insufficient care, and those with diagnoses of glandular illness or other inflammatory rheumatic disorders were excluded from the sample. It should be noted that certain data, such as disease activity, was taken from the respondents' medical records. Disease activity was assessed using the Disease Activity Score 28 (DAS28) and the Clinical Disease Activity Index (CDAI). These tools are composite scores derived from a clinical examination of the number of painful and swollen joints. DAS28 and CDAI showed moderate to strong correlation (Singh, Kumar, Handa, Talapatra, Ray, & Gupta, 2011; according to Šimpraga, 2023). Informed written consent was given by each person. In addition to providing demographic data, the participants independently completed the Serbian version of the SRPQ and the Rheumatoid Arthritis Quality of Life (RAQoL) questionnaire. Table 1 contains information about the participants' characteristics.

Instrument and Procedures

The SRPQ, which has been developed to evaluate participation in people with disabilities, is closely tied to the International Classification of Functioning, Disability and Health's definition of participation (World Health Organization, 2001). To put it another way, the SRPQ was created for rheumatic disorders to evaluate social role participation in relation to the activities a person engages in within a larger social context. SRPQ's initial iteration comprised three dimension scores that evaluate: (1) role importance, (2) satisfaction with time spent in roles, and (3) satisfaction with role performance (Davis et al., 2009; Gignac et al., 2008). In the modified version, the satisfaction with role performance dimension has been changed to physical difficulty (Gignac et al., 2013; Gignac, Lacaille, Beaton, Backman, Cao, & Badley, 2014). Participants are asked to rank the following 11 social roles in terms of importance, satisfaction, and difficulty: (1) intimate relationships; (2) relationships with (step/grand) children; (3) employment; (4) social events; (5) physical leisure; (6) travel or vacation; (7) hobbies; (8) relationships with other families; (9) community, religious, cultural involvement; (10) casual or informal contact with others; and (11) education. One generic role that is scored across the three dimensions is also included in the SRPQ (Davis et al., 2009). There are a total of 36 items. The SRPQ scores range from 1 (not at all important/not at all satisfied/very difficult) to 5 (extremely important/extremely satisfied/not at all difficult) on a five-point Likert scale (Björk, Bergström, Sverker, & Brodin, 2020). The mean value is calculated separately for each of the three dimensions of the social role: importance of the role, physical difficulties in each role ie. role limitation, and role satisfaction. Those individuals who report that the role does not apply to them are as-

Table 1. Participants' RA characteristics

Characteristics	N (%) or M±SD (min–max)
Gender	
Male	20 (15.9%)
Female	106 (84.1%)
Age	54.26±13.65 (20 - 77)
A place of residence	
City	107 (84.9%)
Countryside	19 (15.1%)
Education level	
Primary school	3 (2.4%)
High School	74 (58.7%)
College	12 (9.5%)
Faculty	29 (23%)
Other	8 (6.3%)
Employment	
Employed	56 (44.4%)
Unemployed	21 (16.7%)
Housewife	1 (0.8%)
Retiree	48 (38.1%)
Marriage	
Married	71 (56.3%)
Unmarried union	8 (6.3%)
Single	23 (18.3%)
Divorced	7 (5.6%)
A widower/widow	17 (13.5%)
Severity of RA	
Mild	48 (38.1%)
Moderate	75 (59.5%)
Quite heavy	3 (2.4%)
Method of treatment	
Only other medicines	4 (3.2%)
Standard therapy only	86 (68.3%)
Standard and biological therapy	36 (28.6%)
Use of medicines	
Glucocorticoids	33 (26.2%)
NSAIL	2 (1.6%)
Disease modifying drugs - BML	114 (90.5%)
Biological drugs	38 (30.2%)
DAS28	
Low activity (DAS-28 = 2.6–3.2)	22 (17.5%)
Moderate activity (DAS-28 = 3.2–5.1)	27 (21.4%)
High activity (DAS-28 > 5.1)	2 (1.6%)
Remission (DAS-28 < 2.6)	75 (59.5%)
Clinical Disease Activity Index (CDAI)	
Low activity (CDAI = 2.8–10)	39 (31%)
Moderate activity (CDAI = 10–22)	13 (10.3%)
High activity (CDAI > 22)	1 (0.8%)
Remission (CDAI < 2.8)	73 (57.9%)

sumed not to be limited by the role on the role limitations subscale and are given a score of 1 (no difficulty). This reduces the amount of missing data and results in a conservative estimate of the role constraints. Because individuals may not participate in all roles, mean role satisfaction scores are calculated if participants respond to at least nine of the 12 role domains. It takes about ten minutes to fill out the questionnaire. The author's written consent was obtained for the use of this instrument. Normative data from 510 population controls is available for this self-completed questionnaire (van Genderen et al., 2018). In addition to a translated and culturally modified version in Dutch (van Genderen et al., 2018) and Chinese (Zhang et al., 2018), there is also an English version.

Rheumatoid arthritis quality of life (RAQoL; De Jong, Van der Heijde, McKenna, & Whalley, 1997; Whalley, Mckenna, De Jong, & Van der Heijde, 1997) is a specific instrument for assessing the quality of life of people with rheumatoid arthritis in relation to certain activities of daily living, through social integration and an emotional component. The RAQoL contains 30 questions on certain activities of daily living and quality of life, which the respondent answers with yes or no. The theoretical range is between 0 and 30, with a higher score indicating a poorer quality of life for people with RA. The questionnaire takes up to 10 minutes to complete, as does its administration, and requires no special training for the examiner. In addition to numerous world languages, the instrument has also been translated, adapted and validated in Serbian (Zlatkovic Svenda et al., 2017), has a high internal consistency, measured by the Cronbach's coefficient α, which is 0.94, and the test-retest reliability value is 0.92 (Šimpraga, 2023). In this research, it was used as a comparative instrument to test the psychometric characteristics of the SRPQ.

All procedures performed in the study are in accordance with the ethical standards of the national research committee, and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study was approved by the Clinical research ethics committee of the Institution for Rheumatology in Belgrade (approval No. 29/5 of February 13, 2020). Informed consent was obtained from all individual participants included in the study.

Statistical Analyses

IBM SPSS v.23 was used for all analyses, and a p value of 0.05 or less was regarded as statistically significant. Analyses were conducted for each SRPQ subscale. The mean, standard deviation, and median for continuous variables were determined, along with the interquartile range. Frequencies and percentages were determined for discrete variables. Additionally, test-retest reliability, internal consistency reliability, and construct validity of the Serbian version of the SRPQ were assessed using the intraclass correlation coefficient (ICC), Cronbach's alpha (α) and Spearman correlation coefficient (r).

RESULTS

Score Distribution and Acceptability

The following criteria were used to determine whether the data was acceptable: normal distribution, and absence of substantial floor or ceiling effects (less than 15% of participants scoring at the highest or lowest levels). In the subscale scores at the initial assessments, no discernible floor or ceiling effects were discovered. The SRPQ subscales' restricted content validity is disregarded because there are no floor or ceiling effects. However, some single item scores showed floor and/or ceiling effects (Table 2). This was particularly evident in the physical difficulty items that showed a floor effect in 20-80% of the respondents.

Table 2. Effects of a floor or ceiling on the subscales' scores

SRPQ	M	SD	Min	Max	% scoring Min	% scoring Max
Role importance	3.7	0.5	2.3	4.8	0.79	1.59
Physical difficulty	1.6	0.5	1.0	3.0	7.14	0.79
Satisfaction with the role performance	3.6	0.5	2.3	4.9	0.79	0.79

Kolmogorov–Smirnov tests were conducted to investigate normality. With the exception of the SRPQ subscale physical difficulty at the first measurement, a normal distribution of the SRPQ subscale scores was confirmed (Table 3).

Table 3. Descriptors of distribution and normality of distribution of results

	Variables	M	Mdn	Var.	SD	Sk	Ku	K-S	p
First	RAQoL	5.21	3.00	32.02	5.66	1.40	1.40	0.180	<0.001
	SRPQ role importance	3.68	3.67	0.26	0.51	-0.12	-0.12	0.063	0.200
	SRPQ physical difficulty	1.57	1.50	0.21	0.46	0.93	0.39	0.130	<0.001
	SRPQ satisfaction with the role performance	3.57	3.58	0.28	0.53	-0.02	-0.24	0.052	0.200
Second	RAQoL	7.31	6.00	43.19	6.57	1.04	0.37	0.137	0.086
	SRPQ role importance	3.96	4.04	0.29	0.53	-0.40	-0.53	0.091	0.200
	SRPQ physical difficulty	1.47	1.40	0.13	0.37	0.74	0.45	0.114	0.200
	SRPQ satisfaction with the role performance	3.79	3.85	0.38	0.62	-0.03	-0.45	0.102	0.200

Note: Var. – Variance; Sk – skewness; Ku – Kurtosis; KS – Kolmogorov–Smirnov statistic.

Reliability

Test-retest reliability and internal consistency were evaluated as part of the reliability tests. The SRPQ's test-retest reliability was evaluated by 36 people chosen at random from a group of 126. In two weeks, they were asked to retake the questionnaire. These individuals did not obtain any medical care that could have affected their health conditions during this time. The test conditions, such as the setting and method of administration, were the same for both times of assessment, and these participants remained steady over the course of these two weeks. Test-retest reliability was measured using the intraclass correlation coefficient (ICC), with a value >0.7 indicating acceptable reliability and a value >0.8 indicating outstanding reliability (Terwee et al., 2007). A two-way analysis of variance in a random effects model with a consistency model and an average measurement model yielded the ICC values for subscales scores. The 95% confidence intervals (CI) for the ICC values were given. The ICC ranged from 0.913 for physical difficulty to 0.959 for satisfaction with role performance, making it practically outstanding for all three subscales (Table 4). Correlating the SRPQ subscales results from the first and second assessments allowed for the evaluation of test-retest reliability. In order to show low levels of random measurement error, a minimum value of 0.85 is needed (Weiner, & Stewart, 1984). According to the results, the test–retest reliability was high for the SRPQ subscales role importance ($r=0.891$, $p<0.001$) and satisfaction with the role performance ($r=0.928$, $p<0.001$), demonstrating low levels of random measurement error, while the subscale physical difficulty had a lower test–retest correlation ($r=0.839$, $p<0.001$).

Table 4. SRPQ test-retest analysis

	First assessment		Second assessment		
SRPQ Subscales	*M*	*SD*	*M*	*SD*	ICC (95% CI)
Role importance	3.85	0.53	3.96	0.53	0.942 (0.887–0.970)
Physical difficulty	1.52	0.38	1.47	0.37	0.913 (0.828–0.955)
Satisfaction with the role performance	3.71	0.55	3.79	0.62	0.959 (0.920–0.979)

Cronbach's alpha coefficients (adequate: ≥0.70) were used to assess internal consistency (Terwee et al., 2007). Item deletion analysis was carried out to identify any outstanding items influencing Cronbach's coefficient. Cronbach's alpha was appropriate for all subscales during the initial assessments, but lower for role importance ($\alpha=0.729$) compared to satisfaction with role performance ($\alpha=0.902$) and physical difficulties ($\alpha=0.884$). Cronbach's alpha at the second assessment was also satisfactory for all subscales; however, it was lower for role importance ($\alpha=0.706$) in comparison to the other two subscales, satisfaction with role perfor-

mance (α=0.926), and physical difficulty (α=0.804) (Table 5). No outstanding items that would have affected Cronbach's alpha were indicated by item deletion.

Table 5. Internal consistency

Measures	First assessment	Second assessment
SRPQ - Role importance	0.729	0.706
SRPQ - Physical difficulty	0.902	0.804
SRPQ - Satisfaction with the role performance	0.884	0.926
Rheumatoid Arthritis Quality of Life (RAQoL)	0.911	0.853

Validity

Construct validity was examined by using Spearman correlations with the RAQoL score at the first and second assessments. Spearman correlations between subscales are calculated and classified as small (0.10–0.29), moderate (0.30–0.49) or strong (0.50–1.00) correlations (Cohen, 1988). The correlation between the subscales role importance and physical difficulty was not significant (ρ=-0.022, p=0.806). The subscales role importance and satisfaction with the role performance had a strong correlation (ρ=0.575, p<0.001), whereas physical difficulty and satisfaction with role performance had a moderate correlation (ρ=-0.470, p<0.001). Physical difficulty (ρ=0.476, p<0.001) and satisfaction with the role performance (ρ=-0.437, p<0.001) of the SRPQ subscales showed a moderate correlation with the RAQoL score. However, no statistically significant relationship between the RAQoL score and the SRPQ subscale role importance was discovered (ρ=-0.088, p=0.326). At the retest, the RAQoL score correlated strongly with the SRPQ subscales physical difficulty (ρ=0.784, p<0.001) and satisfaction with the role performance (ρ=-0.694, p<0.001), and moderately with the SRPQ subscale role importance (ρ=-0.395, p=0.017) (Table 6). The SRPQ instrument's constructive validity was validated, with the exception of the subscale role importance in the first measurement.

Table 6. Correlation between the SRPQ subscales

SRPQ	Role importance	Physical difficulty	Satisfaction with the role performance
Role importance	/		
Physical difficulty	-0.022	/	
Satisfaction with the role performance	0.575**	-0.470**	/
RAQoL	-0.088	0.476**	-0.437**

Note: Spearman rank correlation values are shown.** $p < 0.001$ (2-tailed).

DISCUSSION

The aim of this study was to translate the SRPQ into Serbian, cross-culturally adapt it, and assess its psychometric properties, with a focus on the version's validity and reliability. In addition to having strong psychometric properties overall, the translated questionnaire was determined to be pertinent and understandable by Serbian RA participants. It is well recognised in rheumatology that translation is the method most frequently used in questionnaire translation and cultural validation, with back translation coming next and patient cognitive testing coming last (Hunt, Alonso, Bucquet, Niero, Wiklund, & McKenna, 1991).

Given that the translation and validation of this questionnaire has not yet been performed on people with RA, the obtained data can be compared with a validated questionnaire on another target group of people with rheumatic diseases. Our findings revealed that there were no significant floor or ceiling impacts in the subscales scores during the first assessments, but some single item scores showed floor and/or ceiling effects. This was particularly evident in the physical difficulty items that showed a floor effect in 20-80% of participants. In the study conducted by Zhang et al. (2018), on a sample of Chinese people with AS, ceiling and floor effects were absent, as is the case in the research conducted by Van Genderen et al. (2016) on a sample of Dutch people with AS. The original SRPQ was shown to be valid and reliable in Canadian people with AS and revealed that patients greatly valued participation in a variety of social roles, but were dissatisfied with their performance or time spent in the roles (Davis et al., 2011).

Thirty-six Serbian participants who were randomly chosen among 126 participants evaluated the test-retest reliability of the SRPQ. The ICC was almost excellent for all three subscales, ranging from 0.913 to 0.959. Correlating SRPQ subscale scores at the first and second assessments was used to examine test-retest reliability. Test-retest reliability was high for the SRPQ subscales role importance and satisfaction with role performance, but low for the subscale physical difficulty. At the first assessments, Cronbach's alpha was appropriate for all subscales, but lower for role importance (α=0.729) compared to satisfaction with role performance (α=0.902) and physical difficulties (α=0.884). Cronbach's alpha was appropriate for all subscales at the second assessment, but lower for role importance (α=0.706) compared to the other two subscales, satisfaction with the role performance (α=0.926), and physical difficulty (α=0.804). The findings are congruent with those found in the available literature. With respect to internal consistency reliability, the majority of Cronbach's alpha coefficients for each role were strong ($\alpha \geq 0.7$) and moderate for the overall role. The following information was gathered from the Chinese version (Zhang et al., 2018), and the Canadian (English) and Dutch versions of the SRPQ: salience, 0.74; satisfaction with time spent in role, 0.83; and satisfaction with role performance, 0.85 (Gignac et al.,

2008) and 0.74, 0.83, and 0.89, respectively; and physical disability dimension: 0.86 (van Genderen et al., 2016). Cronbach's alpha (internal consistency) was satisfactory for all dimensions. In the Dutch version, reliability was as follows: role importance κ=0.79 (considerable); satisfaction with time spent in role κ=0.84 (very high); satisfaction with the role performance k=0.85 (very high); and physical difficulty κ=0.95 (very high) (van Genderen et al., 2016). For the dimensions of role importance (0.846), satisfaction with time spent in role (0.831), satisfaction with the role performance (0.895), physical difficulty (0.865), and general participation item for each dimension (0.857, 0.857, 0.885, and 0.885, respectively); in the Chinese version (Zhang et al., 2018), test-retest reliability by ICC was nearly perfect.

The results of Devrimsel & Serdaroğlu Beyazal (2021) show that RAQoL scores were positively correlated with SRPQ physical difficulty scores and negatively correlated with SRPQ role satisfaction and SRPQ role importance scores. These results are partially consistent with our results.

In their study, Hunt and colleagues (1991) discovered that the dimension of 'role importance' had reduced internal consistency, weak correlations with other SRPQ dimensions, and weak correlations with other participation-measuring instruments. It is obvious that 'role importance' assessment supplied different information from the other dimensions, and as a result, it may be helpful in understanding the applicability of the findings of the other dimensions. Later included in the SRPQ, the 'physical difficulty' dimension was discovered to have favourable correlations with both HRQoL and outside measures of participation (van Genderen et al., 2016). Also, The Dutch (van Genderen et al., 2016) and the Chinese (Zhang et al., 2018) version of the SRPQ have appropriate construct validity. Similar results were obtained in our research, which confirmed the construct validity of the SRPQ in our sample.

There are some limitations in our study that should be mentioned. The Serbian version of the SRPQ has been found to have good psychometric qualities, although further research is still required, including testing on factors like responsiveness. A further drawback is that only one clinic provided the sample for this study. In the future, more studies with a bigger sample should be conducted.

CONCLUSION

In conclusion, the SRPQ has been successfully translated into Serbian, and its construct validity, internal consistency reliability, and test-retest reliability have all been demonstrated to be high. Cognitive debriefing interviews supported the Serbian language version's suitability as a valid, pertinent, and simple to use option. According to our findings, the SRPQ in Serbian is a useful instrument for assessing social participation in Serbian RA people.

REFERENCES

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. doi.org/10.1097/00007632-200012150-00014

Björk, M., Bergström, M., Sverker, A., & Brodin, N. (2020). Measures of Participation in Persons With Musculoskeletal Conditions. *Arthritis Care & Research, 72*(S10), 486–498. doi.org/10.1002/acr.24226

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences.* Hillsdale, NJ, USA: Lawrence Erlbaum Associates.

Davis, A.M., Wong, R., Badley, E.M., & Gignac, M.A. (2009). There's more to life than everyday function: the challenge of measuring social role participation in ankylosing spondylitis. *Nature Clinical Practice Rheumatology, 5*(1), 46-51. doi.org/10.1038/ncprheum0978

Davis, A.M., Palaganas, M.P., Badley, E.M., Gladman, D.D., Inman, R.D., & Gignac, M.A. (2011). Measuring participation in people with spondyloarthritis using the Social Role Participation Questionnaire. *Annals of the Rheumatic Diseases, 70*(10), 1765–1769. doi.org/10.1136/ard.2010.149211

De Jong, Z., Van der Heijde, D. M. F. M., McKenna, S. P., & Whalley, D. (1997). The reliability and construct validity of the RAQoL: a rheumatoid arthritis-specific quality of life instrument. *British Journal of Rheumatology, 36*(8), 878-883. doi.org/10.1093/rheumatology/36.8.878

Devrimsel, G., & Serdaroğlu Beyazal, M. (2021). The Effect of Social Role Participation on Quality of Life in Rheumatoid Arthritis. J*ournal of Physical Medicine and Rehabilitation Sciences, 24*(3), 216-222. doi.org/10.31609/jpmrs.2020-80347

Drljan, B., Vuković, M., Dragaš Latas, S., & Mihajlović, A. (2021). Perceived social support of residents with dementia in long-term care in Serbia: A pilot study. *Teme, XLV*(3), 787-803. doi.org/10.22190/TEME200530047D

Faul, F., Erdfelder, E., Lang, A.G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods,* 39, 175-191. doi.org/10.3758/BF03193146

Frazzei, G., van Vollenhoven, R.F., de Jong, B.A., Siegelaar, S.E., & van Schaardenburg, D. (2022). Preclinical autoimmune disease: a comparison of rheumatoid arthritis, systemic lupus erythematosus, multiple sclerosis and type 1 diabetes. *Frontiers in Immunology,* 3207. doi.org/10.3389/fimmu.2022.899372

Gignac, M. A., Backman, C. L., Davis, A. M., Lacaille, D., Mattison, C. A., Montie, P., & Badley, E. M. (2008). Understanding social role participation: what matters to people with arthritis?. *The Journal of rheumatology, 35*(8), 1655–1663.

Gignac, M. A., Backman, C. L., Davis, A. M., Lacaille, D., Cao, X., & Badley, E. M. (2013). Social role participation and the life course in healthy adults and individuals with osteoarthritis: are we overlooking the impact on the middle-aged?. *Social science & medicine, 81,* 87–93. doi.org/10.1016/j.socscimed.2012.12.013

Gignac, M.A., Lacaille, D., Beaton, D.E., Backman, C.L., Cao, X., & Badley, E.M. (2014). Striking a balance: work-health-personal life conflict in women and men with arthritis and its association with work outcomes. *Journal of Occupational Rehabilitation, 24*(3), 573-584. doi.org/10.1007/s10926-013-9490-5

Gray, D. B., Hollingsworth, H. H., Stark, S. L., & Morgan, K. A. (2006). Participation survey/mobility: psychometric properties of a measure of participation for people with mobility impairments and limitations. *Archives of physical medicine and rehabilitation, 87*(2), 189–197. doi.org/10.1016/j.apmr.2005.09.014

Lawrence, R.C., Helmick, C.G., Arnett, F.C., Deyo, R.A., Felson, D.T., Giannini, E.H., Heyse, S.P., Hirsch, R., Hochberg, M.C., Hunder, G.G., Jiang, M.H.,

Pillemer, S.R., Steen, V.D., & Wolfe, F. (1998). Estimates of the prevalence of arthritis and selected musculoskeletal disorders in the United States. *Arthritis & Rheumatology*, *41*(5), 778-799. doi.org/10.1002/1529-0131(199805)41:5<778::AID-ART4>3.0.CO;2-V

Long, H., Liu, Q., Yin, H., Wang, K., Diao, N., Zhang, Y., Lin, J., & Guo, A. (2022). Prevalence Trends of Site-Specific Osteoarthritis From 1990 to 2019: Findings From the Global Burden of Disease Study 2019. *Arthritis & Rheumatology*, *74*(7), 1172–1183. doi.org/10.1002/art.42089

Hunt, S.M., Alonso, J., Bucquet, D., Niero, M., Wiklund, I., & McKenna, S. (1991). Cross-cultural adaptation of health measures. *Health Policy*, *19*(1), 33–44.

Post, M. W., de Witte, L. P., Reichrath, E., Verdonschot, M. M., Wijlhuizen, G. J., & Perenboom, R. J. (2008). Development and validation of IMPACT-S, an ICF-based questionnaire to measure activities and participation. *Journal of Rehabilitation Medicine*, *40*(8), 620–627. doi.org/10.2340/16501977-0223

Šimpraga, Lj. (2023). *Characteristics of social participation and quality of life in persons with rheumatoid arthritis.* Doctoral dissertation. University of Belgrade.

Terwee, C. B., Bot, S. D., de Boer, M. R., van der Windt, D. A., Knol, D. L., Dekker, J., Bouter, L. M., & de Vet, H. C. (2007). Quality criteria were proposed for measurement properties of health status questionnaires. *Journal of Clinical Epidemiology*, *60*(1), 34-42. doi.org/10.1016/j.jclinepi.2006.03.012

van Genderen, S., Plasqui, G., Landewé, R., Lacaille, D., Arends, S., van Gaalen, F., van der Heijde, D., Heuft, L., Luime, J., Spoorenberg, A., Gignac, M., & Boonen, A. (2016). Social Role Participation in Patients With Ankylosing Spondylitis: A Cross-Sectional Comparison With Population Controls. *Arthritis care & research*, *68*(12), 1899-1905. doi.org/10.1002/acr.22907

van Genderen, S. (2018). *The impact of ankylosing spondylitis on the life of patients: social role participation and physical activity.* Doctoral dissertation. Maastricht University. doi.org/10.26481/dis.20180712sg

van Genderen, S., Plasqui, G., van der Heijde, D., van Gaalen, F., Heuft, L., Luime, J., Spoorenberg, A., Arends, S., Lacaille, D., Gignac, M., Landewé, R., & Boonen, A. (2018). Social Role Participation and Satisfaction With Life: A Study Among Patients With Ankylosing Spondylitis and Population Controls. *Arthritis care & research*, *70*(4), 600-607. doi.org/10.1002/acr.23304

Weiner, E.A., & Stewart, B.J. (1984). *Assessing individuals: Psychological and educational tests and measurements.* Little Brown.

Whalley, D., Mckenna, S. P., De Jong, Z., & Van der Heijde, D. (1997). Quality of life in rheumatoid arthritis. *British Journal of Rheumatology*, *36*(8), 884-888. doi.org/10.1093/rheumatology/36.8.884

Wilburn, J., McKenna, S. P., Twiss, J., Rouse, M., Korkosz, M., Jancovic, R., Nemec, P., Pacheco-Tena, C. F., Saraux, A., Westhovens, R., Durez, P., Martin, M., & Tammaru, M. (2015). Further international adaptation and validation of the Rheumatoid Arthritis Quality of Life (RAQoL) questionnaire. *Rheumatology International*, *35*(4), 669-675. doi.org/10.1007/s00296-014-3138-4

Wilkie, R., Peat, G., Thomas, E., Hooper, H., & Croft, P. R. (2005). The Keele Assessment of Participation: a new instrument to measure participation restriction in population studies. Combined qualitative and quantitative examination of its psychometric properties. *Quality of Research*, *14*, 1889-1899. doi.org/10.1007/s11136-005-4325-2

World Health Organization (2001). International Classification of Functioning, Disability and Health. Geneva: World Health Organization.

Zhang, G., Li, J., Liu, D., Wang, T., Wang, Y., & Xu, W. (2018). Translation and validation of the Chinese Social Role Participation Questionnaire in patients

with ankylosing spondylitis. *Clinical Rheumatology, 37*(3), 655-660. doi.org/10.1007/s10067-017-3915-z

Zlatković-Švenda, M.I., Stojanović, R.M., Šipetić-Grujičić, S.B, & Guillemin, F. (2014). Prevalence of rheumatoid arthritis in Serbia. *Rheumatology International, 34*(5), 649-658. doi.org/10.1007/s00296-013-2897-7

Zlatkovic-Svenda, M., Rouse, M., Radak-Perovic, M., Stojanovic, R., Vujasinovic-Stupar, N., Lazovic-Popovic, B., Wilburn, J., & McKenna, S.P. (2017). Adaptation and validation of the Rheumatoid Arthritis Quality of Life (RAQoL) questionnaire for use in Serbia. *Rheumatology International, 37*(4), 641-646. doi.org/10.1007/s00296-016-3586-0

ПРЕВОД, ПОУЗДАНОСТ И КОНСТРУКТИВНА ВАЛИДНОСТ УПИТНИКА О УЧЕШЋУ У ДРУШТВЕНИМ УЛОГАМА ЗА ОСОБЕ СА РЕУМАТОИДНИМ АРТРИТИСОМ

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Резиме

Реуматоидни артритис (РА) је хронична, аутоимуна, системска болест непознате етиологије и представља најчешћи облик запаљенског реуматизма. Рано откривање и постављање дијагнозе је од основног значаја за ток лечења, како би се повећала стопа ремисије, те успорио и умањио настанак трајних оштећења. Код већине особа, РА представља тешко обољење, током којег оштећење зглобова напредује, слаби или се губи способност за рад и самозбрињавање. На овај начин долази до настанка инвалидитета. У вези са настанком инвалидитета уско је повезана и социјална партиципација, која се може описати социјалним улогама које појединац обавља. Када се утврђује ниво социјалне партиципације, онда се процењује да ли појединац може да буде у одређеној улози на начин на који и колико жели, као и колика је важност учешћа у улози за појединца, а не да ли је обављена активност коју носи одређена улога. У обзир се узимају личне преференције и важност коју појединац придаје одређеној улози, као и начин и време које особа жели да проведе у тој улози. За процену социјалне партиципације користе се различити инструменти, а један од њих је и Упитник о учешћу у друштвеним улогама. Овај Упитник је нашао примену и показао се поузданим и валидним инструментом за процену социјалне партиципације код особа са анкилозним спондилитисом и остеоартритисом. Како није валидиран за особе са РА, циљ овог рада је да се уради превод и адаптација на српски језик, те да се утврде

његове психометријске карактеристике – поузданост и валидност. Узорак је чинило 126 испитаника са РА (84.1% жена и 15.9% мушкараца), просечног узраста 54.26 (13.65) година. Истраживање је спроведено у Београду, на Институту за реуматологију, током 2021. године. Тест-ретест поузданост, интерна конзистентност и конструктивна валидност српске верзије Упитника о учешћу у друштвеним улогама процењени су применом коефицијента инртакласне корелације, Кронбахове алфе и Спирмановог коефицијента корелације. Резултати су показали високу вредност коефицијента интракласне корелације (0.913–0.959) што указује на одличну тест-ретест поузданост. Када се ради о унутрашњој конзистентности поузданости, већина Кронбаховог алфа коефицијента била је јака (0.706–0.926). Конструктивна валидност упитника је потврђена, са изузетком субскале Значај улоге и то при првом мерењу. Можемо рећи да се српска верзија Упитника о учешћу у друштвеним улогама показала као поуздан и валидан упитник који врши процену социјалне партиципације особа са реуматоидним артритисом.