

Research Article / Araştırma Makalesi

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The Relationship Between Stress and Burnout: A Sample of Automotive Factory Workers*

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Abstract: The purpose of this research is to determine the relationship between stress and burnout in workers of an automotive factory. This research was conducted descriptively with 306 participants at Sango Automotive Products Industry and Trade Joint Stock Company in Kocaeli/Türkiye between April and July 2021. Data were collected using the Personal Information Form, Perceived Stress Scale and Burnout Scale-Short Version. The mean Perceived Stress Scale score of participants was 25.11±7.39; The average score of the Burnout Scale were 29.69±12.61. A statistically significant positive relationship was determined between the mean Perceived Stress Scale scores and Burnout Scale scores of participants ($r=0.67$; $p<0.05$). Additionally, a significant difference was found between the age, marital status, having children, and working hours at the workplace of participants and their scale scores ($p<0.05$). According to the results of this research, reducing workers' stress levels can reduce their burnout levels. These results may provide evidence for psychiatric nurses' interventions to reduce the stress and burnout levels of workers.

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Stres ve Tükenmişlik Arasındaki İlişki: Bir Otomotiv Fabrikası Çalışanları Örneği

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Öz: Bu araştırmanın amacı, bir otomotiv fabrikası çalışanlarında stres ve tükenmişlik arasındaki ilişkinin belirlenmesidir. Bu araştırma, 306 katılımcı ile, Kocaeli/Türkiye'de Sango Otomotiv Ürünleri Sanayi ve Ticaret Anonim Şirketi'nde Nisan - Temmuz 2021 tarihleri arasında tanımlayıcı olarak yürütülmüştür. Veriler; Kişisel Bilgi Formu, Algılanan Stres Ölçeği ve Tükenmişlik Ölçeği-Kısa Versiyonu kullanılarak toplanmıştır. Katılımcıların, Algılanan Stres Ölçeği puan ortalaması 25,11±7,39; Tükenmişlik Ölçeği puan ortalaması 29,69±12,61 olarak saptanmıştır. Katılımcıların, Algılanan Stres Ölçeği puanları ile Tükenmişlik Ölçeği puanları arasında istatistiksel olarak pozitif anlamlı bir ilişki belirlenmiştir ($r=0,67$; $p<0,05$). Ayrıca, katılımcıların yaşları, medeni durumları, çocuk sahibi olma durumları ve iş yerinde çalışma süreleri ile ölçek puanları arasında anlamlı bir fark saptanmıştır ($p<0,05$). Bu araştırmanın sonucuna göre, çalışanların stres düzeylerinin azaltılması onların tükenmişlik düzeylerini azaltabilir. Bu sonuçlar, psikiyatri hemşirelerinin, çalışanların stres düzeyi ve tükenmişlik düzeylerini azaltmaya yönelik müdahaleler için kanıt sunabilir.

Anahtar Kelimeler: Çalışan, Fabrika, Hemşirelik, Stres, Tükenmişlik.**JEL Sınıflandırması:** IO, I1, M5**Başvuru Tarihi:** 24.04.2024**Kabul Tarihi:** 23.07.2024**Bu Makaleye Atıf İçin:** Kurt, Ş., & Mersin, S. (2025). The Relationship Between Stress and Burnout: A Sample of Automotive Factory Workers. *Bilecik Şeyh Edebali Üniversitesi Sağlık Bilimleri Fakültesi Dergisi*, 3(1), 48-59.**Corresponding Author / Sorumlu Yazar**

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GENİŞLETİLMİŞ ÖZ

Araştırma Problemi

Bu araştırma, bir otomotiv fabrikası çalışanlarının stres ve tükenmişlik düzeylerini belirlemeyi ve aralarındaki ilişkiyi belirlemeyi ve etkileyen faktörleri incelemeyi amaçlamaktadır.

Araştırma Soruları

Fabrika çalışanlarının stres ve tükenmişlik düzeyleri nedir? Katılımcıların stres ve tükenmişlik puan ortalamaları arasında istatistiksel olarak anlamlı bir ilişki var mıdır? Stres ve tükenmişlik puan ortalamaları ile bireysel ve iş özellikleri arasında anlamlı bir fark var mıdır?

Literatür Taraması

Çalışanlarda stres ve tükenmişlik önemlidir. Bireylerde stresin artması iş hayatında birçok olumsuzluğa yol açabilir. Bunlar işyerinden ayrılma isteği, isteksizlik, kurumdan şikayet etme, panik, işe devamsızlık, düşük iş performansı, güven eksikliği, yöneticiler tarafından beğenilmeme korkusu, iş kazaları, hatalara karşı kayıtsızlıktır. Ayrıca çalışanlarda tükenmişlik çok yaygındır. Bu nedenle tükenmişliğin önlenmesi için yöneticiler ve sağlık çalışanları birlikte çalışmaktadır. Stresin birçok çalışan için tükenmişliğe neden olduğu bilinmesine rağmen, fabrika çalışanlarında psikiyatri hemşireleri tarafından çalışanların stres ve tükenmişlik düzeyinin belirlenmesi, stres ve tükenmişlik arasındaki ilişkinin incelenmesi ve etkileyen bireysel ve çalışma koşullarının ortaya koyulmasına ihtiyaç bulunmaktadır. Psikiyatri hemşirelerinin ruh sağlığının korunması ve iyileştirilmesinde önemli rol ve sorumlulukları vardır. Psikiyatri hemşirelerinin toplumun her alanında bireylerin ruh sağlığını değerlendirerek, kanıtlar sunması ve ruh sağlığını iyileştirmeye yönelik girişimler planlamaları yasa ve yönetmelikte açıklanmıştır (Resmi Gazete, 2010). Buna göre, psikiyatri hemşirelerinin fabrika çalışanlarının ruh sağlığına yönelik değerlendirmeleri de onların mesleki sorumluluklarının bir yönüdür. Bu nedenle bu çalışmada, psikiyatri hemşireleri için yeni bir alan olarak, fabrika çalışanlarında stres ve tükenmişlik arasındaki ilişki ve etkileyen faktörler ortaya koyulmuştur.

Metodoloji

Bu araştırma, Nisan-Temmuz 2021 tarihleri arasında Kocaeli/Türkiye'de Sango Otomotiv Ürünleri Sanayi ve Ticaret Anonim Şirketi'nde 306 katılımcı ile tanımlayıcı olarak gerçekleştirilmiştir. Veriler Kişisel Bilgi Formu, Algılanan Stres Ölçeği ve Tükenmişlik Ölçeği-Kısa Versiyon kullanılarak toplanmıştır. Verilerin analizinde sayı-yüzde hesaplamaları, Mann Whitney U ve Kruskal Wallis H testleri kullanılmıştır. Ayrıca ölçek puanları arasındaki ilişkiyi analiz etmek için Spearman's rho korelasyon testi kullanılmıştır.

Bulgular ve Sonuç

Katılımcıların Algılanan Stres Ölçeği puanları ile Tükenmişlik Ölçeği puanları arasında istatistiksel olarak pozitif yönde anlamlı bir ilişki tespit edilmiştir ($p<0,05$). Ayrıca katılımcıların yaş, medeni durum, çocuk sahibi olma ve işyerinde çalışma süreleri ile ölçek puanları arasında anlamlı bir fark bulunmuştur ($p<0,05$). Bu çalışmanın sonuçlarına göre, çalışanların stres düzeylerinin azaltılması tükenmişlik düzeylerini azaltabilir. Ancak bu çalışmanın sonuçlarını etkileyen birçok bireysel, fiziksel ve psikolojik faktör olduğu için çalışanlarla deneysel çalışmaların yapılması ve işyeri hemşirelerinin çalışanların stres ve tükenmişlik düzeylerini azaltmaya yönelik hemşirelik girişimlerini planlaması, uygulaması ve sonuçlarını değerlendirmesi önerilebilir. Çalışma, uygulamanın yapıldığı bir otomotiv fabrikasında çalışmayı kabul eden bireylerin verdikleri yanıtlarla sınırlıdır. Araştırmadan elde edilen sonuçlar, uygulamanın yapıldığı işyeri ve araştırmaya katılarak sorulara yanıt veren bireyler için geçerlidir. Diğer ulusal ve uluslararası işyerlerinde çalışan bireyler için geçerli değildir. Bu nedenle araştırma sonuçları diğer bireylere genellenemez. Ayrıca çalışmanın yapıldığı dönemde Covid-19 pandemisi ve iş yerindeki değişimler ile bireyleri etkileyen fiziksel, psikolojik ve kültürel değişkenler kontrol edilememiştir.

INTRODUCTION

Stress is an important factor that pushes the physical and mental limits of individuals and causes anger, fatigue and anxiety in individuals. The causes of stress have been named as stressors. In addition, stress has been defined as the tension experienced by the individual and the disorder it creates in the body or the reactions experienced when the individual uses coping mechanisms. If stress lasts for a long time and there is an inability to cope with problems, burnout may occur (Selye, 1956).

Burnout is a condition that significantly affects the individual, society and work life. It is a psychological syndrome resulting from chronic fatigue and inadequacy. It is the result of a process in which people lose their motivation (Tümkiye et al., 2009). People who experience burnout have difficulty in combating stress and are open to the negativities of stress. Stress and burnout can reduce physical and cognitive resources and prevent efficient and effective work (Maslach and Jackson, 1981; Selye, 1956; Tümkiye et al., 2009). The emotional dimension of burnout needs to be addressed due to depletion of the individual's emotional resources, lack of energy and decreased work efficiency (Maslach and Jackson, 1981). It defined burnout as the negativities shown by the individual in his/her feelings and behaviors towards his/her colleagues. Thus, it was stated that an individual experiencing burnout may experience more physical, emotional and mental difficulties and may feel powerless (Maslach and Jackson, 1981; Tümkiye et al., 2009).

Stress and burnout in employees may negatively affect their performance and productivity by revealing health problems (Altan, 2018; Tekin et al., 2019). As a result, fatigue and a decrease in work life and personal success may be observed (Altan, 2018). Therefore, in order to increase productivity, determination of stress factors and their level is necessary for the protection of physical and mental health. Stress and burnout may increase the occurrence of mental. As a result, stress and burnout may increase the occurrence of mental symptoms such as anxiety, depression and feelings of hopelessness and physical symptoms such as headache, muscle tension and insomnia. In addition, work-related tension may lead to decreased productivity, decreased job satisfaction, absenteeism or quitting the job (Altan, 2018; Tavlı and Ünsal, 2016; Tümkiye et al., 2009).

2. LITERATURE REVIEW

Stress is defined as a response to stimuli and stimulant, a situation that occurs as a result of intense demands that may cause physical and psychological disorders affecting the individual and his/her environment, and a dynamic process that harms well-being (Biggs et al., 2017; Selye, 1951). Stress can be an uncertain and unperceived process as a result of the situation faced by the individual regarding his/her wishes (Selye, 1951). In the definitions of stress made in terms of businesses, it is stated as the response to new and challenging factors in the work life of the employee (Maslach et al., 2001; Tavlı and Ünsal, 2016; Tekin et al., 2019; Uler, 2020). Physiological stress is defined as the response of the organism to external stimuli that is not satisfied with the situation that occurs and that the organism develops against the stimuli (Biggs et al., 2017). The individual experiencing physical and psychological stress aims to make an effort to maintain balance in the face of a challenging and pressurizing situation. Thus, the individual develops reactions against stress caused by both external and internal stimuli (Selye, 1951; Sürme, 2019). If the reaction lasts for a long time, it may cause damaging effects for the organism (Selye, 1951).

In general, the physical effects and symptoms of stress include; hypertension, palpitations, tachycardia, tachypnea, headache, gastrointestinal disorders such as indigestion, heartburn, diarrhea and constipation, muscle

tension and pain, tics and twitching, weight loss, fatigue, drowsiness, dry mouth, sweating, cold hands and feet, skin rash, itching, nail biting, frequent urination, stomach ulcer, heart disease, decreased sexual desire, increased or decreased appetite, dizziness, loss of balance, difficulty in speaking, sensitivity to noise, sound and light (Chrousos, 2009; Sürme, 2019). In addition, hippocampus, amygdala, limbic system structures and prefrontal cortices of individuals experiencing stress may be affected by stress and startle reactions may occur in individuals (Kumar et al., 2013; Sürme, 2019). Stress may decrease the quality of life of individuals by impairing their learning and memory functions and making their lives more difficult (Hatungil, 2008). Stress may also cause anxiety, depression and sleep problems (Chrousos, 2009; Ertek et al., 2020; Sürme, 2019). Furthermore, the individual experiencing stress may experience tension, anxiety, feeling of inadequacy and frustration. Increased stress in individuals also may lead to many negative effects in work life. These include desire to leave the workplace, reluctance, complaining about the organization, panic, absenteeism, low work performance, lack of trust, fear of not being liked by managers, work accidents, insensitivity to mistakes and burnout (Alkış, 2018; Altan, 2018; Tavlı et al., 2016; Tekin et al., 2019).

Burnout has been expressed as a result of the deterioration of the balance of the employees at work and their individual inadequacy depending on the institution, and in the 1970s, the concept of burnout was stated as the depression experienced by employees in the service line of work (Maslach and Schaufeli, 1993). In addition, burnout was defined as an occupational threat and was expressed as failure, problems in relationships, exhaustion resulting from loss of motivation and aspirations, and a painful situation (Maslach and Jackson, 1981; Maslach and Schaufeli, 1993). According to another definition, burnout is defined as a condition that develops as a result of emotional exhaustion, physical exhaustion, prolonged fatigue, hopelessness, helplessness, and negative behaviors towards work, life and other individuals (Maslach and Schaufeli, 1993). The concept of burnout by Maslach and Jackson (1981) was defined as the depression, introversion, and feeling of failure experienced by the individual in the workplace, and as a result, it was defined as the inability of the individual to fulfill the responsibilities required by the profession.

Stress has important effects in work life as it has in every moment of life. Individuals spend time most of their daily lives at work; therefore, stress has an important place in work life (Dolgun, 2010; Kocabaş et al., 2018; Luo et al., 2016). Every individual wants to maintain the balance between work, home and society. Some obstacles in work life can be stress factors. It has been emphasized that working conditions, heavy workload, dissatisfaction with the work, low wage level, quality of the work, working environment and high expectations of the individual about his/her job can be stress factors in working life. The presence of several of these situations may cause the individual's mental health to be negatively affected and his/her balance to deteriorate (Demirezen and Şenol, 2020; Kocabaş et al., 2018; Luo et al., 2016).

When the effects of stress and burnout are examined in business life; absenteeism, increased loss of labor force, inability to focus on work, decreased performance and economic losses can be seen frequently. Especially when employees experience burnout, it can directly affect the quality of their work (Serinkan and Barutçu, 2020; Uler, 2020). The decrease in the performance and productivity of the employee experiencing burnout is one of the most important problems that will affect the organization they serve (Demirezen and Şenol, 2020; Dolgun, 2010; Luo et al., 2016; Serinkan and Barutçu, 2020). In individuals experiencing burnout, there is a decrease in organizational belonging, absenteeism, taking rest, constantly complaining about their superiors and the workplace, an increase in occupational accidents, and miscommunication with other employees (Dolgun, 2010; Kocabaş et al., 2018; Luo et al.,

2016). In addition, burned out employees may not do their jobs and negatively affect other colleagues in addition to their own conflicts. As a result, he/she may have transmitted the feel of burnout to his/her coworkers (Serinkan and Barutçu, 2020).

Nursing is a health discipline carried out through professional staff in order to protect, improve and treat the health of individuals in the society (Eşer et al., 2017). Work life enables individuals to develop physically, mentally, socially and culturally. In this process, the environments in which they work may have negative effects on employees as well as positive effects (Aybas and Kosa, 2018; Görüş et al., 2014). Therefore, nursing is interested in the effects of work life on individuals. Nurses assume important roles in treatment, care, protection and rehabilitative services, especially for the identification, prevention and development of negative situations related to the work life of employees. Nurse's task preventive and developmental health services for the health of employees (Kolaç et al., 2018; Pektaş et al., 2006). In the psychiatric nursing regulation, it is stated that psychiatric nurses have roles and responsibilities to evaluate risks for mental health in all segments of society and to protect and improve mental health (GRT, 2010). The mental health of individuals working in a job reflects an important part of the mental health of the society. Since stress and burnout are important factors in the mental health of workers in factories, determining their levels, examining the individual and working conditions that affect them, and planning interventions for these are among the duties of psychiatric nurses. Therefore, in this study, it was aimed to determine the relationship between stress and burnout in factory workers.

3. MATERIAL AND METHOD

This research was conducted as a descriptive study.

3.1. Participating and Setting

The study was conducted at Sango Automotive Products Industry and Trade Joint Stock Company in Kocaeli/Türkiye between April and July 2021. Among the reasons for conducting the study is that one of the researchers is a psychiatric nurse and the desire to create evidence for necessary interventions by examining the stress and burnout levels of employees and the affecting factors. The population of the study consisted of 480 people working in Company at the time of the study. It was aimed to reach the entire population without selecting a sample. However, due to the fact that there were some people who refused to participate in the research, the research was completed with 306 people who were over the age of 18 and who had no communication problems and who agreed to participate in the research. The data were collected face-to-face. It took approximately 20 minutes for each participant to complete the questionnaires.

Before starting the study, XXX University Non-Interventional Ethics Committee Approval was obtained. After the approval of the ethics committee, implementation permission was obtained from the institution where the research would be conducted. The research was conducted in accordance with the Declaration of Helsinki. Participants were informed that they were free to participate in the research and that they could leave the research at any stage of the research. They were informed that the results of the research could be published for scientific purposes without revealing their identity information. Written informed consent was obtained from the participants before the research.

3.2. Instruments

The data were obtained by using Personal Information Form, Perceived Stress Scale and The Burnout Measure Short

Version.

Personal Information Form: This form includes the socio-demographics of the participants and their workplace characteristics.

Perceived Stress Scale (PSS): This scale was developed by Cohen et al. (1983). Its Turkish validity and reliability were performed by Eskin et al. (2013). The PSS was adapted to measure how stressful the events in an individual's life are perceived to be. The scale includes 14 items and a single dimension in a five-point Likert scale. Seven items (4, 5, 6, 7, 9, 10, 13) are reverse coded. The scores of PSS can vary between 0 and 56. A high score on the scale indicates that the stress perception of the individual is high. In this study, Cronbach Alpha reliability coefficient was determined as 0.81.

The Burnout Measure Short Version (BMS): This scale was developed by Maslach-Pines (2005) to assess the burnout level of individuals and was adapted into Turkish by Tümkaya et al. (2009) and validity and reliability tests were performed. BMS is a 10-item scale consisting of a single dimension and seven Likert-type (1: never, 2: almost never, 3: rarely, 4: sometimes, 5: often, 6: very often, 7: always). The scores of BMS can vary between 1 and 70. A high score on the scale indicates a high level of burnout. In this study, the Cronbach Alpha reliability coefficient of the scale was determined as 0.91.

3.3. Data Analysis

In the study, SPSS (Statistical Package Program for Social Science) 21.0 was used to analyze the data. The Kolmogorov-Smirnov Z test was used to determine whether the scale scores fit the normal distribution. Since it was determined that the scale scores did not show normal distribution, Mann Whitney U test and Kruskal Wallis H test were used. In comparisons between three or more groups, Mann Whitney U test was used in pairwise comparisons to determine which groups the difference was between. Spearman's rho correlation test was used to analyze the relationship between the scores of the scales. Significance $p < 0.05$ was accepted in statistical evaluations.

4. FINDINGS

The results regarding the individual and working characteristics of the 306 workers who participated in the study are given in Table 1.

Table 1. Individual and Working Characteristics of the Participants

Demographics		N	%
Gender	Male	297	97.1
	Female	9	2.9
Age (33.29±6.35)	25 years and under	29	9.5
	26-30 years old	77	25.2
	31-35 years old	85	27.8
	36-40 years old	75	24.5
	41 years and above	40	13.1
Marital Status	Married	220	71.9
	Single	86	28.1
Having Children	Yes	191	62.4
	No	115	37.6
Number of Children (N=191)	One child	115	60.2
	Two children	73	38.2
	Three and above children	31	12.6
Educational Status	Primary education	68	22.2
	High school	158	51.6
	Associate's degree	56	18.3
	Bachelor's degree	24	7.8

Job	Production-worker	292	95.4
	Office-civil servant	14	4.6
Working Order	Shifts	288	94.1
	Normal	18	5.9
Working Day	6 days a week	293	95.8
	Weekdays only	13	4.2
Working Time in The Company	Less than 3 years	60	19.6
	3-5 years	52	17.0
	6-7 years	97	31.7
	8-10 years	49	16.0
	11 years and above	48	15.7

The mean Perceived Stress Scale score of the participants was 25.11 ± 7.39 (0-56) and the mean Burnout Scale score was 29.69 ± 12.61 (10-70) (see Table 2).

Table 2. The Mean Scores of Participants' Perceived Stress Scale and Burnout Scale

Scales	N	Points that can be obtained		Points received		\bar{X}	SS	K-S Z
		Min.	Maks.	Min.	Maks.			
PSS	306	0	56	1	48	25.11	7.39	0.08*
BMS	306	10	70	10	67	29.69	12.61	0.09*

K-S Z: Kolmogorov-Smirnov test * $p < 0.01$

It was determined that there was a statistically positive significant relationship between the Perceived Stress Scale and Burnout Scale scores of the participants ($r=0.67$; $p < 0.05$) (see Table 3).

Table 3. The Relationship Between Participants' Perceived Stress Scale and Burnout Scale Mean Scores

Scales	1	2
1. PSS	1	0.67*
2. BMS		1

* Spearman's rho test, $p < 0.01$

The Perceived Stress Scale scores of the participants showed a statistically significant difference according to their age groups ($X^2=17.21$; $p < 0.05$). In the pairwise comparison analysis between groups, the perceived stress scores of the participants aged 26 years and over were statistically significant and higher than the scores of the participants aged 25 years and under ($p < 0.05$). It was determined that the Burnout Scale scores of the participants showed a statistically significant difference according to their age groups ($X^2=23.57$; $p < 0.05$). In the pairwise comparison analysis between groups, the burnout scores of the participants aged 31 years and over were statistically significant and higher than the scores of the participants aged 25 years and under ($p < 0.05$).

According to the marital status of the participants, PSS and BMS scores show a statistically significant difference ($Z=-3.04, -3.65$; $p < 0.05$). The scores of married participants were statistically significant and higher than the scores of single participants.

The PSS and BMS scores of the participants showed a statistically significant difference according to having children ($Z=-3.24, -4.18$; $p < 0.05$). The scores of the participants who have children are higher than the scores of the participants who do not have children.

It was determined that there was a statistically significant difference in the PSS scores of the participants according to their working time in the company ($X^2=28.88$; $p < 0.05$). The PSS scores of the participants with more than 3 years of employment are significantly higher than the scores of the participants with less than 3 years of employment.

It was determined that there was a statistically significant difference in the BMS scores of the participants according to their working time in the company ($X^2=34.09$; $p<0.05$). The burnout scores of the participants with more than 6 years of service in the company are significantly higher than the scores of the participants with less than 3 years of service in the company. The burnout scores of the participants with 11 or more years of service in the company are significantly higher than the scores of the participants with 3-5 years of service in the company ($p<0.05$) (see Table 4).

Table 4. Comparison of Scales and Socio-Demographic Characteristics

Scales		PSS		BMS			
		$\bar{X}\pm SD$		$\bar{X}\pm SD$			
<i>Age</i>	A-25 years and under	20.03	7.58	17.21* 0.002 B,C,D,E>A	22.34	10.47	23.57* 0.000 C,D,E>A
	B-26-30 years	24.73	7.13		27.00	12.27	
	C-31-35 years	25.69	7.91		30.27	13.11	
	D-36-40 years	26.53	7.02		32.41	11.57	
	E-41 years and above	25.60	5.88		33.83	12.69	
<i>Marital Status</i>	Married	25.91	6.99	-3.04** 0.002	31.20	12.37	-3.65** 0.000
	Single	23.06	8.03		25.81	12.47	
<i>Having Children</i>	Yes	26.18	6.95	-3.24** 0.001	31.93	12.39	-4.18** 0.000
	No	23.32	7.79		25.96	12.14	
<i>Working Time in The Company</i>	A-less than 3 years	20.78	7.21	28.88* 0.000	23.50	9.98	34.09* 0.000
	B-3-5 years	24.90	9.75		27.62	14.16	
	C-6-7 years	26.34	5.98		30.76	12.91	
	D-8-10 years	26.00	6.86		30.92	10.92	
	E-11 years and above	27.33	5.69		36.23	11.24	

*: Kruskal Wallis H test **: Mann Whitney U test

DISCUSSION AND CONCLUSION

In this study, it was evaluated that the stress perceived by the participants was at low-medium level. Similar to the results of this study, it has been determined in the literature that employees in other business lines experience different levels of stress (Deng et al., 2021; Lu, Zhang, Yan et al., 2020; Pandey, 2020). The means of burnout level of the participants was 29.69 ± 12.61 . When the scores that can be obtained from the scale (10-70) were analyzed, it was evaluated that the burnout level of the participants was at a low level. Contrary to the results of this study, in the study conducted by Demirezen and Şenol (2020) to determine the factors affecting the stress and burnout of workers

in the marble industry, the burnout levels of workers were found to be high. Lu, Zhang, Gao et al. (2020) reported that 85.98% of factory workers and miners experienced occupational burnout. Do et al. (2020) stated that since burnout in workplace workers increases their depression and suicidal ideation, it is necessary to conduct regular screening studies for those who work in business life and to provide counseling and treatment services to those who experience burnout. Reverse to the literature, the low level of burnout among workplace workers in the present study may be related to the opportunities provided to the workers of the factory where the study was conducted and the workers' satisfaction with the organization at the workplace.

In this study, a statistically positive and significant relationship was determined between the means of perceived stress level and burnout level ($r=0.67$; $p<0.05$). Workers have high perceived stress levels also have high burnout levels. In a study conducted by Luo et al. (2016), stress levels and burnout of migrant workers were examined and it was determined that as the stress of the workers increased, burnout increased. Albar (2018) reported that workers experienced stress due to mobbing, excessive workload and low wages and consequently showed symptoms such as burnout. Görür and Günaydın (2019) stated that burnout should be dealt with because the increase in the burnout level of employees reduces their commitment to the organization. Salazar and Diego-Medrano (2021) determined that if employees experience workplace stress and distress, their perceived stress levels and burnout levels increase and their job satisfaction decreases. Therefore, it is important and necessary to reduce the stress of employees.

It was determined that the means of perceived stress level of the participants showed a statistically significant difference according to their age groups ($p<0.05$). Participants aged 26 and over had significantly higher perceived stress scores than participants aged 25 and under. Yeh et al. (2019) also stated that stress experienced in the workplace may be affected by the age of employees. They stated that young individuals experience more stress in jobs that require work or experience, while older employees experience stress related to taking responsibility, workplace safety and retirement. In addition, in this study, the burnout scores of participants aged 31 years and older were significantly higher than those of participants aged 25 years and younger ($p<0.05$). Deng et al. (2021) reported that the burnout level of employees aged 30-45 years was high. These results show that workplace employees experience burnout as their age increases. In this study, the high level of both stress and burnout with increasing age may be related to the responsibility of the participants as they get older and gain experience in the workplace.

According to the marital status of the participants, the means of perceived stress level were found to be statistically significant ($p<0.05$). Perceived stress level of married participants was found to be higher than single participants. In this study, the higher stress levels of married workers can be explained by their higher responsibilities and family burden. Because, married individuals may have difficulties in carrying out their responsibilities both at work and in their families and as a result, they may perceive more stress than single individuals.

In addition, in this study, the burnout level of married participants was found to be higher than single participants ($p<0.05$). Similar to the results of this study, they have found high levels of burnout in married individuals (Kolaç et al., 2018), Deng et al. (2021) also reported that the burnout of married/divorced workers in coal mines in the Xinjiang Uygur Autonomous Region was higher than that of single workers.

According to the results obtained from this study, the means of perceived stress level of participants with children were significantly higher than those of participants without children ($p<0.05$). Başol and Saruhan (2018)

reported that those who have children in the workplace experience more problems, which causes employees to experience difficulties. In addition, the burnout scores of participants with children were higher than those of participants without children ($p < 0.05$). Johnson et al. (2020) reported that among health care workers in Bangolere, India, those who had children experienced burnout due to the difficulties they experienced in maintaining balance within the family. The high stress and burnout levels of the participants who had children in this study can be explained by the fact that having children causes difficulties in individuals.

According to the results of this study, according to the working time of the participants in the company, it was determined that the means of perceived stress level of the participants with more than 3 years of working time were significantly higher than the scores of the participants with less than 3 years of working time in the company ($p < 0.05$). In a study conducted by Mulugeta et al. (2021) among vehicle repair workers in Hawassa City of Southern Ethiopia, they reported that participants with more than 10 years of service experience more stress at the workplace compared to those with less than 5 years of service. In addition, the means of burnout level of the participants according to their length of service period were statistically significant ($p < 0.05$). The burnout scores of the participants whose working period in the company was more than 6 years were significantly higher than the scores of the participants whose working period in the company was less than 3 years. The burnout scores of the participants with 11 or more years of service in the company are significantly higher than the scores of the participants with 3-5 years of service in the company ($p < 0.05$). The increase in the burnout level of employees with increasing years of employment in the company can be explained by the increase in individual success and the ability to give more responsibility to the workers as the experience in working life increases. In a study conducted by Naldan et al. (2019) with healthcare personnel, similar to the results of this study, it was determined that emotional exhaustion increased with increasing years of employment. Dehghan et al. (2020) reported that those with 15 years of service in the profession experienced more burnout.

Determining the variables that cause burnout and stress in this study may be guiding in increasing work efficiency. For this reason, it may be recommended that the working conditions of the workers should be maintained and the organization should make plans to further reduce stress and burnout, and since there are many individual, physical and psychological factors affecting the results of this research, it may be recommended to conduct experimental research with workers. It is important for psychiatric nurses working in the workplace to regularly identify workers' stress and burnout levels and provide care to reduce them. Thus, psychiatric nurses can reduce the physical, social and psychiatric difficulties that workers may experience from stress and burnout. As a result of this study, it was determined that the level of burnout increases as the stress level of workplace workers increases, which may be evidence for the interventions to be made by psychiatric nurses working in the workplace.

The research is limited to the answers given by individuals who accepted to work in an automotive factory where the application was carried out. The results obtained from the research are valid for the workplace where the application was carried out and the individuals who participated in the research and answered the questions. It is not valid for individuals working in other national and international workplaces. Therefore, the results of the research cannot be generalized to other individuals. In addition, during the period of the study, the Covid-19 pandemic and the changes in the workplace and the physical, psychological and cultural variables affecting individuals could not be controlled.

AUTHOR CONTRIBUTION STATEMENT

All authors have contributed equally.

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CONFLICT OF INTEREST STATEMENT

There is no conflict of interest with any institution or person within the scope of the study.

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