

RELIABILITY AND FACTORIAL VALIDITY OF THE CONSTRUCTED SCALE FOR ASSESSING JOB SATISFACTION OF PROFESSIONAL SOLDIERS OF THE SERBIAN ARMED FORCES*

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The aim of this research is to verify the reliability and factorial validity of the constructed scale for the evaluation of job satisfaction of professional soldiers. The constructed scale consists of seven subscales. An initial version of the survey contained the total of 49 items, including five socio-demographic questions. Empirical verification covered the sample of 157 professional soldiers of the Guard. The analysis of metric characteristics, reliability of items and subscales, and the factorial validity of theoretically presumed scale for the evaluation of job satisfaction of professional soldiers, was carried out by analysing internal congruence of subscales and factorial analysis. After the analysis has been concluded, a scale was derived that contains 33 items. The factorial analysis has offered 7 factors with explained variance of 70.945%. It was determined that the reliability of the empirically obtained subscales was satisfactory: Emoluments (5 items; $\alpha=0,840$), superior officer (5 items; $\alpha=0,897$), work load (4 items; $\alpha=0,818$), job category (7 items; $\alpha=0,919$), prospect for career advancement (4 items; $\alpha=0,901$), working environment conditions (4 items; $\alpha=0,862$) and interpersonal relations (4 items; $\alpha=0,820$). As a whole, the constructed scale enables a reliable and valid evaluation of professional soldiers' job satisfaction, and it is suitable to be applied for research purposes.

Key words: *human resources, management, work environment, work load, career advancement.*

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Introduction

In last twenty days, many armed forces have carried out a transition of the manning system from recruitment system to full professional composition. That has resulted in placing focus on the concept of job satisfaction due to its pronounced impact on absenteeism and fluctuation of professional soldiers. If we add that the recruitment and retention of professional soldiers in the Serbian Armed Forces has become ever harder, we realise that the retention of the existing professional soldiers is becoming ever more important task (Đokić i Ignjatijević, 2020).

In principle, the rights and obligations of the fixed term contract of the system of defence and other work organisations in Serbia are the same or similar, and they can be easily compared. A professional soldier who decides to leave the Serbian Armed Forces resolves his status in a short time period. In other words, he is not obliged to remain in the system throughout his contract, hence the termination of the contract cannot have any legal ramifications for him.

However, for the Serbian Armed Forces, as an organisation, the consequences of a great personnel outflow might be dramatic, both in financial terms, and in terms of accomplishing their missions and tasks, which leads to the conclusion that it is important to know which aspects influence the job satisfaction of professional soldiers. This type of problem is underscored by a conducted research where “the satisfaction with the organisation where the respondents are employed got the lowest score” (Bojičić, Pavlović i Stojanović-Višić, 2018: 367).

It can be said that learning about professional soldiers' job satisfaction and factors that affect it can be a key for daily behaviour guidance of professional soldier at their work places, and viewed in the long run, it enables maintaining the Serbian Armed Forces and its members within the frame of the strategic plan (Višački i Šaranović, 2014). Because of that “the satisfaction and motivation are becoming the main management's preoccupation in an organisation (Pavlović and Marković, 2014: 302).

Job satisfaction

When we speak about job satisfaction we usually refer to the attitude of the employees. According to Robbins and Judge (2017), job satisfaction is “a positive feelings about one's job resulting from an evaluation of its characteristics” (pg. 119).

Hulin and Judge (2003) noticed that the attitude of employees regarding job satisfaction depends on multidimensional psychological responses that have cognitive (evaluative), affective (emotional), and behavioural components. That is why researchers perceive job satisfaction from two points of view: Determining influencing factors and analysis of consequences that it has for employees and organisations (Pavlović and Marković, 2014).

With regard to measuring job satisfaction, there are disagreements among researchers, i.e. there are different perceptions of the interpretation of this phenomena (Adamopoulos, 2022). A question arises whether it is right to measure it using one global indicator or it is necessary to derive a composite measurement of satisfaction

with key aspects of work from various factors (Carvajal and Popovici, 2018; Robbins and Judge, 2017). Of course, the first way is easier but it does not refer to specific aspects of job satisfaction, i.e. it does not provide information which enable defining appropriate measures to create a good plan for the management of professional soldiers' organisational behaviour (fluctuation, absenteeism...).

Up till now, researchers have defined a general degree of job satisfaction gained by employees, but not the aspects of work that they like or dislike (Barbu, 2020). We can agree that the evaluation of employee's job satisfaction is a complex sum of many discrete elements, which cannot be observed from the very definition of job satisfaction (Robbins i Judge, 2017).

Through researches conducted so far factors of job satisfaction have been grouped in two categories: personal and organisational factors of job satisfaction (Bešlić i Bešlić, 2008; Franceško i Mirković, 2008; Pavlović i Marković, 2014).

For Spector (1997), organisational factors are: salary, promotion, management, benefits, incentives, work procedures, colleagues, nature of work, communication. Our authors (Franceško i Mirković, 2008) classify the following factors as organisational: work by itself, rewarding system, pleasant work environment, work colleagues and organisational structure. According to Abhishek and Locke (2006), the factors of job satisfaction are: Work, salary, promotion, colleagues, supervisor, top management, benefits and policies.

According to Robbins and Judge (2017) the main cases of job satisfaction are: job conditions, personality, pay and corporate social responsibility. They underline that social support, interaction with colleagues outside the workplace and managers play an important role in the creation of attitude regarding job satisfaction.

By analysing literature and available research we can establish that, despite the long history of research conducted regarding this matter, there are still questions on relative contribution of different factors of job satisfaction. In the said literature, the respondents were not servicemen. Additional motive for this research, apart from the specificities of the workplace, is the specific situation that our state has been facing for several decades now - the existence, and then the abolition of mandatory conscription, not so distant wars in the territory of former SFRY, continuous tensions in the southern province, accelerated armament and equipment of the states in the region, and the existence of war hotspots in the world.

Dimensions of Job Satisfaction

In theory, there are different classifications of factors that influence job satisfaction, having in mind that it has always been a topical issue in the study of organisational behaviour. The starting point of this research in determining dimensions that affect job satisfaction is the research done by Lee, Yang and Li (2017). Starting from Minnesota survey on job satisfaction combined with available relevant studies on job satisfaction, they conducted a thorough and precise research on constitutive dimensions of job satisfaction from a micro-perspective. On the basis of their study, and in combination with previously mentioned research, this paper defines the following dimensions of job

satisfaction: emolument, superior officer, work load, interpersonal relations, prospect for career advancement, very type of work, and working environment.

Emolument. A research done by Abuhashesh, Al-Dmour and Masa'deh (2019) underlines that wages in relation to the nature of job, organizational culture, and training is the most important factor that influences job satisfaction and employee performance. The amount of salary, as one of the most influential factors of job satisfaction is detected in certain number of conducted research (Lorber and Savič, 2012; Mumin and Iddrisu, 2022; Sija, 2021; Skalli, Theodossiou and Vasileiou, 2008; Vidić, 2009). The result of the research conducted in 2014 among members of the Ministry of Defence and Serbian Armed Forces, reflects their dissatisfaction with their material status (Višački and Šaranović, 2014).

Superior Officer. Support, communication and superior's demeanour can have a negative effect on professional soldiers' job satisfaction. A research conducted in United States Armed Forces showed that job satisfaction is influenced to a largest extent by the quality of superior officer and work load (Sanchez, Bray, Vincus and Bann, 2004).

Research results about the impact of constructive and destructive leadership on job satisfaction among Swedish soldiers showed that constructive leadership correlates significantly with job satisfaction (Brandebo, Osterberg and Berglund, 2019). Recent research also point to strong interconnection between *manager* variable and *job satisfaction* variable (Herminingsih, 2017; Quek, Thomson, Houghton, Bramley, Davis and Cooper, 2021; Kazimi, Khan and Shorish, 2023; Limpo and Junaidi, 2023; Nguon, 2022).

Work Load. Too much work load is often noted as a source of job dissatisfaction. In their study Amir and Hussain (2018) confirm that job satisfaction is greatly influenced by work load.

Interpersonal relations. Interpersonal relations are extremely important for employees, which has been supported by numerous conducted research (Đorđević, Milanović and Stanković, 2021; Sypniewska, 2014; Videnović, 2012). At work, people tend to work in groups that have a common purpose (Robbins and Judge, 2017). If, at that, we have in mind our collectivist culture, the influence of a pleasant social atmosphere and absence of conflicts, interpersonal relations represent a significant factor of employees' job satisfaction (Videnović, 2012).

Prospect for Career Advancement. A research conducted in 2014 indicated dissatisfaction of MoD and SAF members with the impossibility of personal development and career advancement (Višački and Šaranović, 2014). In its study, Sija (2021) shows that career development has the strongest connection to job satisfaction, while Gartner (1999) determines in his research that there is a considerable interconnection between the prospect for career advancement and job satisfaction.

Type of Job. "Jobs are perceived as interesting if they provide opportunities for additional training, independence and control of others, and variety" (Robbins and Judge, 2017, pg. 127). The study conducted among officers of Chinese armed forces indicated that career calling significantly and positively correlates with job satisfaction (Peng, Zhang, Zheng, Guo, Miao and Fang, 2020). This is confirmed by a research carried out among Nigerian police officers (Obodo, Okonkwo and Aboh, 2019).

Working Environment. Job satisfaction is influenced by employees' perception of different physical aspects of working area (Tomovska, Stefanovska, Ralev and Krliu, 2014). Although in a research conducted by Perić, Dramićanin and Sančanin (2019) the respondents were not military or police personnel, the similarity with this population of respondents is the hierarchical structure of management. The results of their research about job satisfaction of employees of "Radan" Hotel lead to the conclusion that work environment strongly correlates with job satisfaction (Perić, Dramićanin and Sančanin, 2019).

Subject and Aim of Research

The aim of this research was to verify the reliability and factorial validity of the constructed scale for the evaluation of job satisfaction of professional soldiers.

Population and Sample

Data used in this paper are a part of research conducted for a doctoral thesis titled "The influence of job satisfaction on the fluctuation of professional soldiers of the Serbian Armed Forces" in the period from 15th August to 30th September 2023.

The research was carried out on a sample of 157 professional soldiers from units of the Guard of the Serbian Armed Forces. The sample consisted of professional soldiers whose employment relationship with the Serbian Armed Forces started on 1st August 2022, since it is considered that 12 months is the minimal time to establish attitude towards the unit and superior officers (Živković, 2019).

The sampling in the units and institutions of the Guard whose members took part in the survey was random, and the respondents were those individuals who were at work at the time of data gathering and who were in the position to participate in the survey. Five respondents were excluded from the survey due to inadequate filling out of the survey which makes the response rate of 96.82%.

The respondents were males (78.7%) and females (21.3%) 40 years of age or younger (84.6% with respect to 15.6% of those older than 40) with secondary education (85.8% with third degree secondary education and fourth degree secondary education, 1.3% with primary education, and 12.5% with university education) who were single (49.3%) or married/cohabiting. Approximately 70% of respondents stated that they had 10 years of service, 24.2% had 10 to 20 years of service, and 6% had more than 20 years of service. The sample is presented on Table 1.

Table 1.
Frequency distribution of demographic characteristics

		Frequency	Percentage	Valid percentage	Cumulative percentage
Sex	Female	33	21,7	21,7	21,7
	Male	119	78,3	78,3	100
	Total	152	100	100	
Age (years)	Up to 20	1	0,7	0,7	0,7
	21 - 25	32	21,1	23,2	23,9
	26 - 30	18	11,8	13,0	37,0
	31 - 35	36	23,7	26,1	63,0
	36 - 40	30	19,7	21,7	84,8
	41 - 45	15	9,9	10,9	95,7
	From 46	6	3,9	4,3	100
	Total	138	90,9	100	
	Non existent	14	9,2		
Marital status	Single	75	49,3	49,3	49,3
	In Community	77	50,7	50,7	100
	Total	152	100	100	
Work experience (in years)	1 - 5	50	32,9	33,1	33,1
	6 – 10	55	36,2	36,4	69,5
	11 - 15	28	18,4	18,5	88,1
	16 - 20	9	5,9	6,0	94,0
	21 - 25	4	2,6	2,6	96,7
	26 - 30	3	2,0	2,0	98,7
	31 - 39	2	1,3	1,3	100
	Total	151	99,3	100	
		Non existent	1	0,7	
Education	Primary school	2	1,3	1,3	1,3
	Secondary school - 3 rd degree	33	21,7	22,0	23,3
	Secondary school - 4 th degree	96	63,2	64,0	87,3
	Other	19	12,5	12,7	100
	Total	150	98,7	100	
		Non existent	2	1,3	

Instrument

The survey that was used contained 5 socio-demographic variables significant for this research. They are categorical. The instrument intended to look into the structure of job satisfaction among professional soldiers of the Guard contains 44 items/claims. The respondents expressed the degree of agreement with each of the given claims on a Likert-type scale (from 1 - strongly disagree, to 5 - strongly agree).

The basis for the creation of subscales (adapted and modified combination of claims) to describe satisfaction with work load level, satisfaction with the prospect for career advancement, and satisfaction with interpersonal relations was taken over from Lee and associates (2017).

Satisfaction with emolument and satisfaction with superior officer was measured using adapted and modified combination of claims taken over from Lee and associates (2017) and Schwepker (2021).

Satisfaction with very type of job was measured using adapted and modified combination of claims taken over from Ali and Anwar (2021), and claims taken over and modified from Lee and associates (2017).

The subscale for the satisfaction with working conditions was created by the author of the research.

Results

As the methodology for developing a survey dictates, after the survey conceptualisation, its design and completed pilot research, the metric analysis of the scale ensues (Cohen and Swerdlik, 2010). Analysis of the reliability of items and subscales and factorial validity was carried out by analysing internal concurrence of subscales and by means of exploratory factorial analysis. To conduct data analysis, programme package SPSS (version 26) was used.

Factorial Analysis

To determine factorial validity of theoretically constructed scale, an exploratory factorial analysis was conducted. It was done by employing principal component analysis and varimax rotation. The value of correlation coefficient of original variables and components that was less than 0.4 (by absolute value) was not taken into consideration in the analysis.

Before the conduct of the analysis, an examination of suitability of data for factorial analysis was carried out. The value of Kaiser-Meyer-Olkin indicators is 0.907, which exceeds recommended value of 0.6 and shows that the matrix is suitable for factorisation (Pallant, 2009). Also, a high value of Bartlett test of sphericity ($\chi^2_{(n=152)} = 4872,833$) with achieved statistical significance ($p = 0,000$) indicates the feasibility of factorisation of the correlation matrix.

Table 2.
Total variance explained (44 items)

Component	Original eigenvalue			Extraction sum of squared loading			Rotation sum of squared loading		
	Sum	Variance %	Cumulative %	Sum	Variance %	Cumulative %	Sum	Variance %	Cumulative %
1	%	Sum	Variance %	Cumulative	38,624	38,624	5,715	12,989	12,989
2	%	Sum	Variance %	Cumulative	7,146	45,770	5,446	12,377	25,366
3	%	4,985	50,755	2,194	4,985	50,755	4,132	9,391	34,756
4	1,947	4,425	55,180	1,947	4,425	55,180	3,807	8,653	43,409
5	1.805	4,102	59,282	1,805	4,102	59,282	3,118	7,086	50,495
6	1,547	3,516	62,798	1,547	3,516	62,798	2,797	6,358	56,853
7	1,278	2,905	65,704	1,278	2,905	65,704	2,422	5,505	62,358
8	1,102	2,504	68,208	1,102	2,504	68,208	1,828	4,155	66,514
9	1,020	2,317	70,525	1,020	2,317	70,525	1,765	4,011	70,525
10	0,946	2,151	72,676						

The factorial analysis of the theoretically constructed scale (44 items) detected the presence of nine components that explain 70.525% variance (Table 2).

Through the initial exploratory factorial analysis it was established that four items (P5, R5, MN5 and MO6) were attached to completely different factors that were not compatible even in terms of content. Apart from the given items, another five items (P4, R1, R6, UR2 and MO4) are loaded to a factor that is not the primary one. Therefore, they were excluded from further analysis (35 items were kept).

A repeated exploratory factorial analysis, after removing (9) unsatisfactory items, identified the presence of 7 factors that explain 70.092% variance. In the repeated factorial analysis the value of Kaiser-Meyer-Olkin indicators was 0.918, and the value of Bartlett test of sphericity was $\chi^2_{(n=152)} = 3778,463$ with achieved statistical significance $p = 0,000$. The repeated exploratory factorial analysis showed that two items (R1, R2) are attached to other dimensions not compatible in terms of content. They were excluded from the following analysis.

After removing unsatisfactory items, another exploratory factorial analysis was carried out that established the existence of 7 dimensions. Seven factors explain 70.945% variance. The value of Kaiser-Meyer-Olkin indicators was 0.921, and the value of Bartlett test of sphericity was $\chi^2_{(n=152)} = 3484,428$ with achieved statistical significance $p = 0,000$ (Table 3).

Table 3.
Total variance explained (33 items)

Component	Original eigenvalue			Extraction sum of squared loading			Rotation sum of squared loading		
	Sum	Variance %	Cumulative %	Sum	Variance %	Cumulative %	Sum	Variance %	Cumulative %
1	13,918	42,177	42,177	13,918	42,177	42,177	4,638	14,055	14,055
2	2,394	7,255	49,432	2,394	7,255	49,432	3,999	12,120	26,175
3	1,841	5,578	55,010	1,841	5,578	55,010	3,194	9,677	35,852
4	1,599	4,847	59,857	1,599	4,847	59,857	3,123	9,463	45,316
5	1,379	4,179	64,036	1,379	4,179	64,036	3,122	9,460	54,775
6	1,233	3,735	67,771	1,233	3,735	67,771	2,810	8,514	63,289
7	1,047	3,174	70,945	1,047	3,174	70,945	2,527	7,656	70,945
8	0,833	2,525	73,471						

Seven factors identified through exploratory factorial analysis after removing 11 items in line with theoretic suggestion in the research. Factor 1 includes items from VP3 to VP9, which refer to satisfaction with the type of job performed by professional soldiers. Factor 2 encompasses items from R2 to R4, R7 and R8 which represent satisfaction with superior officer. Factor 3 includes items UR1, UR3, UR4 and UR5 which refer to satisfaction with work environment. Factor 4 encompasses items from MN1 to MN4 which refer to satisfaction with prospect for career advancement. Factor 5 encompasses items from P1 to P3, P6 and P7 which represent satisfaction with emolument. Factor 6 includes items from MO1 to MO3 and MO5 which relate to satisfaction with interpersonal relations. Finally, factor 7 encompasses items from O1 to O4 which refer to satisfaction with work load. Factor loadings are presented in Table 4.

Table 4.
Rotated matrix of factorial loading

ITEM 1 2			COMPONENT							
			3	4	5	6	7			
1	P1	I believe that my work is adequately paid.						0,693		
2	P2	When I think about the salary that the military pays, I feel that I am not adequately valued.						0,596		
3	P3	Emoluments and benefits are just in our unit.						0,494		
4	P6	The salary is low compared to similar work in other places.						0,798		
5	P7	The salary in the military is lower than in other organisations.						0,799		
6	R2	My superior officer is not interested in his subordinates.		0,676						
7	R3	I like my superior officer.		0,755						
8	R4	My superior officer is fair to his subordinates.		0,854						
9	R7	My superior officer considers ideas and suggestions of his subordinates.		0,834						
10	R8	My superior officers rewards and praises his subordinates.		0,731						
11	O1	As long as I do my job well, I have enough time to dedicate to my family and friends.							0,623	
12	O2	Because of overtime I do not have time for leisure activities.							0,732	

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ITEM 1 2			COMPONENT							
			3	4	5	6	7			
13	O3	I am very exhausted by unit procedures.	0,403						0,539	
14	O4	My work load permanently exceeds my endurance.							0,700	
15	VP3	I often find my job to be boring.	0,602							
16	VP4	I am quite satisfied with my current job.	0,674							
17	VP5	I am excited about my job almost every day.	0,695							
18	VP6	I am disappointed with my work place.	0,638							
19	VP7	I feel fulfilled and proud to do this job.	0,779							
20	VP8	Sometimes I feel that my work is pointless.	0,569							
21	VP9	I enjoy my work.	0,632							
22	MN1	As long as I work well, I will have a chance of career advancement.				0,788				
23	MN2	I can improve my capabilities during the process of training.				0,722				
24	MN3	I feel satisfied about the prospect for career advancement in the unit.				0,771				
25	MN4	I can always acquire new knowledge and experience at my work.	-0,45			0,604				
26	UR1	I am satisfied with the level of equipment at workplace.			0,782					

		ITEM 1 2	COMPONENT							
			3	4	5	6	7			
27	UR3	I am satisfied with accommodation in my unit.			0,726					
28	UR4	I am satisfied with quartermaster equipment.			0,835					
29	UR5	I am satisfied with meals provided in the unit.			0,622					
30	MO1	I am satisfied with interpersonal relations in the unit.								0,711
31	MO2	I feel satisfied when working with my colleagues	-0,43							0,560
32	MO3	There are many quarrels among colleagues and avoidance of responsibilities.								0,750
33	MO5	Due to the lack of training of my colleagues I have to make additional efforts in my work.								0,772

Method of extraction: Analysis of main components

Varimax rotation method with Kaiser normalisation

^a Rotation converged in 7 repetitions

Analysis of internal congruence of identified subscales

Internal congruence, i.e. reliability of subscales, is expressed through coefficient Cronbach alpha (α) and it ranges from 0.818 to 0.919 (Table 5). In a general perspective, the reliability of subscales is satisfactory, particularly if we take into consideration the number of items within them.

In Table 5, we can observe very strong correlation among items in the framework of identified subscales. After completed analysis of internal congruence, it can be concluded that the reliability of each subscale is satisfactory. The coefficient Cronbach alpha (α) of the scale for the assessment of professional soldiers' job satisfaction makes the total of 0.684.

Table 5.
Internal reliability of items and subscales after removing 11 items

Subscales	Cronbach alpha (α)	Mean value of correlation among items	Value of correlation of item pairs	Number of item
Emolument	0,840	0,514	0,420 – 0,708	5
Superior Officer	0,897	0,638	0,520 – 0,784	5
Work Load	0,818	0,531	0,449 – 0,649	4
Type of Job	0,919	0,622	0,524 – 0,720	7
Prospect for Career Advancementa	0,901	0,695	0,636 – 0,779	4
Working Environment	0,862	0,613	0,506 – 0,731	4
Interpersonal relations	0,820	0,537	0,404 – 0,674	4

Descriptive analysis of identified subscales

A descriptive statistical analysis (Table 6) was produced at the level of overall scores of job satisfaction subscales. The table shows that the minimum and maximum values match theoretical values. Values obtained by Skewness and Kurtosis indicate that there are not significant deviations from normal distribution. Values M indicate that within the structure of job satisfaction of professional soldiers in the Guard, the respondents are the most pleased with their superior officers ($M=18,697$), type of job ($M=17,842$), while they are the least satisfied with work environment conditions ($M=10,671$).

Table 6.
Descriptive statistics of the scale for the assessment of professional soldiers' job satisfaction

Subscales	N	Min	Max	M	δ	Asymmetry		Kurtosis	
						Statistics	Statistical	Statistics	Statistical
Emolument	152	5,0	25,0	13,651	4,9411	0,160	0,197	-0,493	0,391
Superior officer	152	5,0	25,0	18,697	4,4035	-0,770	0,197	0,465	0,391
Work Load	152	4,0	20,0	12,967	4,3313	-0,191	0,197	-0,729	0,391
Type of Job	152	7,0	35,0	17,842	6,8775	0,470	0,197	-0,390	0,391
Prospect for Career Advancement	152	4,0	20,0	12,842	4,4856	-0,313	0,197	-0,831	0,391
Working Environment	152	4,0	20,0	10,671	4,4001	0,153	0,197	-0,868	0,391
Interpersonal relations	152	4,0	20,0	13,796	3,6509	-0,157	0,197	-0,543	0,391

Discussion

The purpose of this research was to verify the reliability and factorial validity of the constructed scale for the evaluation of job satisfaction of professional soldiers. The results confirmed the seven-dimensional structure of the proposed scale developed after study of relevant literature. The survey itself underwent changes, so the number of items was reduced (from 44 to 33).

The exploratory factorial analysis identified 11 items with unsatisfactory characteristics or they were attached to completely different factors. Therefore, they were excluded from further analysis. After unsuitable items have been excluded, exploratory factorial analysis was conducted and it arrived at seven factors which explained 70.945%. This confirmed the existence of seven dimensions of theoretically presumed scale for the evaluation of job satisfaction. In comparison to six-dimension model of job satisfaction suggested by Lee and associates (2017), this research added another dimension "work environment". The factorial analysis suggests that the greatest contribution was provided by the subscale "type of job", meaning that this

factor explains the greatest portion of the variance (42.177%) of this construct, and it is followed by the subscales "*superior officer, work environment, prospect of career advancement, emolument and work load*". The least contribution is provided by the scale "*interpersonal relations*". This conclusion is not entirely in line with the research results obtained by Lee and associates where *prospect for career advancement* gave the greatest contribution to understanding of job satisfaction, and it was followed by *emolument, type of job, interpersonal relations, superior officer*, while *work load* had the least influence. This discrepancy is reflected in differences between civilian and military organisations (Griffeth, Hom and Gaertner, 2000).

The reliability of empirically obtained subscales was tested using coefficient values Cronbach alpha as the unit of internal consistency. According to Kline (2016), the reliability of "results whose coefficients are about 0.90 are considered as "excellent", and values around 0.80 as "very good..." (pg. 92). On the basis of value coefficient Cronbach alpha, presented in Table 5, it can be concluded that all dimensions of the scale for job satisfaction assessment are highly reliable, meaning that they confirm that the scale is a viable instrument for the assessment of job satisfaction of professional soldiers.

In Table 6, one can observe that minimal and maximal values in all subscales match theoretical values. The analysis of arithmetical average shows positive skewness of "distribution scale "type of job, emolument and work environment". In subscales "superior officer, interpersonal relations, prospect for career advancement and work load" the values of arithmetical average move towards higher values, therefore, they are negatively asymmetric. Values of arithmetical average of the subscales indicate that, within the structure of job satisfaction, professional soldiers of the Guard are the most pleased with their superior officers (M=18.697), type of job (M=17.842), while they are the least satisfied with work environment (M=10.671). The results of arithmetical average of each dimension/subscale of job satisfaction suggest that there is room for the improvement of the level of job satisfaction of professional soldiers in the Guard, especially in the subscales where arithmetical average values are the lowest.

The original contribution to this research is the seventh dimension of job satisfaction - *work environment* which was established and introduced by the author. It should be noted that research subjects were exclusively professional soldiers of the Guard, so that the obtained results cannot be generalised to entire population of professional soldiers of the Serbian Armed Forces. They can be pleased to a greater or lesser extent with some aspects than the entire population of SAF professional soldiers, so the current findings should be interpreted with caution.

The obtained research results represent a sound basis for future research to get reliable and valid instruments for the collection of data on job satisfaction that would refer to entire population of professional soldiers in the Serbian Armed Forces.

Conclusion

The lack of adequate instruments for the assessment of proposed job satisfaction factors to be used for the purpose of reducing the fluctuation of professional soldiers underlines the theoretical and practical significance of this research.

The results show that the proposed subscales possess acceptable metric characteristics, and that they can be used for the evaluation of job satisfaction of professional soldiers.

The exploratory factorial analysis has identified eleven potentially problematic items which empirically do not belong to the expected construct, hence, they were removed from the assessment of the measuring instrument validity. The exploratory factorial analysis verified a latent structure (seven dimensions) of theoretical scale for the assessment of professional soldiers' job satisfaction, and proved factorial validity of measuring instrument.

The internal reliability of the items and subscales was verified by means of analysis of internal congruence which indicated existence of a significant correlation among items of the subscales. As a whole, the constructed scale enables a reliable and valid evaluation of professional soldiers' job satisfaction. It can be concluded that the constructed scale is suitable to be applied in further research of this issue with this population.

The created scale for the assessment of job satisfaction opens possibilities for the examination of suppositions regarding the influence of job satisfaction of professional soldiers on other depending variables of organisational behaviour (fluctuation, absenteeism, productivity, deviant behaviour on the workplace) which bears diagnostic significance in practice. To take appropriate measures and create a good plan for the management of professional soldiers' organisational behaviour, their fluctuation among other, it is certainly necessary to assess their job satisfaction.

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Summary

In last twenty days, many armed forces have carried out a transition of the manning system from recruitment system to full professional composition. That has resulted in placing focus on the concept of job satisfaction due to its pronounced impact on absenteeism and fluctuation of professional soldiers. It can be said that learning about professional soldiers' job satisfaction and factors that contribute to it can be a key for daily behaviour guidance of professional soldier at their workplaces, and viewed in the long run, it enables maintaining the Serbian Armed Forces and its members within the frame of the strategic plan (Višački i Šaranović, 2014).

The aim of this research was to verify the reliability and factorial validity of the constructed scale for the evaluation of job satisfaction of professional soldiers. The constructed scale assesses job satisfaction of professional soldiers through seven different dimensions: emolument, superior officer, work load, interpersonal relations, prospect for career advancement, working environment and the very type of work.

In the research the used survey contained 5 socio-demographic variables significant for this research. They are categorical. The instrument intended to look into the structure of job satisfaction among professional soldiers of the Guard contains 44 items/claims. The respondents expressed the degree of agreement with each of the given claims on a Likert-type scale (from 1 - strongly disagree, to 5 - strongly agree).

The data used in this paper are a part of research conducted for a doctoral thesis titled "The influence of job satisfaction on the fluctuation of professional soldiers of the Serbian Armed Forces" in the period from 15th August to 30th September 2023.

The research was carried out on a sample of 157 professional soldiers from units of the Guard of the Serbian Armed Forces. The sample consisted of professional soldiers whose employment relationship with the Serbian Armed Forces started on 1st August 2022.

The analysis of metric characteristics, reliability of items and subscales, and the factorial validity of theoretically presumed scale for the evaluation of job satisfaction of professional soldiers, was carried out by analysing internal congruence of subscales and factorial analysis. To conduct data analysis, programme package SPSS (version 26) was used.

After the analysis has been concluded, a scale was derived that contains 33 items. The exploratory factorial analysis has identified eleven potentially problematic items which empirically do not belong to the expected subscale, hence, they were removed from the assessment of the measuring instrument validity. The exploratory factorial analysis verified a latent structure (seven dimensions) of theoretical scale for the assessment of professional soldiers' job satisfaction, with explained 70.945% of variance, and proved factorial validity of measuring instrument. The internal reliability of the subscales was verified by means of analysis of internal congruence which indicated a very strong correlation among items of the subscales. Emoluments (5 items; $\alpha=0,840$), superior officer (5 items; $\alpha=0,897$), work load (4 items; $\alpha=0,818$), job category (7 items; $\alpha=0,919$), prospect for career advancement (4 items; $\alpha=0,901$), working environment conditions (4 items; $\alpha=0,862$) and interpersonal relations (4 items; $\alpha=0,820$). As a whole, the constructed scale enables a reliable and valid evaluation

of professional soldiers' job satisfaction, and it is suitable to be applied for research purposes.

To take appropriate measures and create a good plan for the management of professional soldiers' organisational behaviour, their fluctuation among other, it is certainly necessary to assess their job satisfaction. The created scale for the assessment of job satisfaction opens possibilities for the examination of suppositions regarding the influence of job satisfaction of professional soldiers on other depending variables of organisational behaviour (fluctuation, absenteeism, productivity, deviant behaviour on the workplace) which bears diagnostic significance in practice. The results of this research suggest that there is room in all subscales/dimensions for the improvement of the level job satisfaction of professional soldiers in the Guard, especially in the segment that refers to work environment and prospec for career advancement.

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