

Burnout Level of a Bank's Call Centre Employee and Affecting Factors

Saime Erol¹, Kamer Gur¹, Sumeysra Ergun², Ilknur Yalcın³

¹Marmara University, Health Sciences Faculty, Department of Public Health Nursing, Istanbul - Turkey

²Istanbul Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, Istanbul - Turkey

³Unilever San. ve Tic. Türk A.Ş., Istanbul - Turkey

Yazışma Adresi / Address reprint requests to: Saime Erol
Marmara University, Health Sciences Faculty, Department of Public Health Nursing, Istanbul - Turkey
Elektronik posta adresi / E-mail address: saimeerol@hotmail.com
Kabul tarihi / Date of acceptance: 13 Eylül 2014 / September 13, 2014

ÖZET

Bir banka çağrı merkezi çalışanlarının tükenmişlik düzeyi ve etkileyen faktörler

Amaç: Bu çalışma çağrı merkezi çalışanlarının tükenmişlik düzeyleri ile kişisel özellikler ve işyeri çevresel faktörler arasındaki ilişkiyi açıklamak amacıyla yürütüldü.

Yöntem: Araştırma tanımlayıcı tasarım kullanılarak Şubat ve Nisan 2011 tarihleri arasında İstanbul'da özel bir bankanın çağrı merkezi çalışanları ile gerçekleştirildi. Çalışma popülasyonunu gönüllü olarak katılan 201 çağrı merkezi çalışanı oluşturdu. Veriler araştırmacılar tarafından hazırlanan anket formu ve Maslach Tükenmişlik Ölçeği kullanılarak toplandı. Toplanan veriler, tanımlayıcı istatistikler, bağımsız örneklem t, ANOVA, Mann-Whitney U, Kruskal Wallis Testi ve lojistik regresyon analizi ile değerlendirildi. Anlamlılık düzeyi $p < 0.05$ ve güven aralığı %95 olarak kabul edildi.

Bulgular: Araştırmaya katılan bireylerin yaşları 20-46 arasında değişmektedir ve yaş ortalaması 36.84 ± 13.22 'dur. Çoğunluğu kadın (%77.1) ve lisans mezunudur (%52.2). Çalışanların duygusal tükenme puanları orta düzeyde bulundu. İş nedeniyle stres deneyimleyenlerin duygusal tükenme riskleri stres deneyimlemeyenlerden $OR=11.50$ (%95 CI 2.45-28.57) kat daha yüksek bulundu. Duyarsızlaşma puanları düşük düzeydeydi. Kulak çınlaması şikâyeti olan bireylerin duyarsızlaşma puanları çınlama şikâyeti olmayanlardan $OR=7.35$ (%95 CI 1.41-8.51) kat daha yüksek bulundu. Çalışanların kişisel başarı puanları düşük düzeydeydi ve erkeklerin puan ortalamaları kadınlardan $OR=5.87$ (%95 CI 1.25-8.29), baş ağrısı şikâyeti olanların olmayanlardan $OR=8.38$ (%95 CI 1.74-18.44) kat daha düşük düzeyde bulundu.

Sonuç: İşe bağlı stres, erkek cinsiyet ve baş ağrısı şikâyeti tükenmişliği etkileyen faktörler olarak belirlendi.

Anahtar sözcükler: Maslach tükenmişlik ölçeği, çağrı merkezi çalışanı, tükenmişlik, sağlık durumu, stress

ABSTRACT

Burnout level of a bank's call centre employee and affecting factors

Objective: This study was carried out with the aim of exploring the relationship between burnout and personal characteristics and workplace environment factors in call center employees.

Method: The research was conducted between February and April 2011 in a private bank located in Istanbul using descriptive design. Population consists of call center employees in bank and 201 volunteers participated in the study. Data were collected by using questionnaire form prepared by researchers and Maslach Burnout Inventory. Data were analyzed with descriptive statistics, independent samples t, ANOVA, Mann-Whitney U, Kruskal Wallis test and logistic regression. Significance was set at $p < 0.05$ and confidence interval estimated at that 95% level.

Results: The mean age of respondents was 36.84 ± 13.22 with a range from 20 to 46 years. Most participants were female (77.1%), and graduate degree (52.2%). The average emotional exhaustion scores of the employees were at middle range. The emotional exhaustion risks of those who experience stress due to their work were found $OR=11.50$ (95% CI 2.45-28.57) times higher than those who do not experiencing any stress. The average depersonalization scores at the low range. Depersonalization scores of those having tinnitus were $OR=7.35$ (95% CI 1.41-8.51) times higher than those who do not have such a problem. The average personal accomplishment scores were at the low range and men's scores were found $OR=5.87$ (95% CI 1.25-8.29) times less than women's and also, the scores of those who have headache were $OR=8.38$ (95% CI 1.74-18.44) times less than those who do not have headache.

Conclusion: Work-based stress, male gender, and headache factors that affects burnout.

Key words: Maslach burnout inventory, call center employee, burnout, health status, stress

INTRODUCTION

Call centers are among the most rapidly developing sectors through the World. In Bank call centers are the important factors for fast and safe customer care (1,2). Call centers generally have two types of services for the

customers: Firstly, responding the customers' calls and the secondly, selling, manufacturing and searching for the new customers (1). Among the strategic goals of call centers there are shortening the responding time, increasing the quantity and quality of customer care and decreasing the expenses. To reach these strategic goals, the performances

of the employees are followed by digital equipment (1,3).

Call centers require emotional effort. In such an environment which requires permanent interaction with customers, emotions should always be kept under control (1,3). Dealing with sad or problematic customers increases the work stress and repeating these continuously increases the muscular tension. In call centers where physical and mental efforts are applied at highest levels, some problems are observed (4-5). People, working in such an environment, experience physical and emotional fatigue owing to the burden, and working conditions. They develop negative emotions towards themselves and others as well. Such a situation observed in those people is called "burnout". Burnout which has been observed in those jobs requiring a dense interaction with people, affect not only individuals but also institutions negatively (6-7). Burnout is defined as "one's having lost the excitement and sense of mission towards his job" (5,6,7). Fatigue, depression, feeling pessimistic and lack of excitement are among its characteristics (6). There are varieties of factors which lead to burnout. Socio-demographic factors such as age, sex, educational status, work-based factors such as burden, lack of autonomy, work-environment related factors such as noise, hot, cold etc. are all among the factors leading to burnout (3,7,8).

Maslach (1981) defined burnout in three dimensions: emotional exhaustion, depersonalization and personal accomplishment feeling (6).

Emotional exhaustion is the basic factor of burnout syndrome and points out the decrease in emotional sources and burden. Also, it shows the personal stress dimension of the burnout (3,7). Emotional exhaustion occurs as a result of factors and demands causing stress. One feels himself tired and emotionally fatigued (3,7).

Depersonalization points out the interpersonal status of burnout. One feels pessimistic and highly uninterested towards his work. It also includes some bad behaviour towards others like being negative, sarcastic and not caring about anything (6,8).

Personal accomplishment shows insufficiency in the performance, required for the work. It also states one's assessing himself negatively and decreasing in the feeling of sufficiency. One, who is in such a situation, becomes uninterested in his job so that his contribution gets lower and lower to his institution day by day (9).

There is a direct relation between the health of employees and working environment (4,5,10,11,12). According to research, working long hours in front of the computer causes eye-fatigue, headache, neck ache and backache (11,13,14,15). For the employees of call centers sore throat, hoarse voice, tinnitus are among the most common complaints (17,18).

Health care team / occupational health nurse of the institution can check the health of their employees regularly in order to diagnose work-based health problems. Moreover, they can identify burnout levels of their employees with the help of Maslach Burnout Inventory and they can identify individual and environmental factors related with it. Knowing the factors effecting burnout most, provides a better planning of interventions to reduce the level of burnout. According to these findings, some protective measurements might be taken especially for those who are under risk of burnout and for the environmental factors being better as well as solving the one's health problems. With lower burnout levels, employees can benefit their organizations more.

The aim of this study is to identify the burnout level and factors affecting the level of burnout in banks call center.

Research questions are the followings:

1. What is the level of burnout in bank call center employees?
2. What are the factors affecting burnout level in bank call center employees?

MATERIALS AND METHODS

Design and Sample

The study was conducted between March 28 and April 8, 2011 in call-center employees of a private bank in Istanbul, Turkey, using a descriptive research design.

The study group was designed to include all call center employees who are working at the bank (n=350). Some employees did not want to participate in the research. Final study group included 201 call-center employees representing 57% of the universe. The call center employs inbound and outbound operators. Most of the time call agents are occupied by inbound calls. Primarily, they provide information and execute orders of customers. They work 8 hours a day with three shifts.

Table 1: Maslach Burnout Inventory Sub-Dimensions and Distances between the scores

	High	Middle	Low	Min- Max
Emotional Exhaustion (EE)	≥18	12-17	0-11	0 – 36 points
Depersonalization (DP)	≥10	9-6	0-5	0 – 20 points
Personal Accomplishment (PA)	0 - 21	22-25	≥26	0 – 32 points

Dependent and Independent Variables

Data was collected by using a questionnaire form prepared by researchers in line with the literature and Maslach Burnout Inventory (MBI). Dependent variables are the mean scores for emotional exhaustion. The independent variables were the (a) employees' individual characteristics, health problems and (b) workplace environment factors.

Data collection and Instruments

Data was collected in March and April 2011 by the Occupational Health Nurse. Data collection methods were a questionnaire comprised of demographic characteristics and environmental factors of the work environment, and Maslach Burnout Inventory. Subjects completed the questionnaires during their leisure time which was 15- 20 min. All subjects were informed about the study objectives prior to participation and participated voluntarily.

The questionnaire included the following areas: (1) Individual factors (age, sex, education, length of employment in current company, in shift / shiftless work). Health status: participants were asked if, over the past 12 months, they had experienced the following symptoms at least weekly, and were further asked to rank them on a scale writing yes or no: musculoskeletal pain, headache, fatigue, tinnitus, hoarseness, throat ache, low-morale, nervousness, and listening, comprehension, concentration difficulties. (2) Perceived job stress and workplace noise were measured using self-reported responses to the question "Are you stressed at the workplace?" with responses being recorded on a four-point scale, comprising 1=mostly, 2=sometimes, 3=rarely and 4=never. The responses for "is your workplace noisy?" were recorded on a two-point scale, comprising 1=yes and 2=no. The responses for the last question "does noise disturb you?" were recorded on a three-point scale, comprising 1=none, 2=a little and 3=very much.

Maslach Burnout Inventory

It was developed by Maslach and Jackson (1981) and was placed into the literature with the name of Maslach. Maslach Inventory Scale, whose validity and reliability works were done by Ergin (1992), consists of 22 items. Likert type items are pointed between 0 and 4. Cronbach alpha values related with three sub-dimension of the scale were found as 0.89 for the Emotional Exhaustion and 0.71 for the Depersonalization and lastly 0.72 for the Personal Accomplishment (19).

Statistical Analysis

All data was analyzed using SPSS software version 16.0. Descriptive statistics, number, percentage and standard deviation statistics were used along with the t-test, variance analysis, Mann-Whitney U and Kruskal Wallis test to compare the scales and the independent variables. Statistical significance was set at $p < 0.05$.

MBI subscale point averages of two groups which fit to normal distribution were compared using the independent samples of t test. Those which did not fit to normal distribution were compared using Mann Whitney U test.

MBI subscale point averages of three groups which fit to normal distribution were compared using ANOVA and those which did not fit to normal distribution were compared using Kruskal Wallis.

Logistic regression analysis was performed to examine the risk factors which were significant in the Univariate analysis. To apply for regression analysis, the cut-off points which were three for the three sub-scales were reduced to two. For the emotional exhaustion, the scores between 18-36 were accepted as high and 17-0 as middle/ low. For depersonalization, the scores between 10-20 were accepted as high and 9-0 as middle/low. Finally, for personal accomplishment sub-group, the scores between 0-21 were accepted as high and 22-32 as middle/low. In regression analysis, the variables were selected by enter method and

odds ratios were calculated taking the first categories as reference. Logistic regression analysis was used for the 95% confidence interval.

Ethical Permissions

This study was approved by the Bank's corporate communications department. All participants were informed about the purpose of the study and the study's expectations. They were assured that their identities would be kept anonymous. Verbal consent was obtained from all participants.

RESULTS

The average age was 27.21 ± 4.49 years (20-46 years). 77.1% of the employees were female, 22.9% were male and 52.2% had Bachelor's degree. The vast majority of the participants were employed full time (93.5%). 95.5% of the employees stated that the workplace is noisy. For the question "does the noise disturb you?" 53.7% (n=108) of the employees' response was "a little" and 43.8% (n=88) was "very much". It was found that 47.8% (n=96) of the employees were feeling stressed most of the time and 35.3% (n=71) were feeling stressed sometimes in the workplace (Table 2).

It was found that 26.9% of the call center employees got low points in the emotional exhaustion sub-scale and 23.4% of them got middle and 49.8% of them got high scores. For the depersonalization sub-scale, 47.8% got low, 32.3% got middle, and 19.9% got high scores. For the Personal accomplishment sub-group, 14.4% got low, 37.3% got middle, and 48.3% got high scores (Table 3).

Table 4 shows the physical, mental and psychosocial problems among the call center employees. Health complaints were as follows: musculoskeletal pain (82.6%), headache (76.1%), concentration difficulty (65.7%), nervousness (61.2%), fatigue (54.2%), difficulty in listening (50.7%), difficulty in comprehension (44.3%), tinnitus (40.8%), throat ache (39.3%), low-morale (36.3%), sleep disturbances (17.9%).

The sub-dimension average scores of burnout scale for the comparison of health problems experienced by the

Table 2: Demographic characteristics of the bank's call center employees (n=201)

Variable	n	%
Gender		
Male	46	22.9
Female	155	77.1
Age groups		
20-29 years	154	76.6
≥30 years	47	23.4
Education		
High school	28	13.9
University students	60	29.9
Bachelor's degree	105	52.2
Master's degree	8	4.0
Number of break		
1-2	90	44.8
3	66	32.8
4-5	45	22.4
Is your workplace noisy?		
Yes	192	95.5
No	9	4.5
How much noise disturbs you?		
None	5	2.5
A little	108	53.7
Very much	88	43.8
Are you stressed at the workplace?		
Rarely/ never	34	16.9
Sometimes	71	35.3
Mostly	96	47.8

Table 3: Maslach Burnout Inventory sub-scale scores (n=201)

MBI Sub-scale	n	%	mean±standard deviation(SD)	min	max	
Emotional exhaustion (EE)						
0-11	low	54	26.9	16.80±5.87	0	36
12-17	middle	47	23.4			
18-36	high	100	49.8			
Depersonalization						
0-5	low	96	47.8	6.58±3.36	0	20
6-9	middle	65	32.3			
10-20	high	40	19.9			
Personal accomplishment						
26-32	low	29	14.4	21.47±5.04	8	32
22-25	middle	75	37.3			
21-0	high	97	48.3			

Tablo 4: The mean MBI sub-scale scores of the employees according to their health problems

Health Problem	%
Muskuloskeletal pain	
Yes	82.6
No	17.4
Headache	
Yes	76.1
No	23.9
Difficulty in concentration	
Yes	65.7
No	34.3
Nervousness	
Yes	61.2
No	38.8
Fatigue	
Yes	54.2
No	45.8
Listening difficulty	
Yes	50.7
No	49.3
Sleep disturbances	
Yes	17.9
No	82.1
Difficulty in comprehension	
Yes	44.3
No	55.7
Tinnitus	
Yes	40.8
No	59.2
Sore throat	
Yes	39.3
No	60.7
Low morale	
Yes	36.3
No	63.7

employees were shown in Table 5.

The emotional exhaustion scores of those who experienced headache, sleep disturbances, tinnitus, musculoskeletal pain, low-morale, nervousness, listening, comprehension and concentration difficulties were found significantly higher than those who did not experience such complaints ($p < 0.05$).

The depersonalization scores of those who experienced headache, fatigue, sleep disturbance, tinnitus, sore throat, nervousness, listening, comprehension and concentration disturbances were found statistically and meaningfully higher than those who did not experience these problems ($p < 0.05$).

Personal accomplishment scores of those who experienced depression, comprehension and concentration problems, were found statistically and meaningfully lower than those who did not have these problems ($p < 0.05$).

The variables which are possible to affect the burnout

levels of the employees were compared with Maslach Burnout Inventory's average scores of the sub-groups. Individuals who deemed their work setting to be noisy, were highly disturbed by the noise and felt stressed at the workplace were found to have significantly higher emotional burnout scores compared to others.

Males between the ages of 20-29 who believed that their workplace was noisy, who were extremely disturbed by the noise and felt under too much stress were found to have significantly higher depersonalization sub-scale scores compared to others ($p < 0.05$). 30+ males who felt under too much stress at the workplace were found to have significantly lower ($p < 0.05$) Personal Accomplishment sub-scale scores compared to others.

The variables, which were significant in the univariate analysis and had a risk of causing burnout were examined using multi-variable logistic regression analysis. To examine emotional exhaustion risk, a logistic regression model, with a presentation power of 80%; Hosmer and Lemeshow Test: $\chi^2 = 7.263$; $p = 0.509$ was established. According to the model, the emotional exhaustion risk of those who reported that they experienced stress most of the time was found OR=11.50 (95% CI 2.45-28.57) times more ($p < 0.01$) than those who never experienced stress. Other risk factors were not significantly different ($p > 0.05$).

To examine the factors affecting the risk of depersonalization, a logistic regression model with a presentation power of 86%; Hosmer and Lemeshow Test: $\chi^2 = 9.87$; $p = 0.011$ was founded. Those with tinnitus had OR=7.35 (95% CI 1.41-8.51) times higher risk of depersonalization than those without tinnitus ($p < 0.01$). Other risk factors were not significant ($p > 0.05$).

To examine the personal accomplishment risk, a logistic regression model with a presentation power of 73%, Hosmer and Lemeshow Test: $\chi^2 = 6.55$; $p = 0.58$ was established. According to the model, gender affects the personal accomplishment ($p < 0.01$). The personal accomplishment of males were found OR=5.87 (95% CI 1.25-8.29) times lower than that of females. Furthermore, headache was found to be an effective factor for personal success ($p < 0.01$). Those who experienced headache had OR=8.38 (95% CI 1.74-18.44) times less personal accomplishment than those who did not experience headache ($p < 0.01$). Other risk factors were not significant ($p > 0.05$).

Table 5: The mean MBI sub-scale scores of the employees according to their health problems

Health Problems	MBI Sub-scale		
	EE mean±SD	DP mean±SD	PA mean±SD
Headache			
Yes (n=153)	17.75±8.04	7.18±4.49	21.42±4.20
No (n=48)	13.75±6.44	4.66±3.30	21.62±3.48
Statistics	**	**	
Fatigue			
Yes (n=109)	18.40±7.43	7.49±4.45	21.51±4.35
No (n=92)	14.90±7.96	5.51±4.02	21.42±3.66
Statistics	**	**	
Sleep disturbances			
Yes (n=36)	21.38±7.78	8.27 ±4.31	20.88±4.97
No (n=165)	15.80±7.53	6.21±4.30	21.60±3.81
Statistics	***	**	
Tinnitus			
Yes (n=82)	18.85±7.80	8.30±4.83	20.95±4.48
No (n=119)	15.38±7.62	5.40±3.58	21.83±3.70
Statistics	**	***	
Sore throat			
Yes (n=78)	17.96±8.65	7.34±4.13	22.22±4.52
No (n=121)	16.04±7.24	6.09±4.45	20.98±3.62
Statistics			
Low morale			
Yes (n=73)	21.28±7.37	8.71±4.69	20.47±4.47
No (n=126)	14.24±6.96	5.37±3.66	22.03±3.67
Statistics	***	***	**
Musculoskeletal pain			
Yes (n=35)	20.0±6.69	7.60±3.59	21.14 ±3.92
No (n=164)	16.12±7.93	6.37±4.49	21.54 ±4.07
Statistics		**	
Nervousness			
Yes (n=85)	19.64±8.69	8.01±4.54	21.75±4.47
No (n=116)	14.71±6.48	5.54±3.93	21.26±3.69
Statistics	***	***	
Difficulty in listening			
Yes (n=102)	18.58±7.09	7.71±4.34	21.32±4.16
No (n=99)	14.95±8.21	5.42±4.09	21.62±3.92
Statistics	**	**	
Difficulty in comprehension			
Yes (n=89)	19.85±7.14	7.87±4.58	20.71±3.84
No (n=110)	14.37±7.58	5.56±3.90	22.07±4.10
Statistics	***	**	*
Difficulty in concentrating			
Yes (n=131)	18.73±7.10	7.22±4.26	20.78±4.11
No (n=68)	13.10±7.97	5.36±4.33	22.79±3.57
Statistics	**	**	***

*p<0.05, **p<0.01, ***p<0.001, EE: emotional exhaustion, DP: depersonalization, PA: personal accomplishment, SD: Standart deviation

DISCUSSION

According to results of this study, the average emotional exhaustion and depersonalization scores of call center employees were found to be middle, and their personal accomplishment scores were found as low. In our country, the average Maslach burnout inventory sub-scale scores were found similar in two studies: these were conducted on

bank employees (7) and bank call center employees (3,7).

Güllüce and Kaygın conducted a study on bank employees and found no significant difference between employees' genders, age groups, educational status and burnout scale sub-groups (15). In this study, unlike to Güllüce and Kaygın's results, the personal accomplishment scores of males were found OR=5.87 (95% CI 1.25- 8.29) times lower than those of females through the logistic

Table 6: The mean scores of MBI sub-groups according to independent variables

Variable	MBI Sub-scale		
	EE mean±SD	DP mean±SD	PA mean±SD
Age groups			
20-29 years (n=154)	17.19±8.43	6.97±4.44	21.79±4.24
≥30 years (n=47)	15.51±5.46	5.31±3.89	20.42±3.08
Statistics		*	*
Gender			
Male (n=46)	15.58±6.95	5.26±3.44	20.32± 4.21
Female (n=155)	17.16±8.09	6.98±4.54	21.81± 3.93
Statistics		**	**
Education			
High school (n=28)	17.17±6.78	7.46±4.14	22.67 ±4.65
University (n=60)	16.46±9.06	6.43±4.25	22.06±4.35
Bachelor's (n=105)	16.98±7.63	6.46±4.53	21.01±3.44
Master's (n=8)	15.62±5.20	5.25±4.20	18.75±4.09
Statistics			
Is your workplace noisy?			
Yes (n=192)	17.04±7.85	6.73 ±4.39	21.50±4.07
No (n=9)	11.66±6.30	3.44 ±2.27	20.88±3.40
Statistics	*	*	
How much noise disturbs you?			
None /A little (n=113)	14.59±6.90	5.31±3.90	21.13±4.03
Very much (n=88)	20.9±7.75	8.21±4.40	21.90±4.03
Statistics	***	***	
Are you stressed at the workplace?			
Mostly (n=96)	21.06±6.51	8.10±4.31	20.50±3.96
Sometimes (n=71)	14.71± 6.20	5.64±3.96	21.85 ±3.33
Never/Rarely (n=34)	9.11±6.91	4.26±3.80	23.41±3.94
Statistics	***	***	**

*p<0.05, **p<0.01, ***p<0.001, EE: emotional exhaustion, DP: depersonalization, PA: personal accomplishment

regression analysis. No significant difference was found between the other independent variables and emotional exhaustion, depersonalization, personal accomplishment. From this perspective our results were similar to that of Güllüce and Kaygi.

Call center employees spend most of time in the office. According to the literature, the workplace has an effect on individuals' health and a noisy environment causes physical pressure and disappointment on employees (20). Similarly, in this study 95% of the employee indicated that call center was too noisy and more than half of them showed their disturbance towards it.

Rameshbabu et al. (4) found out that insufficient sleep and stress might lead to undesirable health outcomes. Lin et al. (21), in their study, emphasized the relationship between perceived work-based stress of call center employees and health diseases including eye fatigue, tinnitus, nervousness, sore throat peptic ulcer, musculoskeletal disturbances. Lin et al. (10) in another

study pointed out that the most important stress factor for both male and female call center employees was the customers waiting in queue. Furthermore, female employees feel more physical disturbances on their whole body than the males (4,10,21). In this study, similar to literature, the health problems experienced by call center employees were listed from serious one to less serious, respectively. These were the musculoskeletal disturbances, headache, difficulty in concentration, difficulty in comprehension, tinnitus, sore throat, and low-morale.

Emotional Exhaustion

Call centers are the emotional effort required workplaces. In such workplaces, there is always a continuous interaction with customers; thus, the feelings should be kept under control (2). According to our results, the average emotional exhaustion scores of call center employees were at middle range. Moreover, almost half of the employees

got high scores (18-36) in the emotional exhaustion subscale. This also shows that the group's level of emotional exhaustion is high. The emotional exhaustion scores of those who experienced headache, fatigue, tinnitus, musculoskeletal disturbances, irritation, and listening, comprehension, concentration difficulties were found statistically and significantly higher than those who did not experience such problems. Similar to the literature, that finding indicated the relationship between health problems and emotional exhaustion (10,11,12,14,21). Emotional exhaustion might occur due to the health problems created by the workplace and some health problems might occur due to the emotional exhaustion as well. It can be considered that these two factors affect each other. According to Maslach, some work-related factors creating stress are the indicators of burnout and emotional exhaustion. According to our results, those who reported their workplace as noisy, those who showed their disturbance towards the noise, and those who felt themselves under dense stress got significantly high scores in the emotional exhaustion scale. This finding is in the same parallel with the findings of literature (6).

In order to clarify the most effective factor for emotional exhaustion among individual characteristics, health problems, workplace risk factors, the logistic regression analysis was conducted. In this model, the emotional exhaustion risk of those who reported that they experienced stress often was found OR=11.50 (95% CI 2.45 – 28.57) times higher than those who did not experience stress at all. Other risk factors did not affect it meaningfully. That result is supported by Maslach's statements "work-related factors, creating nervousness are the main indicators of burnout and emotional exhaustion" (6). Our results are similar to the results of other studies (4,11,13,21).

Depersonalization

Depersonalization indicates interpersonal dimension of the burnout. It shows negative and uninterested feelings towards to work. It has been accepted as an unfunctional reaction to the work-based stress (22). Depersonalization shows itself with attributes and behaviors, lack of feeling (23). According to our results, the average depersonalization scores of employees were found at middle range. However, the majority of the call center employee were gathered

between the scores of 0-5 which is the lower part of the scale. Furthermore, some factors such as being young, being female, having health problems, considering the workplace as noisy and stressful are thought to increase the level of depersonalization. In the logistic regression model, on the other hand, the presence of tinnitus affected depersonalization significantly. Our results are similar to that of literature (4,6,10,21).

Personal Accomplishment

Personal accomplishment indicates the reduce of feeling of being effective at work (24). This concept points out "one's having a tendency of assessing himself negatively". An individual feeling a reduction in his success feels himself insufficient; thus he/she loses motivation. In that dimension, an individual thinks he has no progress at his work, thinks his efforts are all in vain, and also thinks he creates no difference for his environment. An individual in such a mood cannot like his job and thus, his contribution to the institution becomes less and less. According to our results, almost half of the employees got scores between 0-21 which shows a low level of personal accomplishment. This shows that the personal accomplishment level of the group is rather low. According to literature, burden, negative attribution and behaviors of the manager, no chance for making progress at work, working closely to other people etc. all cause a reduction in the feeling of personal accomplishment and thus, increase of the feeling of burnout (4,17,20,22).

The employees who are 30 years and up, males, and those who feel themselves under stress at workplace have significantly low scores. In logistic regression model, the personal accomplishment of the females were found OR=5.87 (95% CI 1.25- 8.29) times lower than that of males. The scores of those employee who experienced headache were found OR=8.38 (95% CI 1.74-18.44) times less than those who did not experience headache.

These results show us that being adult and male, a stressful workplace, and having headache all affect the personal accomplishment negatively. Thus individuals feel themselves unsuccessful. A call center is a risky environment for such problems. It is in accordance with the literature from this point of view (4,10,12,21).

CONCLUSIONS

In this study, 95% of the call center employee stated that the workplace was too noisy and 47.8% of them felt themselves under great stress at the workplace. The major health complaints of call center employee were musculoskeletal pain, headache, concentration difficulty, nervousness, fatigue, listening difficulty, understanding difficulty, and tinnitus.

It was identified that emotional exhaustion and depersonalization scores of the employee were at middle range and personal accomplishment scores were at low range.

It was also found that a noisy workplace, disturbance due to noise, feeling one's himself under stress at workplace were among the factors that affect the emotional exhaustion negatively. Furthermore, it was stated that stress increased the emotional exhaustion OR=11.50 (95% CI 2.45 – 28.57) times. It is emphasized that some factors such as being between the ages of 20-29, being a female, being disturbed due to the noise, feeling great stress at workplace all affect the depersonalization. It was also found out that the complaint of tinnitus going together with depersonalization OR=7.35 (95% CI 1.41 – 8.51). It is put forth that difficulty in comprehension and concentration, being 30 years old and up, being male and feeling great stress at workplace are the factors which affect the personal accomplishment. The personal accomplishment scores of males are OR=5.87 (95% CI 1.25- 8.29) times lower than that of females and the scores of those having a headache are OR=8.38 (95% CI 1.74-18.44) times lower than that of those who do not have a headache.

REFERENCES

- Gordi MR. Job satisfaction of call center representatives. A mini-thesis in partial fulfillment of there quirements for the degree of Master of Arts in the Faculty of Industrial Psychology: University of the Western Cape; 2006.
- Lewig KA, Dollard MF. Emotional dissonance, emotional exhaustion and job satisfaction in call center workers. *European Journal of Work and Organizational Psychology*. 2003;12(4): 366-392.
- Yılmaz G, Keser A. Call center work from employer and employee perspective: two field studies from Turkish banking sector. *Work, Power, Industrial Relations and Human Resources Journal*. 2006; 8(2): 22-35.
- Rameshbabu A, Reddy DM, Fleming R. Correlates of negative physical health in call center shift workers. *Applied Ergonomics*. 2013; 44: 350-354.
- Schnall PL, Landsbergis PA, Baker D. Job strain and cardiovascular disease. *Annu Rev Public Health*. 1994; 15: 381-411.
- Maslach C, Jackson SE. The measurement of experienced burnout. *Journal of Occupational Behavior* 1981; 2: 99-113.
- Alimoğlu MK, Dönmez L. Day light exposure and the other predictors of burnout among nurses in a university hospital. *International Journal of Nursing Studies*. 2005; 42: 549-555.

Recommendations for These Results

Assessment of burnout status of bank call center employee periodically,

Providing the necessary treatment for those who have health problems as soon as possible,

Reducing the number of stress factors at workplace,

Taking the required precautions in order to lessen the noise at workplace,

Re-conducting of the study with a larger sample group are recommended.

Limitations

It might be counted as a limitation that the study was applied in a bank's call center. Thus, the study population was limited. Health problems of the employees were based solely on their reports and employees' stress levels not measured by the scale.

Implications for Public Health Nursing

The findings of this study have implications for occupational nursing practice. Workplace nurses may determine the factors that lead to burnout at the workplace and come up with programs to mitigate those factors.

Acknowledgements

This work was supported by Marmara University Scientific Research Project Commission (SAG-D-130612-0210) and presented at the 5th FOHNEU International Congress and published in abstract form.

8. Kaygın E, Naktiyok A. Tükenmişlik ve iş tatmini arasındaki ilişki: akademik personel üzerinde bir araştırma [The relationship between burnout and job satisfaction: A study on the academic staff]. Çukurova Üniversitesi İİBF Dergisi. 2012; 16(1): 99-118.
9. Lin YH, Chen CY, Lu SY. Physical discomfort and psychosocial job stress among male and female operators at telecommunication call centers in Taiwan. *Appl Ergon*. 2009; 40(4): 561-568.
10. Rocha LE, Glina DMR, Marinho MF, Nakasato D. Risk factors for musculoskeletal symptoms among call centers operators of in bank in Sao Paulo. *Brazil Ind Health*. 2005; 43(4): 637-646.
11. Charbotel B, Croidieu S, Vohito M, Guerin AC, Renaud L, Jaussaud J, et al. Working conditions in call-centers, the impact on employee health: a transversal study. Part II. *Int Arch Occup Environ Health*. 2009; 82(6): 747-756.
12. Norman K, Nilsson T, Hagberg M, Tornqvist EW, Toomingas A. Working conditions and health among female and male employees at a call center in Sweden. *Am J Ind Med*. 2004; 46(1): 55-62.
13. Sprigg CA, Smith PR, Jackson PR. Psychosocial risk factors in call centers: an evaluation of work design and well-being. *Health & Safety Executive*. 2003; Research Report: 169.
14. Ferreira JRM, Saldiva PHN. Computer–telephone interactive tasks: predictors of musculoskeletal disorders according to work analysis and workers' perception. *Appl Ergon*. 2002; 33(2):147-153.
15. Holdsworth L, Cartwright S. Empowerment, stress and satisfaction: An exploratory study of a call center. *Leadership & Organization Development Journal*. 2003; 24(3): 131-140.
16. Zapfa D, Isica A, Bechtoldta M, Blaua P. What is typical for call center jobs? Job characteristics and service interactions in different call centers. *European Journal of Work and Organizational Psychology*. 2003; 12(4): 311-340.
17. Jones K, Sigmon J, Hock L, Nelson E, Sullivan M, Ogren F. Prevalence and risk factors for voice problems among telemarketers. *Arch Otolaryngol Head Neck Surg*. 2002;128(5): 571-577.
18. Ergin C. Doktor ve hemşirelerde tükenmişlik ve Maslach Tükenmişlik Ölçeğinin uyarlanması [Doctors and nurses, and the Maslach Burnout burnout scale adaptation]. VII. Ulusal Psikoloji Kongresi. Bilimsel Çalışmaları, Editörler: R. Bayraktar, İ. Dağ. Hacettepe Üniversitesi. 1992;143-154, Ankara.
19. Sharma M, Raina RL, Sharma R, Tiwari AK. Job stress of call center employees. *International Conference on Technology and Business Management*. 2011; 601(7): 28-30.
20. Lin YH, Chen CY, Hong WH, Lin YC. Perceived job stress and health complaints at a bank call center: comparison between inbound and outbound services. *Ind Health*. 2010; 48(3): 349-356.
21. Lewin J, Sager JK. A process model of burnout among sales people: some new thoughts. *Journal of Business Research*. 2007; 60: 1216-1224.
22. Pienaar J, Willems SA. Burnout, engagement, coping and general health of service employees in the hospitality industry. *Tourism Management*. 2008; 29: 1053-1063.
23. Maslach C, Goldberg J. Prevention of burnout: New perspective. *Applied and Preventive Psychology*. 1998; 7(1): 63-74.