Journal of Economy Culture and Society

Research Article

Problem Solving and Personality in Security Officers

Halim İŞSEVER[1] , Elif EZİRMİK[1] , Nefise ŞEKER[1] ,
Zeynep Betül SAĞLAM[1] , Gözde ÖZTAN[2] , Fatma CANATAR[1]

[1]Public Health, Occupational Health, Istanbul University, Faculty of Medicine, Turkey

[2]Medical Biology, Istanbul University, Faculty of Medicine, Turkey

ORCID: H.İ. 0000-0002-5435-706X;
E.E. 0000-0001-6828-4378;
N.Ş. 0000-0003-4722-3087;
Z.B.S. 0000-0001-9538-2969;
G.Ö. 0000-0002-2970-1834;
F.C. 0000-0001-6614-3862

Corresponding author:
Halim İŞSEVER,
İstanbul Tıp Fakültesi Halk Sağlığı
Anabilimdalı, Beyazıt, İstanbul, Türkiye
E-mail: hissever@istanbul.edu.tr

ABSTRACT

The study was conducted to examine the relationship between problem solving skills and personality traits of university security guards. The research was carried out with 190 security personnel working at universities in 2019. In the study, the Problem- Solving Skills Scale for Adults and the Big Five Personality Questionnaire-50 Turkish Form were used. 83.7% of the participants in the study were male, 73.2% were married, 68.4% were high school graduates, and 95.8% had in-service training. According to the logistic regression model, the results of our study were as follows: the problem solving skill 'Considering the Effects of the Solution of the Problem' was OR= 2.33 times (95% CI: 1.028-5.29) higher in female security guards than in males; 'Problem- Solving Through Modeling' was OR=0.48 times (95% CI : 0.237-0.987) higher in single security guards than married ones; and OR=2.18 times (95%CI: 1.181-4.047) higher in ones whose 'responsibility' personality trait was above the median value. The problem- solving skills of the security personnel were found to be related to their personality traits, gender, marital status, working time and education level.

Keywords: Occupational health, personality, problem, solving, security officers

1. Introductıon

The private security industry has developed significantly since the concept of public service began to change in Turkey. The sector consists of many subsectors that provide services to meet various types of security needs of the community (Aras, 2018).

Today, with the impact of the globalization process, we see that security threats have diversified and intensified more than at any time in history. The differentiation of threats to the security field with globalization makes it necessary to make a new definition of security. Today, the need for security is increasing in parallel with the increase in quality and quantity of the values that individuals have. One of the most important ways to solve this increasing security need in developed societies is private security services. Private security guards who will be used on-sitewill effectively meet individual security needs, save on security costs , reduce the burden of general security and prepare the ground for their more comfortable and effective work in their own fields. The fragmentary, variable, danger, and threat perception-related nature of modern society increases the need for security and makes police and other private security services important [Akbaş, Dursun & Ürün, 2018].

Security guards are subjected to violence by citizens during their work duties more than the general workforce. Moreover, workers in these professions cannot withdraw from their working environment even if they are under serious threat, because they are called on for help and also because they have the responsibility to maintain law and order in the community. Therefore, the problem solving- skills and personality traits of security guards are important when it comes to responding to an incident (Leino, Selin &Summala, 2011; Beech, Leather,2006). Lifelong learning is one of the most important concepts of today. It is a fact that individuals need education and learning throughout their lives because information that is changing and developing very rapidly makes it necessary for individuals to develop themselves (Beech, Leather, 2006; Yaman, Dede, 2008). The word "p roblem" is commonly used in daily life. Difficulties, distress, and trouble in social life are defined by this word. Problems usually consist of ambiguity, situations where accuracy and authenticity are not assured, and problems and relationships that involve difficulty. In another sense, especially problematic are states of tension, imbalance, incompatibility, and uncertainty (Bagnall, 1990).

Problem is defined as the obstacle an individual faces at any stage in order to achieve the intended purpose. The problem which is stated as an obstacle that an individual encounters has characteristics that cause uncertainty in the human mind, needs to be solved, and disturbs the individual (Oğuz, Akyol, 2015).

The effective power available to overcome a wide range of issues from everyday life to traumatic life events is defined as problem- solving. The problem- solving phase begins with cognitive processes respectively directed to a target. The problem- solving skill mediates the ability of individuals to adapt effectively to the environment in which they live. Some problems have right answers or clear solutions, while others do not. In this case, interdisciplinary knowledge and multifaceted thinking are important in solving problems (Soyer, Bilgin, 2010).

The Problem- Solving Skills Scale for Adults measures perceptions of one's problem -solving ability, including behaviors and attitudes associated with problem-solving styles. It consists of three phases: Problem- Solving Confidence, Approach-Avoidance, and Personal Control (Kourmousi, Xythali, Theologitou & Koutras, 2016).

In problem- solving, different approaches have been defined according to the characteristics of the problem and the individual interested in the problem. The traditional approach involves identifying the problem, analyzing its causes, identifying alternative solutions, evaluating and applying solutions, and determining whether the problem is solved (Ekici, Balım, 2013).

All of the distinctive features that distinguish one person from another and make him different from other people are expressed as personality. Recently, the experts who are doing research on personality have revealed a five- factor personality model that is effective in the detailed evaluation of personality. The five-factor model, which is the most widely used and best known personality traits model today, is a model based on the lexical hypothesis and depicts personality in terms of extraversion, agreeableness, neuroticism, conscientiousness, and openness. The basis of the lexial hypothesis is that the personal differences seen in individuals will be encoded in all languages in the world and that they provide a classification that includes the individual structures of individuals through words.

(Horzum, Ayas, & Padır, 2013). Another personality measurement data collection tool, The Five- Factor Personality Inventory, which includes 220 questions rated in a 5-point Likert scale between 1-Strongly agree and 5-Strongly disagree, which were prepared in accordance with the Five- Factor Model of Personality (FFMP). The Five- Factor Personality Inventory is scored over five key factors and 17 subdimensions (Tatar, Bildik, Saltukoğlu & Dinçel, 2014).

Since there are a limited number of Turkish personality tests based on the Five- Factor Model of Personality, the Big Five-50 Personality Test (B5PT-50-Tr) is usually first translated into Turkish The B5PT-50-Tr and the Five- Factor Personality Inventory Short Form (5FPI-SF) are then administered to the same groups. In this way, the similarities and differences of the two tests can be revealed (Tatar, 2016).

"Occupational safety and health (OSH) is generally defined as the science of the anticipation, recognition, evaluation and control of hazards arising in or from the workplace that could impair the health and well-being of workers, taking into account the possible impact on the surrounding communities and the general environment. This domain is necessarily vast, encompassing a large number of disciplines and numerous workplace and environmental hazards ." *"Occupational safety and health is an extensive multidisciplinary field, invariably touching on issues related to scientific areas such as medicine - including physiology and toxicology - ergonomics, psychology, physics and chemistry, as well as technology, economics, law and other areas specific to various industries and activities"*. The aims of an occupational health service are to improve workers' health, minimize hazards within the working environment and match working conditions to employees as closely as possible. The important thing in primary protection is the placement of suitable workers for suitable jobs. For this reason, it is important to place the worker in suitable jobs according to his anatomical, physiological and psychological characteristics. (Alli, 2008, Issever, Onen, Sabuncu , Altunkaynak, 2002).

The aim of this study was to evaluate the security guards' problem- solving skills and personality characteristics and the relationship between decision making processes in critical situations.

2. Materıals and Methods

This is a descriptive study conducted on individuals who worked as university security guards between September 1 and October 31, 2019. The study included 190 people who were working on the dates of the study and volunteered to participate in the study. The questionnaire was filled out with the face-to-face survey method in an appropriate setting. The total number of security guards was 400 and 190 people that were included in the study because 20 people were off duty and had presented reports on for various reasons during the research period. no sample selection method was used in the study. one in two employees was included in the study. The time for each employee to answer the questionnaire was approximately 15 minutes.

The Ethics Committee permission for the research was obtained from the Clinical Research Ethics Committee of Istanbul Faculty of Medicine, Istanbul University. In the study, the personal information form, the Problem-Solving Skills Scale for Adults, and the Big Five Personality Test-50 Turkish Form (B5PT-50-Tr) were used. The personal information form included questions about age, gender, marital status, educational status, working time, known illnesses, job satisfaction, working style, choosing your job willingly, in-service training, incidences of verbal or physical violence, and the most common security incidents and their frequency . The total score of the Problem- Solving Skills Scale and the scores of sub-dimensions of the Big Five Personality Test-50 Turkish Form were the dependent variables of the study and the pieces of demographic information were the independent variables.

The problem- Solving Skills Scale For Adults was developed by Yaman S. and Dede Y. in 2008. The scale that was developed to determine the levels of problem- solving skills of adults is of the Likert type. The response options for items on the scale are arranged as: 5=Always, 4=Often, 3=Sometimes, 2=Seldom, and 1=Never. The scale includes 18 items within the following sub-dimensions: Considering the effects of the solution of the Problem, Problem- Solving through Modeling, Exploring Alternative Solutions, determination in implementing the Determined Solution, and analyzing the encountered Problem (Yaman, Dede,2005). The Big Five Personality Test-50 Turkish Form (B5KT-50-Tr) was adapted to Turkish by Tatar A. in 2016 . and was developed based on the Big Five Test based on 100 single-ended adjectives. The B5KT-50-TR factors are named 1-Extroversion, 2-Agreeableness, 3- Conscientiousness, 4-Neuroticism, and 5-Openness. It consists of 50 items in total, with 10 items in each factor, and rated with a 5-point Likert scale between not appropriate=1 and very appropriate=5 (Tatar, 2016).

Statistics

Descriptive statistics were presented with mean, standard deviation, median, and minimum-maximum values for continuous data. The suitability of continuous data for normal distribution was evaluated by Kolmogorov-Smirnov and Shapiro-Wilk tests. The t-test was used for comparison of two parametric groups. The Mann-Whitney U test was used for comparison of two non-parametric groups, and the Kruskal Wallis test was used for comparison of more than two independent groups. In the comparison of numerical variables, the Spearman correlation analysis was performed. A logistic regression model was created by taking problem solving skills as the dependent variables with each one of its dimensions and taking the personality traits and demographic characteristics as the independent variables. The 21.0 version of IBM SPSS (Statistical Package for the Social Sciences, Chicago, IL, USA) software was used for statistical analysis.

3. Results

The demographic characteristics of the individuals included in the study are given in Table 1.

Table 1: Demographic characteristics of the individuals included in the study

Variables		Number	Percentage
Gender	Male	159	83. 7
	Female	31	16.3
Marital Status	Married	139	73.2
	Single	51	26.8

Educational Status	Primary School	1	0.5
	Secondary School	15	7.9
	High School	130	68.4
	Associate Degree	27	14.2
	Bachelor's Degree	17	8.9
Presence of a known illness	Yes	21	11.1
	No	169	88.9
In-service training	Yes	182	95.8
	No	8	4.2
Satisfaction with the job	Yes	179	94.2
	No	11	5.8
Work style	Daytime only	20	10.5
	Night only	9	4.7
	In Shift	161	84.7
Whether he/she chose the profession willingly	Yes	163	85.8
	No	27	14.2
Being exposed to violence	No, I haven't been exposed to any verbal or physical violence	126	72.4
	Yes, I have been exposed to verbal violence	33	19
	Yes, I have been exposed to physical violence	3	1.7
	Yes, I have been exposed to both verbal and physical violence	12	6.9
Total		190	100

Of the 190 security guards who participated in the study, 83.7% were male, 73.2% were married, and 68.4% were high school graduates. 84.7% were working in shifts, 72.4% had not experienced physical or verbal violence (Table.1).

The mean age of the security guards involved in the study was 35.78±5.98 (median:35, min:21, max:60). The mean daily working time was 8.04±0.41 hours (median:8, min:8, max:12). The mean years of work of the participants was 13.57±6.35 (median:13, min:3, max:40) years. The mean number of security incidents encountered daily was 5.01±6.95 (median:3, min:0, max:55).

Table 2: Distribution of the individuals included in the study by the median scores of their Five Factor personality traits

Extroversion	Median Scores	Frequency	Percent
	Below 33 points	101	53. 2
	Above 33 points	89	46.8
Agreeableness		Frequency	Percent
	Below 33.5 points	95	50
	Above 33.5 points	95	50
Conscientiousness		Frequency	Percent
	Below 32 points	99	52.1
	Above 32 points	91	47.9
Neuroticism		Frequency	Percent
	Below 28 points	101	53.2

	Above 28 points	89	46.8
		Frequency	**Percent**
Openness	Below 34 points	112	58.9
	Above 34 points	78	41.1

Table 3: Distribution of the individuals included in the study by the median scores of their problem- solving skills

Considering the Effects of the Solution of the Problem	Median scores	Frequency	Percent
	Below 22 points	120	63.2
	Above 22 points	70	36.8
Problem Solving Through Modeling		**Frequency**	**Percent**
	Below 12 points	102	53.7
	Above 12 points	88	46.3
Exploring Alternative Solutions		**Frequency**	**Percent**
	Below 17 points	98	51.6
	Above 17 points	92	48.4
Determination in Implementing the Determined Solutions		**Frequency**	**Percent**
	Below 13 points	95	50
	Above 13 points	95	50
Analyzing the Problems Encountered		**Frequency**	**Percent**
	Below 13 points	104	54.7
	Above 13 points	86	45.3

The mean total score of B5KT-50-Tr of the 190 security guards who participated in the study was 160.76±16.58 (median:160, min:118, max:219). The score of the sub-dimension 'Extroversion' was 33.02±4.45 (median:33 min:17, max:42), the mean score of the sub-dimension 'agreeableness' was 33.54±4.35 (median:33,5 min:22, max:45), the mean score of the sub-dimension 'conscientiousness' was 33.53±3.58 (median:32, min:22, max:44), the mean score of the sub-dimension 'neuroticism' was 27.65±6.55 (median:28, min:14, max:49), and the mean score of the sub-dimension 'openness' was 34.03±4.17 (median:34, min:22, max:46) The total mean score of the Problem- Solving Skills Scale (PSSS) of the 190 security officers involved in the study was 76.17±9.28 (median:77, min:41, max:90). The mean score of the sub-dimension 'Considering the Effects of the Solution of the Problem' of the PSSS was 21.05±3.00 (median:22, min:12, max:25), the mean score of the sub-dimension 'Problem Solving through Modeling' was 12.11±2.14 (median:12, min:6, max:15), the mean score of the sub dimension 'Alternative Research Solutions' was 16.87±2.74 (median:17, min:7, max:20), 'Determination in Implementing the Determined Solution' was 13.13±1.93 (median:13, min:6, max:15), and the mean score of the sub-dimension 'Analyzing the Encountered Problems' was 12.99±1.84 (median:13, min:8, max:15) (Table2, Table 3).

When problem- solving scores are evaluated according to demographic characteristics, t he average difference between "Considering the Effects of the Solution of the Problem" scores according to the gender variable was found to be significant. Average scores were higher in women (p<0.05). The difference between the "Problem Solving through Modeling" mean scores accor-

ding to the marital status variable was found to be significant. Average scores were higher in married participants (p<0.05).

The difference in the mean scores of "Exploring Alternative Solutions" according to the variable of working time in the profession was found to be significant. Average scores were higher for employees with more than ten years' experience. (p<0.05).

The difference between the mean scores of "Determination in Implementing the Determined Solution" was found to be significant according to the educational level variable. The average scores for problem- solving skills were higher in those with high school education (p<0.05).

In examining the distribution of the individuals by the median scores of their five- factor personality traits, the number of individuals with 'Extroversion' above the median score was 53.2% (n=89); the number of individuals with 'Agreeableness' above the median score was 50.2% (n=95); the number of individuals with 'Conscientiousness' above the median score was 47.9% (n=91); the number of individuals with 'Neuroticism' above the median score was 46.9% (n=89); and the number of individuals with 'Openness' above the median score was 41.1% (n=78). In examining the distribution of the individuals by the median scores of their problem solving skills, the number of individuals whose scores of 'Considering the Effects of the Solution of the Problem' were above the median score was 36.8% (n=70); the number of individuals whose scores of 'Problem- Solving Through Modeling' were above the median score was 46.3% (n=88); the number of individuals whose scores of 'Exploring the Alternative Solutions' were above the median score was 48.4% (n=92); the number of individuals whose scores of 'Determination in Implementing the Determined Solution' were above the median score was 50% (n=95); and the number of individuals whose scores of 'Analyzing the Encountered Problem' were above the median score was 45.3% (n=86). In the correlation analysis performed, positive, moderate, and statistically significant correlations were found between the scores of the subdimensions 'extroversion', 'agreeableness,' and 'conscientiousness' of the Big Five Personality Test-50 and the PSSS subdimension score. A negative, weak, and statistically significant correlation was found between the sub-dimensions score of PSSS and 'Neuroticism.' A positive, weak, and statistically significant correlation was found between the PSSS sub-dimension score and the score of 'Openness.' No statistically significant correlation was found between the years of work and the PSSS sub-dimension score (Table 4).

Table 4: The Correlation between the problem solving skills and personality traits

Five Factor Personality Traits		Considering the Effects of the Solution of the Problem	Problem- Solving Through Modeling	Exploring Alternative Solutions	Determination in Implementing the Determined Solutions	Analyzing the Problems Encountered
Extroversion	r_s	*0.175***	*0.219****	*0.187****	*0.150***	*0.245****
	p	0.016	0.002	0.01	0.039	0.001
Agreeableness	r_s	*0.256****	*0.250****	*0.174***	0.105	*0.220****
	p	p<0.001	0.001	0.016	0.149	0.002
Conscientiousness	rs	0.*188****	*0.254****	*0.222****	0.075	*0.156***
	p	0.009	p<0.001	0.002	0.304	0.032
Neuroticism	r_s	-0.14	-0.095	-0.042	*-0.235****	*-0.187****
	p	0.055	0.193	0.569	0.001	0.01
Openness	r_s	0.134	*0.203****	*0.184***	0.087	0.11
	p	0.065	0.005	0.011	0.23	0.131

r_s :Spearman correlation coefficient . *p<0.05; **p<0.01; 0.001

The logistic regression model associated with problem- solving skills, demographic characteristics and personality traits is shown in Table 5.

Table 5: The logistic regression model associated with problem- solving skills and the demographic characteristics and the personality traits

Considering the Effects of the Solution of the Problem (Dependent variable)

	B	S.E.	Wald	df	Sig.	OR	95% CI for OR	
							Lower	Upper
Gender (Female)	0.847	0.418	4.102	1	0.043	*2.332*	*1.028*	*5.29*
Constant	-0.704	0.176	15.892	1	0	0.495		

Problem- Solving Through Modeling (Dependent variable)

	B	S.E.	Wald	df	Sig.	OR	95% CI for OR	
							Lower	Upper
Marital Status (Single)	-0.726	0.364	3.985	1	0.046	*0.484*	*0.237*	*0.987*
Conscientiousness	0.782	0.314	6.191	1	0.013	*2.186*	*1.181*	*4.047*
Constant	-0.3	0.236	1.619	1	0.203	0.741		

Exploring Alternative Solutions (Dependent variable)

	B	S.E.	Wald	df	Sig.	OR	95% CI for OR	
							Lower	Upper
Years of Experience (10 years)	0.728	0.31	5.527	1	0.019	*2.071*	*1.129*	*3.815*
Constant	-0.395	0.225	3.082	1	0.079	0.673		

Determination in Implementing the Determined Solutions (Dependent variable)

	B	S.E.	Wald	df	Sig.	OR	95% CI for OR	
							Lower	Upper
Educational Status (High School)	-0.79	0.376	4.402	1	0.036	0.454	0.217	0.949
Constant	0.21	0.174	1.457	1	0.227	1.233		
Analyzing the Problems Encountered (Dependent variable)		Statistical significant model was not found						

The logistic regression model related to demographic variables and personality traits was created by taking the dependent variable of problem solving skills. Problem-solving skills 'Considering the Effects of the Solution of the Problem' was OR = 2.33 times higher in females than males. In the same way, 'Problem -Solving Through Modeling' was OR=0.48 times more in single participants than in married participants , and was OR=2.18 times more in those whose 'Conscientiousness' personality trait was above the median value. Logistic regression model was created by taking the dependent variable 'Exploring the Alternative Solutions'. In the model, the OR = 2.07 times higher in individuals who used this skill in individuals with more than 10 years of work experience than individuals with less than 10 years of experience. When the skill of Determination in Implementing the Determined Solution ' is taken as the dependent variable, the OR = 0.45 times lower in individuals with an education level above high school than those who are lower than high school.

When "Analysis the Problem Encountered" was taken as the dependent variable, a model that explains personality traits and demographic variables was not formed.

4. Discussion

In this study, we evaluated the correlations between the problem solving skills and the personality traits. The total mean score of the Problem-Solving Skills Scale (PSSS) of the 190 security officers involved in our study was 76.17±9.28. When the distribution of the individuals included in the study by the median scores of their Problem- Solving Skills characteristics; the number of individuals with a score of 'Considering the Effects of the Solution of the Problem' above the median score was 36.8% (n=70), the number of individuals with a score of 'Problem Solving through Modeling' above the median score was 46.3% (n=88), the number of individuals with a score of 'Exploring the Alternative Solutions' above the median score was 48.4% (n=92), the number of individuals with a score of 'Determination in Implementing the Determined Solution' above the median score was 50% (n=95), the number of individuals with a score of 'Analyzing the Encountered Problem' above the median score was 45.3% (n=86). In examining the distribution of the individuals included in the study by the median scores of their Five- Factor personality traits, the number of individuals with a score of 'Extroversion' above the median score was 53.2% (n=89), the number of individuals with a score of 'Agreeableness' above the median score was 50.2% (n=95), the number of individuals with a score of 'Conscientiousness' above the median score was 47.9% (n=91), the number of individuals with a score of 'Neuroticism' above the median score was 46.9% (n=89), and the number of individuals with a score of 'Openness' above the median score was 41.1% (n=78).

In our study, there was no statistically significant difference between the gender and the mean scores of the PSSS. In İnel et al.'s study, the mean score of PSSS of the 256 classroom teacher candidates was determined to be 72.88. There was also no statistically significant difference between the total mean scores and the gender of the teacher candidates (Inel, Evrekli & Türkmen, 2011).

In Çam et al.'s study, a different scale was used (Interpersonal Problem-Solving Inventory), the female students got higher scores in the subdimensions "A Negative Approach to the Problem" and "Persistent-Constant Approach" than men and the mean score of the males was found to be higher in the subdimension 'Lack of Self-Confidence' (Çam, 2006).

In the literature, there are a limited number of examples of studies conducted with the PSSS for security guards. Therefore, we evaluated the findings of our study with the Interpersonal Problem Solving Inventory. In Yılmaz et al.'s study conducted with 503 police officers using the Interpersonal Problem Solving Inventory, the results were similar to those of our study. There was no difference between the genders in the interpersonal problem solving skills of the policemen (Yılmaz, Dost, 2016).

In our study, there was no significant correlation between the years of work and the PSSS. In Yılmaz et al.'s same study, the scores of the policemen with 1-5 years of service on the "Negative Approach to Problem (NAP)" subscale were significantly higher than those of the policemen with 6-15 years of service. In terms of scores from the "Lack of Self-Confidence" subscale, the scores of the police officers with 1-5 years of service were significantly higher than those of the police officers with 6-15 years of service. In terms of scores from the "Taking No Responsibility (TNR)" subscale, the mean scores of the police officers with 1-5 years of service were significantly higher than those of the police officers with 6-15 years of service (Yılmaz, Dost, 2016).

There was no significant correlation between age and PSSS in our study. In D'Zurilla et al.'s study conducted using the "Social Problem- Solving Inventory," it was found that the social problem solving ability increases from young adulthood (age 17-20) to middle age (age 40-55) and then decreases in old age (age 60-80). In particular, compared with the young adults, the middle-aged individuals scored higher on positive problem orientation and rational problem solving. Compared with the older adults, middle-aged individuals scored higher on positive problem orientation and rational problem solving (D'Zurilla, Maydeu & Kant, 1998).

In the study in which Yiğit et al. used the "Adjective-Based Personality Scale," it was observed that extraversion, openness to experience, agreeableness, and conscientiousness subdimensions differed significantly according to the educational level variable of security guards. While the mean scores of "Extraversion" and "Neuroticism" of the individuals with an associate degree or who were a high school graduate were found to be significantly higher than those of the individuals who were secondary school graduates, the mean scores of "openness to experience" and "agreeableness" of high school graduates were higher than those of the secondary school graduates (Yiğit, Deniz, 2012).

In the correlation analysis performed in our study, positive, moderate, and statistically significant correlations were found between the subdimension score of PSSS and the scores of the 'extroversion', 'agreeableness,' and 'conscientiousness' of the Big- Five Personality Test-50. There was a negative, weak, and statistically significant correlation between the subdimensional score of the PSSS and the scores of the subdimension 'neuroticism'. A positive, weak, and statistically significant correlation was found between the total score of the PSSS and the score of the subdimension 'openness'.

In a meta-analysis, personality may directly facilitate or constrain coping but relations of personality with coping have been inconsistent across studies, suggesting a need for greater attention to methods and samples. Extraversion and Conscientiousness predicted more problem solving and cognitive restructuring, Neuroticism less so. Neuroticism predicted problematic strategies like wishful thinking, withdrawal, and emotion-focused coping but, like Extraversion, also predicted support seeking. Personality more strongly predicted coping in young samples, stressed samples, and samples reporting dispositional rather than situation specific coping (Connor-Smith, Flachsbart, 2007).

In the literature, there are some studies on the personality traits in different groups. It was found that there was a positive relationship between the students' problem solving skills and their general personality adaptation as well as the subscales of social and personal adaptation. The students' problem solving skills increase as the level of adaptation regarding these personality traits increases (Dündar, 2009).

In the studies on students, it was found that there was a statistically significant relationship between the "Conscientiousness" personality trait and the Impatient, Avoidant, Self-confident, and Planned Problem Solving Approaches. On the other hand, there was a statistically significant relationship between the "Negative Valence" and the Evaluative and Avoidance Problem Solving Approaches. "Openness" was found to be associated with the Mindful, Evaluative, Self-confident, and Planned Problem- Solving Approaches. "Neuroticism" was found to be one of the predictors of just the Planned Problem Solving Approach (Soyer, Bilgin 2010; Çam, 2006).

In our study, according to the logistic regression model for problem solving skills and personality traits, it was observed that the Thinking Effects of Problem Solving skill was OR = 2.13 (95% CI: 1.195-3.818) times higher in women than in men.

Those who used Problem Solving Through Modeling were found to have OR = 0.484 (95% CI: 0.237 - 0.987) times lower for those who were single than those who were married. Besides, those who use the same problem solving method and show the "Conscientiousness" personality trait OR = 2.18 (95% CI : 1.181-4.047) times higher.

Those who use the "Exploring Alternative Solutions" solution method have OR = 2.07 (95% CI : 1.129 -3.815) times more than those who have worked for 10 years or less. Those who use the "Determination in Implementing the Determined Solutions" solution method have OR = 0.45 (95% CI : 0.217-0.949) times higher in education level higher education graduates than those who do not. The prominent personality traits are the conscientiousness personality and extraversion. Responsibility refers to what extent individuals are lazy, internally organized, and less reliable (low integrity) or hardworking, organized, reliable, and resolute (high integrity). The individuals having the traits in these dimensions are likely to succeed in any task, in both an autonomous and hierarchical structure.

Interpersonal problem solving was examined using the scales showing different personality traits. In Coşkun's study, it was found that there was a significant negative relationship between the unwillingness to take responsibility and self-compassion, extroversion, openness to experiences, agreeableness, and responsibility. Also, it was found that there was a positive relationship between the constructive problem solving and self-compassion, extroversion, openness to experiences, agreeableness and responsibility. Moreover, it was found that some approaches of self-compassion and some approaches to personality traits significantly explained interpersonal problem solving (Coskun, 2016). In our study, in the problem solving and personality traits, conscientiousness and extroversion explained the model. In Balli's study on the private security guards who have a dangerous and risky profession; it was asserted that the trait "extroversion" explained the private security guards' (in the managerial positions) being perceived as leaders (Balli, 2013).

Security guards have difficulties in planning their work because it requires dealing not only with the inherent complexity of crew scheduling problems, but also with an optimization objective that is more qualitatively defined than quantitative terms. Snijders et al. He addressed the problem of job scheduling of security guards working at the stations and explained that operations research was appropriate to solve a problem with classical crew planning (Snijders H, Saldanha R L, 2017).

Cheung et al. developed a Job Specific Social Skills Training program scale (JSST) for those who want to work as security guards in mental health services. Factor analysis revealed a six-factor structure. These factors were knowledge and attitudes, communication in professional manners, social skills in interacting with customers, organization of tasks, problem solving skills, and conflict prevention skills (Cheung, 2006).

Babaei's study showed that the personality factors and the problem solving ability were related. The problem solving skills and the personality traits were negatively correlated with neuroticism and positively associated with contentiousness, extroversion, and agreeableness (Babaei, Mohammadian, Abdollahi & Hatami, 2018).

In addition to many traits required for the private security guards whose importance is increasing day by day, there is a need for carrying out the necessary works, especially training, on their personal traits, empathy, and communication skills. Within this context, it is deemed appropriate to increase the education level of all private security guards, to open schools providing private security education in colleges, and to support them with the in-service training in business life because not only is the personality of the individual affected by the work environment, but

she/he can also affect the work environment. For example, nonagreeable individuals can adversely affect the organizational environment. Therefore, the role of personality in human relations should also be considered (Ozsoy, Yildiz, 2013). In a nutshell, it is obvious that personality, which has been found to be associated with many individual and organizational processes, is an important phenomenon in terms of organizational and individual performance. In this regard, the subject "personality" is a field that needs to be addressed not only in the recruitment process but also in other organizational areas, and there is a need for scientific studies on this field. When some behaviors occur frequently and consistently during a period of time, they become automatic. Some habits are desirable, and some are undesirable, depending on their short and long-term consequences. If health and safety rules are implemented correctly, recognition, and the positive consequences can facilitate the transfer of behavior from the self-directed state to the habit state. Self-directed behavior is not always desirable. When workers take a calculated risk, they are intentionally choosing to ignore a safety precaution or take a short cut to perform more efficiently or with more comfort or convenience (Geller, 2005).

5. Conclusions

The results of this study showed that there was a relationship between the personality factors and problem solving ability. Therefore, the officials working for the institution can use this information when choosing the talented security staff. We believe it would be useful to have pre-employment and periodical examinations for those who work in jobs with intensive public interaction, besides evaluating their psychological status when necessary (Issever, Onen, Sabuncu &, Altunkaynak, 2002).

References

Alli, B. O. (2008) .*Fundamental principles of occupational health and safety.* Geneva: International Labour Office. 3—21.

Aras, H. (2018). Özel güvenlik görevlilerinde kurumsal uzmanlaşma: bir model önerisi [Institutional specialization for private security offıcers: a model suggestion]. *Journal of Security Sciences*, *7*(1), 131—158. http://dx.doi.org/ 10.28956/gbd.422806.

Akbaş, F., Dursun, G., & Ürün, E. (2018). Özel güvenlik mesleğinin ünvan sorunu ve gelişimi [Title problem and development of private security profession]. Eurasian Journal of Researches in Social and Economics (EJRSE), *5*(6), 230—240.

Babaei, M., Mohammadian, M., Abdollahi, M., Hatami, A. (2018). Relationship between big five personality factors, problem solving and medical errors. *Heliyon*, *4*(9),1—14. http://dx.doi.org/ 10.1016/j.heliyon.2018.e00789.

Bagnall, R. J. (1990). Life long education: The institutionalization of an illiberal and regressive ideology? *Educational Philosophy and Theory*, *22* (1), 1—7. https://doi.org/10.1111/j.1469-5812.1990.tb00419.x.

Balli, E. (2013). The effects of personality traits on being perceived as a leader: an empirical study in a private security officer sample. *Anadolu University Journal of Social Sciences*, *13* (3), 85—94.

Beech, B., & Leather, P. (2006). Workplace violence in the health care sector: a review of staff training and integration of training evaluation models. *Aggression and Violent Behavior*,*11*(1),27—43. https://doi.org/10.1016/j.avb.2005.05.004.

Cheung, L. C. C., Tsui, C. U., & Tsang, H. W. H. (2006). A job-specific social skills training program for people with severe mental illness: A case study for those who plan to be a security guard. *Journal of Rehabilitation*, *11*(4),14—23.

Connor-Smith, J. K., & Flachsbart, C. (2007). Relations between personality and coping: A meta-analysis. *Journal of Personality and Social Psychology*, *93*(6), 1080—1107. https://doi.org/10.1037/0022-3514.93.6.1080.

Coskun, A. (2016). Interpersonal problem solving,self-compassion and personality traits in university students *Educational Research and Reviews*, *11*(7), 474—481. https://doi.org/10.5897/ERR2015.2605.

Çam, S., Tümkaya, S. (2006). Üniversite öğrencilerinde kişilerarası problem çözme [University students' interpersonal problem solvi ng] . *Çukurova University Journal of Social Sciences Institute*, *15*(2), 119—132.

D'Zurilla, T., Maydeu-Olivares, A., & Kant, G. (1998). Age and gender differences in social problem solving ability. *Personality and Individual Differences*, *25*(2), 241—252.

Dündar, S. (2009). Üniversite öğrencilerinin kişilik özellikleri ile problem çözme becerileri arasındaki ilişkinin incelenmesi [Analyzing the relationship between problem solving skills and personality characteristics of university students]. *Dokuz Eylul University Faculty of Economics and Administrative Sciences Journal, 24*(2), 139—150.

Ekici, D.I., & Balım, A.G. (2013). Ortaokul öğrencileri için problem çözme becerilerine yönelik algı ölçeği: geçerlilik ve güvenirlik çalışması [Problem solving skills perceptıon scale for secondary students: a study of validity and reliability]. *YYU Journal Of Education Faculty, 10*(1), 67—86.

Geller, S. E. (2005). Behavior-based safety and occupational risk management. *Behavior Modification*, *29*(3),539—561.

Horzum, M.B., Ayas, T., & Padır, M.A.(2017). Adaptation of big five personality traits scale to turkish culture. *Sakarya University Journal of Education*, *7*(2),398—408. https://doi.org/10.1177/0145445504273287.

Didem, İ., Evrekli, E., & Türkmen, L. (2011). Sınıf öğretmeni adaylarının problem çözme becerilerinin araştırılması [Researching of pre-service elementary teachers' problem solving skills]. *Pamukkale University Journal of Education*, *29*(1), 167—178.

Issever, H., Onen, L., Sabuncu, H.H., Altunkaynak, O. (2002). Personality characteristics, psychological symptoms and anxiety levels of drivers in charge of urban transportation in Istanbul. *Occupational Medicine*, *52*(6), 297—303. https://doi.org/10.1093/occmed/52.6.297.

Kourmousi, N., Xythali, V., Theologitou, M., Koutras, V. (2016) . Validity and reliability of the problem solving inventory (PSI) in a nationwide sample of greek educators. *Social Sciences, 5*(2), 1—11. https://doi.org/10.3390/socsci5020025.

Leino, T.M., Selin, R., Summala, H., Virtanen, M. (2011). Violence and psychological distress among police officers and security guards. *Occupational Medicine*, *61*(6), 400—406. https://doi.org/10.1093/occmed/kqr080.

Oğuz, V., & Akyol, K.A. (2015). Problem çözme becerisi ölçeği (PÇBÖ) geçerlik ve güvenirlik çalışması [Problem-solving skills scale (PSSS) validity and reliability]. *Çukurova University Journal of Education Faculty, 44*(1),105—122. https://doi.org/10.14812/cufej.2015.006.

Ozsoy, E., & Yıldız, G. (2013). Kişilik kavramının örgütler açısından önemi: bir literatür taraması [Importance of the concept of personality in terms of organizations: a literature review]. *Journal of Business Science*, *2*(1), 1—12.

Snijders, H., & Saldanha, R. L. (2017). Decision support for scheduling security crews at Netherlands Railways. *Public Transport*, 9(1), 193—215. https://doi.org/10.1007/s12469-016-0142-y.

Soyer, M.K., & Bilgin, A.(2010, November). *Problem- Solving Skills Perceptions of The University Students According to Different Variants.* International Conference on New Trends in Education and Their Implications, Antalya, Turkey. Retrieved from http://www.iconte.org/FileUpload/ks59689/File/66.pdf.

Tatar, A., Bildik, T., Saltukoğlu, G., Dinçel, M. G. (2014) . Klinik olmayan örneklemde beş faktör kişilik envanteri belirti tarama amaçlı kullanılabilir mi?: ön çalışma [Could five factor personality inventory be used for the purpose of symptom screening in a non-clinical sample?: a preliminary study]. *FSM Scholarly Studies Journal of Humanities and Social Sciences,* 4,181—199. https://doi.org/10.16947/fsmiad.56329.

Tatar, A. (2016). Büyük beş-50 kişilik testinin türkçeye çevirisi ve beş faktör kişilik envanteri kısa formu ile karşılaştırılması [Translation of the big five-50 personality test into Turkish and comparison with the short form of the five-factor personality inventory]. *Anadolu Psychiatry Journal*, *17*(1), 14—23. https://doi.org/10.5455/apd.220580.

Vatan, S. (2013). Üniversite öğrencilerinin kişilik özellikleri, umutsuzluk, çaresizlik ve talihsizlik düzeyleri ile problem çözme yaklaşımları arasındaki ilişkilerin incelenmesi [The relationships between personality characteristics, hopelessness, helplessness, haplessness and problem- solving styles in T urkish university students]. *Turkish J Clinical Psychiatry, 16*(2), 88—97.

Yaman, S., & Dede, Y. (2008). A scale for adults' problem solving skills. *Educational Sciences and Practice*, 7(14), 251—269.

Yılmaz, E., & Dost, M.T. (2016) . Polislerin kişilerarası problem çözme becerileri ile öfke ve öfke ifade tarzları [Interpersonal problem solving skills, anger and anger expression styles of police officers turkish]. *Turkish Psychological Counseling and Guidance Association, 6*(46), 15—34 .

Yiğit, R., & Deniz, M. (2012). Güvenlik alanında yeni bir kurum: özel güvenlikçilerin kişilik özellikleri, empatik eğilim ve iletişim becerileri [A new institution in the field of security: personality traits, empathetic disposition and communication skills of private security guards Examination of private security officer's personality traits with emphatic tendency and communication skills in terms of some variables]. *The Journal of Social Economic Research, 12*(24), 357—378.