

## Adaptation and Validation of the Creative Performance Pressure Scale in the Turkish Context

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ARTICLE INFO	ABSTRACT
<b>Keywords:</b> Creative Performance Pressure (CPP) Creative Requirements (CR) Organizational Creativity Routine Performance Pressure (RPP) Well-Being Work Stress	<b>Purpose</b> – The primary aim of this study is to adapt the Creative Performance Pressure scale developed by Liu et al. (2022) into Turkish and to comprehensively evaluate its factor structure and reliability. Additionally, the Routine Performance Pressure (Mitchell et al., 2018) and Creative Requirements (Unsworth et al., 2005) scales were also adapted into Turkish and assessed through convergent and divergent validity analyses, thereby contributing to the comprehensive validation of these measures. The second aim, aligned with the first, is to examine the effects of creative performance pressure, routine performance pressure, and creative requirements on employee well-being, work stress, and organizational creativity through these scales. Within the scope of this second aim, the study also seeks to establish the predictive validity of the scales. <b>Design/methodology/approach</b> – Collaborative translation technique was used to ensure conceptual and linguistic equivalence of the scale items. Structural validity was tested through confirmatory factor analysis, while internal consistency was assessed using Cronbach's alpha and composite reliability coefficients. Predictive validity was examined via path analysis. Differences between public and private sector white-collar employees were analyzed using multi-group analysis. The study is theoretically grounded in Cognitive Appraisal and Conservation of Resources theories. <b>Results</b> – The adapted scales demonstrated satisfactory levels of structural validity and reliability for use in the Turkish context. The results revealed significant sectoral differences in the perception of performance pressures and creative requirements, which were found to influence levels of work stress, organizational creativity, and psychological well-being. <b>Discussion</b> – By adapting these scales into Turkish for the first time, the study contributes to the local literature. The findings emphasize that the impact of creative demands and pressures varies across sectors. Therefore, sector-specific strategies are needed to manage work-related stress effectively and foster creativity. Moreover, a balanced and mindful approach to managing these pressures is essential for safeguarding and improving employees' psychological well-being.
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### 1. Introduction

The concept of creativity has gained increasing attention in both academic and professional spheres, accompanied by substantial growth in related research. A historical examination of the concept reveals its evolving nature. For instance, in the earlier literature review dated to 1950, Guilford (1950:445) found that only 186 out of 121,000 studies addressed topics related to creativity. Following this explanation, which emphasized the significant lack of research on creativity, there was a substantial increase in creativity-related studies across various disciplines, particularly driven by changing global dynamics (Rhodes, 1961). In recent years, rapid developments in both social and professional life have made it clear that creativity and innovation are playing an increasingly critical role, leading individuals to think outside the box, try new ideas, and explore the realm of creative potential (Shin et al., 2023:1). It is emphasized in the World Economic Forum (2020) report that creativity is one of the most vital skills for success in 2020 and beyond; in a hyper-competitive labor market, creativity ranks third among the top ten skills. Within this context, fast-growing brands recognize creative thinking as one of their most valuable skills (Singer & McCallum, 2023). In this framework, considering the important contributions of creativity, organizations develop various strategies and practices to encourage employee creativity and increase creative performance (Chen & Chen, 2023). However, whether these

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practices increase creativity and whether they always bring positive results is a point that needs to be examined meticulously. The search and desire for creativity can evolve into pressure after a certain point. While there are findings in the literature that some directives increase creativity (Said-Metwaly et al., 2017), there are also studies showing that those directives are sometimes perceived as “pressure” and have negative effects on creativity (Liu et al., 2022). Therefore, it is important to recognize that constantly demanding creativity and new ideas can create pressure and lead to certain impositions, which may result in negative outcomes often described as the “dark side of creativity”.

A Gallup study shows that in a work culture where there is flexibility to take risks and sufficient time, the proportion of employees who feel themselves creative increases (Kirkpatrick, 2024). However, basing employees' creative achievements on performance appraisal systems, rewards, and incentives to increase creative performance can negatively affect employees' potential (Victor & Cullen, 1988; Kanfer & Chen, 2016). These situations may turn into performance pressure for employees to produce creative outputs because creativity essentially requires autonomy and space to incubate ideas (Song et al., 2025). Performance pressure on such space can hinder creativity. In other words, creativity has become a necessity in today's business world, and practices for creative performance can encourage employees to think more efficiently and generate innovative solutions. However, if creativity turns into pressure as a mandatory requirement or is perceived differently by employees, it may threaten their well-being. In addition, this may lead to stress and eventually affect organizational creativity negatively. Therefore, it is necessary to strike a balance in this regard, manage the process properly, and understand how it is interpreted by employees (Eun & Chua, 2021).

It is crucial to clarify how creative performance pressure is defined, how it is shaped by organizations, and how it is perceived by employees. In today's competitive environment, it is essential to recognize the phenomenon that emerges from the imposition of creativity, and accordingly, the literature employs the “Creative Performance Pressure Scale” as a standardized instrument to measure this construct. The scale helps organizations understand how they can effectively manage and optimize organizational creativity (Liu et al., 2022:664-667). As for employees, proper management of creative pressure can increase their well-being and performance, leading to a more efficient work environment.

Majority of the studies conducted in Türkiye and other countries focuses on the antecedents and consequences of creativity, yet ignoring the plausible dark side of creativity. Acknowledging the detrimental effects of the pressures for being creative, the primary aim of this study is to adapt the Creative Performance Pressure Scale developed by Liu et al. (2022) into Turkish and to examine its validity and reliability. When a new construct is introduced, it must be tested to confirm that it accurately represents the intended construct and should be empirically distinguished from other seemingly relevant constructs (Cook and Campbell, 1979). To this end, the Performance Pressure Scale developed by Mitchell et al. (2018) (*referred to as the “Routine” Performance Pressure Scale in this study, following Liu et al. (2022) to avoid conceptual ambiguity*) and the Creative Requirements Scale developed by Unsworth et al. (2005) were also translated into Turkish to conduct more comprehensive analyses of convergent and discriminant validity of Creative Performance Pressure. To ensure that the adapted scale accurately measures the intended constructs within the target culture, it is necessary to assess not only convergent and divergent validity but also predictive validity, which provides evidence of the scale's ability to predict relevant outcomes (DeVellis, 2003; Jensen et al., 2010). To this end, the secondary aim of the study is to investigate the effects of creative performance pressure, routine performance pressure, and creative requirements on well-being, work stress, and organizational creativity using these scales. This approach allows for the assessment of the predictive validity of the scales. In validating a scale, it is also important to establish whether the factor structure and relationships between variables identified holds across different groups. Therefore, this study examines whether factor structures of CPP, RPP and CR scales and their relationships with wellbeing and stress differ across sectors (public vs. private). It is believed that such sector-based comparisons could contribute to a more comprehensive validation of the scales and reveal whether sector-based differences in the perception of organizational variables obtained in previous studies (Andrade & Westover, 2023; Ingrams, 2020) exist in the current study.

Adaptation of Creative Performance Pressure scale is needed not only to better capture the feelings of Turkish employees in response to increasing creativity demands, but also contribute to Turkish economy and improve working environment. Addressing the concept and effect of creativity is very crucial because statistics are indicating that creativity is emerging as a vital contributor to both economic development and competitive

performance in Turkey (Güçlü et al., 2025). While the average value added of major sectors in Turkey -such as industry, services, agriculture, and construction- is 25.5%, that of the creative industries is higher at 30.1%, indicating their greater contribution to economic value. In addition, Creative Economy Outlook 2024 report prepared by a United Nations Conference on Trade and Development identifies Turkey as one of the top five exporters of creative goods and services among developing nations (UNCTAD, 2024). Considering the impact of creative industries and creativity on economic growth in Turkey, fostering a conducive environment for innovation through effective management of creative performance pressures and incentives would enhance competitiveness nationwide. Therefore, to execute the process effectively, it is crucial to comprehend the creative performance pressure that may impede or foster innovation in the Turkish labor market and to assess it using objective measurement techniques. Considering the strategic importance of creativity for economic development of Turkey and achieving sustainable growth objectives, this study could assist practitioners in properly measuring and effectively managing the pressure of creative performance. However, the cultural attributes of Türkiye may influence the perception of creative performance pressure items, necessitating a meticulous assessment of the scale's cross-cultural validation.

Studies have shown that Turkish culture is relatively feminine, where values such as compassion and empathy are at the forefront, and behaviors like helping and supporting others are common (Hofstede, 2001). These characteristics may reduce individuals' feelings of pressure to perform creatively or diminish their performance orientation. Since success in feminine cultures is based on personal satisfaction and social harmony rather than competitive innovation, and because compassion is more common in these cultures, cooperation and safety also come into play (Sargut, 2001). Thus, creative performance may be intrinsically motivated rather than externally compelled. In addition, the paternalistic leadership style is at the forefront in Turkish culture (Gürçan, 2021:45-46). It can mitigate employees' negative emotional moods, make them more resilient in stressful and pressured contexts, and increase their overall well-being (Aycan, 2006; Bibi et al., 2020). Thus, paternalistic leadership can act as a buffer that reduces the pressure of creative performance. Employees, on the other hand, may be able to cope with stress more effectively thanks to the supportive approach of their leaders, which may lead to more creative thinking, high creative performance, and a different perception of the pressure on creativity. In addition to the points mentioned above, in collectivist cultures such as Turkey, social cohesion, in-group solidarity, and interpersonal support take precedence over individual competition (Hofstede, 2001; Sargut, 2001). Employees in such cultures may perceive performance pressure not only as an individual challenge but also as a shared responsibility, which can mitigate the negative effects of pressure. Therefore, elements of Turkish organizational culture such as collectivism, femininity, and paternalism, may cause creative performance pressure to operate differently than observed in other cultural contexts. Consequently, testing the validity of the relevant scales within the Turkish cultural context is not only a methodological necessity but also important for culturally enriching the theoretical understanding of creative performance. In light of all this information, even though the present study does not have a direct cultural perspective, it highlights the importance of testing the validity of scales developed in different cultures in other cultural contexts.

## 2. Theoretical Background

Within the framework of the Theory of Cognitive Appraisal, it is possible to understand how individuals evaluate factors such as stress and pressure from their environment and how they react accordingly (Lazarus & Folkman, 1984). The theory reveals that stress is not only the result of an external stimulus, but also the determinant of how the individual evaluates the event by actively participating in the process. Meanwhile, this evaluation process shapes emotional and behavioral responses (Shagirbasha & Sivakumaran, 2021). Accordingly, an employee working under creative performance pressure may evaluate the pressure as a threat or an opportunity. If the employee perceives the performance pressure as a threatening and harmful situation, it may lead to job stress and a general decline in performance by distracting from performing creatively as desired. However, the situation may differ for individuals who perceive pressure as an opportunity. When employees interpret pressure as a chance for growth and development, they may experience increased motivation, which can positively contribute to their well-being, enhance their creative thinking, and foster organizational creativity. For example, an employee with a high promotion focus may view creative performance pressure as a developmental opportunity. Consequently, they may demonstrate higher levels of motivation, cognitive flexibility, and an improved ability to think creatively. In contrast, an employee with a

low prevention focus may perceive such pressure as a threat, which can negatively impact their creative performance (Higgins, 1997; Lam & Chiu, 2002). In other words, pressure on creative performance may provide opportunities for some individuals to gain recognition, appreciation, and personal development opportunities by emphasizing that creativity is a necessity and generating new ideas (Li et al., 2017). According to this perspective, rather than being an obstacle, pressure can become a necessity that encourages creative thinking and enables innovation. However, because of the uncertainty about whether new ideas will be successful, the pressure may force some employees to engage in risky and unconventional behavior, which may lead to undesirable situations. In other words, creative performance pressure can be perceived as an opportunity and enhance creativity, or it can be perceived as an obstacle and undermine creativity (Liu et al., 2022).

Through creative performance pressure, employees are expected to generate innovative ideas, but this process usually requires high levels of resources (e.g., energy, time, attention, etc.). According to the Conservation of Resources Theory (CoR) (Hobfoll, 1989), if employees have sufficient resources such as support, leadership, or individual motivation, they may perceive creative performance pressure as an opportunity and perform better. However, if these resources are insufficient, the situation will be perceived negatively. In such cases, employees may find it difficult to cope with the fear of losing their available resources, which can negatively affect their creative performance. In other words, the employee who is expected to perform creatively in the work environment may perceive pressure as a threat that consumes their mental resources. If these exhausted resources are not replenished with new ones (e.g., leadership support and motivation), the process may be perceived negatively (Shih & Yeh, 2024:325-326). As a result, undesirable individual and organizational behaviors or outcomes may occur, such as reduced organizational creativity, increased work stress, and negative impacts on well-being.

### 3. Method

#### 3.1. Sample and Procedure

The study was approved by Hacettepe University Ethics Committee (approval id: E-90955707-300-00003952721 / 21.11.2024) and informed consent was obtained from all participants. Through online survey, data were collected from 257 employees using the snowball technique. The sample consisted of 257 employees, of which 52.9% were female (N=136) and 46.7% were male (N=120) and 0.4% (N=1) did not want to specify their gender. However, analyses were conducted with 247 appropriate data. This sample size is considered adequate based on the suggestions of Hair et al. (2019), who indicate that a ratio of five respondents per scale item is sufficient.

Most of the participants were between the ages of 26 and 35 (33.6%). The majority of the participants were married (70.4%) and mostly had postgraduate education (45.7%; 40.1% were university graduates). All demographics of the participants subjected to the analysis are presented in the Table 1.

**Table 1.** Descriptive Statistics of Sample

		Frequency	Percentage
Gender	Female	129	52,2
	Male	117	47,4
	Prefer not to say	1	0,4
Age	18-25	6	2,4
	26-35	83	33,6
	36-45	66	26,7
	46-55	33	13,4
	56 and above	59	23,9
Marital Status	Married	174	70,4
	Single	73	29,6

Education	Primary School	15	6,1
	High School	20	8,1
	Bachelor's Degree	99	40,1
	Postgraduate (Master's/PhD)	113	45,7
Total Experience	0-5 years	42	17,0
	6-10 years	51	20,6
	11-15 years	31	12,6
	16-20 years	29	11,7
	21 -25 years	10	4,0
	25 years and above	84	34,0
Sector	Public Sector	116	47,0
	Private Sector	131	53,0

### 3.2.Measures

The scale items were translated from English, the original language of the scale, into Turkish using the "collaborative translation technique" to ensure both conceptual and linguistic equivalence. In this process, two researchers, experts in Business Administration and fluent in both languages, independently translated the scale items into Turkish employing the parallel translation method. Subsequently, both translations, along with the original English version, were evaluated by a third expert, also proficient in both languages and experienced in Business Administration. For each item, the translation that was semantically closest to the original scale was selected to form the final Turkish version. This iterative, expert-driven translation process enhances the scale's intercultural validity and reliability. The finalized Turkish versions of the scale items have been provided in Appendix 1 as a supplementary file.

*Creative Performance Pressure Scale (CPP):* The scale adapted into Turkish in the present study was originally developed by Liu et al. (2022). It comprises four items under a single sub-dimension. A sample item is "I feel tremendous pressure to find new uses for existing methods or equipment". Participants responded to the scale items using a 7-point Likert-type scale (1 = Strongly Disagree, 7 = Strongly Agree). Higher scores indicate greater levels of creative performance pressure. The Cronbach's  $\alpha$  coefficient of the original scale was reported as .90.

*Routine Performance Pressure Scale:* The convergent validity of the Creative Performance Pressure scale was assessed by analyzing the correlations between the scores of the Creative Performance Pressure and Routine Performance Pressure scales. Routine Performance Pressure, which was developed by Mitchell et al. (2018), comprises four items (e.g., *The pressures for performance in my workplace are high.*) that are assessed using a five-point Likert-type scale (1 = Strongly Disagree, 5 = Strongly Agree). The Cronbach's  $\alpha$  coefficient is reported as .85. Since the scale had not been previously adapted into Turkish, it was translated into Turkish by the researchers using the collaborative translation technique.

*Creative Requirements Scale:* The Creative Requirements Scale, developed by Unsworth et al. (2005), was used to examine the divergent validity of the scale adapted into Turkish in the present study. It consists of 5 items (e.g., *My job requires me to have ideas about changing ways of organizing work.*) and uses a 5-point Likert-type scale (1 = Strongly Disagree, 5 = Strongly Agree), with an internal consistency of .92. This scale was also translated into Turkish by the researchers using the collaborative translation technique.

### 3.3.Predictive Validity Measures

The predictive validity of the creative performance pressure scale was examined through its relationship with organizational creativity, well-being, and job stress variables. Furthermore, the article conducted an analysis of the routine performance pressure and creative requirements variables and investigated their relationships with the related variables in order to offer a comprehensive perspective. Considering the results of the previous studies and literature, creative performance, routine performance and creative requirements were expected to negatively predict employees' perceived wellbeing and stress. On the other hand, by creating stress, creative performance pressure is expected to reduce organizational creativity.

*Organizational Creativity Scale:* The 10-item Organizational Creativity Scale, developed by Lang and Lee (2010), uses a 7-point Likert-type scale (1 = Strongly Disagree, 7 = Strongly Agree). Since the scale had not been adapted into Turkish previously, it was translated into Turkish by the researchers using the collaborative translation technique. The Cronbach's  $\alpha$  coefficient for this scale is found to be .93 in the current study.

*Well-being Scale:* The Psychological Well-being Scale developed by Diener et al. (2009), consists of 8 items and employs a 7-point Likert-type scale (1 = Strongly Disagree, 7 = Strongly Agree). The adaptation of the scale into Turkish was carried out by Telef (2013). The Cronbach's  $\alpha$  value reported in the original article of the scale was calculated as .80.

*Work Stress Scale:* The 7-item Work Stress Scale developed by House and Rizzo (1972), uses a 5-point Likert-type scale (1 = Strongly Disagree, 5 = Strongly Agree). The scale was adapted into Turkish by Efeoğlu (2006). The Cronbach's  $\alpha$  coefficient for this scale is reported as .84.

### 3.4.Data Analysis

The adaptation of the Creative Performance Pressure Scale into Turkish was carried out using IBM SPSS 25 and AMOS 23 (Arbuckle, 2014) statistical programs. The results of these analyses are discussed in detail under the relevant headings.

## 4. Results

### 4.1.Construct validity

Liu et al. (2022) applied exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to determine the factor structure of the creative performance pressure scale they developed in their study. Therefore, the item-factor relationships of the scale are predetermined in the literature. Bryne (2010) suggests that for scales that have been developed within the framework of a specific theory and whose factor structure has been previously tested, the structural validity should be evaluated by confirmatory factor analysis. The method allows testing the fit of the theoretically determined item-dimension relationships of the scale to the existing dataset. Therefore, in this study, a series of confirmatory factor analyses (CFA) were conducted to examine the factor structure and to verify the discrimination of the factors.

In the study, one- and two-factor models (I and II) were compared with the proposed three-factor model. The goodness of fit indices for the models are presented in Table 2. The goodness-of-fit indices showed that the three-factor model provided a better fit than the other models with both one and two factors. The nested comparison of the three- and one-factor model produced a  $\Delta x^2$  value of 549.707 ( $p < .01$ ). The nested comparison of the two-factor model-I (creative performance pressure and routine performance pressure under the same factor) and the one-factor model produced a  $\Delta x^2$  value of 466,822 ( $p < .01$ ). The nested comparison of the two factor model- II (creative performance pressure and creative requirement under the same factor) with the one factor model yielded a  $\Delta x^2$  value of 318.01 ( $p < .01$ ). The nested comparison of the three and two factor model-I produced a  $\Delta x^2$  value of 231.69 ( $p < .01$ ). Similarly, the nested comparison of the three factor model and the two factor model-II revealed a statistically significant difference between the chi-square values of the two models ( $\Delta x^2 = 82.88$ ;  $p < .01$ ). The results of the chi square difference tests indicate that the fit of the three factor model to the data set is more acceptable than the other models.

**Table 2.** Goodness of Fit Statistics for the Measurement Models

Model/Model Comparison Tests	$\chi^2$	df	p	$\chi^2 / df$	CFI	GFI
Three-factor	213,69	62	.00	3,447	0,902	0,871
CPP and RPP were combined into one factor	296,575	64	.00	4,634	0,85	0,837
CPP and CR were combined into one factor	445,387	64	.00	6,959	0,754	0,759
One-factor	763,397	65	.00	11,745	0,550	0,603
Three-factor vs. One-factor	549,707	3	.00			
Two Factor-I (CPP & RPP) vs. One-factor	466,822	1	.00			
Two Factor-II (CPP & CR) vs. One-factor	318,01	1	.00			
Three-factor vs. (CPP & CR)	231.697	2	.00			
Three-factor vs. (CPP & RPP)	82.885	2	.00			

Note.  $\chi^2$ = Chi-square, df: “Degrees of Freedom, CFI: “Comparative Fit Index”, GFI: “Goodness of Fit Index, CPP: Creative Performance Pressure, RPP: Performance Pressure, CR: Creative Requirements”.

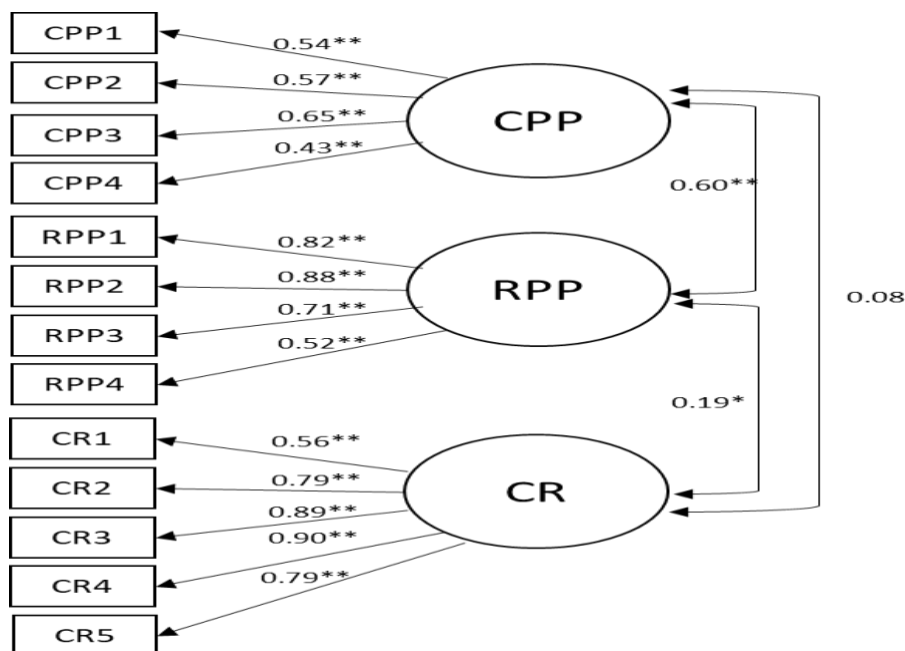
After the three-factor structure was confirmed by the analyses, it was decided to add error variance terms between the items measuring the same factor in order to improve the model (i.e., four error variances terms were added). Thus, as can be seen in Table 3, the fit statistics of the model substantially ( $\chi^2= 2.38$ ; GFI= .92; CFI= .95; TLI= .93; RMSEA=.07). It is observed that the goodness of fit indices of the three-factor model meet the criteria recommended by different researchers (Bryne, 2010; Schermelleh-Engel et al., 2003), indicating relatively good-fitting model.

**Table 3.** Comparison of CFA Results for the Original and Revised Model

Fit Indices	$\chi^2$	df	$\chi^2/df$	GFI	CFI	TLI	RMSEA
Threshold Value			<5	$\geq .85$	$\geq .90$	$\geq .90$	$\leq .08$
Original Model	213.690	62	3.44	.87	.90	.88	.10
Revised Model	138,004	58	2.38	.92	.95	.93	.07

Note.  $\chi^2$ = “Chi-square”, df: “Degrees of Freedom”, GFI: “Goodness of Fit Index, CFI: “Comparative Fit Index”, TLI: “Tucker-Lewis Index”, RMSEA: “Root Mean Square Error of Approximation”.

All three factors loaded significantly on the respective items with standardized factor loading ranging from .43 to .90. (Figure 1). The covariance between creative performance pressure and routine performance was found to be quite high (0.60), yet not indicating singularity. This strong association between CPP and RPP could be attributed to the wording of the items, which stresses perceived pressure, albeit resulting from different sources (from creativity and ordinary performance). Though found to be significant, the covariance between creative requirements and routine performance pressure was found to be weak (Covariance term = 0.19;  $p < 0.05$ ), indicating the divergence of these two scales. Quite unexpectedly, although they are related to creativity, the covariance term between creative requirement and creative pressure scales were found to be insignificant (Covariance term = 0.08;  $p > 0.05$ ).



**Figure 1.** Results Of Confirmatory Factor Analysis

**Internal Consistency, Convergent Validity and Divergent Validity**

Cronbach's alpha coefficients ( $\alpha$ ) were calculated to assess the internal consistency of the scales. As seen from Table 4, the coefficients were found to be 0.71, 0.88 and 0.83 for CPP, RPP and CR scales respectively, which are satisfactory considering the suggestions of Nunnally (1978). As seen from Figure 1, the fourth item of CPP scale was found to have significant, yet relatively lower standardized loadings. In order to decide whether to exclude or include this item in the subsequent analysis, item-total correlations and scale-if-item deleted statistics were analyzed. Item-total correlation for the fourth item was found to be 0.39, which is low, yet acceptable according to the suggestion of Cristobal et al. (2007), Maltby (2007) and Brzoska & Razum (2010). When this item is deleted from the scale, Cronbach Alpha increases only from 0.706 to 0.709. This item was decided to be retained although it is suggested to be closely examined in future studies.

Besides, composite reliability (CR) estimates were calculated to assess the internal consistency of the scales given the fact that composite reliability estimates account for varying factor loadings and avoid the limitations inherent in Cronbach's alpha, such as the assumption of equal item loadings and reliance on number of items. Composite reliability of two scales were found to be above threshold value of 0.70, suggested by Hair et al. (2019) (for CR scale CR estimate = 0.87; for RPP scale CR estimate = 0.82). For CPP scale, CR estimate was found to be slightly below the threshold value (CR estimate = .64). When the covariance terms were removed and CR estimates were calculated according to the estimates in the revised model, CR estimate reached the threshold value (CR = 0.71). Based on both Cronbach's Alpha and composite reliability estimates, scales (CR and RPP) were judged to be internally consistent.

Convergent validity analysis was conducted by calculating the correlation between the creative performance pressure scale score and the routine performance pressure scale score. In addition to this bivariate correlation, the correlations for all article variables are presented in Table 4. The creative performance pressure scale score and the routine performance pressure scale showed a significant and positive correlation at a moderate to high level ( $r(247) = .478, p < .05$ ). Thus, it was found that there was a strong relationship between the participants' creative performance pressure scores and routine performance pressure scores. Our expectation was supported. Overall, the correlation analyses confirmed the convergent validity of the CPP.

**Table 4.** Means, Standard Deviations, Cronbach Alphas, and Correlations: Normative Sample

	Mean	S.D.	Alpha	CR	RPP	OC	WSTR	WELLB
CPP	3,26	1,20	,71	,108	,478**	,115	,349**	-,078
CR	4,12	,72	,88		,314**	,259**	,146*	,177**
RPP	3,11	,911	,83			,215**	,467**	-,055
OC	4,38	1,32	,93				-,154*	,293**
WSTR	2,95	,85	,86					-,155*
WELLB	5,60	,78	,88					

Note. S.D.: "Standard Deviation", CPP: "Creative Performance Pressure", RPP: "Routine Performance Pressure", CR: "Creative Requirements", WSTR: "Work Stress", WELLB: "Wellbeing", OC: "Organizational Creativity".

The creative requirement scale was used to test divergent validity. When the relationship between creative performance pressure and creative requirement was analyzed, a non-significant correlation was found ( $r(247) = .108, p > .05$ ). Thus, our expectation was supported. The non-significant correlation between these two measured variables confirms the divergent validity.

**4.2. Predictive Validity**

Following the examination of construct, convergent, and divergent validity and internal consistency, the relationships between CPP and work stress, wellbeing, and organizational creativity were examined by path analysis to test the predictive validity of the scale. Moreover, in order to make a more detailed contribution to the literature, the relationships between CR and RPP and work stress, wellbeing, and organizational creativity were also examined in detail through path analysis (Table 5).



**Table 5.** The standardized and unstandardized estimates of revised full structural model

	Unstandardized estimate	Standard error	Standardized estimate ( $\beta$ )	p
<i>Creative Performance Pressure</i>				
cpp1	1.00	-	.70	<.001
cpp2	1.20	.14	.86	<.001
cpp3	.53	.89	.43	<.001
cpp4	.46	.10	.32	<.001
<i>Work Stress</i>				
wstr1	1.00	-	.58	<.001
wstr2	1.39	.15	.80	<.001
wstr3	1.39	.15	.82	<.001
wstr4	1.19	.14	.70	<.001
wstr5	1.27	.15	.71	<.001
wstr6	.92	.13	.53	<.001
wstr7	.78	.13	.44	<.001
<i>Wellbeing</i>				
wellb1	1.00	-	.79	<.001
wellb2	.93	.07	.80	<.001
wellb3	.99	.74	.82	<.001
wellb4	.57	.06	.59	<.001
wellb5	.68	.06	.66	<.001
wellb6	.54	.06	.57	<.001
wellb7	.76	.08	.54	<.001
wellb8	.53	.05	.60	<.001
<i>Organizational Creativity</i>				
oc1	1.00	-	.71	<.001
oc2	1.00	.08	.69	<.001
oc3	1.01	.11	.62	<.001
oc4	1.00	.10	.66	<.001
oc5	1.13	.10	.76	<.001
oc6	1.25	.11	.86	<.001
oc7	1.13	.10	.76	<.001
oc8	1.11	.98	.79	<.001
oc9	1.14	.10	.74	<.001
oc10	1.02	.10	.76	<.001
<i>Creative Requirements</i>				
cr1	1.00	-	.56	<.001
cr2	.99	.09	.79	<.001
cr3	1.24	.12	.89	<.001
cr4	1.13	.11	.89	<.001
cr5	1.06	.11	.79	<.001

<i>Routine Performance Pressure</i>				
rpp1	1.00	-	.83	<.001
rpp2	1.49	.07	.89	<.001
rpp3	.80	.07	.67	<.001
rpp4	.57	.07	.50	<.001
<i>Paths</i>				
From CPP to WSTR	.19	.42	.34	<.001
From CPP to WELLB	-.09	.05	-.11	.121
From CPP to OC	-.15	.06	-.15	<.05
From CR to WSTR	-.03	.71	-.03	.64
From CR to WELLB	.35	.12	.22	<.05
From CR to OC	.48	.14	.25	<.001
From RPP to WSTR	.33	.58	.48	<.001
From RPP to WELLB	-.10	.07	-.10	.16
From RPP to OC	.09	.09	.08	.27

Note. CPP: “Creative Performance Pressure”, RPP: “Routine Performance Pressure”, CR: “Creative Requirements”, WSTR: “Work Stress”, WELLB: “Wellbeing”, OC: “Organizational Creativity”.

As a result of the analysis of the CPP, it was observed that the factor loadings were between .32 and .86. In this context, the last item was not removed in the present article due to the fact that each of the items loaded significantly and the internal consistency coefficients were above the criterion. In the analysis conducted in terms of the predictive validity of the scale, the effect of CPP on work stress was found to be positive and significant ( $\beta = .34$ ,  $p < .001$ ). Its effect on organizational creativity was negative and marginally significant ( $\beta = -.15$ ,  $p < .05$ ). The effect of CPP on wellbeing was not significant ( $\beta = -.11$ ,  $p = .121$ ).

The effect of CR on organizational creativity was found to be positive and significant ( $\beta = .25$ ,  $p < .001$ ), while its effect on wellbeing was found to be positive and marginally significant ( $\beta = .22$ ,  $p < .05$ ). The effect on work stress was not significant ( $\beta = -.03$ ,  $p = .64$ ). On the other hand, the effect of RPP on work stress was found to be positive and significant ( $\beta = .48$ ,  $p < .001$ ), while its effects on wellbeing ( $\beta = -.10$ ,  $p = .16$ ) and organizational creativity ( $\beta = .08$ ,  $p = .27$ ) were not significant.

#### 4.3.Examining Relationships in the Sectoral Context

Many studies have examined whether employees perceive some variables differently based on the sector (such as public and private sectors) (Andrade & Westover, 2023; Baarspul & Wilderom, 2011; Ingrams, 2020). Considering the existing findings in the performance pressure and creativity literature that these variables may be related to the sector, revealing the possible relationships of the variables in the sectoral context would be a useful and comprehensive analysis in terms of demonstrating predictive validity. In other words, the reason for examining the differences between the public and private sectors in the present study is that such comparisons can be meaningfully conducted based on existing theoretical and empirical research; this approach allows for a more in-depth and reliable analysis of performance differences across sectors (Boateng et al., 2018). Therefore, it is important to examine the sectoral relationships of other variables adapted and used in Turkish. Consequently, a multigroup analysis was conducted with data obtained from 247 respondents. Multigroup path analysis results are presented in Table 6.

The validity of the hypothesized model for the private sector and the public sector was tested using multigroup, full latent variable modelling. Maximum likelihood estimation was employed, given the existence

of multivariate normality among variables. Before evaluating the magnitude of the relationships among variables, first, the hypothesized model's invariance was assessed using the nested model comparison method. Firstly, the unconstrained model was compared with Model-1 in which all factor loadings were constrained to be equal across both sectors.

A chi square difference test suggested the existence of measurement invariance across two sectors ( $\Delta\chi^2 (32) = 38.332$ ;  $p > .05$ ). Once the measurement invariance model (Model-1) was accepted, more restrictive Model 2, in which both factor loadings and structural weights were constrained to be equal, was compared with Model 1. The chi square difference test between Model 1 and Model 2 was significant ( $\Delta\chi^2 (9) = 23.020$ ,  $p < .05$ ), indicating that structural invariance couldn't be established. Since structural paths differ, more restrictive models were not compared. Therefore, the structural paths differ across the public and private sectors. To further explore the source of the difference, estimates were examined.

**Table 6.** Results of the multigroup path analyses

	Public Sector n=116				Private Sector n=131			
	Unstandardized estimate	S.E.	Standardized estimate ( $\beta$ )	p	Unstandardized estimate	S.E.	Standardized estimate ( $\beta$ )	p
<i>Paths</i>								
From CPP to WSTR	,244	,065	,479	<.001	,126	,054	,479	<.05
From CPP to WELLB	,001	,094	,001	,994	-,175	,073	,001	<.05
From CPP to OC	-,147	,102	-,136	,150	-,113	,085	-,136	,181
From CR to WSTR	,033	,091	,038	,719	-,057	,112	,038	,608
From CR to WELLB	,224	,177	,149	,206	,398	,170	,149	<.05
From CR to OC	,269	,190	,147	,156	,457	,203	,147	<.05
From RPP to WSTR	,148	,079	,214	,059	,460	,083	,214	<.001
From RPP to WELLB	-,059	,145	-,049	,684	-,159	,085	-,049	,063
From RPP to OC	,605	,168	,413	<.001	-,190	,102	,413	,063

*Note.* S.E.: "Standardized Estimate", CPP: "Creative Performance Pressure", RPP: "Routine Performance Pressure", CR: "Creative Requirements", WSTR: "Work Stress", WELLB: "Wellbeing", OC: "Organizational Creativity"

In the public sector, the effect of CPP on work stress was significant ( $\beta = .48$ ,  $p < .001$ ), whereas in the private sector this effect was marginally significant ( $\beta = .48$ ,  $p < .05$ ). The effect of CR on wellbeing ( $\beta = .15$ ,  $p < .05$ ) and organizational creativity ( $\beta = .15$ ,  $p < .05$ ) was marginally significant only in the private sector. The effect of

RPP on organizational creativity ( $\beta = .41, p < .001$ ) was significant in the public sector. The effect of RPP on work stress was significant in the private sector ( $\beta = .21, p < .001$ ).

## 5. Discussion and Conclusion

The primary objective of this study was to assess the reliability and validity of the Turkish adaption of the Creative Performance Pressure Scale. The findings indicated that the Turkish adaptation of the scale is a valid and internally consistent measurement instrument. Moreover, confirmatory factor analysis substantiated the single-factor structure proposed by Liu et al. (2022).

The correlation analysis revealed a moderate to high positive association between the Creative Performance Pressure (CPP) scale and the Routine Performance Pressure (RPP) scale), supporting the convergent validity of the CPP scale. Existence of moderate to high levels of positive correlation seems reasonable since both scales intends to quantify the degree of pressure that employees perceive in their work environment. While the CPP scale emphasizes the pressure to develop creative and novel solutions, the RPP scale quantifies the stress that is associated with the efficient and consistent execution of routine or standardized tasks. Though concentrating on distinct aspects of performance, employees who internalize high-performance standards may experience similar levels of pressure across both creative and routine domains, which could make CPP and RPP co-exist and related.

Quite unexpectedly, a non-significant correlation was found between CPP and Creative Requirements (CR) scores. At first glance, this lack of association may appear counterintuitive, as both constructs are relevant to creativity in the workplace. Nevertheless, a more thorough analysis reveals significant conceptual distinctions between the two measures, which might explain the observed result. As noted earlier, the CPP scale intends to measure the subjective perceptions of the pressure that individuals experience when they are required to participate in creative activity. This pressure could be a result of the psychological distress, which is associated with having the responsibility to solve problems in a creative manner, generate novel ideas, or innovate. In contrast to CPP scale measuring subjective evaluations, the CR scale assesses the objective, structural attributes of the position that explicitly necessitate creativity. It assesses the extent to which the job inherently calls for creative thinking and innovation as part of its design, regardless of the emotional experience or perception of any particular employee. Creative requirements may encompass factors such as the presence of ambiguous problems, opportunities for autonomous decision-making, or task complexity, which structurally mandate creativity. Having a job requiring creativity may not induce creative performance pressure, as CPP could be intrinsically linked to the employee's internalized sense of urgency and responsibility, which be induced or alleviated by personal factors such as ambitions, perfectionism and personality. Thus, the non-significant correlation between CPP and Creative Requirements (CR) scores could be regarded as a support for divergent validity.

Supporting the predictive validity of the CPP scale, the results revealed that CPP positively predicts employees' perceived job stress. This relationship could be attributed to the expectation of creativity, which might impose significant performance pressure on employees (Liu et al., 2022). A range of factors, including individual differences in the perception of creativity, increased mental effort, uncertainty, insufficient resources, and fear of failure, might contribute to higher stress levels among employees (Anderson, 2023; Lazarus & Folkman, 1984). Furthermore, path analysis revealed a negative, yet marginally significant effect of CPP on organizational creativity, which could also interpreted as a manifestation of predictive validity. High expectations for creative performance appear to induce pressure, which, when excessive, can heighten the fear of making mistakes and discourage employees from taking risks or exploring new approaches (Gutnick et al., 2012:192-195). Consequently, organizational creativity may be hindered by the limitations imposed on the processes of creative thinking and innovation. The relationship between CPP and well-being was also evaluated for predictive validity. The analysis showed that CPP had no significant direct effect on well-being. The absence of significant relation might result from the subjective, multidimensional, and complex nature of the concept of well-being (Diener, 1984; Seligman, 2011), which might cause well-being to be affected by personality factors or broader job strain factors. It is also plausible that CPP might influence employees' overall well-being through indirect mechanisms or individual differences rather than a direct relationship.

As expected, the effect of CR on organizational creativity was found to be positive and significant. Such an effect can be attributed to the fact that job requirements that encourage creative thinking motivate employees

to develop innovative solutions (Unsworth et al., 2005). In line with this, the non-significant effect of CR on job stress suggests that creative requirements may serve as a motivational factor for employees rather than directly creating stress. The positive and significant effect of RPP on job stress indicates that performance pressure induces stress in employees. Constant expectations and performance pressure increase stress levels by compelling employees to exert more effort (Xu et al., 2021). Similar to the effect of CPP on well-being, the non-significant effect of RPP on well-being suggests that individual differences or other factors may play a more decisive role, and well-being, being a subjective concept, may be influenced by various other mechanisms. Furthermore, the insignificant effect of RPP on organizational creativity can be explained by the fact that this pressure focuses more on completing existing tasks and enhancing productivity rather than fostering creative thinking.

A further contribution of the current study is to examine whether the pressures, expectations, and requirements for creativity and performance are perceived similarly across different sectors, as the literature suggests that certain factors and variables may differ substantially between sectors as private and public (Baarspul & Wilderom, 2011; Rainey & Bozeman, 2000). The significant effect of CPP on job stress in the public sector indicates that employees in this sector perceive creative performance expectations as a greater source of pressure. Factors such as the more mechanical and bureaucratic structure of public organizations (Burns & Stalker, 1961), the presence of structural barriers to implementing innovative ideas, and the ambiguous rewarding of creativity in performance evaluations may intensify the stress-inducing effects of CPP (Fryer et al., 2009; Liu et al., 2022). Consequently, public employees may feel more threatened by creative expectations and pressures, which could elevate their psychological strain and, in turn, their job stress. Several plausible explanations may account for why the effect of CPP on job stress is significant in the public sector, while it is only marginally significant in the private sector. In the private sector, creativity has often become a necessity and is more explicitly prioritized. Moreover, due to its alignment with a more organic organizational structure, supervision in the private sector is generally less rigid compared to the public sector, and tolerance for errors tends to be higher (Kumari & Pandey, 2011). These characteristics may attenuate the impact of CPP on stress in the private sector, rendering it marginally significant. Additionally, private sector organizations are compelled to adopt a more dynamic and innovative culture in order to achieve a competitive advantage (Al-Mutairi et al., 2020). As a result, creativity is regarded as an integral part of work, and individuals capable of adapting to this culture are more likely to be employed. Furthermore, private sector firms often have greater capacity to provide flexibility to their employees (Haque, 2017). Conservation of Resources Theory (Hobfoll, 1989) provides a useful framework for interpreting this dynamic. Employees with more available resources in the private sector may perceive pressure differently than those with limited resources in the public sector. The same level of pressure may be perceived as more manageable and less stressful by private sector employees. In contrast, the pressure to “be creative” in the public sector can serve as a source of stress, as it often necessitates deviating from established roles. Moreover, the innovative and dynamic culture of the private sector may further mitigate or buffer the stress-inducing effects of such pressure.

In line with the arguments given above, the marginally significant effect of CR on well-being and organizational creativity in the private sector can be attributed to several contextual factors. One key reason is that the inherently creative culture of the private sector may reduce the necessity for additional creative requirements. In other words, creative thinking and behavior have already become embedded in the organizational fabric/culture, allowing employees to engage in such behaviors without experiencing an added sense of obligation. This dynamic may account for the limited (marginal) effect of CR observed in this context. In short, because creative demands are already internalized by private sector employees, the additional contribution of this variable in explaining outcomes such as organizational creativity or well-being remains weak. In contrast, the non-significant effect of CR on these outcomes in the public sector may be due to bureaucratic and mechanistic structures, rigid procedures, a traditional organizational culture, and ambiguity in the recognition and reward of creative performance.

In public sector organizations, the effect of RPP on organizational creativity was found to be more positive and significant compared to CPP. Within this context, public sector organizations typically emphasize overall performance objectives such as service delivery, accountability, and efficiency (Almquist et al., 2013). RPP emphasizes direct performance and result orientation (Mitchell et al., 2018). Therefore, in the public sector, the pressure to perform tasks better, faster, and more efficiently -rather than direct pressure to be creative- may

foster the need to develop creative ways to navigate systemic constraints and fulfil responsibilities effectively. Thus, RPP in public organizations may have a more pronounced impact on organizational creativity.

Another important result is that the effect of RPP on job stress is significant in the private sector. This sector is typically characterized by intense competition and a strong emphasis on creativity. In such a context, continuous pressure related to overall performance has a more substantial impact on job stress than creative performance pressure, which employees are generally accustomed to and therefore do not perceive as a major source of stress. In other words, in this sector, where competitive working conditions and risks related to job security are intense, the presence of continuous and routine general performance pressure creates an additional source of anxiety for employees, and this situation increases job stress. Therefore, while a routine and more general approach appears to contribute to organizational creativity in the public sector, in the private sector, due to structural and cultural differences, a similar condition results in increased job stress - an important finding of this research. Thus, the current study provides a significant perspective on how organizational dynamics and employee perceptions differ across the two sectors, leading to different outcomes in the context of performance pressure, expectations, and requirements.

Considering all of these findings together, it becomes clear that the same type of performance pressure, as conceptualized by Cognitive Appraisal Theory (Lazarus & Folkman, 1984), might be perceived differently by employees across distinct organizational contexts, such as the public and private sectors. Variations in stress levels, well-being, and organizational creativity may be the consequence of the different perceptions in the public and private sectors. Individuals seem to interpret the demands and requirements they face not only as objective realities, but also through their subjective evaluations, and this process of meaning-making might directly impact both individual and organizational outcomes. These findings highlight how factors such as work context, job demands and expectations, the nature of the sector, and the cultural or organizational structure shape individuals' experiences of stress, well-being, and creativity. Therefore, the effects of factors such as creativity and performance pressure can only be properly understood when examined within a multidimensional framework.

As in every study, the current study also has some limitations. The first limitation stems from the data collection method. The use of the self-report method may be subject to criticism because of the subjective nature of responses and the tendency of participants to present themselves in a more positive or negative perspective. However, this method may also offer the advantage of more accurately capturing individual experiences and emotional states, as participants have greater self-awareness. In addition, another limitation of the study is that the data were collected using a cross-sectional design and a single method -a questionnaire. Therefore, based on the present study, it is recommended that future research employ different data collection methods and obtain data in different time periods in order to increase the generalizability of the findings. On the other hand, although the main focus of the current study is scale adaptation, it makes a valuable contribution by not only adapting the CPP scale into Turkish, but also by providing an in-depth examination of the differing effects of creative performance pressure across various variables and sectors. However, while certain individual and organizational variables were addressed within the scope of the study, factors such as leadership style, organizational culture and work motivation were not considered. Therefore, by using adapted items with statements tailored to Turkish culture, the related construct can be further explored in Turkish literature by incorporating different variables.

At this point, it should be emphasized that this is not a pure scale adaptation study. Thus, the study not only makes a contextual contribution at the local level, but also offers important insights for both the academic literature and current practices, providing valuable knowledge on creativity, performance pressure, sectoral contexts, and individual and organizational outcomes in a broader, universal sense.

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## **Appendix 1**

### **Creative Performance Pressure Scale**

- The pressures for demonstrating originality in my workplace are high.
- I feel tremendous pressure to find new uses for existing methods or equipment.
- If I do not produce new ideas at high levels, my job will be at risk.
- I would characterize my workplace as an environment where I have to identify opportunities for new products/processes.

### **Creative Requirement Scale**

- My job requires me to have ideas about changing services or facilities for patients and/or visitors.
- My job requires me to have ideas about changing ways of organizing work.
- My job requires me to have ideas about changing work goals and objectives.
- My job requires me to have ideas about work procedures.
- My job requires me to have ideas about changing the environment in which I work.

### **Routine Performance Pressure Scale**

- The pressures for performance in my workplace are high.
- If I don't produce at high levels, my job will be at risk.
- I feel tremendous pressure to produce results.
- I would characterize my workplace as a results-driven environment.