ORIGINAL RESEARCH

THE EFFECTS OF DEPRESSION AND SMOKING UPON THE QUALITY OF LIFE OF MUNICIPAL POLICE OFFICERS

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ABSTRACT

Objectives: Quality of Life (QoL) is a broad concept incorporating the person's physical health, psychological health, social relationships and environment. In this study, we aimed to establish the effects of depression and the smoking status upon the quality of life among municipal police officers.

Patients and Methods: : This cross-sectional study was carried out among 157 municipal police officers working at the Municipal Department of Konya. A socio-demographical information form, World Health Organization Quality of Life (WHOQOL-BREF) and Beck Depression Inventory (BDI) were applied. Qol was assessed using the WHOQOL-BREF questionnaire.

Results: Of the participants, 99.4% (n=156) were men, 79.6% (n=125) had secondary and high school level education and they were aged between 22-57 (mean=39.33±7.29). Of the total, 117 (74.5%) were indebted and 77 (49.1%) were current smokers. Quality of life scores in the domains of physical health ($p<0.001$), psychological health ($p<0.001$), social relationships ($p<0.001$) and general health ($p<0.001$) were significantly lower among the depressive persons than the non-depressive ones.

Conclusion: Approximately half of the municipal police officers had depressive symptoms and were smokers. To prevent the negative manifestations of depression and smoking that might occur in the future, it is important to understand the origins of the stresso.

Keywords: Depression, Municipal police officer, Smoking, Quality of life.

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BELEDİYE ZABITA MEMURLARINDA SİGARA İÇME VE DEPRESYONUN YAŞAM KALİTESİ ÜZERİNE ETKİLERİ

ÖZET

Amaç: Yaşam kalitesi kişinin fiziksel sağlığını, psikolojik sağlığını, sosyal ilişkiler ve çevresini içine alan geniş bir kavramdır. Belediye zabıta memurlarında depresyon ve sigara içme durumunun yaşam kalitesi üzerine etkilerinin incelenmesi amaçlanmıştır.

Yöntem: Kesitsel bir araştırma olan bu çalışma Konya Zabıta Müdürlüğü'nde görevli 157 zabıta memurunun katılımıyla gerçekleştirilmiştir. Araştırmamızda sosyo-demografik bilgi formu, WHOQOL-BREF yaşam kalitesi anketi ve Beck Depression Ölçeği (BDI) kullanılmıştır.

Bulgular: Katılanların, %99.4'ü (s=156) erkek, %79.6'sı (s=125) orta okul ve lise eğitimli, yaşları 22-57 arasında (ortalama 39.33±7.29) idi. Katılımcıların 117'si (%74.5) borçlu idi ve 77'si (%49.1) sigara içiyordu. Yaşam kalitesi fiziksel sağlıkta ($p<0.001$), psikolojik sağlıkta ($p<0.001$), sosyal ilişkilerde ($p<0.001$) ve genel sağlık alanlarında depresif kişilerde depresif olmayanlara göre önemli ölçüde düşüktü.

Sonuç: Bu çalışmada, zabıta memurlarının yaklaşık olarak yarısı sigara içicisi idi ve depressif bulguları vardı. Depresyon ve sigaranın gelecekte yapacağı olumsuz etkileri önlemek için zabıtalarda strese yol açan sebepleri anlamak önemlidir.

Anahtar Kelimeler: Depresyon, Zabıta memuru, Sigara, Yaşam kalitesi.

INTRODUCTION

The municipal police officers are a municipal authority who keep public order locally, contribute to the safety of people and property, supervise the abiding of citizenship co-existence regulations, contribute to traffic safety and order on the roads, solve minor crimes, warn physical and legal entities about violating generally binding legal regulations, and provide measures for rectification.[1]

The municipal police officers occupy an important position within the community both as enforcers of the law and as role models for appropriate behavior. It is well-known that the municipal police officers are a working population exposed to stress; as a group they experience many occupational demands with physiological and psychological effects. Sources of stress for them may be their relationship with the public, exposure to episodes of criminality, rotating shift work and the need to maintain high levels of service in various contexts.[1,2]

Stress is an unavoidable part of an individual's working life. Work-related stress and anxiety may have a profound effect on an individual's well-being. 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 other similar stimuli. Stress 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.[2-7]

Smoking is the most important preventable cause of morbidity and mortality worldwide.[8,9] Despite public health efforts to influence smoking initiation and cessation in the USA, young women and men continue to begin smoking at increasingly earlier ages.[10-12] According to PİAR results, smoking rates among the general population in Turkey are extremely high (62.5% in men and 24.8% in women).[13]

The World Health Organization defines quality of life (QoL) as: "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". Quality of Life (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.[4,5,14-17] Assessment of QoL is important in medical practice, in improving the doctor-patient relationship, assessing the effectiveness and relative merits of different

treatments, in health services evaluation, research and in policy making. [18-22]

In this study, we aimed to establish the effects of depression and smoking upon the quality of life of municipal police officers.

MATERIAL AND METHOD

Population

This cross-sectional study was carried out among 157 municipal police officers working at the Municipal Department of Konya in the period of January- February 2006. Before beginning this research, ethical consideration was approved by the ethical committee of the Meram Medical Faculty of Selçuk University. All of the participants were volunteers. 190 municipal police officers were working at the Municipal Department of Konya in this period. Before the distribution of the questionnaires, official permission was received from the director of municipal police department.

Questionnaire

After giving information about the subject of the study to the municipal police officers and getting their approval about accepting to participate in the study, we applied three questionnaire forms: a socio-demographical information form, WHOQOL-BREF (TR) and Beck Depression Inventory (BDI). The questionnaires were collected within two weeks of distribution. Of the 190 subjects, 82.6% (157/190) completed the questionnaire forms. Those who were not willing to take part were excluded. Factors investigated included: sociodemographic variables, smoking status, the quality of life and the Beck Depression Inventory (BDI). The answers were recorded by the researchers.

Socio demographic characteristics and smoking-related behavior

The first questionnaire included 50 items and revealed the police officer's socio-demographic characteristics, smoking-related attitude and behavior. Current smokers were defined as those who had smoked 100 cigarettes and now smoked either everday (i.e., daily smokers) or some days (i.e., some-day smokers). Ex- smokers had smoked at least 100 cigarettes in their lives but did not smoke currently. The minimum quitting period for the ex-smokers was accepted as 6 months. Never-smokers were defined as those who had never smoked.[16]

Beck Depression Inventory (BDI)

The second questionnaire included 21 items and revealed the participants' depression level. The information on depressed mood and anxiety was obtained by this Beck Depression Inventory (BDI). If the total score was under 9, it was regarded as non-depressive (normal), 9-16 mild, 17-29 moderate, 30 and over severe depression respectively. The cut-off point of BDI was taken as 17. [17,18]

Quality of life

The quality of life was assessed using the WHOQOL-BREF questionnaire. The WHOQOL- BREF is a self-report scale that consists of 26 items. The WHOQOL- 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 quality of life and overall health. The WHOQOL- BREF has been demonstrated to have satisfactory discriminant validity, internal consistency and test-retest reliability. [19,20]

Ethical considerations

The research and ethical committee of the Meram Medical Faculty of Selcuk University approved this study. All of the participants were volunteers.

Data analysis

The SPSS 13.0 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 the statistical significance between groups, chi-square and Student's t tests were used. $p<0.05$ was considered significant.

RESULTS

Socio-demographic characteristics of participants

A high level (82.6%) of participation (157/190) was achieved in the survey. In this study, the sample population consisted of 157 municipal police officers, among whom 99.4% (156) were men, 79.6% (n=125) had been educated in secondary and high schools, 96.8% (n=152) were married, and the age interval of participants was between 22-57 (mean=39.33±7.29). The median government service was 15 years (min=1, max=32), the median duration of daily work was 9 hours (min=6, max=16). The median monthly salary was 800 YTL (min=525, max= 1200). Only 53.5% (n=84) were living in their own house, 35.0% (n=55) were tenants, 74.5% (n=117) were in debt, 29.3% (n=46) could not afford to pay their credit cards in time. Of the total, 115 (73.2%) participants had selected this occupation deliberately and willfully, 98 (62.4%) municipal police had been to court once during their job (Table I).

Smoking-related habits

When we examined the status of smoking, we found that 49.1% (n=77) were current smokers, 24.2% (n=38) non smokers and 26.7% (n=42) were ex-smokers. The lowest age at starting smoking was 5, the highest age was 40 and the median value was 18. Of the participants, 68.8% (n=53) started smoking at the age of 20 and under. Social factors (environment, friends, etc.) were the first reasons for starting smoking (49.4%), the second reasons were stress and anxiety (24.7%).

Gender, age, marital status, education level, being in debt, homes, having a private car and not affording to pay the credit cards in time, depression had no affects on smoking status statistically ($p>0.05$) (Table III).

Depression results

The mean BDI score was 10.4±8.7 (median=9, min=0, max=45). According to the results of the Beck Depression Inventory (BDI); 52.2% (n=82), 23.6%(n=37), 21.7%(n=34), 2.5%(n=4) were normal, mild, moderate, severe depression respectively. When the cut-off point of BDI was taken as 17, 119 participants (75.8%) had scores of 16 and under, and 38 (24.2%) had scores of 17 and over, respectively. When we compared the results of the Beck Depression Inventory and smoking status, there was no significant difference between smokers and non-smokers statistically ($p>0.05$) (Table III).

Assessment of QoL

When we compared the quality of life scores and smoking status, there was no significant difference in the physical health ($p=0.598$), psychological health ($p=0.920$), social relationships ($p=0.375$), environment ($p=0.910$) between smokers and non-smokers statistically (Table II).

Quality of life scores in the domains of physical health ($p<0.001$), psychological health ($p<0.001$), social relationships ($p<0.001$), environment ($p<0.001$), overall QoL ($p<0.001$) and overall health ($p<0.001$) were significantly lower among the depressive individuals than among the non-depressive ones (Table II). The perception of overall health, the QoL and the life satisfaction among police officers is shown in Table IV.

Table1. Demographic characteristics of smokers and non-smokers

	Smokers(n=77)		Non-smokers(n=80)		Total(n=157)			
	n	%	n	%	n	%	χ^2	p
Gender								
Male	77	49.4	79	50.6	156	100.0	1.355	0.244
Female	0	0.0	1	100.0	1	100.0		
Age(yr)								
21-30	14	60.9	9	39.1	23	100.0	2.340	0.505
31-40	26	44.8	32	55.2	58	100.0		
41-50	35	50.0	35	50.0	70	100.0		
>50	2	33.3	4	66.7	6			
Marital status								
Married	75	49.3	77	50.7	152	100.0	0.170	0.680
Single	2	40.0	3	60.0	5	100.0		
Level of Education								
Primary School	3	42.9	4	57.1	7	100.0	0.205	0.977
Middle-High School	62	49.6	63	50.4	125	100.0		
University	12	48.0	13	52.0	25	100.0		
Indebted								
Yes	63	53.8	54	46.2	117	100.0	3.516	0.061
No	14	35.0	26	65.0	40	100.0		
Place of residence								
Own house	36	42.9	48	57.1	84	100.0	3.014	0.222
Tenant	30	54.5	25	45.5	55	100.0		
Lodgings	11	61.1	7	38.9	18	100.0		
Affording to pay the credit cards in time								
Yes	50	45.0	61	55.0	111	100.0	1.909	0.167
No	27	58.7	19	41.3	46	100.0		
Having a private car								
Yes	31	44.3	39	55.7	70	100.0	1.145	0.285
No	46	51.9	41	47.1	87	100.0		
Peer's occupation								
Present	0	0.0	2	100.0	2	100.0	0.392	0.531
No	77	49.7	78	50.3	155	100.0		

Table II The effects of depression and the smoking status upon the quality of life among municipal police officers

	Depression Status		
Domains Related to Qol	**BDI ≥ 17 (n=38)**	**BDI ≤ 16 (n=119)**	**p**
	Mean ±SD	Mean ±SD	
Overall QoL	2.45±0.86	3.178±0.82	**< 0.001**
Overall Health	2.50±1.01	3.49±1.05	**< 0.001**
Physical Health	47.21±14.06	68.85±14.11	**< 0.001**
Psychological Health	47.53±14.79	67.36±13.33	**< 0.001**
Social relationships	51.63±21.66	69.03±16.30	**< 0.001**
Environmental	42.08±13.04	58.13±13.95	**< 0.001**
	Smoking Status		
	Smokers(n=77)	**Non-smokers(n=80)**	**p**
	Mean±SD	Mean±SD	
Overall QoL	2.94±0.89	3.06±0.88	0.369
Overall Health	3.24±1.08	3.25±1.16	0.986
Physical Health	64.34±16.46	62.91±17.29	0.598
Psychological Health	62.43±16.29	62.69±15.99	0.920
Social relationships	66.21±18.03	63.48±20.26	0.375
Environmental	54.39±15.18	54.11±15.57	0.910

Table III Beck Depression scores of municipal police officers according to their demographic characteristics

	BDI ≤ 16 (n=119)		**BDI ≥ 17 (n=38)**		**Total(n=157)**			
	n	%	n	%	n	%	χ^2	p
Gender								
Male	119	76.3	37	23.7	156	100.0	2857	0.091
Female	0	0.0	1	100.0	1	100.0		
Age(yr)								
21-30	22	95.7	1	4.3	23	100.0	1.272	0.259
31-40	41	70.7	17	20.3	58	100.0		
41-50	50	71.4	20	28.6	70	100.0		
>50	6	100.0	0	0.0	6	100.0		
Marital status								
Married	115	75.7	37	24.3	152	100.0	0.052	0.820
Single	4	80.0	1	20.0	5	100.0		
Education								
Primary School	7	100.0	0	0.0	7	100.0	5.200	0.158
Middle-High School	92	73.6	33	26.4	125	100.0		
University	20	80.0	5	20.0	25	100.0		
Indebted								
Yes	85	72.6	32	27.4	117	100.0	1.851	0.174
No	34	85.0	6	15.0	40	100.0		
Place of residence								
Own house	61	72.6	23	27.4	84	100.0	1.229	0.541
Tenant	43	78.2	12	24.8	55	100.0		
Lodgings	15	83.3	3	16.7	18	100.0		
Affording to pay the credit cards in time								
Yes	88	79.3	23	20.7	111	100.0	1.899	0.168
No	31	67.4	15	32.6	46	100.0		
Having a private car								
Yes	47	67.1	23	32.9	70	100.0	4.340	**0.037**
No	72	82.8	15	17.2	87	100.0		
Smoking status								
Smokers	60	77.9	17	22.1	77	100.0	0.180	0.672
Non-smokers	59	73.8	21	26.2	80	100.0		
Peer's occupation								
Present	2	100.0	0	0.0	2	100.0	2.823	0.244
No	114	75.0	38	25.0	152	100.0		

TableIV The perception of overall health, the QoL and life satisfaction among police officers

The perception of overall health and the QoL among municipal police officers		
	n	**%**
Very bad	13	8.3
Not so bad	16	10.2
Moderate	92	58.6
Quite good	30	19.1
Very good	6	3.8
Total	157	100.0
The perception of overall health and the satisfaction from life		
	n	**%**
Not satisfied at all	13	8.3
A little satisfied	24	15.3
Moderately satisfied	51	32.5
Quite satisfied	49	31.2
Extremely satisfied	20	12.7
Total	157	100.0

DISCUSSION

In the study, the factors related to working life such as work stress and job satisfaction which could affect the quality of life were not questioned and the cross-sectional method of the study does not allow making an estimation about the causal link between depression and the quality of life both of which can be stated as the limitations of this study.

It is the duty of municipal police officers to secure the effective application of the Mayor's edicts and of the decisions of the Municipal Council, which have to do with securing order, serenity and the well-being of the public within a municipality. The service is provided by uniformed officers acting in the interest of the public. The municipal police are a force, which, due to the strict application of law, have been very successful. The activity of Municipal Police officers was also based on the requirements of the laws for "Local Government", "Administrative Violations", "City Planning", "Construction Police" etc.[1,2] Because of the excess workload and occupational stress, municipal police officers tend to work as inherently stressful.[3,5]

As a result, high levels of stress-related symptoms might be expected in this population. Pancheri et al declared that traffic police officers were found significantly more often in the high stress classes than the municipal police force of the city of Rome.[23] Tomei et al in their study, had emphasized, related to the assessment of subjective stress in the municipal police force in Rome, that the analysis of the data showed significantly higher scores in the anxiety and aggressiveness clusters at the end of the shift.[2] In our study, when the cut-off point of BDI was taken as 17, 38 municipal police officers (24.2%) had scores of 17 and over. According to these results, in this study, almost one quarter (24.2%) of all the municipal police officers was in depression, similar to the other studies' results mentioned above.

It is obvious that the municipal police officers were exposed to stress. During their working life, 98 (62.4%) municipal polices had been to court once. In addition, only 53.5% (n=84) were living in their own house, 35.0% (n=55) were tenants, 74.5% (n=117) were in debt, 29.3% (n=46) could not afford to pay their credit cards in time. These socio-economic factors could affect the spiritual

comfort of the individuals. Deschamps and friends explained that police officers were reported to experience greater stress, and in fact sources of stress were found both in the weariness of the job and private-life planning.[24] On the other hand, Berg and et al. emphasized that job pressure was experienced as the least stressful, but the most frequently occurring, according to the comprehensive nationwide questionnaire survey of 3272 Norwegian police. "Working overtime" was the most frequent and the least severe stressor.[5] According to Collins and friends, 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.[6] Richmond et al. emphasized that 12% of male police officers and 15% of female police officers reported feeling moderate to severe symptoms of stress in Sidney.[25] In our study, while gender, age, marital status, education, place of residence, being indebted, not affording to pay the credit cards in time had no effect on depression statistically ($p>0.05$), having a private car caused higher depression than among those who had no private car ($p=0.037$). Maintaining, running and paying the taxes of a private car might have caused extra expenses to the family budget and might be a cause for depression.

In our study, the smoking rate among the municipal police officers was 49.1%. The smoking rate was 24.3% for females, 62.8% for males among the general population in Turkey.[13] This rate was lower than the smoking prevalence of the general population. Deschamps et al found that the rate of smoking among 617 policemen was 42.0%.[24] This result is similar to our findings. Richmond et al. emphasized that over one-quarter (27%) of male and one-third (32%) of female police officers reported smoking in Sidney.[25] Regarding smoking, a large cohort study from the United States revealed that the police had one of the highest smoking rates among all professions.[26] More than one-quarter of the Australian federal police who visited a police health clinic were found to be cigarette smokers.[20] The reason why police smoke at high rates is complex. Physiological changes due to shift work, such as disrupted sleep patterns and circadian rhythms may contribute to high rates of smoking prevalence among police officers. However, stress is probably the most important contributor to excess smoking levels within law enforcement.[20] In our study, gender, age, marital status, education, place of residence, having a private car, being indebted, not affording to pay the credit cards in time, being depressed had no effect on smoking status statistically ($p>0.05$). Cigarette smoking is the most important avoidable cause of morbidity and premature death in the developed world.[8,27] Smoking cessation programs should be introduced among the municipal police officers to reduce the number of those who smoke. Also, a continuing education program should be instituted to instruct them about their role in society.

While quality of life scores in the domains of physical health, psychological health, social relationships and environmental, overall health were significantly lower among the municipal police officers who had 17 and over BDI score than the ones who had 16 and under BDI score ($p<0.001$), quality of life scores had no affect on smoking status statistically ($p>0.05$). In our study, it was established that 24.2% of all the municipal police officers had depression symptoms and diminished quality of life. In our study, the perception of overall health and the QoL was poor in 18.5 % of the participants. The evaluation of the perception of overall health and the life satisfaction among police officers revealed that 23.6% of them were not satisfied. These results demonstrate negative influences on the individual's perceived reality of their own situation.

Conclusion

There is a growing preoccupation with stress as a problem within the workplace. Recently, many factors have conspired to make working life far more stressful than before. While job satisfaction was primarily associated with positive effects, life satisfaction, and self-

esteem; job stress was primarily associated with negative effects and cigarette smoking.[7] An effective and comprehensive-national tobacco control program is urgently required. More active health promotion and provision of brief interventions among municipal police may improve their unhealthy life-styles. As a result, the municipal police officers are at risk psychologically because of depression and diminished quality of life. It will be considerably beneficial to provide police with psychological support and consulting services.

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