The Assessment of Quality of Life and Depression Among Police Officers

Polis Memurlarında Yaşam Kalitesi ve Depresyonun Değerlendirilmesi

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ABSTRACT Objective: We aimed to investigate the quality of life and depression among police officers who are quite vulnerable to psychological effects due to the nature of the job they perform. **Material and Methods:** This cross-sectional study was carried out between May 25th 2006 and June 15th 2006 among 492 police officers working at the Police Organization of Konya. Depression level was examined through the Beck depression Inventory (BDI). In addition, QoL was assessed using the WHO QoL-BREF questionnaire. **Results:** Of all the participants, 467 (94.9%) were male, and 25 (5.1%) female. Mean age was 37.39 ± 6.50 (min= 22, max= 53). When the cut-off point of BDI was considered 17.403 (81.9%) police officers had BDI ≤16, and 89 (18.1%) had BDI ≥17 (depressive). The frequency of depression level was significantly higher among the police officers who were in debts, not home owners and could not afford to pay their credit card balances on time (p< 0.05). Thus, there seemed to be a positive correlation between stress and economical problems. Besides, QoL scores were significantly lower among the depressive individuals than non-depressive ones (p< 0.001). **Conclusion:** As the study clearly indicates, QoL scores were significantly lower among depressive individuals. These results indicate that police officers are subject to high levels of psychological risk. There is an obvious need to provide psychological support and consulting services to the police.

Key Words: Depression; police; quality of life

ÖZET Amaç: Bu çalışmada, yaptıkları görevin özelliğinden dolayı gerçekten psikolojik etkilere maruz kalan polis memurları arasında yaşam kalitesi ve depresyonu araştırmayı amaçladık. **Gereç ve Yöntemler:** Bu kesitsel çalışma 25 Mayıs 2006-14 Haziran 2006 tarihleri arasında Konya Polis Teşkilatında çalışan 492 polis memurunda gerçekleştirildi. Depresyon seviyesi Beck depresyon ölçeği (BDÖ) ile belirlendi. Yaşam kalitesi WHOQOL-BREF anketi kullanılarak değerlendirildi. **Bulgular:** Katılanların, 467 (%94.9)'si erkek, 25 (%5.1)'i kadın idi. Yaş ortalaması 37.39 ± 6.50 (min= 22, max= 53) idi. BDÖ kesme değeri 17 alındığında 403 (%81.9) polis memurunun BDÖ'ye göre depresyon seviyesi ≤16 ve 89 (%18.1)'unun BDÖ ≥17 (depresyonda) idi. Borçlu olan, kendi evi olmayan, kredi kartlarını zamanında ödeyemeyen polis memurlarında depresyon sıklığı önemli ölçüde fazla idi (p< 0.05). Bu sebepten dolayı, stres ile ekonomik problemler arasında pozitif korelasyon vardı. Ayrıca, yaşam kalite skorları depresif kişilerde depresif olmayanlara göre önemli derecede daha düşüktü (p< 0.001). **Sonuç:** Bu sonuçlar polis memurlarının psikolojik olarak yüksek risk altında olduğunu göstermektedir. Polislere psikolojik destek ve danışmanlık hizmetleri verilmesine aşikâr bir şekilde ihtiyaç vardır.

Anahtar Kelimeler: Depresyon; polis memuru; yaşam kalitesi

Quality of life (QoL) is considered among the most important issues of modern day medicine.[1] It involves considerations of certain health problems as well as environmental factors in social dimensions. The definition of the World Health Organization (WHO) provides impor-

tant clues about the nature and effects of the QoL for the persons who pay great attention to the issue such as researchers and practitioners: "the individual's perception of his/her position in life in the context of the culture and value system in which he/she lives and in relation to his/her goals, expectations, standards and concerns".[1] This definition reflects the multidimensional nature of QoL as the subjective evaluation is embedded in the individual's physical health, psychological state, level of independence, social relationships, personal beliefs and relationships to salient features of the environment.[2]

Prevalence

The European Study of Epidemiology of Mental Disorders (ESEMeD) reported that mental disorders were associated with substantial levels of disability and loss of QoL.[3] A number of QoL assessments reflect a new evaluation of functional and social outcomes associated with recovery from mental illness. The assessments of QoL in the psychiatric field are gaining significance, both in consideration of different diagnoses and in consideration of the impact of treatment intervention, and in evaluation of medical disability.[2] In this regard, Richmond et al found in Sidney that 12% of male and 15% of female police officers reported feeling moderate to severe symptoms of stress.[4]

As a case of examining the QoL among police officers, this study focuses on the profession with the intention of digging into the real reasons behind and effects on stress-related health problems. The vulnerability of the occupation attracts our attention, as the effects are more visible especially in such case. Besides, there is a reasonable number of studies conducted by eminent scholars in the field throughout the world. This gives the study a very solid ground from the point of the view of comparison.

Police officers' work tends to be regarded as inherently stressful because of the personal risk of exposure to violence and the day-to-day involvement in a variety of traumatic incidents.[5] As a result, high level of stress-related symptoms might be expected among this population.[6,7]

Work related stress and anxiety might have a profound effect on an individual's well-being. Stress is an unavoidable part of an individual's working life. Although it can have positive qualities in that the individual may feel more excited than agitated and perceive the situation positively as a form of challenge, it is also described as posing a threat to the quality of life as well as physical and psychological health. Stress is a complex issue but generally, it is defined as a physical, mental, or emotional reaction resulting from an individual's response to environmental tensions, conflicts, pressures, and similar stimuli. So it is often described as being associated with emotions such as anger, anxiety and depression, and there is evidence to suggest that it is also related to impoverished mental health.[6,8,9]

Due to the nature of the job they perform, police officers are under severe stress; therefore, to make a study on this respective profession would certainly reveal valuable results for other professions. That is why we aimed to investigate the QoL and related risk factors among the police officers in Konya province in this study.

▍MATERIAL AND METHODS

This cross-sectional study was carried out between May 25th, 2006 and June 15th, 2006. The universe of this study consisted of 2530 police officers working at different police units in Konya. Konya Province, which has around 1.500.000 inhabitants, is a leading industry and trade centre in Turkey. The general characteristics of the inhabitants in the province are quite similar to that of the general Turkish population, receiving inland migrations both from the neighboring provinces and from all over the country. The Ethics Committee of the Selçuk University, Meram Faculty of Medicine approved the research protocol and methods to be used throughout the research. Additional written informed consent was obtained from all participants for the questionnaires and interviews. For this research, a second approval was obtained from the Chief of the Police Department in Konya. The participants were selected from departmental personnel rosters by using 20% systematic sample.

Therefore, the sample reflects the entire universe of the research. The initial intention was to select 506 police officers for the study; however, 492 police officers were included, constituting 94.6% of the target population (492/506). The officers who were on vacation were excluded from the research.

A standardized questionnaire, consisting of 32 questions, was applied to determine socio-demographic characteristics. Questionnaires were delivered with the official permission and cooperation of the chief of the police forces. The questionnaires were delivered and collected within 2 weeks time by the chiefs of the police force. To assure anonymity of the research, delivery and collection of the questionnaires were carried out through closed envelopes.

Depression Status

The depression level in this study was evaluated by the BDI Turkish version, which was assessed for validity and reliability by Ulusoy et al.[10] The BDI is a self-administered 21-item questionnaire measuring supposed manifestations of depression. BDI reflects negative attitudes towards self, performance impairment and somatic disturbances, as well as a general factor of depression. Each of the 21 items of the BDI attempts to assess a specific symptom or attitude "which appears to be specific to depressed patients, and consistent with descriptions of the depression contained in the psychiatric literature." The BDI is designed to assess depression independent of any particular theoretical bias. A total score of less than 9 indicates non-depressive (normal), 9-16 mild, 17-29 moderate, and 30 and over severe depression. When the cut-off point of BDI is considered 17, a score of 17 and higher indicates depressive symptoms severe enough to require further clinical consideration.[11]

QoL

The QoL was assessed using the WHOQoL-BREF questionnaire Turkish version, which was assessed for validity and reliability by Eser et. al.[12] The World Health Organization Quality of Life (WHOQoL)-BREF is a self-report scale that consists of 26 items. It is a multilingual, multicultural generic QoL scale, developed across 15 field centers. The WHO-QoL-Bref includes four domains related to QoL: physical health, psychological health, social relationships and environment. In addition, two items are examined separately, namely the perception of overall QoL and the perception of overall health. The WHOQoL-Bref was demonstrated to have satisfactory discriminant validity, internal consistency and test-retest reliability.[13] The items are rated on a 5-point Likert scale, reflecting intensity, capacity, frequency or evaluation. The items inquire "how much", "how completely", "how often", "how good" or "how satisfied", with possible answers ranging from "very satisfied" to "not satisfied at all". The range of scores in each domain is from 4 to 20, where a higher score indicates a better QoL.[2] The data were evaluated through SPSS, using WHOQoL-BREF algorithm.

One can safely assume that QoL is a broad concept incorporating the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of the environment.[14] QoL cannot be simply equated with the terms of health status, life style, life satisfaction, mental state, or well-being; it is rather a multidimensional concept incorporating the individual's perception of these and other aspects of life. Assessment of QoL is important in medical practice to improve the doctor-patient relationship, assessing the effectiveness and relative merits of different treatments, health services evaluation, in research and policy making.[15-19]

Assessment of QoL

WHO, with the aid of 40 collaborating centers around the world, has developed two self-administered instruments for measuring QoL (the WHOQoL-100 and the WHOQoL-BREF), that can be used in a variety of cultural settings whilst allowing the results from different populations and countries to be compared. The WHOQoL-BREF contains two items from the Overall QoL and General Health, and one item from each of the 24 facets included in the WHOQoL-100. Analysis of the WHOQoL-100 structure has suggested the possibility of merging 2 of 6 domains of the WHOQoL-

100, thereby creating 4 domains of QoL: physical, psychological, social relationships and environment. The WHOQoL-BREF produces a profile with four domain scores and 2 individually scored items about an individual's overall perception of QoL and health (Q1 and Q2). The 4 domain scores are scaled in a positive direction, with a score range of 0-100, and with higher scores denoting higher QoL. The two individual items assessing overall QoL are scaled in a positive direction, with a score range of 1-5 (converted in this study into a 0-100 score), with higher scores denoting higher QoL.[15]

Statistical Analysis

The SPSS 10.0 statistical software package was used in data entry and analysis. The statistical analysis and evaluations were conducted by the authors. The variables were described by mean, frequency and standard deviation (SD). To assess statistical significance between groups, chi-square and Mann-Whitney U tests were used. A p value of <0.05 was considered significant.

RESULTS

Socio-Demographic Characteristics of Participants

The sample population consisted of 492 police officers, among whom 467 (94.9%) were male, 25 (5.1%) female, and 93.9% (n= 462) were married (see, Table 1). The age interval of participants was 22-53 years (mean = 37.39 ± 6.50). The median government service was 13 years (min= 1, max= 30), the median duration of daily work was 12 hours (min= 8, max= 16), 49.4% (n= 243) completed primary school, 33.7% (n= 166) middle-high school education and the frequency of smoking was 41.9% (n= 206). Only 27.6% (n= 136) were homeowners, 48.0% (n= 236) tenants, 77.6% (n= 382) were in-debt, and 20.9% (n= 103) could not afford to pay their credit balances.

Prevalence of Smoking

Of the participants in this study, 41.9% (n= 206) were current smokers, 34.3% (n= 169) never smoked and 23.8% (n= 117) were ex-smokers (see, Table 1). The lowest age to start smoking was 7 and the highest was 44 with a median value of 18.

TABLE 1: Socio-demographic characteristics of the police officers.

Characteristics	n	%
Gender		
Female	25	5.1
Male	467	94.9
Marital Status		
Married	462	93.9
Single	27	5.5
Divorced	3	0.6
Age (year)		
21-30	66	13.4
31-40	264	53.7
41-50	153	31.1
>50	9	1.8
Level of Education		
Primaryschool	243	49.4
Middle-high school	166	33.7
University/faculty	83	16.9
Smoking Status		
Current-smokers	206	41.9
Ex-smokers	117	23.8
Never-smokers	169	34.3
Total	492	100.0
BeckDepressionstatus		
BDI ≤ 16	403	81.9
BDI ≥ 17	89	18.1

BDI: Beck depression inventory.

Depression Results

The results of the Beck Depression Inventory (BDI) revealed that 58.1% (n= 286) of the participants were 'normal', 23.8% (n= 117) 'mildly', 14.6% (n= 72) 'moderately' and 3.5% (n= 17) were 'severely' depressed. The mean score of BDI was 9.91 ± 9.78 (min= 0, max= 59). When the cut-off point of BDI score was considered 17, 403 (81.9%) police officers had BDI scores ≤16 and 89 (18.1%) police officers had BDI scores ≥17. While gender, age, marital status, education level, car ownership, and smoking status were not associated with depression (p> 0.05), the frequency of depression level was significantly higher among the police officers who were in debts (p= 0.003), did not have their own home (p= 0.006), and were unable to pay their credit card balances in time (p< 0.001) (Table 2).

Assessment of QoL

QoL scores in the areas of physical health (p< 0.001), psychological health (p< 0.001), social rela-

TABLE 2: According to Beck depression scores, demographic characteristics of police officers.								
	BDI ≤16 (n= 403)		BDI ≥17 (n= 89)		Total (n= 492)		χ^2	p
	n	%	n	%	n	%		
Gender								
Male	381	81.6	86	18.4	467	100.0	0.726	0.394
Female	22	88.0	3	12.0	25	100.0		
Age (year)								
21-30	58	87.9	8	12.1	66	100.0	5.454	0.142
31-40	213	80.7	51	19.3	264	100.0		
41-50	127	83.0	26	17.0	153	100.0		
>50	5	55.6	4	44.4	9	100.0		
Marital status								
Married	379	82.0	83	18.0	462	100.0	3.630	0.163
Single	23	85.2	4	14.8	27	100.0		
Divorced	1	33.3	2	66.7	3	100.0		
Education								
Primary school	193	79.4	50	20.6	243	100.0	6.066	0.194
Middle-high school	142	85.5	24	14.5	166	100.0		
University/faculty	68	81.9	15	18.1	83	100.0		
Indebted								
Yes	302	79.1	80	20.9	382	100.0	8.544	0.003
No	101	91.8	9	8.2	110	100.0		
Place of residence								
Own house	115	84.6	21	15.4	136	100.0	12.549	0.006
Tenant	185	78.4	51	21.6	236	100.0		
Flat provided to employees	103	85.8	17	14.2	120	100.0		
Affording to pay the credit cards in time								
Yes	337	86.6	52	13.4	389	100.0	26.458	0.000
No	66	64.1	37	35.9	103	100.0		
Having a private car								
Yes	210	83.0	43	17.0	253	100.0	0.420	0.517
No	193	80.8	46	19.2	239	100.0		
Smoking status								
Smokers	240	83.9	46	16.1	286	100.0	1.854	0.173
Non-smokers	163	79.1	43	20.9	206	100.0		

BDI: Beck depression inventory.

tionships (p< 0.001), environmental (p< 0.001), overall QoL (p< 0.001) and overall Health (p< 0.001) were significantly lower among the depressive individuals than non-depressive ones (Table 3). A comparison of the QoL scores and smoking status indicated that there was a significant difference in overall QoL (p= 0.003) and health (p= 0.048) and there was no significant difference in physical health (p= 0.179), psychological health (p= 0.552), social relationships (p= 0.496) and effects of environment (p= 0.224) between smokers and non-smokers (Table 4). The perception of overall health and the QoL among police officers were shown in Table 5. Besides, the perception of overall health and the satisfaction from life among police officers were shown in Table 6.

DISCUSSION

There is a growing anxiety about stress, as regarded as a problem within the workplace. For the last two decades or so, many factors have conspired to make working life far more stressful than before.[20-22] The police profession is generally considered highly stressful, caught between the increasing threat of violence on streets, high public demand and a mounting focus on police efficiency and probity.[5,23,24]

TABLE 3: The effects of depression status on the quality of life among police officers.						
	BDI $\geq$ 17 (n= 89)		BDI $\leq$ 16 (n = 403)		Z	
WHOQOL- BREF	Median	(Min-Max)	Median	(Min-Max)	(Test Stat.)	p*
Overall QoL	3	(1 – 5)	2	(1 - 4)	-8.010***	0.000
Overall Health	4	(1 – 5)	3	(1- 5)	-8.739***	0.000
Physical Health	69	(31-100)	44	(0-88)	-10.071***	0.000
Psychological Health	69	(19-100)	50	(0-81)	-11.178***	0.000
Social relationships	75	(19-100)	44	(0-94)	- 9.924***	0.000
Environmental	56	(13-100)	44	(0-75)	- 9.482***	0.000

*Mann-Whitney U test was used. BDI: Beck depression inventory, QoL= Quality of life.

ns: Not significant, *p<0.05, **p<0.01, ***p<0.001.

TABLE 4: The effects of smoking status on quality of life among police officers.						
	Smokers (n= 206)		Non-smokers (n= 286)		Z	
WHOQOL-BREF	Median	(Min-Max)	Median	(Min-Max)	(Test Stat.)	p*
OverallQoL	3	(1–5)	3	(1-5)	-2.979**	0.003
OverallHealth	3	(1-5)	4	(1-5)	-1.979*	0.048
PhysicalHealth	69	(31-100)	69	(0-94)	-1.344^{ns}	0.179
PsychologicalHealth	69	(6-100)	69	(0-100)	-0.595^{ns}	0.552
Socialrelationships	75	(0-100)	75	(0-100)	-0.681^{ns}	0.496
Environmental	50	(13-100)	56	(0-94)	-1.217^{ns}	0.224

*Mann-Whitney U test was used. QoL= Quality of life.

ns: Not significant, *p<0.05, **p<0.01, ***p<0.001.

When the cut-off point of BDI was considered 17, 403 (81.9%) police officers had BDI scores ≤16 and 89 (18.1%) had BDI scores ≥17. Almost less than one-fifth (18.1%) of all police officers were working under depression. Whilst gender, age, marital status, education, car ownership, smoking status did not have any effect on depression (p< 0.05), being in debt (p= 0.003), place of residence (p= 0.006), and failure to pay the credit card balances in time (p< 0.001) had a significant impact on depression. QoL scores in the domains of physical health (p< 0.001), psychological health (p< 0.001), social relationships (p<0.001) and environmental (p< 0.001), as well as overall health (p< 0.001) were significantly lower among the police officers who had BDI scores of 17 and over than the ones who had 16 and under. Our study suggests that 18.1% of the entire police force showed depression symptoms and had diminished QoL.

Smoking is the most important avoidable cause of morbidity and premature death in the developed

TABLE 5: The perception of overall health and the QoL among police officers.		
	n	%
Very bad	52	10.6
A little bad	52	10.6
Moderate	295	60.0
Quite good	84	17.0
Very good	9	1.8
Total	492	100.0

QoL= Quality of life.

TABLE 6: The perception of overall health and the satisfaction from life among police officers.		
	n	%
Not satisfied atall	33	6.7
Littl satisfied	67	13.6
Moderate satisfied	142	28.9
Quite satisfied	195	39.6
Extremely satisfied	55	11.2
Total	492	100.0

world.[25,26] It not only increases the risk of death among adults but also affects the QoL and physical functioning.[25-27] PIAR public opinion survey carried out by the Ministry of Health on smoking prevalence among people in 1998. According to PIAR results, smoking rates among the general population in Turkey are extremely high (43.6% in persons above 35 years of age).[28] In this study, 41.9% (n= 206) were smokers, 34.3% (n= 169) never-smokers, and 23.8% (n= 117) ex-smokers. This ratio of the current smokers was similar to the results of PIAR. Tobacco use recently is among the most important health disorders in our country. Smoking, as a major public-health concern, is still a widespread habit among many occupations. As a result, an effective and comprehensive tobacco control program is urgently required. In this study, the prevalence of smoking was considerably high among police officers. Therefore, it can bear fruitful results to encourage giving-up campaigns among police officers who are supposed to be models for the rest of the local community by their habits.

Richmond et al reported that over one-quarter (27%) of male and one-third (32%) of female police officers reported smoking in Sidney. Besides, 12% of men and 15% of women reported feeling moderate to severe symptoms of stress in the same study.[4] In our study, the rate of smoking was higher than in the one already mentioned. This may make an assertion possible, as smoking is an important public health problem among police officers in Turkey. For this reason, an effective and comprehensive-national tobacco control program is urgently required.

Deschamps et al reported that the rate of smoking among 617 policemen was 42.0% (n= 269).[29] This result is similar to our findings. Similarly, police officers were reported to experience greater stress and the weariness of the job and private life troubles were the sources of stress.[29]

Berg et al emphasized that job pressure was the least stressful, but the most frequently occurred, according to the comprehensive nationwide questionnaire survey of 3272 Norwegian police officers. "Working overtime" was the most frequent and the least severe stressor.[7]

According to Collins and Gibbs, occupational stressors ranking most highly within the population were not specific to policing, but to organizational issues such as the demands of work impinging upon home life, lack of consultation and communication, lack of control over workload, inadequate support and excess workload in general.[8]

In our study, the rate of the perception of overall health and the QoL was 21.2 % as in the Table 5. This rate was considerably low. The rate of perception of overall health and the satisfaction from life among police officers was 79.7% and 20.3% was dissatisfied. These results demonstrate influences on the individual's perceived reality of their own situation.

Unfortunately, Medline review reveals a limited number of studies on this issue in Turkey. In other words, there is a limited chance to test the validity of our findings due mainly to relatively lack of national data. As a result, the police officers are subject to psychological risk factors, stemming from depression and diminished QoL. This study may pose a gold mine for the researchers, who have intention of going into deep theoretical and practical evaluations.

CONCLUSION

In this study, we found that 18.1% of all police officers had BDI scores of 17 or more, which is an indication of possible depression. This indicates that police officers are at risk psychologically. To prevent negative manifestations of depression that might occur in the future, it is important to understand the origins of the stressors that are currently prevalent among the police officers.[21] The authors conclude that before any significant step can be taken to assist the police officers in what may be an occupational hazard, an accurate indication of the magnitude of the problem must be attained.

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