

Research on the effect of employees' role ambiguity and role conflict on burnout: Nature Conservation and National Parks application in Türkiye

Çalışanların rol belirsizliği ve rol çatışmasının tükenmişlik üzerindeki etkisine ilişkin bir araştırma: Türkiye'de Doğa Koruma ve Milli Parklar uygulaması

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Abstract

This study investigates the effects of role ambiguity and role conflict on burnout among employees of the General Directorate of Nature Conservation and National Parks in Türkiye. A structured questionnaire, consisting of three sections, was administered to 204 randomly selected participants out of a total of 3.894 employees. The questionnaire included scales for role ambiguity, role conflict and Burnout Inventory. Statistical analyses, including t-tests, ANOVA, correlation, and regression, were conducted to examine the relationships between these variables. The study also examined the impact of demographic factors, including age, gender, occupational status, and period of service, on role stressors and burnout. The findings revealed that younger employees (aged 25-44) experienced higher levels of role ambiguity, while engineers/experts faced greater role conflict compared to administrators. Additionally, female employees were at a higher risk of emotional exhaustion, a key dimension of burnout. Role ambiguity and role conflict collectively explained 35% of the variance in burnout, with role ambiguity having a more substantial impact ($r=0.527$). These results underscore the need for organisations to support younger and technical staff, clarify roles, and balance workloads to mitigate burnout among their employees.

Keywords: National Parks, Burnout, Role Ambiguity, Role Conflict

Jel Codes: Q3, Q7, M12

Öz

Bu çalışmada, Türkiye Doğa Koruma ve Milli Parklar Genel Müdürlüğü çalışanları arasında rol belirsizliği ve rol çatışmasının tükenmişlik üzerindeki etkileri araştırılmıştır. Toplam 3.894 çalışandan rastgele seçilen 204 katılımcıya üç bölümden oluşan yapılandırılmış bir anket uygulanmıştır. Anket, rol belirsizliği, rol çatışması ölçeklerini ve Maslach Tükenmişlik Envanterini içermektedir. Bu değişkenler arasındaki ilişkileri incelemek için t-testleri, ANOVA, korelasyon ve regresyon gibi istatistiksel analizler yapılmıştır. Çalışmada ayrıca yaş, cinsiyet, mesleki durum ve kıdem gibi demografik faktörlerin rol stresörleri ve tükenmişlik üzerindeki etkisi analiz edilmiştir. Bulgular, daha genç çalışanların (25-44 yaş) daha yüksek düzeyde rol belirsizliği yaşadığını, mühendislerin/uzmanların ise yöneticilere kıyasla daha fazla rol çatışması yaşadığını ortaya koymuştur. Ayrıca, kadın çalışanların tükenmişliğin temel boyutlarından biri olan duygusal tükenme açısından daha yüksek risk altında olduğu görülmüştür. Rol belirsizliği ve rol çatışması, tükenmişlikteki değişkenliğin %35'ini toplu olarak açıklarken, rol belirsizliğinin daha güçlü bir etkisinin olduğu anlaşılmıştır ($r=0.527$). Bu sonuçlar, kuruluşların daha genç ve teknik personeli desteklemesi, rolleri netleştirmesi ve tükenmişliği azaltmak için iş yüklerini dengelemesi gerektiğinin altını çizmektedir.

Anahtar Kelimeler: Milli Parklar, Tükenmişlik, Rol Belirsizliği, Rol Çatışması

JEL Kodları: Q3, Q7, M12

Introduction

The human resources and workforce are universally acknowledged as the cornerstone of organisational success, driving progress, innovation, and the achievement of strategic objectives (Gheyratmand, Mohammadipour and Bakhshipor, 2016). However, the relentless pace of modern organisational life, coupled with increasing competition, has placed unprecedented levels of stress on employees. This stress permeates not only their professional lives but also spills over into their personal domains, affecting overall well-being (Jackson and Schuler, 1985). While stress, in moderate doses, can catalyse enhanced performance and personal growth (Pratiwi, Ratnadi, Suprasto and Sujana, 2019), its excessive accumulation often leads to detrimental outcomes, including diminished job satisfaction, reduced productivity, and severe psychological consequences such as anxiety and depression. The stress in these organisations needs to be identified correctly and handled accordingly.

Throughout history, stress has been an integral part of daily life and has been defined in various ways. Selye (1955) described stress as a response to pressure, whereas Lazarus and Folkman (1984) defined it as a dynamic interaction between the individual and the environment. Moos (1993) classified coping strategies into two categories: approach strategies (logical analysis, positive reappraisal, seeking guidance and support, and problem-solving) and avoidance strategies (cognitive avoidance, acceptance and resignation, seeking alternative rewards, and emotional discharge).

One of the most pervasive and debilitating outcomes of chronic workplace stress is burnout, a syndrome characterised by emotional exhaustion, depersonalisation, and a diminished sense of personal accomplishment (Maslach and Leiter, 2008; Utami and Nahartyo, 2013). Burnout, first conceptualised by Freudenberg (1974) as "the extinction of motivation or incentive, especially where one's devotion to a cause or relationship fails to produce the desired results," has since been recognised as a critical occupational hazard. It is particularly prevalent in environments where employees face high job demands coupled with insufficient resources. The antecedents of burnout are multifaceted, encompassing both individual and organisational factors. Among these, role ambiguity and role conflict have emerged as significant predictors of burnout, often exacerbating stress levels and undermining employee well-being (Maslach, Schaufeli and Leiter, 2001; Dasgupta, 2012; Montgomery, Panagopoulou, Esmail, Richards and Maslach, 2019).

Role ambiguity occurs when employees are unclear about their job responsibilities, expectations, or the means to achieve their objectives, resulting in uncertainty and stress (Mwakyusa and Mcharo, 2024). Role conflict, on the other hand, occurs when employees face incompatible or contradictory demands within their roles, creating a sense of incongruity and frustration (Jawahar, Stone and Kisamore, 2007). Although these two constructs are distinct, they are often interrelated and collectively contribute to the development of burnout. The consequences of burnout are far-reaching, affecting not only individual employees but also organisational outcomes (Wu, Hu and Zheng, 2019; Chen, 2023). Burnout has been linked to increased turnover intentions (Salama, Abdou, Mohamed and Shehata, 2022), absenteeism (Lee et al., 2023), reduced job performance (Üngüren and Arslan, 2021), and weakened organisational commitment (El Gareh, Hattabou, Oulamine and Alourhazal, 2023). Moreover, burnout undermines employee health, productivity, and overall organisational efficiency (Chen and Liu, 2023). Many studies identify role ambiguity as a significant risk factor for burnout. The role conflict, on the other hand, refers to the incongruity of expectations associated with a role and is associated with the burnout development (Gaspar et al., 2024). Previous studies have pointed out that some particular risk factors play a significant role in the increase (Maslach and Jackson, 1985; Cordes and Dougherty, 1993; Russell, Altmaier and Van Velzen, 1987; Zellars, Perrewé and Hochwarter, 2000). Other researchers believe that organisational factors play a central role in burnout (Olivares-Faúndez, Gil-Monte, Mena, Jélvez-Wilke and Figueiredo-Ferraz, 2014). Consequences and antecedents of burnout have been attributed to many personal and organisational variables (Gabriel and Aguinis, 2022). Among the organisational factors, lack of social support, work overload, client-related demands, lack of self-regulatory activity, and role problems such as role ambiguity and role conflict, are often advertised as the causes of burnout (Cropanzano, Rupp and Byrne, 2003; Yürür and Sarikaya, 2012; Morse, Salyers, Rollins, Monroe-DeVita and Pfahler, 2022). For this reason, many researchers have begun to investigate burnout across various professional groups.

Extensive research has been conducted on burnout across various professions, including nursing (Leiter and Maslach, 2009; Izdebski, Kozakiewicz, Białorudzki, Dec-Pietrowska and Mazur, 2023), teaching (Saloviita and Pakarinen, 2021), social work (Maslach, 2017), academia (Silva et al., 2021; Beehr, Bowling and Bennett, 2010), and legal professions (Nickum and Desrumaux, 2023). However, there is a notable gap in the literature regarding burnout in the natural resources and forestry sector, a field characterised by its multidisciplinary nature, diverse responsibilities, and unique stressors. Employees in this sector

often face complex tasks, environmental challenges, and bureaucratic pressures, making them particularly susceptible to burnout. Despite this, few studies have explored the impact of role ambiguity and role conflict on burnout within this context, especially in Türkiye (Gedik and Çet, 2020; Bielinis et al., 2025).

The forestry sector is inherently interdisciplinary and requires employees to cope with complex tasks that combine biological, social, economic and technical dimensions. This complexity, combined with an intense workload and vertical organisational structure, leads to role ambiguity and role conflict among employees of the General Directorate of Nature Conservation and National Parks (NCNP). These role stressors also contribute significantly to the prevalence of burnout syndrome within the organisation. Additionally, the effects of role conflict, role ambiguity, and burnout may vary depending on individual demographic characteristics, including age, gender, marital status, occupational status, and period of service. Despite the increase in research on burnout in various sectors, there is a significant gap in the literature on this subject, especially in forestry institutions in Türkiye. To date, no study has been conducted specifically examining the relationship between role ambiguity, role conflict and burnout in this context.

This study aims to fill this gap by examining the effects of role conflict and role ambiguity on burnout among employees of the NCNP in Türkiye, providing empirical findings regarding the unique challenges faced by NCNP employees. By focusing on the interplay between these role stressors and burnout, this research aims to illuminate the unique challenges faced by employees in the forestry and national parks sectors. Additionally, the study investigates the influence of demographic variables—such as age, gender, occupational status, and period of service—on role ambiguity, role conflict, and burnout. Understanding these dynamics is crucial for developing targeted interventions to mitigate burnout and enhance employee well-being in this sector.

Literature review and hypothesis development

Burnout

Maslach and Jackson (1981) defined burnout as "a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do 'people-work' of some kind". According to them, burnout is defined as a syndrome characterised by feelings of emotional exhaustion, depersonalisation, and reduced personal accomplishment. This definition is widely followed in burnout research. Emotional exhaustion is a chronic state of emotional and physical depletion (Cropanzano et al., 2003) and is considered the core dimension of burnout (Maslach and Jackson, 1981; Maslach and Goldberg, 1998; Maslach et al., 2001). Depersonalisation, the second component of burnout, is defined as "the development of negative, cynical attitudes and feelings about one's clients" (Maslach and Jackson, 1981) and represents the interpersonal context dimension of burnout (Maslach et al., 2001). These two dimensions are generally considered the core symptoms of burnout (Shirom, 1989; Shirom, 2005). Schaufeli and Salanova (2007) have also regarded emotional exhaustion and depersonalisation as the central elements of burnout. The third dimension of burnout, personal accomplishment, is a decline in one's feelings of competence and achievement in one's work with people (Schaufeli and Greenglass, 2001).

Although there is no single definition of burnout, there is a broad consensus that it is an individual's response to chronic work stress (Cooper, Dewe and O'Driscoll, 2001; Jenaro, Flores and Arias, 2007; Maslach et al., 2001; Olivares-Faúndez et al., 2014). The literature on occupational stress and burnout has grown constantly over the past two decades (Perrewé et al., 2002).

Another aspect of burnout is the perception that one's job accomplishments fall short of personal expectations, a perception that involves a negative self-evaluation in the absence of feedback from coworkers and other factors that precipitate burnout (Jackson and Schuler, 1983). Maslach's Burnout Inventory (MBI) is commonly used as a search tool in the current literature to measure the level of burnout (Lee and Ashforth, 1990; Kanste, Miettunen and Kynğäs, 2006; Wu, Zhu, Wang, Wang and Lan, 2007).

An individual's demographic features such as age, marital status, gender, period of service and level of education remarkably influence their level of burnout (Maslach and Jackson, 1981; Randall and Scout, 1988; Cordes and Dougherty, 1993; Maslach et al., 2001; Brewer and Shapard, 2004; Lau, Yuen and Chan, 2005; Garrosa, Moreno-Jimenez, Liang and Gonzalez, 2008; Ari and Bal, 2008; Chauhan, 2009; Tunc and Kutanis, 2009). In the present study, the H1 hypothesis was used to test the correlation between the demographic features of NCNP employees and their levels of burnout and its sub-dimensions.

H₁: *There is a significant correlation between NCNP employees' demographic features and their level of burnout and sub-dimensions of burnout.*

Role ambiguity

Researchers have identified chronic role stressors as a significant predictor of burnout. Over the years, role stressors such as role conflict and role ambiguity have been identified as important causes of stress in the workplace (Cordes and Dougherty, 1993; Perrewé et al., 2002; Lambert and Lambert, 2001; Ghorpade, Lackritz and Singh, 2011).

Role ambiguity occurs when an individual is deprived of the necessary knowledge and an exact understanding of role behaviours which are expected from them (Walker Jr, Churchill Jr and Ford, 1975). According to Katz and Kahn (1978), it represents the ambiguity which an individual with a specific status experiences when they do not know how to behave. Similarly, Pearce (1981) states that the two main reasons for role ambiguity are lack of knowledge and uncertainty.

Role ambiguity can be associated with various elements, such as an insufficient job definition, administrators' uncertain orders, and coworkers' complex words and behaviours (Luthans, 2011; Griffin and Moorhead, 2011; Doğan, Demir and Türkmen, 2016). Role ambiguity leads to job stress, anxiety, tension, and decreased job satisfaction among employees (Valenzi and Dessler, 1978).

Organisational and personal factors may also lead to role ambiguity. A complex organisational structure, technological and organisational changes within the institution, changes in the organisational environment, and organisational restructuring can be listed among the reasons that lead to role ambiguity (Rizzo, House and Lirtzman, 1970). Personal factors, on the other hand, result from the employee fulfilling the role in question. An employee's organisational role is related to their perception of that role. Therefore, an employee's demographic features play a crucial role among personal factors.

It was observed in the literature that there was a statistically significant correlation between role ambiguity and burnout (Schwab and Iwanicki, 1982; Brookings, Bolton, Brown and McEvoy, 1985; Fimian and Blanton, 1987; Von Emster and Harrison, 1998; Sabuncuoğlu, 2008; Tunc and Kutanis, 2009; Ghorpade et al., 2011; Doğan et al., 2016). Another study reported a correlation between role ambiguity and reduced sense of personal accomplishment, which is one of the sub-dimensions of burnout (Jackson, Schwab and Schuler, 1986). In the present study, the H2 hypothesis was used to investigate the correlation between role ambiguity among NCNP employees and their level of burnout, as well as the sub-dimensions of burnout.

H₂: *There is a significant correlation between NCNP employees' role ambiguity and their level of burnout and sub-dimensions of burnout.*

Role conflict

There are various definitions of role conflict in the literature. It was first systematically studied by Kahn, Wolfe, Quinn, Snoek and Rosenthal (1964). Katz and Kahn (1978) define the concept as "an individual's obedience to a requirement of their role at a level which will make it difficult to obey others when they are obliged to fulfil two or more roles". Weatherly and Tasnik (1993) define it as the mismatch between two or more roles within a set of roles. Some scholars define it as an employee's obligation to fulfil roles that are mismatched with their expectations (Peterson et al., 1995). Thus, an employee is likely to have difficulty in fulfilling a role while trying to fulfil another role.

Role conflict involves a lack of harmony with responsibilities, resources, rules, policies and coworkers in a work environment (Nicholson and Goh, 1983). Role conflict is categorised into five distinct types: intrasender role conflict, intersender role conflict, interrole conflict, person-role conflict, and role overload (Katz and Kahn, 1978).

Studies by Kahn et. al., (1964) and House and Rizzo (1972) determined that role conflict leads to increased job tension and anxiety. Other studies conducted at different times have also found a statistically significant correlation between role conflict and burnout (Schwab and Iwanicki, 1982; Brookings et al., 1985; Fimian and Blanton, 1987; Lee and Ashforth, 1996; Von Emster and Harrison, 1998; Peeters, Montgomery, Bakker and Schaufeli, 2005; LePine, Podsakoff and LePine, 2005; Schaufeli, 2007; Tunc and Kutanis, 2009; Ghorpade et al., 2011; Sabuncuoğlu, 2008). Similar to role ambiguity, role conflict results in several negative consequences. The existing studies report a significant correlation between role conflict and emotional exhaustion (Jackson et al., 1986; Leiter and Maslach, 1988), as well as between role conflict, emotional exhaustion, and depersonalisation (Jackson, Turner and Brief, 1987). In the present study, the H3 hypothesis was used to test the correlation between NCNP employees' role conflict and their level of burnout, as well as the sub-dimensions of burnout.

H₃: *There is a significant correlation between NCNP employees' role conflict and their level of burnout and sub-dimensions of burnout.*

Materials and methods

Study area

This study focuses on employees of the NCNP, a key institution under the Ministry of Agriculture and Forestry in Türkiye. The NCNP is responsible for the conservation and management of Türkiye's natural heritage, encompassing a wide range of activities across seven distinct departments: National Parks, Nature Conservation, Sensitive Areas, Wildlife, Hunting Management, Biological Diversity, and Service Management. With operations spanning 15 different regions across the country, the NCNP employs workers in both office and field settings. This extensive geographic and cultural diversity within the organisation provided a unique opportunity to examine the interplay between role stressors and burnout across varied contexts.

Study design and statistical analysis

This study employed a quantitative research design to investigate the relationships between role ambiguity, role conflict, and burnout among employees of the NCNP in Türkiye. A structured questionnaire consisting of three parts was administered to a randomly selected sample of 204 participants out of a total population of 3,894 employees. The sample size was initially determined to be 94 participants using the following formula (Equation 1) at a 95% confidence level with a 10% margin of error (Karasar, 1991). To account for potential non-response, the sample size was doubled, and the questionnaire was distributed via email to ensure adequate participation. The survey was conducted online between late 2015 and early 2016, resulting in 204 completed responses.

$$n = \frac{Z^2 \cdot N \cdot p \cdot q}{N \cdot D^2 + Z^2 \cdot p \cdot q} \quad (\text{Eq. 1})$$

Where, n = sample size, N = Population, Z = 1.96 at a 95% confidence level, p is the estimated proportion of the population (0.5), D = margin of error (%10 or 0.1), and q is $1 - p$ (0.5). In cases where no prior assumptions about the population proportion are available, p and q are typically set to 0.5 to maximise the sample size (Yavuz, 2000; Doğan and Doğan, 2014).

Questionnaire design

The questionnaire was divided into three sections:

1. Demographic Information: This section collected data on participants' gender, age, marital status, educational level, occupational status, and period of service.

2. Role Ambiguity and Role Conflict: The 14-item Role Ambiguity and Role Conflict Scale developed by Rizzo et al. (1970) was used. The scale consists of two sub-dimensions: role ambiguity (6 items) and role conflict (8 items). Higher scores on the scale indicate higher levels of role ambiguity and role conflict. The reliability of the scale was confirmed with Cronbach's alpha values of 0.797 for role ambiguity and 0.792 for role conflict.

3. Burnout: The Maslach Burnout Inventory (MBI), developed by Maslach and Jackson (1981), was used to measure burnout. The MBI comprises three sub-dimensions: emotional exhaustion (8 items), depersonalisation (6 items), and reduced personal accomplishment (8 items). The reliability of the MBI was confirmed with a Cronbach's alpha value of 0.817.

Items in the second and third sections of the questionnaire were scored using a 5-point Likert scale. Negative statements were used for the emotional exhaustion and depersonalisation sub-dimensions, while positive statements were used for reduced personal accomplishment. Items in the reduced personal accomplishment sub-dimension were reverse-coded to ensure consistency in scoring. Higher scores on the MBI indicate higher levels of burnout.

Data analysis

Data were analysed using SPSS statistical software. The normality of the data was assessed using skewness and kurtosis coefficients. According to Tabachnick and Fidell (2013), data with skewness and kurtosis values between +1.5 and -1.5 are considered normally distributed for Likert-type scales. In this study, the skewness and kurtosis values fell within this range, confirming the normality of the data.

To examine differences in role ambiguity and role conflict based on demographic variables, independent samples t-tests and one-way ANOVA were conducted. When significant differences were found, LSD post hoc tests were performed to identify the specific groups contributing to the differences. Additionally, Pearson correlation analysis was used to assess the relationships between role ambiguity, role conflict, and burnout. Finally, multiple regression analysis was conducted to determine the extent to which role ambiguity and role conflict predict burnout.

Results and discussion

Demographic features of participants

The results related to the NCNP employees' demographic features were summarised in Table 1.

Table 1: Participants' demographic features

Demographic Variables	Groups	n	%
Gender	Male	140	68.6
	Female	64	31.4
Total		204	100
Age	25-34	80	29.2
	35-44	58	28.4
	>45	66	32.4
Total		204	100
Marital Status	Single	68	33.3
	Married	136	66.7
Total		204	100
Level of Education	High School	13	6.4
	Bachelor's Degree	149	73.0
	Postgraduate	42	20.6
Total		204	100
Occupational Status	Administrator	41	20.1
	Engineer/Expert/ Assist. Expert	103	50.5
	Other	60	29.4
Total		204	100
Period of Service (Years)	<3	48	23.5
	3-5	36	17.6
	6-10	37	18.1
	11-15	20	9.8
	16-20	29	14.2
	>21	34	16.7
Total		204	100

*n: Number of people

According to the basic statistics, the survey revealed that 68.6 per cent of the employees were male, while 31.1 per cent were female. The percentage of the age groups for 25-34, 35-44, and >45 were 39.2%, 28.4%, and 32.4% respectively. The rate of married employees was 66.7%. In terms of level of education, 6.4% of the participants completed high school, 73% had a Bachelor's degree, and 20.6% had completed postgraduate education. As for participants' occupational status, 20.1% of them worked as administrators, 50.5% of them worked as an engineer/expert/assistant expert, and 29.4% of them worked in other positions. When it comes to period of service in the organisation, 23.5% of the participants have worked less than 3 years, 17.6% of them have worked from 3 to 5 years, 18.1% of them have worked from 6 to 10 years, 9.8% of them have worked from 11 to 15 years, and 14.2% of them have worked from 16 to 20 years, and 16.7% of them have worked for more than 20 years in the same organisation (Table 1). For example, according to the ILO's "ILO Partnering for Development" (2021) report, the representation rate of women in STEM (Science, Technology, Engineering, and Mathematics) fields is ~30% globally. In Türkiye, according to TMMOB ("TMMOB Home", 2025), the female employment rate in the engineering sector is 24.5%. In this context, the fact that the female employee rate in NCNP (31.1%) is above the Turkish average suggests that the institution is in a relatively better position in terms of gender diversity. However, the existence of the "glass ceiling" effect should still be examined, especially in terms of female representation in senior positions (Eagly and Carli, 2007). According to OECD ("OECD Topics", 2023) data, the share of the 45 and over age group is increasing due to the ageing population, especially in public institutions. The fact that the 45 and over age group accounts for 32.4% of NCNP may indicate that the institution can retain experienced employees. However, the high number of individuals in the 25-34 age group may also suggest that the institution is successful in attracting young talent (Ng and Feldman, 2010). This is consistent with TMMOB ("TMMOB Home", 2025) data; the marriage rate among individuals aged 30-45 in Türkiye is ~65%. On the other hand, research on the work-life balance and institutional commitment of married employees (Greenhaus, Collins and Shaw, 2003) indicates that married individuals show higher organisational commitment. Still, work stress may also increase due to family responsibilities. The 20.1% manager ratio is consistent with the "optimal manager-to-employee ratio" in the literature (15-25%) (Robbins and

Judge, 2018). The demographic structure of NCNP exhibits positive characteristics, such as a young and educated workforce, a balanced age distribution, and high institutional seniority.

Descriptive statistics for research variables

The results of the scales used in the study are shown in Table 2. Upon examining the descriptive statistical analyses of the scales in the study, it is evident that the average for burnout is 2.74 (SD = 0.67). Among the sub-dimensions of burnout, the mean for emotional exhaustion is 2.97 (SD=0.91), for depersonalisation is 2.66 (SD=0.93), and for low personal accomplishment is 2.50 (SD=0.80). Additionally, role ambiguity and role conflict were found to be 2.55 (SD = 0.92) and 2.53 (SD = 0.71), respectively.

Table 2: Descriptive Statistics of Scales

Scales	n	Mean	Standard Deviation (SD)
Burnout	204	2.74	0.67
Emotional Exhaustion	204	2.97	0.91
Depersonalisation	204	2.66	0.93
Low Personal Accomplishment	204	2.50	0.80
Role Ambiguity	204	2.55	0.92
Role Conflict	204	2.53	0.71

Effects of participants' demographic features on role ambiguity and role conflict

The results showed that no statistically significant differences were found between employees' levels of role ambiguity and role conflict by gender, marital status, level of education and period of service. Additionally, there were no statistically significant differences between role conflict and age groups (Table 3).

Table 3: Participants' Demographic Features related to Role Ambiguity and Role Conflict

Variables	n	%	Role Ambiguity	Role Conflict	Role Ambiguity/Role Conflict
			Mean (Standard Deviation)		
Gender			t=0.418, P=0.676	t=1.022, P=0.308	t=0.349, P=0.728
Male	140	68.6	2.57 (0.94)	2.56 (0.76)	2.57 (0.70)
Female	64	31.4	2.51 (0.89)	2.45 (0.61)	2.48 (0.58)
Age			F=4.423, P=0.013	F=1.204, P=0.302	F=4.102, P=0.018
25-34	80	39.2	2.70 (0.92)	2.61 (0.72)	2.66 (0.66)
35-44	58	28.4	2.66 (0.88)	2.52 (0.66)	2.59 (0.60)
>45	66	32.4	2.28 (0.91)	2.43 (0.76)	2.36 (0.70)
Marital Status			t=1.486, P=0.139	t=1.678, P=0.095	t=1.944, P=0.053
Single	68	33.3	2.69 (0.97)	2.65 (0.77)	2.67 (0.70)
Married	136	66.7	2.49 (0.90)	2.47 (0.68)	2.48 (0.64)
Level of Education			F=1.140 P=0.322	F=0.142, P= 0.868	F=0.779, P=0.460
High School	13	6.4	2.28 (1.18)	2.54 (1.24)	2.41 (1.06)
Bachelor's Degree	149	73.0	2.44 (0.76)	2.48 (0.59)	2.46 (0.57)
Postgraduate	42	20.6	2.61 (0.94)	2.54 (0.69)	2.58 (0.65)
Occupational Status			F=3.947, P=0.021	F=0.369, P=0.002	F=7.696, P=0.001
Administrator	41	20.1	2.20 (0.87)	2.19 (0.55)	2.19 (0.53)
Engineer/Expert/ Assist. Expert	103	50.5	2.66 (0.88)	2.64 (0.64)	2.65 (0.63)
Other	60	29.4	2.61 (0.99)	2.58 (0.86)	2.59 (0.72)
Period of Service (years)			F=1.086, P=0.370	F=1.813, P=0.112	F=1.005, P=0.416
<3	48	23.5	2.68 (0.97)	2.58 (0.67)	2.63 (0.66)
3-5	36	17.6	2.57 (0.88)	2.68 (0.74)	2.63 (0.64)
6-10	37	18.1	2.64 (0.97)	2.49 (0.80)	2.57 (0.74)
11-15	20	9.8	2.17 (0.75)	2.73 (0.44)	2.45 (0.32)
16-20	29	14.2	2.61 (0.83)	2.49 (0.77)	2.55 (0.67)
>20	34	16.7	2.44 (1.01)	2.25 (0.69)	2.34 (0.74)

In Table 3, a statistically significant difference was observed among role ambiguity scores in different age groups ($F = 4.423$; $p < 0.05$). It was found that role ambiguity scores among employees aged between 25 and 34 (2.70 ± 0.92) and between 35 and 44 (2.66 ± 0.88) were significantly higher compared to those aged 45 and over (2.28 ± 0.91). In other words, the 25-34 and 35-44 age groups suffered from a higher level of role ambiguity. On the other hand, no significant differences were found between employees' levels of role conflict and age groups ($p > 0.05$). Our findings confirm the results of (Gormley and Kennerly, 2010) that the effect of age was significant on role ambiguity but not on role conflict.

The mixed effect of the role conflict and role ambiguity (Table 3) scores displayed significant differences in different age groups ($F=4.102$; $p<0.05$). The role ambiguity/role conflict scores of employees aged between 25 and 34 (2.66 ± 0.66) and between 35 and 44 (2.59 ± 0.60) were significantly higher compared to those of employees aged 45 and over (2.36 ± 0.70). Supporting evidence suggests that younger employees are more likely to face both a lack of role clarity and conflicting expectations (Jackson and Schuler, 1985).

The employees' levels of role ambiguity, role conflict and role ambiguity/role conflict displayed significant differences in terms of occupational status. The LSD post hoc test results indicated that the role ambiguity scores of engineers/experts/assistant experts (2.66 ± 0.88) and other employees (2.61 ± 0.99) were significantly higher compared to those of administrators (2.20 ± 0.87).

When the role conflict scores were analysed, it was evident that engineers/experts/ assistant experts (2.64 ± 0.64) and other employees (2.58 ± 0.86) had a significantly higher level of role conflict compared to administrators (2.19 ± 0.55). Hence, it can be argued that engineers, experts, and expert assistants working for the NCNP suffered from more role ambiguity and role conflict than administrators. Shows that technical staff experience more uncertainty and contradictory demands in operational processes (Schaufeli and Enzmann, 2020). As a result, role stressors in NCNP are shaped by age- and position-related dynamics. The findings are consistent with the ILO ("ILO Partnering for Development", 2021) emphasis on "the critical role of job design in stress management". In conclusion, the findings in this study are consistent with the literature.

Effects of participants' demographic features on sub-dimensions of burnout

The results related to the impact of participants' demographic features on sub-dimensions of burnout are given in Table 4.

Table 4: Participants' Demographic Features related to Sub-Dimensions of Burnout

Variables			Emotional Exhaustion	Depersonalisation	Low Personal Accomplishment
	n	%	Mean (Standard Deviation)		
Gender			$t=-2.114$, $P=0.036$	$t=-0.699$, $P=0.485$	$t=0.043$, $P=0.966$
Male	140	68.6	2.88 (0.92)	2.63 (0.89)	2.50 (0.84)
Female	64	31.4	3.17 (0.84)	2.73 (1.01)	2.49 (0.68)
Age			$F=1.892$, $P=0.153$	$F=1.509$, $P=0.224$	$F=6.347$, $P=0.002$
25-34	80	39.2	2.98 (0.95)	2.77 (1.06)	2.65 (0.75)
35-44	58	28.4	3.13 (0.76)	2.68 (0.88)	2.61 (0.70)
>45	66	32.4	2.81 (0.96)	2.50 (0.78)	2.22 (0.87)
Marital Status			$t= 0.566$, $P=0.572$	$t=1.069$, $P=0.287$	$t= 1.964$, $P=0.051$
Single	68	33.3	3.02 (0.91)	2.76 (1.02)	2.65 (0.73)
Married	136	66.7	2.94 (0.90)	2.61 (0.87)	2.42 (0.82)
Level of Education			$F=0.237$, $P=0.790$	$F=0.403$, $P=0.669$	$F=0.393$, $P=0.676$
High School	13	6.4	3.13 (0.99)	2.88 (1.08)	2.45 (1.00)
Bachelor's Degree	149	73.0	2.97 (0.86)	2.62 (0.80)	2.41 (0.75)
Postgraduate	42	20.6	2.95 (0.92)	2.65 (0.95)	2.53 (0.79)
Occupational Status			$F=0.308$, $P=0.735$	$F=2.223$, $P=0.111$	$F= 8.807$, $P=0.000$
Administrator	41	20.1	2.90 (0.93)	2.40 (0.86)	2.05 (0.72)
Engineer/Expert/ Assist. Expert	103	50.5	2.96 (0.89)	2.68 (0.91)	2.63 (0.72)
Other	60	29.4	3.04 (0.93)	2.79 (0.98)	2.57 (0.87)
Period of Service (years)			$F=0.594$, $P= 0.704$	$F= 0.727$, $P= 0.604$	$F= 0.844$, $P= 0.520$
<3	48	23.5	2.46 (0.64)	2.61 (0.65)	2.78 (0.83)
3-5	36	17.6	2.54 (0.89)	2.70 (0.61)	2.65 (0.65)
6-10	37	18.1	2.31 (0.87)	2.74 (0.64)	2.86 (0.58)
11-15	20	9.8	2.78 (0.83)	2.46 (0.64)	2.61 (0.65)
16-20	29	14.2	2.65 (0.65)	2.54 (0.89)	2.70 (0.61)
>20	34	16.7	2.86 (0.58)	2.31 (0.87)	2.74 (0.64)

It can be observed from Table 4 that the participants' burnout scale and sub-dimension scores did not display any statistically significant differences in terms of marital status, level of education, occupational status, and period of service. The female employees experienced higher levels of burnout in "the subscales of emotional exhaustion" in comparison to the male employees. We found a statistically significant difference between gender and emotional exhaustion ($t=2.114$, $p<0.05$). Therefore, it can be stated that female employees suffer from a higher level of emotional exhaustion, which can be attributed to the fact that females attach more importance to human relations due to their instincts. It is partially

compatible with the burnout model developed by the ILO ("ILO Partnering for Development", 2021). Because the literature emphasises that burnout is mainly related to organisational factors such as workload, lack of autonomy and social support, while demographic characteristics have a limited effect (Schaufeli and Enzmann, 2020). In their meta-study analysing more than 500 studies, the same researchers found that marital status and level of education did not have a consistent relationship with burnout. The findings in the NCNP support this general trend. In another study, confirmed in their meta-analysis of 183 studies, women were found to score statistically higher on emotional exhaustion than men. However, they argued that this difference is due to sociocultural factors such as gender roles (expectations of "emotional labour" from women) and work-family conflict (Purvanova and Muros, 2010). Argue that burnout is more common among highly educated employees (Brewer and Shapard, 2004), while Toppinen-Tanner et al. (2005) found no significant relationship between education level and burnout. The results in NCNP support the latter view. The lack of a difference by occupational status may suggest that similar job stressors are shared between managers and experts. As a result, burnout in NCNP occurs independently of demographic factors other than gender. High emotional exhaustion in female employees can be interpreted as an organisational reflection of gender inequalities (Westman and Etzion, 2005). As a result, females and males may experience varying dimensions of burnout at different levels. Several studies report that females usually suffer from more emotional exhaustion compared to males (Maslach and Jackson, 1981; Cordes and Dougherty, 1993). Maslach and Jackson (1981) reported, however, that males had a higher level of depersonalisation and a reduced sense of personal accomplishment compared to females. In conclusion, the findings in this study are partially consistent with the literature. While the results of this study are consistent with the results of some researchers (Maslach and Jackson, 1981; Cordes and Dougherty, 1993), they are partially consistent with the results of other researchers (Schaufeli and Enzmann, 2020). This may be because the concept of burnout is handled in different ways by different authors.

When participants' age and levels of burnout were analysed, a statistically significant difference was observed between the sub-dimension of low personal accomplishment and age groups. The mean low personal accomplishment scores of employees aged between 25 and 34 (2.65 ± 0.75) and between 35 and 44 (2.61 ± 0.70) were significantly higher compared to those of employees aged 45 and over (2.22 ± 0.87) (Table 4). Our results indicated that as employees aged, their reduced personal accomplishment level decreased. According to Anderson and Iwanicki (1984), more experienced employees reported lower levels of emotional exhaustion and depersonalisation, but a higher level of low personal accomplishment. This confirms our findings that young employees had a higher level of burnout compared to older employees. This is because older employees are more patient, mature, and emotionally balanced compared to younger employees, which helps them become more resistant to burnout at later ages (Ardıç and Polatçı, 2008). Young age is a risk factor in terms of burnout syndrome. When similar studies in the literature are analysed, it can be inferred that age as a demographic variable and level of burnout are usually inversely related (Tunc and Kutanis, 2009; Ahola, Toppinen-Tanner, Huuhtanen, Koskinen and Väänänen, 2009; Marchand, Blanc and Beauregard, 2018). Consequently, the findings in this study are consistent with the literature.

There were no statistically significant differences between mean emotional exhaustion and depersonalisation scores, which were the sub-dimensions of burnout ($p > 0.05$). In contrast, a statistically significant difference was found between low personal accomplishment and occupational status (Table 4). It can be stated that the mean low personal accomplishment scores among engineers/experts/assistant experts (2.63 ± 0.72) and other employees (2.57 ± 0.87) were significantly higher compared to those of administrators (2.05 ± 0.72). When this situation was evaluated in terms of managers and employees, the burnout syndromes were extensively experienced by the employees. Cordes and Dougherty (1993) suggest that individuals will experience less exhaustion as they progress through their careers in their profession. Many studies have found a negative correlation between academics' seniority and burnout levels (Lau et al., 2005; Şen, 2023; Büyükkada, 2021). Eventually, the findings in this study are consistent with the literature.

Relationship between role ambiguity, role conflict and burnout

The correlation analysis and levels of significance among role ambiguity, role conflict and burnout are given in Table 5.

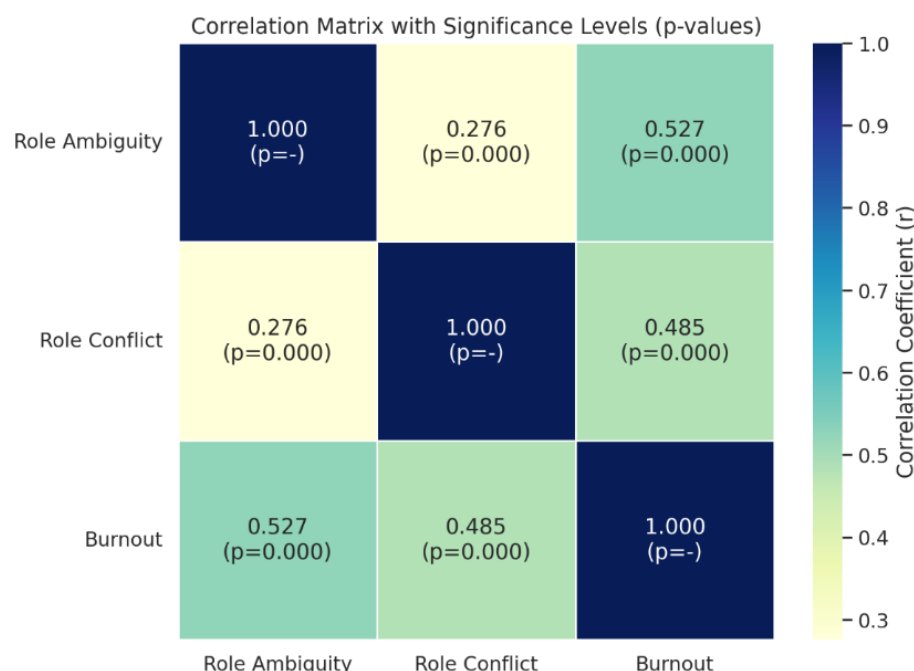
Table 5: The Results of Correlation

	Role Ambiguity	Role Conflict	Burnout
Role Ambiguity	r	1	0.527
	p	0.000	0.000
	n	204	204
Role Conflict	r	0.276	0.485
	p	0.000	0.000
	n	204	204
Burnout	r	0.527	1
	p	0.000	0.000
	n	204	204

(r=correlation factor, p=significant level, and n=sample size)

A significant positive correlation was observed among role ambiguity, role conflict and burnout. A moderate correlation exists among role ambiguity ($r=0.527$, $p<0.01$), role conflict (0.485 , $p<0.01$) and burnout (Table 5, Figure 1). Similar studies have reported a significant positive correlation between role ambiguity, role conflict, and burnout. Ahola et al. (2009) in their research on teachers showed that role ambiguity and conflict directly trigger emotional exhaustion. A meta-analysis found that role stressors correlate with burnout in the $r = 0.40$ - 0.60 range (Lee and Ashforth, 1996). The results in the NCNP ($r \approx 0.50$) overlap with this range. Kokkinos (2007) states that role conflict is the strongest predictor of depersonalisation in teachers. Kokkinos (2007) obtained results parallel to those in the Western literature in their study in China. Tunc and Kutanis (2009) confirmed that role stressors have the most substantial effect on emotional exhaustion in Turkish civil servants. Resultantly, the findings related to the relationship between NCNP employees' role stressors and burnout are consistent with much of the existing literature. The strong link between role stressors and burnout has emphasised the need to mandate preventive human resources policies.

Therefore, H_1 , H_2 and H_3 hypotheses are accepted. Similar studies report a significant positive correlation among role ambiguity, role conflict and burnout (Schwab and Iwanicki, 1982; Brookings et al., 1985; Lee and Ashforth, 1996; Collins, 2000; Fogarty and Kalbers, 2006; LePine et al., 2005; Peeters et al., 2005; Kokkinos, 2007; Law, Sweeney and Summers, 2008; Shinan-Altman and Cohen, 2009; Tunc and Kutanis, 2009; Schaufeli, Bakker, Van der Heijden and Prins, 2009; Dasgupta, 2012).


Figure 1: Correlation Matrix with Significance Levels

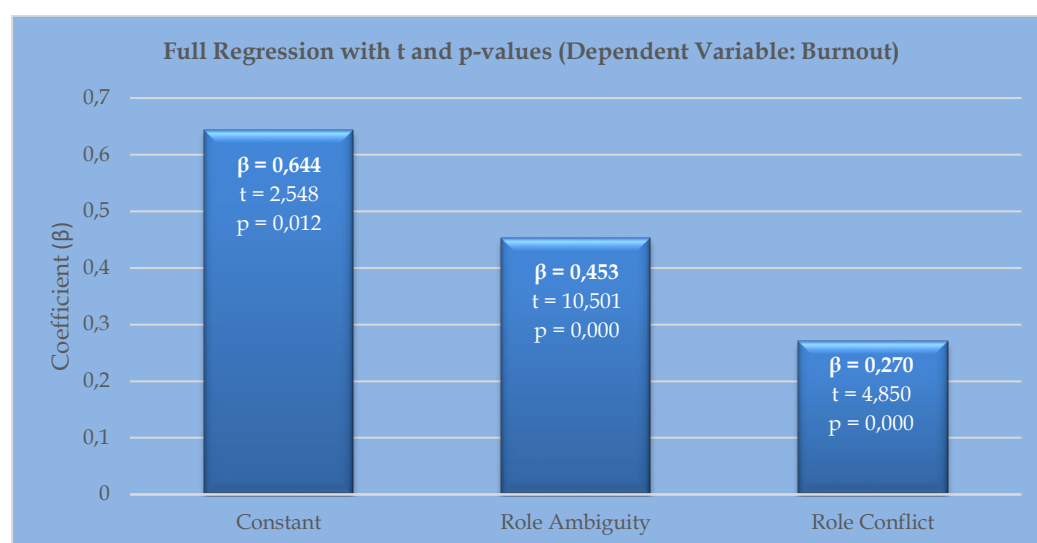
The regression analysis results showed that the role ambiguity and role conflict had a significant impact on burnout, and that burnout was directly proportional to role ambiguity and role conflict (Table 6, Figure 2). Thus, it was concluded that the regression model used for the correlation among role ambiguity, role conflict and burnout was suitable ($F(2.203) = 56.697$; $p<0.01$).

Table 6: The Effects of Role Ambiguity and Role Conflict on Burnout: Regression Coefficients

Dependent Variables	Independent Variables	β	Std. Error	B	t	p
Burnout	Constant	0.644	0.253		2.548	0.012
	Role Ambiguity	0.453	0.043	0.621	10.501	0.000
	Role Conflict	0.270	0.056	0.287	4.850	0.000
	F (2.203)=56.697; p=0.000; R ² =0.35					

The role ambiguity and role conflict explained nearly 35% of the variance in the burnout as independent variables. Therefore, it was safe to argue that 35% of NCNP employees' burnout can be explained by role ambiguity and role conflict. Maslach and Leiter (2016) found that role ambiguity and role conflict explained 29.6% of burnout. In their study on healthcare workers, Olivares-Faúndez et al. (2014) found that role ambiguity and role conflict explained 27.8% of burnout. Ultimately, the findings in this study are consistent with the literature. The results of the t-test related to the significance of regression coefficients (β) demonstrated that both role ambiguity ($\beta=0.453$; $t=10.50$; $p<0.01$) and role conflict ($\beta=0.270$; $t=4.85$; $p<0.01$) as a variable had a significant positive impact on burnout. The mathematical model relating role ambiguity, role conflict, and burnout can be defined as follows.

$$\text{Burnout} = 0.644 + 0.453 \times \text{Role Ambiguity} + 0.270 \times \text{Role Conflict} \quad (\text{Eq.2})$$


Figure 2: The Effects of Role Ambiguity and Role Conflict on Burnout: Regression Coefficients

It is seen that the role ambiguity variable appears to have more impact on burnout compared to role conflict (Table 6, Figure 2). This showed that NCNP employees experience more role ambiguity. As a result, burnout syndrome was experienced, with role ambiguity and role conflict having an effect, as shown in similar studies (Han, Han, An and Lim, 2015; Doğan et al., 2016).

Conclusion

The present study aimed to measure the impact of role ambiguity and role conflict on burnout syndrome among NCNP employees who frequently interact with others as part of their job. Statistically significant correlations were observed between role ambiguity and age as well as occupational status, and between role conflict and occupational status. Employees aged 25-34 and 35-44 experienced higher levels of role ambiguity, suggesting that younger employees are more susceptible to unclear role expectations. Furthermore, engineers, experts, and assistant experts reported higher levels of both role ambiguity and role conflict compared to administrators. This disparity may stem from the more apparent authority and decision-making responsibilities of administrative roles, which reduce uncertainty and conflict.

Younger employees exhibited higher levels of burnout compared to their older counterparts. This finding aligns with prior research indicating that older employees, due to their greater experience, tend to exhibit more patience, emotional maturity, and resilience, thereby mitigating burnout. Conversely, younger employees, who are often in the early stages of their careers, may lack the coping mechanisms to manage stress effectively, leading to higher burnout rates. This underscores the need for targeted interventions to support younger employees, such as onboarding programs that clearly communicate organisational mission, vision, and role expectations.

While the overall burnout levels among participants were not critically high, the emotional exhaustion sub-dimension emerged as a significant concern. This suggests that NCNP employees frequently experience physical and emotional fatigue, likely due to high workloads and interpersonal conflicts. Addressing these stressors through "workload management" and "conflict resolution strategies" could significantly improve employee well-being.

The analysis revealed that role ambiguity has a more substantial impact on burnout than role conflict. A moderate positive correlation was found between role ambiguity and burnout ($r = 0.527$, $p < 0.01$), and between role conflict and burnout ($r = 0.485$, $p < 0.01$). Regression analysis demonstrated that role ambiguity and role conflict collectively explain 35% of the variance in burnout. This substantial predictive power underscores the importance of addressing these role-related stressors to mitigate burnout. Specifically, organisations should prioritise role clarity and effective communication to reduce ambiguity and conflict.

Burnout is a common problem in the service sector. Enterprises and forestry enterprises within the scope of the present study can be listed among risky groups in terms of burnout. It affects employees' psychological, physical, and social well-being, leading to job dissatisfaction and underperformance. Therefore, it is essential to reveal factors that cause burnout syndrome. It looks pretty likely that the implementation of effective methods against burnout at an individual and organisational level will positively influence individuals suffering from burnout and the organisations where they work and serve.

Another possible research topic on burnout syndrome is the various impacts and consequences of burnout on administrators and employees. Additionally, it is essential to emphasise the analysis of the potential effects of burnout, including its level and consequences, on administrators. This will be a new step for administrators and employees to gain a comprehensive understanding of burnout syndrome and to reduce or mitigate its effects. Therefore, it should always be remembered that burnout syndrome involves a process. In this respect, administrators and organisations need to take responsibility for monitoring, identifying, and intervening in the burnout process.

In conclusion, this study highlights the significant role of role ambiguity and role conflict in contributing to burnout among NCNP employees. By addressing these stressors and implementing targeted interventions, organisations can foster a healthier, more productive work environment. Future research should build on these findings to further explore the interplay between organisational factors, employee well-being, and performance, ultimately contributing to the success and sustainability of organisations in the forestry sector.

Practical implications

This study has several practical implications for organisational management:

Role Clarity: Organisations must ensure that employees have a clear understanding of their roles, responsibilities, and performance expectations. This can be achieved through structured onboarding programs, regular feedback sessions, and clear job descriptions.

Support for Younger Employees: Given the higher burnout levels among younger employees, targeted interventions such as mentorship programs, stress management workshops, and career development opportunities should be implemented.

Workload Management: To address emotional exhaustion, organisations should adopt workload distribution models that prevent overburdening employees and promote a healthy work-life balance.

Reward Systems: Designing effective reward and recognition systems can enhance job satisfaction and reduce burnout by motivating employees and acknowledging their contributions.

Theoretical contributions

This study contributes to the literature by addressing a significant gap in research on burnout within forestry and natural resource management organisations, particularly in Türkiye. By demonstrating the impact of role ambiguity and role conflict on burnout, this research extends the applicability of existing burnout theories to a previously underexplored sector. Furthermore, this study highlights the importance of demographic factors, such as age and occupational status, in shaping burnout experiences. By identifying the specific factors that contribute to burnout in this context, the study aims to provide actionable insights for policymakers and organisational leaders, enabling them to create healthier, more supportive work environments. Identifying and addressing employees who experience burnout is crucial for enhancing job satisfaction and improving performance. Since the most critical component of an organisation is its employees, the job satisfaction and performance of employees will increase. This will directly impact the organisation's success. Ultimately, this research underscores the

importance of addressing role-related stressors as a means of fostering employee resilience, job satisfaction, and organisational success.

Limitations and future research

While this study provides valuable insights, it is not without limitations. The sample consisted of 204 employees from a single organisation, which may limit the generalizability of the findings. Future research should include a broader range of forestry institutions and employees to enhance external validity. Additionally, exploring other factors such as job satisfaction, organisational commitment, and performance could provide a more comprehensive understanding of burnout dynamics. Longitudinal studies can also shed light on how burnout develops and how interventions affect employee well-being.

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Author Contributions:

Conceptualisation, investigation, coordination, methodology, software, validation, supervision, and writing—original draft preparation M.P. Data curation, surveying, writing-review, validation; G.T. M.P. A.O. discussed, revised, and designed the last version of the manuscript. All authors have read and agreed to the published version of the manuscript.

References

- Ahola, K., Toppinen-Tanner, S., Huuhtanen, P., Koskinen, A., and Väänänen, A. (2009). "Occupational burnout and chronic work disability: An eight-year cohort study on pensioning among Finnish forest industry workers", *Journal of Affective Disorders*, 115(1-2), 150-159. <https://doi.org/10.1016/j.jad.2008.09.021>
- Anderson, M. B. G., and Iwanicki, E. F. (1984). "Teacher motivation and its relationship to burnout", *Educational Administration Quarterly*, 20(2), 109-132. <https://doi.org/10.1177/0013161X84020002007>
- Ardıç, K., and Polatçı, S. (2008). "Tükenmişlik Sendromu Akademisyenler Üzerinde Bir Uygulama (GOÜ Örneği)", *Gazi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 10(2), 69-96, (in Turkish). <https://dergipark.org.tr/tr/pub/gaziuiibfd/issue/28328/301039>
- Arı, G. S., and Bal, E. Ç. (2008). "Tükenmişlik kavramı: Birey ve örgütler açısından önemi", *Yönetim ve Ekonomi (Celal Bayar Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi)*, 15(1), 131-148, (in Turkish). <https://www.researchgate.net/publication/381278977>

- Beehr, T. A., Bowling, N. A., and Bennett, M. M. (2010). "Occupational stress and failures of social support: when helping hurts", *Journal of Occupational Health Psychology*, 15(1), 45-59. <https://doi.org/10.1037/a0018234>
- Bielinis, E., Janeczko, E., Omelan, A. A., Korcz, N., Furgała-Selezniow, G., and Kobylka, A. (2025). "Main Predictors of Burnout in Forestry Workers and Role of the Forest Environment in Mitigating Stress and Exhaustion", *Sustainability*, 17(2), 513. <https://doi.org/10.3390/su17020513>
- Brewer, E. W., and Shapard, L. (2004). "Employee burnout: A meta-analysis of the relationship between age or years of experience", *Human Resource Development Review*, 3(2), 102-123. <https://doi.org/10.1177/1534484304263335>
- Brookings, J. B., Bolton, B., Brown, C. E., and McEvoy, A. (1985). "Self-reported job burnout among female human service professionals", *Journal of Organizational Behaviour*, 6(2), 143-150. <https://doi.org/10.1002/job.4030060205>
- Büyükaada, S., Kılıç, G. N., Kocabaş, İ., and Karabay, A. (2021). "Investigation of burnout levels of school administrators and teachers in the COVID-19 epidemic process", *International Journal of Psychology and Educational Studies*, 8(Special Issue), 118-128. <https://doi.org/10.52380/ijpes.2021.8.4.681>
- Chauhan, D. (2009). "Effect of job involvement on burnout", *Indian Journal of Industrial Relations*, 441-453. <http://www.jstor.org/stable/27768217>
- Chen, R., and Liu, W. (2023). "Managing healthcare employees' burnout through micro aspects of corporate social responsibility: A public health perspective", *Frontiers in Public Health*, 10, 1050867. <https://doi.org/10.3389/fpubh.2022.1050867>
- Chen, T. (2023). "The interplay between psychological well-being, stress, and burnout: Implications for translators and interpreters", *Heliyon*, 9(8), 1-6, e18589. <https://doi.org/10.1016/j.heliyon.2023.e18589>
- Cooper, C. L., Dewe, P. J., and O'Driscoll, M. P. (2001). *Organisational stress: A review and critique of theory, research, and applications*. SAGE Publications. https://doi.org/10.1111/1468-0432.00006_4
- Collins, V. A. (2000), "A meta-analysis of burnout and occupational stress", *Dissertation Abstracts International: Section B. Services and Engineering*, 60, 4.942
- Cordes, C. L., and Dougherty, T. W. (1993). "A review and an integration of research on job burnout", *Academy of Management Review*, 18(4), 621-656. <https://doi.org/10.2307/258593>
- Cropanzano, R., Rupp, D. E., and Byrne, Z. S. (2003). "The relationship of emotional exhaustion to work attitudes, job performance, and organisational citizenship behaviours", *Journal of Applied Psychology*, 88(1), 160-169. <https://doi.org/10.1037/0021-9010.88.1.16>
- Dasgupta, P. (2012). "Effect of role ambiguity, conflict and overload in private hospitals' nurses' burnout and mediation through self efficacy", *Journal of Health Management*, 14(4), 513-534. <https://doi.org/10.1177/0972063412468980>
- Doğan, A., Demir, R., and Türkmen, E. (2016). "Rol belirsizliğinin, rol çatışmasının ve sosyal desteğin tükenmişliğe etkisi: devlet ve vakıf üniversitelerinde çalışan akademik personelin tükenmişlik düzeylerinin karşılaştırılması", *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 30(1), 37-67, (in Turkish). <https://dergipark.org.tr/en/download/article-file/315490>
- Doğan, İ., and Doğan, N., 2014. *Adım Adım Çözümlü Parametrik Olmayan İstatistiksel Yöntemler*, Ankara: Detay Yayıncılık, (in Turkish).
- Eagly, A. H., and Carli, L. L. (2007). *Through the labyrinth: The truth about how women become leaders* (Vol. 11), Boston, MA: Harvard Business School Press. <https://www.emerald.com/insight/content/doi/10.1108/gm.2009.05324aae.001/full/html>
- El Gareh, F., Hattabou, A., Oulamine, A., and Alourhazal, H. (2023). "The relationship between "burnout" and "organisational commitment, job demands and resources" among hospital staff in Morocco", *African Scientific Journal*, 3(18), 428-428. <https://doi.org/10.5281/zenodo.8134050>
- Fimian, M. J., and Blanton, L. P. (1987). "Stress, burnout, and role problems among teacher trainees and first-year teachers", *Journal of Organizational Behaviour*, 8(2), 157-165. <https://www.jstor.org/stable/3000368>
- Fogarty, T. J., and Kalbers, L. P. (2006). "Internal auditor burnout: An examination of behavioural consequences", *Advances in Accounting Behavioural Research*, 9(1), 51-86. [https://doi.org/10.1016/S1475-1488\(06\)09003-X](https://doi.org/10.1016/S1475-1488(06)09003-X)

- Freudenberger, H. J. (1974). "Staff burnout", *Journal of Social Issues*, 30(1), 159-165. <https://doi.org/10.1111/j.1540-4560.1974.tb00706.x>
- Gabriel, K. P., and Aguinis, H. (2022). "How to prevent and combat employee burnout and create healthier workplaces during crises and beyond", *Business Horizons*, 65(2), 183-192. <https://doi.org/10.1016/j.bushor.2021.02.037>
- Garrosa, E., Moreno-Jimenez, B., Liang, Y., and Gonzalez, J. L. (2008). "The relationship between socio-demographic variables, job stressors, burnout, and hardy personality in nurses: An exploratory study", *International Journal of Nursing Studies*, 45(3), 418-427. <http://dx.doi.org/10.1016/j.ijnurstu.2006.09.003>
- Gaspar, T., Botelho-Guedes, F., Cerqueira, A., Baban, A., Rus, C., and Gaspar-Matos, M. (2024). "Burnout as a multidimensional phenomenon: how can workplaces be healthy environments?", *Journal of Public Health*, 1-14. <https://doi.org/10.1007/s10389-024-02223-0>
- Gedik, T., and Çet, Ş. (2020). "Orman ürünleri sanayisinde rol belirsizliği ve rol çatışmasının iş tatmini üzerine etkisi (Bolu, Düzce ve Bartın illeri örneği)", *Bartın Orman Fakültesi Dergisi*, 22(2), 521-531, (in Turkish). <https://dergipark.org.tr/en/pub/barofd/issue/54412/688473>
- Gheyratmand, M., Mohammadipour, M., and Bakhshipor, A. (2016). "The role of personality traits, role conflict, work-family conflict and organisation-based self-esteem in job burnout and job compatibility of the staff", *Mediterranean Journal of Social Sciences*, 7(4), 251-256. <https://doi.org/10.5901/mjss.2016.v7n4s2p251>
- Ghorpade, J., Lackritz, J., and Singh, G. (2011). "Personality as a moderator of the relationship between role conflict, role ambiguity, and burnout", *Journal of Applied Social Psychology*, 41(6), 1275-1298. <https://doi.org/10.1111/j.1559-1816.2011.00763.x>
- Gormley, D. K., and Kennerly, S. (2010). "Influence of work role and perceptions of climate on faculty organisational commitment", *Journal of Professional Nursing*, 26(2), 108-115. <https://doi.org/10.1016/j.profnurs.2009.11.001>
- Greenhaus, J. H., Collins, K. M., and Shaw, J. D. (2003). "The relation between work-family balance and quality of life", *Journal of Vocational Behaviour* 63(3), 510-531. [https://doi.org/10.1016/S0001-8791\(02\)00042-8](https://doi.org/10.1016/S0001-8791(02)00042-8)
- Griffin, R. W., and Moorhead, G. (2011). *Organisational Behaviour* (10th ed.) Cengage Learning.
- Han, S. S., Han, J. W., An, Y. S., and Lim, S. H. (2015). "Effects of role stress on nurses' turnover intentions: The mediating effects of organisational commitment and burnout", *Japan Journal of Nursing Science*, 12(4), 287-296. <https://doi.org/10.1111/jjns.12067>
- House, R. J., and Rizzo, J. R. (1972). "Role conflict and ambiguity as critical variables in a model of organisational behaviour", *Organisational Behaviour and Human Performance*, 7(3), 467-505. [https://doi.org/10.1016/0030-5073\(72\)90030-X](https://doi.org/10.1016/0030-5073(72)90030-X)
- International Labour Organization (ILO) Partnering for Development Women in STEM and Leadership Roles. (2021). Erişim Adresi: <https://www.ilo.org/projects-and-partnerships/projects/women-stem-workforce-readiness-and-development-programme-philippines>
- Izdebski, Z., Kozakiewicz, A., Białorudzki, M., Dec-Pietrowska, J., and Mazur, J. (2023). "Occupational burnout in healthcare workers, stress and other symptoms of work overload during the COVID-19 pandemic in Poland", *International Journal of Environmental Research and Public Health*, 20(3), 2428. <https://doi.org/10.3390/ijerph20032428>
- Jackson, S. E., and Schuler, R. S. (1983). "Preventing employee burnout", *Personnel*, 60(2), 58-68. <https://www.researchgate.net/publication/13037861>
- Jackson, S. E., and Schuler, R. S. (1985). "A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings", *Organisational Behaviour and Human Decision Processes*, 36(1), 16-78. [https://doi.org/10.1016/0749-5978\(85\)90020-2](https://doi.org/10.1016/0749-5978(85)90020-2)
- Jackson, S. E., Schwab, R. L., and Schuler, R. S. (1986). "Toward an understanding of the burnout phenomenon", *Journal of Applied Psychology*, 71(4), 630. <https://doi.org/10.1037/0021-9010.71.4.630>
- Jackson, S. E., Turner, J. A., and Brief, A. P. (1987). "Correlates of burnout among public service lawyers", *Journal of Organizational Behaviour*, 8(4), 339-349. <https://doi.org/10.1002/job.40300804064>

- Jawahar, I. M., Stone, T. H., and Kisamore, J. L. (2007). "Role conflict and burnout: The direct and moderating effects of political skill and perceived organisational support on burnout dimensions", *International Journal of Stress Management*, 14(2), 142-159. <https://doi.org/10.1037/1072-5245.14.2.142>
- Jenaro, C., Flores, N., Arias, B. (2007). "Burnout and coping in human service practitioners", *Professional Psychology: Research and Practice*, 38(1), 80. <https://doi.org/10.1037/0735-7028.38.1.80>
- Kahn, R. L., Wolfe D. M., Quinn, R. P., Snoek, J. D., and Rosenthal, R. A. (1964). *Organisational stress: Studies in role conflict and ambiguity*. Oxford: John Wiley. <https://doi.org/10.2307/2391654>
- Kanste, O., Miettunen, J., and Kyngäs, H. (2006). "Factor structure of the Maslach Burnout Inventory among Finnish nursing staff", *Nursing and Health Sciences*, 8(4), 201-207. <https://doi.org/10.1111/j.1442-2018.2006.00283.x>
- Karasar, N. (1991). *Scientific Research Method: Concepts, Principles and Techniques*, Ankara: Sanem Printing, (in Turkish). <https://katalog.nobelyayin.com/en/kategori/research-methods-936.html>
- Katz, D., and Kahn, R. L. (1978). *The social psychology of organisations* (Vol. 2), New York: Wiley.
- Kokkinos, C. M. (2007). "Job stressors, personality and burnout in primary school teachers", *British Journal of Educational Psychology*, 77(1), 229-243. <https://doi.org/10.1348/000709905X90344>
- Lambert, V. A., and Lambert, C. E. (2001). "Literature review of role stress/strain on nurses: an international perspective", *Nursing and Health Sciences*, 3(3), 161-172. <https://doi.org/10.1046/j.1442-2018.2001.00086.x>
- Lau, P. S., Yuen, M. T., and Chan, R. M. (2005). "Do demographic characteristics make a difference to burnout among Hong Kong secondary school teachers?", *Social Indicators Research*, 71, 491-516. <https://doi.org/10.1007/s11205-004-8033-z>
- Law, D. W., Sweeney, J. T., and Summers, S. L. (2008). "An examination of the influence of contextual and individual variables on public accountants' exhaustion", *Advances in Accounting Behavioural Research*, 11(4), 129-153. [https://doi.org/10.1016/S1475-1488\(08\)11006-7](https://doi.org/10.1016/S1475-1488(08)11006-7)
- Lazarus, R., and Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer. https://doi.org/10.1007/978-1-4419-1005-9_215
- Lee, R. T., and Ashforth, B. E. (1990). "On the meaning of Maslach's three dimensions of burnout", *Journal of Applied Psychology*, 75(6), 743. <https://doi.org/10.1037/0021-9010.75.6.743>
- Lee, R. T., and Ashforth, B. E. (1996). "A meta-analytic examination of the correlates of the three dimensions of job burnout", *Journal of Applied Psychology*, 81(2), 123-133. <https://doi.org/10.1037/0021-9010.81.2.123>
- Lee, C., Vu, T. H. T., Fuller, J. A., Freedman, M., Bannon, J., Wilkins, J. T., ... and Evans, C. T. (2023). "The association of burnout with work absenteeism and the frequency of thoughts in leaving their job in a cohort of healthcare workers during the COVID-19 pandemic", *Frontiers in Health Services*, 3, 1272285. <https://doi.org/10.3389/frhs.2023>
- Leiter, M. P., and Maslach, C. (1988). "The impact of interpersonal environment on burnout and organisational commitment", *Journal of Organizational Behaviour*, 9(4), 297-308. <https://doi.org/10.1002/job.4030090402>
- Leiter, M. P., and Maslach, C. (2009). "Nurse turnover: the mediating role of burnout", *Journal of Nursing Management*, 17(3), 331-339. <https://doi.org/10.1111/j.1365-2834.2009.01004.x>
- LePine, J. A., Podsakoff, N. P., and LePine, M. A. (2005). "A meta-analytic test of the challenge stressor-hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance", *Academy of Management Journal*, 48(5), 764-775. <https://doi.org/10.5465/AMJ.2005.18803921>
- Luthans, F. (2011). *Organisational Behaviour: An Evidence Based Approach*. New York: McGraw-Hill.
- Marchand, A., Blanc, M. E., and Beauregard, N. (2018). "Do age and gender contribute to workers' burnout symptoms?", *Occupational Medicine*, 68(6), 405-411. <https://doi.org/10.1093/OCCMED/KQY088>
- Maslach, C., and Jackson, S. E. (1981). "The measurement of experienced burnout", *Journal of Organizational Behaviour* 2(2), 99-113. <https://doi.org/10.1002/job.4030020205>

- Maslach, C., and Jackson, S. E. (1985). "The role of sex and family variables in burnout." *Sex Roles*, 12(7-8), 837-851. <https://doi.org/10.1007/BF00287876>
- Maslach, C., and Goldberg, J. (1998). "Prevention of burnout: New perspectives", *Applied and Preventive Psychology*, 7(1), 63-74. [https://doi.org/10.1016/S0962-1849\(98\)80022-X](https://doi.org/10.1016/S0962-1849(98)80022-X)
- Maslach, C., Schaufeli, W. B., and Leiter, M. P. (2001). "Job burnout", *Annual Review of Psychology*, 52, 397-422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Maslach, C., and Leiter, M. P. (2008). "Early predictors of job burnout and engagement", *Journal of Applied Psychology*, 93(3), 498. <https://doi.org/10.1037/0021-9010.93.3.498>
- Maslach, C., and Leiter, M. P. (2016). "Understanding the burnout experience: recent research and its implications for psychiatry", *World Psychiatry*, 15(2), 103-111. <https://doi.org/10.1002/wps.20311>
- Maslach, C. (2017). "Finding solutions to the problem of burnout", *Consulting Psychology Journal: Practice and Research*, 69(2), 143-152. <https://doi.org/10.1037/cpb0000090>
- Montgomery, A., Panagopoulou, E., Esmail, A., Richards, T., and Maslach, C. (2019). "Burnout in healthcare: the case for organisational change", *Bmj*, 366, l4774. <https://doi.org/10.1136/bmj.l4774>
- Moos, R. H. (1993). *Coping responses inventory: professional manual*. Psychological Assessment Resources, Incorporated.
- Morse, G., Salyers, M. P., Rollins, A. L., Monroe-DeVita, M., and Pfahler, C. (2012). "Burnout in mental health services: A review of the problem and its remediation", *Administration and Policy in Mental Health and Mental Health Services Research*, 39, 341-352. <https://doi.org/10.1007/s10488-011-0352-1>
- Mwakyusa, J. R., and Mcharo, E. W. (2024). "Role ambiguity and role conflict effects on employees' emotional exhaustion in healthcare services in Tanzania", *Cogent Business and Management*, 11(1), 2326237. <https://doi.org/10.1080/23311975.2024.2326237>
- Ng, T. W., and Feldman, D. C. (2010). "The relationships of age with job attitudes: A meta-analysis", *Personnel Psychology*, 63(3), 677-718. <https://doi.org/10.1111/j.1744-6570.2010.01184.x>
- Nicholson, P. J., and Goh, S. C. (1983). "The relationship of organisation structure and interpersonal attitudes to role conflict and ambiguity in different work environments", *Academy of Management Journal*, 26(1), 148-155. <https://doi.org/10.5465/256141>
- Nickum, M., and Desrumaux, P. (2023). "Burnout among lawyers: effects of workload, latitude and mediation via engagement and over-engagement", *Psychiatry, Psychology and Law*, 30(3), 349-361. <https://doi.org/10.1080/13218719.2022.2035840>
- Organisation for Economic Co-operation and Development (OECD) Topics Ageing and Employment. (2023). Erişim Adresi: <https://www.oecd.org/en/topics/ageing-and-employment.html>
- Olivares-Faúndez, V. E., Gil-Monte, P. R., Mena, L., Jélvez-Wilke, C., and Figueiredo-Ferraz, H. (2014). "Relationships between burnout and role ambiguity, role conflict and employee absenteeism among health workers", *Terapia Psicológica*, 32(2), 111-120. <http://dx.doi.org/10.4067/S0718-48082014000200004>
- Pearce, J. L. (1981). "Bringing some clarity to role ambiguity research", *Academy of Management Review*, 6(4), 665-674. <https://doi.org/10.5465/amr.1981.4285727>
- Pratiwi, I. Y., Ratnadi, N. M. D., Suprasto, H. B., and Sujana, I. K. (2019). "The effect of role conflict, role ambiguity, and role overload in burnout government internal supervisors with tri hita karana culture as moderation", *International Research Journal of Management, IT and Social Sciences*, 6(3), 61-69. <https://doi.org/10.21744/irjmis.v6n3.630>
- Perrewé, P. L., Hochwarter, W. A., Rossi, A. M., Wallace, A., Maignan, I., Castro, S. L., ... and Van Deusen, C. A. (2002). "Are work stress relationships universal? A nine-region examination of role stressors, general self-efficacy, and burnout", *Journal of International Management*, 8(2), 163-187. [https://doi.org/10.1016/S1075-4253\(02\)00052-2](https://doi.org/10.1016/S1075-4253(02)00052-2)
- Peeters, M. C., Montgomery, A. J., Bakker, A. B., and Schaufeli, W. B. (2005). "Balancing work and home: How job and home demands are related to burnout", *International Journal of Stress Management*, 12(1), 43. <https://doi.org/10.1037/1072-5245.12.1.43>

- Peterson, M. F., Smith, P. B., Akande, A., Ayestaran, S., Bochner, S., Callan, V., ... and Viedge, C. (1995). "Role conflict, ambiguity, and overload: A 21-nation study", *Academy of Management Journal*, 38(2), 429-452. <https://doi.org/10.5465/256687>
- Purvanova, R. K., and Muros, J. P. (2010). "Gender differences in burnout: A meta-analysis", *Journal of Vocational Behaviour*, 77(2), 168-185. <https://doi.org/10.1016/j.jvb.2010.04.006>
- Randall, M., and Scott, W. A. (1988). "Burnout, job satisfaction, and job performance", *Australian Psychologist*, 23(3), 335-347. <https://doi.org/10.1080/00050068808255616>
- Rizzo, J. R., House, R. J., and Lirtzman, S. I. (1970). "Role conflict and ambiguity in complex organisations", *Administrative Science Quarterly*, 150-163. <https://doi.org/10.2307/239148>
- Robbins, S. P., and Judge, T. A. (2018). *Essentials of Organisational Behaviour*. 14th Edition, London: Pearson Education, Inc.
- Russell, D. W., Altmaier, E., and Van Velzen, D. (1987). "Job-related stress, social support, and burnout among classroom teachers", *Journal of Applied Psychology*, 72(2), 269. <https://doi.org/10.1037/0021-9010.72.2.269>
- Sabuncuoğlu, E. T. (2008). "Rol çatışmasının ve rol belirsizliğinin tükenmişlik ve iş doyumunu üzerindeki etkilerinin incelenmesi", *Dokuz Eylül Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 23(1), 35-49, (in Turkish)
- Salama, W., Abdou, A. H., Mohamed, S. A. K., and Shehata, H. S. (2022). "Impact of work stress and job burnout on turnover intentions among hotel employees", *International Journal of Environmental Research and Public Health*, 19(15), 9724. <https://doi.org/10.3390/ijerph19159724>
- Saloviita, T., and Pakarinen, E. (2021). "Teacher burnout explained: Teacher-, student-, and organisation-level variables", *Teaching and Teacher Education*, 97, 103221. <https://doi.org/10.1016/j.tate.2020.103221>
- Selye, H. (1955). "Stress and disease", *Science*, 122 (3171), 625-631. <https://www.jstor.org/stable/1749664>
- Schaufeli, W. B., and Greenglass, E. R. (2001). "Introduction to special issue on burnout and health", *Psychology and Health*, 16(5), 501-510. <https://doi.org/10.1080/08870440108405523>
- Schaufeli, W. B. (2007). Burnout in health care. In P. Carayon (Ed.), *Handbook of human factors and ergonomics in health care and patient safety* (pp. 217-232). Mahwah, NJ: Lawrence Erlbaum. <https://doi.org/10.1201/9781482269505>
- Schaufeli, W. B., and Salanova, M. (2007). "Efficacy or inefficacy, that's the question: Burnout and work engagement, and their relationships with efficacy beliefs", *Anxiety, Stress, and Coping*, 20(2), 177-196. <https://doi.org/10.1080/10615800701217878>
- Schaufeli, W. B., Bakker, A. B., Van der Heijden, F. M., and Prins, J. T. (2009). "Workaholism, burnout and well-being among junior doctors: The mediating role of role conflict", *Work and Stress*, 23(2), 155-172. <https://doi.org/10.1080/02678370902834021>
- Schaufeli, W., and Enzmann, D. (2020). *The burnout companion to study and practice: A critical analysis*, London: CRC press. <https://doi.org/10.1201/9781003062745>
- Schwab, R. L., and Iwanicki, E. F. (1982). "Perceived role conflict, role ambiguity, and teacher burnout", *Educational Administration Quarterly*, 18(1), 60-74. <https://doi.org/10.1177/074193258600700206>
- Shinan-Altman, S., and Cohen, M. (2009). "Nursing aides' attitudes to elder abuse in nursing homes: The effect of work stressors and burnout", *The Gerontologist*, 49(5), 674-684. <https://doi.org/10.1093/geront/gnp093>
- Shirom, A. (1989). Burnout in work organisations. In: Cooper, C.L. and Robertson, I. (Eds), *International Review of Industrial and Organizational Psychology*, Wiley, New York, 25-48.
- Shirom, A. (2005). "Reflections on the study of burnout", *Work and Stress*, 19(3), 263-270. <https://doi.org/10.1080/02678370500376649>
- Şen, C. (2023). "Investigation of burnout levels of special education teachers", *Journal for the Education of Gifted Young Scientists*, 11(4), 521-528. <http://dx.doi.org/10.17478/jegys.1344410>
- Silva, L. P., Dos Santos, J. S. P., da Silva, L. L., Cezar, I. S., de Abreu, J. S. D., de Cerqueira, V. P., ... and Meira, C. S. (2021). "Prevalence of burnout syndrome and associated factors in university professors working in Salvador, state of Bahia", *Revista Brasileira de Medicina do Trabalho*, 19(2), 151-156. <https://doi.org/10.47626/1679-4435-2020-548>

Tabachnick, B. G., and Fidell, L. S. (2013). Using Multivariate Statistics, Pearson.

Toppinen-Tanner, S., Ojajarvi, A., Väänänen, A., Kalimo, R., and Jäppinen, P. (2005). "Burnout as a predictor of medically certified sick-leave absences and their diagnosed causes", *Behavioural Medicine*, 31(1), 18-32. <https://doi.org/10.3200/BMED.31.1.18-32>

Türk Mühendis ve Mimar Odaları Birliği (TMMOB) Home TMMOB'ye bağlı odaların üye sayıları. (2025). Erişim Adresi: <https://www.tmmob.org.tr/en/node/20141>

Tunc, T., and Kutanis, R. O. (2009). "Role conflict, role ambiguity, and burnout in nurses and physicians at a university hospital in Turkey", *Nursing and Health Sciences* 11(4), 410-416, (in Turkish). <https://doi.org/10.1111/j.1442-2018.2009.00475.x>

Utami, I., and Nahartyo, E. (2013). "Auditors' personality in ncreasing the burnout", *Journal of Economics, Business, and Accountancy Ventura*, 16(1), 161-170. <https://doi.org/10.14414/jebav.v16i1.132>

Üngüren, E., and Arslan, S. (2021). "The effect of role ambiguity and role conflict on job performance in the hotel industry: The mediating effect of job satisfaction", *Tourism and Management Studies*, 17(1), 45-58. <https://doi.org/10.18089/tms.2021.170104>

Valenzi, E., and Dessler, G. (1978). "Relationships of leader behaviour, subordinate role ambiguity and subordinate job satisfaction", *Academy of Management Journal*, 21(4), 671-678. <https://doi.org/10.5465/255707>

Von Emster, G. R., and Harrison, A. A. (1998). "Role ambiguity, spheres of control, burnout, and work-related attitudes of teleservice professionals", *Journal of Social Behaviour and Personality*, 13(2), 375.

Walker Jr, O. C., Churchill Jr, G. A., and Ford, N. M. (1975). "Organisational determinants of the industrial salesman's role conflict and ambiguity", *The Journal of Marketing*, 32-39. <https://doi.org/10.1177/002224297503900106>

Weatherly, K. A., and Tansik, D. A. (1993). "Tactics used by customer contact workers: Effects of role stress, boundary spanning and control", *International Journal of Service Industry Management*, 4(3), 4-17. <https://doi.org/10.1108/09564239310041643>

Westman, M., and Etzion, D. L. (2005). "The Crossover of Work-Family Conflict From One Spouse to the Other 1", *Journal of Applied Social Psychology*, 35(9), 1936-1957. <https://doi.org/10.1111/j.1559-1816.2005.tb02203.x>

Wu, S., Zhu, W., Wang, Z., Wang, M., and Lan, Y. (2007). "Relationship between burnout and occupational stress among nurses in China", *Journal of Advanced Nursing*, 59(3), 233-239. <https://doi.org/10.1111/j.1365-2648.2007.04301.x>

Wu, G., Hu, Z., Zheng, J. (2019). "Role stress, job burnout, and job performance in construction project managers: the moderating role of career calling", *International Journal of Environmental Research and Public Health*, 16(13), 2394. <https://doi.org/10.3390/ijerph16132394>

Yavuz, H., (2000). Parametrik Olmayan İstatistiksel Yöntemler, 464 s., (in Turkish) Trabzon.

Yürür, S., and Sarikaya, M. (2012). "The effects of workload, role ambiguity, and social support on burnout among social workers in Turkey", *Administration in Social Work*, 36(5), 457-478. <https://doi.org/10.1080/03643107.2011.613365>

Zellars, K. L., Perrewé, P. L., and Hochwarter, W. A. (2000). "Burnout in health care: The role of the five factors of personality", *Journal of Applied Social Psychology*, 30(8), 1570-1598. <https://doi.org/10.1111/j.1559-1816.2000.tb02456.x>