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The Sources of Stress, The Symptoms of Stress and Anger Styles as a Psychosocial Risk at Occupational Health and Safety: A Case Study on Turkish Police Officers.

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Abstract

The present study aims at measuring the sources of stress, the symptoms of stress and anger styles of police officers as psychosocial risk factors. A survey was carried out on 5725 randomly selected police officers in a big city in Turkey. The questionnaire included some personal information. When collecting data, Mayerson's Stress Factor Scale was used to measure the sources of stress. The Psychological Symptom Checklist-SCL-90-R was used to measure the participants' psychological symptoms and the State Trait Anger Scale (STAS) is used to measure anger styles of police officers. When analyzing data, correlations and stepwise multiple regression analysis are used to examine the relationship.

The findings of the present study have shown that there are meaningful relationships among the symptoms of stress, the sources of stress and anger. According to this pointing system, it has been found that the police officers got higher stress points from the Mayerson Stress Sources Scale when physical environment, job, social stress and self-expression are considered, and they were tended to have increased problems. Psychological symptoms are highly prevalent among Turkish Police officers. In the end, several suggestions have been made to the police departments to help the officers who are affected adversely by job stress. According to these findings, we suggest a more specific research to be performed in order to determine and prevent these stress factors among Turkish Police officers.

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1. Introduction

Today, stress is one of the biggest health problems of the laborers. Over half a million people have their physical or mental health damaged as a result of stress at work. Stress is the part of human life and every living organism is exposed to stress as a result of daily life activities. Stress is one of the major psychosocial risks at work which is an occupational health and safety issue.

The negative individual consequences that stress causes on the behaviors, emotions and biological structures of people lead to a further increase in the stress-related illness in working life with each passing day. The relations between the stress at workplace and physical and mental health [1, 2, 3, 4,] and productivity [5, 6] are often emphasized in the studies conducted in recent years. Stress, which is generally perceived as a negative situation and is envisaged as a disease of our time, is the non-specific response of human body to any unwanted harmful environment according to Hans Selye (1974, 1984) and the reaction of an individual to the difference between the world and his/her expectations according to Magnuson (1990). Davis (1982) defines stress as a state of tension of the emotions, thought process and physical conditions of an individual, which threatens his/hers strength to cope with the environments; Robbins (2001), as the result of important and dynamic conditions of the opportunities, limitations or claims, which people face; Cannon, as physiological stimuli needed to re-gain the physiological homeostasis disrupted after the unwanted environmental effects; Lazarus, as the sum of the relations beyond the individual stamina caused by the person which, according to the individual, threatens himself/herself [9; 10,11].

Work has an important place in human life. It has been found out by many studies that work-related factors and their disadvantages lead to the stress on employees create psychological pressures and destructions, adversely affect their health and performance, cause employees' turnover, absenteeism, burnout and tendency to leave [7, 8, 22, 23]

Another feature to be evaluated in terms of the features of a job is containing danger by the job. For example, aviation, navigation, working at nuclear power plants, working underground or in high places can be mentioned as examples of the jobs with a high-risk level. In the studies on stress, some professions are defined as highly dangerous and stressful jobs. These occupations threaten human life in terms of work accidents and occupational safety. For Example; nurses, doctors, policemen, soldiers, health workers, bank employees, customer service representatives, call center staff, air traffic control specialists, security service personnel, war correspondents, and so on are in the stressful professions group [35; 36; 31].

Some professions are more stressful than the other occupational groups in terms of working conditions. For example, changes in the working hours, shift work, long working hours lead to the emergence of many physical, mental, social and biological rhythm disorder problems [42; 30; 38; 35; 12] .Thus, it would be the reason for sleep problems, low resistance against some diseases, heart disease, chronic fatigue, musculoskeletal pain, high blood pressure, back problems, anger, aggression, and depression, even cancer. Also many adverse situations occur, such as especially work-related accidents, inefficiency, performance loss, lack of adaptation of work [35; 15; 39; 36; 42].

Police officers work under conditions that produce stress. Being a police is considered as one of the highly stressful occupations because of the negative working conditions such as long irregular hours, hierarchic structure and safety concerns. Today, the police work for 10–12 hours every day. Long hours at work lead to stress emotion which is hazardous to police officer's health. When compared to the other occupations, being a police is considered highly stressful [16; 32; 53; 33; 54; 19; 6; 41]

Stress causes the police to exhibit negative attitude, experience burnout, the decrease in the commitment to work, show counter-productivity behavior. The police, working conditions of who are difficult and exhausting, are generally faced with the unhappy and victim people in a tense environment. The fact that the police who are stressed must serve a stressful individual also puts this profession into more difficult conditions [54; 17, 14].

In the literature, many studies have been done on police officers' stress. Stress is an integral part of the life of a professional police officer. The police often encounter stressful situations in their daily work, and these stressors have cumulative effects. As a matter of fact, every person is subject to stress, but police officers are at greater risk than other people. Factors such as dangerous missions, overloaded shift hours, long term working hours, fatigue, hierarchical and disciplinary structure etc., affect psychology and physiology of the police. All these factors are the psychosocial risks for police officers and have a negative effect on Occupational Health and Safety. Stress becomes a risk only to safety and health if it is protracted. Some mental health experts opine that short-term stress for meeting

a deadline of certain demands is not usually a problem, but it is a way to energize individuals to the best of their abilities [47].

The stress of being a policeman is pointed out as one reason for capable police officers for leaving the profession for other careers [54] or even committing suicide. Studies carried out in Turkey; show that a police officer commits suicide every three days. The number of police officers committing suicide only in 2013 is 36. The suicide rate among the police is 19.6 per hundred thousand. Among the causes of police suicide, mental depressions, family reasons, financial problems and intense stress come first [26]. Thus, it is important to have a productive and healthy police service that serves as an important contributor to the stability and well-being of a country. Therefore, it is necessary to examine potential factors that cause police officers to suffer from stress [41, 39, 27].

Although numerous studies were conducted internationally on job stress and outcome of the work related stress of the police, the studies conducted in Turkey are insufficient. The police, who are members of a profession responsible for ensuring the safety of the community, are exposed to various physical and psycho-social risk factors resulting from the nature of their work and working conditions. All these risks are a threat to the occupational health and safety aspects.

2. Material and Method

This study investigates the relationships between police officers and the source of stress, the symptoms of stress and anger styles.

2.1. Sample and Measurement scales

The sample group of the study consists of 7500 police officers from Bursa city in Turkey. Questionnaires with free return envelopes were distributed as sealed to all police officers using basic sample method by an administrator of the police. We collected these questionnaires 3 days later. Anonymity was guaranteed, and information about the study was provided by the management. The ethical approval for this research was obtained from the appropriate research committee at Uludag University. Informed consent was obtained from all participants in the study.

The questionnaire response was 6200 participants (82% return rate). After exclusion of those with missing values and error checking on the research variables, the final number of participants was 5725. The study sample comprises of 94% male officers and married officers (91%) with an average age of 39.5 years (SD=6.5 years; range 20-66 years) and average experience in their current job of 15.9 years (SD=6.4 years)

In this study, a questionnaire was created which made use of the measurement scales in previous studies, whilst also taking into consideration particular Turkish cultural characteristics. The dimensions in the questionnaire and the measurement scales are as follows.

- *Mayerson Stress Source Scale (MSSS)* that includes 43 statements was used to determine stress sources of police officers. Mayerson's Stress Factor Measurements are composed of four sub-factors providing information about the sources of stress which are encountered in the conditions of daily life, force, overwhelm the individual and threaten his/her health. Stress sources were collected into four groups including "social" stress sources resulting from human relations, "job related" stress sources resulting from "self-recognition", "physical environment" stress sources resulting from physical environment including noise and air pollution. It has five points. Scores obtained from each stress source were evaluated in four groups [24]
- *The Psychological Symptoms Scanning Scale- (SCL- 90-R)* was used to screen global psychological distress. This scale is on the self-reported symptoms of mood and psychological distress that police officers experience. The Psychological Symptoms Scanning Scale- (SCL-90-R), which was a self-assessment tool, was developed by Derogatis (1977). The instruments applied in this study were the Turkish version [29] of the SCL-90-R, a widely applied and well-known disorder-specific self-reporting instrument that assesses the severity of depression symptoms. Retaining the five-level Likert scale from 0 = none at all to 4 = very severe. The scale is composed of 90 items and 10 sub-factors, which include psychological symptoms and complaints. In general, it is used to determine the 10 basic psychological distress fields. Those are: Somatization, Obsessive compulsive,

Interpersonal sensitivity, Depression, Anxiety, Hostility, Phobic anxiety, Paranoid ideation, Psychoticism and Additional items.

- *The State Trait Anger Scale (STAS)* is used to determine the trait anger level and anger expression of the individuals. This scale was developed by Charles D. Spielberger, Jacobs, Russel and Crane (1983). The scale which is assessed by four-point Likert Technique is composed of 34 items and 4 sub-scales. These are trait anger, anger expression-in, anger expression-out, and anger-expression control sub-scales. Trait anger (first 10 items) measures the anger experience and anger expression styles in the absence of a situation that creates anger (anger expression style); anger expression-in, measures suppression of anger in situations that provoked outrage while anger-expression-out measures the tendency to reflect the anger out and the tendency of aggressive behavior; anger expression sub-scale measures how often the anger can be controlled (43, 44, 45).
- *Demographic questionnaires* have 5 questions such as gender, age, working year etc.

3. Results

Table 1 represents the major demographic characteristics of the survey respondents. A vast majority of respondents (64.9%) were between 35-44 years old; 51% have an associate degree and 25% have a graduate degree. 41 % of the respondents have been in the profession for 16-20 years (Table 1).

Table 1 Demographic Characteristics

Age.	N (n)	(%)
18 - 24	110	1.9
25 - 34	781	13.6
35 - 44	3713	64.9
45 - 54	1110	19.4
55 +	11	.2
<i>Marital status</i>		
married	5188	90.6
Single	457	8.0
Divorced	72	1.3
widow	8	.1
<i>Education</i>		
Primary school	127	2.2
High School	1113	19.4
Undergraduate	2919	51.0
Graduate	1425	24.9
Master and PhD	141	2.5
<i>Working year</i>		
0 - 5 year	492	8.6
6 - 10 year	377	6.6
11 - 15 year	1489	26.0
16 - 20 year	2346	41.0
21 + year	1021	17.8
<i>Total</i>	<i>5725</i>	<i>100.0</i>

Internal consistency reliabilities (coefficient alpha) are shown for all the study scales in Table 2.

Table 2 Coefficient Alphas for Study Variables.

Variable	N	Item	C.Alpha
SCL 90	5725	90	.9734
MSSS	5634	43	.9113
STAS	5725	34	.8476

(SCL90) *The Psychological Symptoms Scanning Scale*

(MSSS) *Mayerson Stress Source Scale*

(STAS) *The State Trait Anger Scale*

As seen in Table 2, the reliability values obtained from all scales are within the limits accepted in the social sciences, and it is seen that ranged from 0.85 to 0.97.

Correlations were calculated in order to see the relations between the trait anger levels and anger styles of individuals and all other scales. According to the findings shown in Table 3, there is a significant correlation between the Trait Anger, SCL, and MSSS. All correlation coefficients realized in line with the expectations and generally appeared at levels that can be considered high for this type of work (Table 3).

Table 3 Correlations Between All Scales

.	(1)	(2)	(3)	(4)	(5)	(6)
(1) SCL90	1					
(2) MSSS	.596(**)	1				
(3) Social	.475(**)	.907(**)	1			
(4) Self-recognition	.609(**)	.850(**)	.667(**)	1		
(5) Job related	.573(**)	.920(**)	.723(**)	.779(**)	1	
(6) Physical environment	.380(**)	.645(**)	.453(**)	.475(**)	.635(**)	1
(7) STAS	.411(**)	.525(**)	.473(**)	.475(**)	.478(**)	.318(**)

** $p < 0.01$.

All correlations among Stress Symptoms (SCL90), Stress Sources and Trait correlations are positive and statistically significant ($r = .59$, $p < .001$); ($r = .41$, $p < .001$); ($r = .52$, $p < .001$).

In this part of the study, gradually (stepwise) multiple regression analysis was performed to determine which variable (sources of stress or stress markers) explains the respondents' anger styles, in other words whether they reflect the anger to the others or to themselves and whether they can control the anger or suppress it. This analysis was performed by keeping the anger styles as a dependent variable and including all other independent variables into the model gradually (stepwise). As it is known, in this technique, if the added variable is statistically significant, it remains in the model and the significance is tested by re-estimating the model. In this estimation technique, the model is tried to be explained with the minimum number of variables (Table-4)

Table 4: Stepwise Multiple Regression Analysis for Trait Anger

Independent Variables	Dependent Variable = STAS			
	β	t	F	R ²
Step 1			2036.598**	.276
Stress Sources	.360	45.129**		
Step 2			1096.259**	.291
Stress Sources	.297	30.283**		
Stress Symptoms	.131	10.638**		

* $p < 0.05$; ** $p < 0.01$

As seen in Table 4, the sources of stress were used in Step 1. In the 2nd step, stress determinants variable was added to the sources of stress variable. It is understood that both independent variables have effects in terms of variables affecting the anger styles. In other words, it has been found out that the sources of stress and stress determinants variables significantly affect the sources of anger variable. The sources of Stress and Stress Determinants variables explain 29% of the total variance.

When the beta values in the model obtained at the second stage are observed, it is seen that the sources of stress ($\beta = -.360$, $p < 0.05$) and stress determinants ($\beta = .131$, $p < 0.05$), variables have relative importance respectively in explaining the sources of anger styles.

4. Discussion and Conclusion

Unlike several previous studies examining the sources of the police's job stress [32, 18, 20, 34], this paper explores the effects of job stress on the Trait Anger. The police have too much stress due to their job. Stress occurring with individual and organizational factors is reflected in anger. The job that the police do and the mission they undertake bring a huge responsibility as well. The increase in the level of responsibility also increases the stress level. This can result in anger.

In the studies conducted, it has been found out that the stress levels of the police are high due to both individual and organizational reasons and most of them experience burnout after stress, they show anger and aggression and it adversely affects their family and business life [48, 28, 39, 40].

In the research conducted on the military personnel by Taylor and his colleagues (2009) in order to measure the relationship between daily stress and the anger experiences, it was suggested that the anger expression-in and anger expression-out experiences were a challenge as a psychological effect of stress. Similar results were obtained in our study and the correlation was found between anger styles and symptoms of stress [43, 44, 45, 46]

It was found out in a research conducted by Queirós and colleagues (2013) on 274 male policemen that socio-demographic factors were effective in the relationship between exhaustion after work-related chronic stress and aggression. In the research conducted by Meffert and his colleagues (2008) in order to examine the relationship between post traumatic disease symptoms and anger it was emphasized, by finding the relationship between the variables, that the continuously increasing anger is not only an impact on physical and mental health of the individual, but is also important for its potential effect on public health [37]. In our study, a positive relationship was found between symptoms of stress, sources of stress and anger styles as well. This shows that sources of stress have an effect on anger, for constant stress increases the anger level. Moreover, it was found out that the effect of symptoms on anger level was higher than that of the sources of stress. As symptoms can reveal the feeling of anger on their own, they will also affect both the levels of stress and anger by triggering stress. For example, somatization symptoms increase both the stress level and anger level in the personal relationships due to the disease thoughts. Likewise, having paranoid thoughts affects the levels of stress and anger by ruling the individual's thoughts. Because police profession is a profession with the highest stress level, the measures for the working conditions must be taken first. Because long working hours, overwork, worries every moment that there may be a hazardous situation pose a risk to health and safety. While taking measures in relation to these conditions, to develop an individual-oriented approach to stress management and develop solution methods organization-oriented may be more useful. While developing these solutions, to start working by determining which factors create stress on the police and to what extent will increase the effectiveness of stress management [37, 12, 27, 25,49,50]

As a result, for the police officers who are responsible for ensuring the peace and security of the community, individual and institutional methods should be identified to prevent or reduce the stress and training programs for coping with stress and controlling the anger should be organized. On the other hand, working conditions must be regulated accordingly in order to protect the health of the workers and provide effective health services by taking into consideration that working conditions of the police affect health, physiological and psychological situations.

Limitations

This study has some limitations. Particularly the tendency of the people to hide the expression-in and expression-out of their aggression and anger may lead to the suspicious looking at the results.

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