International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 03, 2020
ISSN: 1475-7192

The Effect of Working Conditions of Doctors on Their Burnout Levels

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ABSTRACT--*Burnout is a syndrome, which is characterized with physical, emotional and mental exhaustion that maintain with the emergence of consistent tiredness, desperation, hopelessness and loss of self-respect emotions, causing troubles in someone's work life or her/his relationship with other people. This study is carried out to determine the effect of working conditions of doctors, working in Şanlıurfa, on their burnout levels. Within this regard, a questionnaire is conducted to 257 out of 750 doctors from 3 public hospitals, one private hospital and one university hospital, in the city centre of Şanlıurfa, by using simple random sampling method between 02.12.2019 and 25.01.2020. The emotional burnout levels of doctors are high and they are not content with the working conditions. At the end of the research, it is found out that doctors experience burnout at medium-level and there is a medium-level relationship between working conditions and burnout. As a result of the regression analysis, it is expected that the improvement in the working conditions of doctors causes to decrease the burnout level of them,* ***thereby****, an improvement in a general sense.*

Key words--*Working hours, Burnout, Doctor*

I. INTRODUCTION

People spend a significant part of their daily lives by working. Hence, working plays an important role in someone's life both economically and psychologically (Aras et al., 2018:106). Emotions of people reflect on their attitudes and their attitudes reflect on their behaviours. With the positive outcomes of perceived job specifications, work environment and emotional experiences in the workplace, work satisfaction and organizational commitment arise. In this case, efficiency and quality increase. However, consequences like stress, burnout, depersonalization and, finally, leave of employment can arises in the contrary cases. This causes efficiency and service quality to fall.

Previously, physical environment, working hours, occupational health and safety, wage, job satisfaction and working organization were included into the working conditions, however; the concept of working conditions has rapidly expanded with several developments in the areas such as social, political, economic, cultural and human rights. In addition to the studies of several international organizations, notably ILO, demands of workers, social pressures and changes in the perspectives of employers and governments have affected this development (Nalbant, 2006:26).

Work environment refers to the whole working conditions, having effect on individual and her/his behaviour. Considering all these definitions, these points should be paid attention while analysing the working conditions (Turkish Medical Association, 2018):

- The employment type of doctor,

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Received: 03 Dec 2019 | Revised: 21 Jan 2020 | Accepted: 18 Feb 2020

- Working conditions (working hours, over-time, home-job interaction, number of places worked, out-of-town assignments, means of transportation etc.),
- Wage,
- Relationships between employees,
- The quality of services,
- Problems and difficulties in the workplace,
- The effect of law and rights on employee,
- Professional independence of doctors,
- Organised struggle.

In addition to health services such as examining patients and/or operation, which doctors have, additional duties and responsibilities such as scientific research, education, administrative and academic studies leads working conditions to display heavy and risky view. Due to workload, which is arisen from inadequate equipment and few numbers of healthcare professionals and the length of working hours, having generally low wages pushes doctors to professional dissatisfaction and low motivation (Kumaş & Beyaztaş, 2007). Besides, medical knowledge and procedures generally include limitations and uncertainties. Any medical error or mistake can give irremediable damages to patients; even cause them to pass away. In addition, night work of healthcare professionals, shift working and long working hours are among the important reasons that trigger burnout. When analysed the literature, it is seen that doctors have considerably heavy working conditions (Saygılı & Çelik, 2011; Kumaş & Beyaztaş, 2007; Nalbant, 2006).

Burnout, firstly defined by psychologist Herbert Freudenberger in 1970s, includes "the state of mental exhaustion caused by professional life", "emotional exhaustion caused by depersonalization and decreased feeling of failure" and the loss of motivation (Lee et al., 2015:105). The definition, accepted today, was made by Maslach and Jackson. According to this, burnout is defined as "a syndrome, which is characterized with physical, emotional and mental exhaustion that maintain with the emergence of consistent tiredness, desperation, hopelessness and loss of self-respect emotions, causing troubles in someone's work life or her/his relationship with other people", it is handled under three dimensions as emotional exhaustion, depersonalization and lack of personal accomplishment (Maslach & Jackson, 1981:100).

Emotional exhaustion shows itself with lack of energy and feeling of consumed emotional resources. Depersonalization arises with workers who treat people, provided service, as if they were objects rather than human beings. Low personal accomplishment shows itself with a decrease in success and the feeling of competence, related to relationships with people, encountered within work (Aslan & Aslan, 1997:134).

Burnout in the workplace arises from uncontrollable stress, perceived as a threat factor for the comfort and peace of a person and named as the ambiguous physiological and psychological reaction to incidents (Güney, 2017:406). Work stress, emotional burnout, development of negative attitudes against workplace (cynicism) and lastly failure result in the feeling of uselessness (Günsel & Bozkurt, 2016:66-68). These emotions cause individual to deviate from the normal activities and, eventually, feel burnout (Güney, 2017:406).

At the beginning, burnout was reported among the employees, mostly in service businesses. In modern society, work stress and burnout are important issues for healthcare professionals. Burnout not only put the welfare and

health of employees in danger but also can result in much more medical errors and inadequate service quality (Bruce et al., 2005:73; Chou et al., 2014:1).

A great number of studies has shown that long-term exposure to work-related stress can lead burnout (Bruce et al., 2005:273; Shanafelt et al., 20155; Panagioti et al., 2017). In addition, when analysed the literature, it has been proven that doctors have significant stress in their professionals and this can lead to physical, psychological and emotional damages, especially burnout (Bruce et al., 2005; Tijdink et al., 2013; Maslach, 2005; Chou et al., 2014).

The biggest problem of burnout, seen among doctors, is the results in terms of doctors, patients and society. Burnout can frequently lead someone to drift away her/his job, thereby, potential unemployment, financial loss and more family conflict. Burnout can lead to damage objects; behave aggressively or violently in the workplace; suffer from depression and the possible increase in the rate of suicides. People with burnout have tendency to make more medical errors and most of these errors result in practices that destroy doctors, and eventually this leads to decrease in the quality of healthcare services (Shanafelt et al., 2015:1601; West et al., 2006).

Burnout brings along alienation. Alienation is defined as someone thinks nothing of social values and norms with the loss of interest in her/his society, cultural values and distribution of roles and feels weak and alone. Alienation can result in decrease of commitment to organization, decline in expectations and finally quitting (Erkasap, 2016:41-55).

Excessive workload, time pressure, the loss of autonomy between career and family and losing control are the most important reasons of burnout among doctors (Prins et al., 2007:789). In fact, these reasons show that the origin of this problem depends on organizations and the system of healthcare services rather than individuals. In addition, business policies can be associated to higher burnout levels, depression and the risk of coronary artery disease. When analysed the literature, it is determined that adequate personnel, fair hospital management, the idea of leadership, proper policies and practices are important in order to decrease burnout level (Bruce et al., 2005; Ünal et al., 2001). By all means, the reasons of burnout are not always external, the level of burnout is considerably high among the doctor that have features such as idealism, perfectionism and high sense of responsibility (Lee et al., 2015:106).

The way to fight against burnout is primarily specifying the reasons and determining the solutions. At this point, it is necessary for managers to work sensitively and properly organize the working conditions.

Taking into account all of these, it is estimated that this study, carried out to determine the effect of working conditions of doctors on their burnout levels, will contribute to the literature.

II. METHOD

The Research Question ***of Study:*** The sentence -"What is the effect of working conditions of doctors, working in Şanlıurfa, on their burnout levels?"- constitutes the problem of the study.

The aim of the ***study:*** This study is carried to determine the effect of working conditions of doctors, working in Şanlıurfa, on their burnout levels.

The Population and Sample of Study: The population of the study consists of doctors, working in 3 public hospitals, one private hospital and one university hospital. As the number of doctors are around 750 in the

population of the study, the sample group is determined as 250 by using simple random sampling method. The study was carried out between 02.12.2019 and 25.01.2020. At the end of the study, the number of doctors who filled in the questionnaire is 257.

Data collection tool: In order to collect data in the study, the questionnaire, named the working conditions of doctors in Şanlıurfa, which was developed by Eriş (2008) and a part, consisting of 5 questions regarding the socio-demographical features of doctors was used to collect data. Every statement in the questionnaire was prepared according to 5-point Likert scale and structured as "Strongly Disagree (1)", "Disagree (2)", "Neutral (3)", "Agree (4)", "Strongly Agree (5)".

Maslach Burnout Scale (MBS), consisting of 22 questions, was used to determine the burnout levels of doctors. The scale was developed by Maslach (1981) and adapted to Turkish by Çam and Ergin (1993). The scale includes sub dimensions which are emotional exhaustion with 9-item, depersonalization with 5-item and personal accomplishment with 8-item. The answers of scale were designed according to 5-point Likert (0=Never, 1=Rarely, 2=Sometimes, 3=Mostly, 4=Always).

While estimating the reliability value of the scales, Cronbach Alpha coefficient was calculated. The reliability coefficient of MBS is calculated as .845 and the reliability coefficient of the scale, named working condition of doctors in Şanlıurfa, is calculated as .835. These show that the reliability coefficients of the scales used in the study are high.

Table 1 The Socio-Demographic Attributes of Doctors in the Study

Hospital	**Number**	**Percent**
Public Hospitals	170	66.1
Harran University	55	21.5
Private Hospitals	32	12.4
Total	257	100.0
Age Group	**Number**	**Percent**
≤33	154	61.1
34≥	103	39.9
Total	257	100.0
Sex	**Number**	**Percent**
Female	101	39.3
Male	156	60.7
Total	257	100.0
Education	**Number**	**Percent**
Practitioner	98	38.1
Specialist Doctor	159	61.9
Total	257	100.0
Working Duration of Doctors in Şanlıurfa	**Number**	**Percent**
2 years or less	155	60.3
3 years or more	102	39.7

Total	257	100.0

The socio-demographic attributes of doctors in the study are shown in Table 1. It is determined that 66.1% of doctor works in the public hospital, 61.1% of them is 33 years or below, 60.7% of them is male, 61.9% of them is specialist doctor and 60.3% of them has been working in Şanlıurfa for 2 years or less.

III. FINDINGS

Findings of the study are given below.

Table 2: The Burnout Levels of Doctors

MBS Dimensions	X	SD
Emotional Exhaustion	28.56	6.55
Depersonalization	12.53	3.96
Personal Accomplishment	27.33	4.75

The points of MBS sub-dimensions of doctors are shown in Table 2. It is found that the emotional exhaustion point of doctors is 28.56 ±6.55, the point of depersonalization is 12.53 ± 3.96 and the point of personal accomplishment is 27.33 ±4.75.

Table 3: The Means of Views of Doctors regarding the Working Conditions

MBS Dimensions	Mean	SD
Working Conditions	3.65	.642
Social Opportunities	3.59	.789
Special Causes	3.12	.924

The means of views of doctors, in Şanlıurfa, regarding the working conditions are shown in Table 3. It is found that the mean of working conditions sub-dimension is 3.65, the mean of social opportunities sub-dimension is 3.59, and the mean of special causes sub-dimension is 3.12.

Table 4. The Analysis of Relationship between Working Conditions of Doctors and Burnout Sub dimensions

		Emotional Exhaustion	Depersonalization	Personal Accomplishment	General Burnout
Working Conditions	Corr. Coeff.	.687	.512	-.168	.632
	p	.000	.000	.001	.000

Social Opportunities	Corr. Coeff.	.413	.288	-.036	.410
	p	.000	.000	.489	.000
Special Causes	Corr. Coeff.	.415	.377	-.229	.345
	p	.000	.000	.000	.000

Findings regarding the relationship between doctors' working and life perceptions and burnout sub-dimensions, obtained by analysing the correlation coefficients, are shown in Table 4. According to these findings, all correlation coefficients are found as statistically significant, apart from the coefficients between personal accomplishment and social opportunities. The highest correlation coefficient is between the working conditions and emotional exhaustion, the lowest is between the working conditions and personal accomplishment.

Table 5. The Effect of Working Conditions, Social Opportunities and Special Causes Perceptions of Doctors on Emotional Exhaustion

	Regression Coefficients	Standard Regression Coefficients	t	p
Invariant	0.098		0.557	0.578
Working Conditions	0.749	0.618	13.308	0.000
Social Opportunities	0.025	0.025	0.558	0.577
Special Causes	0.115	0.137	3.233	0.001
R	R square	Corrected R square	F	p
0.702	0.492	0.488	114.743	0.000

In Table 5, the significance of linear regression model for the effects of working conditions of doctors, social opportunities and special causes on emotional exhaustion was tested with ANOVA test. According to ANOVA test, the model was found statistically significant. In addition, corrected R-square coefficient of the model is calculated as 0.488. This value shows that working conditions, social opportunities and special causes explain 48.8% of the variation in the emotional exhaustion with the linear regression model.

According to the findings regarding coefficients of regression model, the coefficient of social opportunities is statistically nonsense, the coefficients of working conditions and special causes are statistically significant. According to the standard coefficient, it is expected that 1 unit improvement in the working conditions causes 0.618 unit decrease (improvement) in the emotional exhaustion variable of burnout syndrome, 1 unit improvement in the special causes leads 0.137 unit decrease in the emotional exhaustion. When considered the values of student-t statistics of coefficients, it can be interpreted as the dimension of working conditions has higher significance (effect) on the emotional exhaustion of burnout syndrome.

Received: 03 Dec 2019 | Revised: 21 Jan 2020 | Accepted: 18 Feb 2020

Table 6 The Effect of Working Conditions, Social Opportunities and Special Causes Perceptions of Doctors on Depersonalization

	Regression Coefficients	Standard Regression Coefficients	t	p
Invariant	0.488		2.603	0.010
Working Conditions	0.479	0.443	8.084	0.000
Social Opportunities	-0.025	-0.027	-0.506	0.613
Special Causes	0.139	0.187	3.672	0.000
R	R square	Corrected R square	F	p
0,537	0.288	0.282	47.738	0.000

In Table 6, the significance of linear regression model for the effects of working conditions of doctors, social opportunities and special causes on depersonalization was tested with ANOVA test. According to ANOVA test, the model was found statistically significant. In addition, corrected R-square coefficient of the model is calculated as 0.282. This value shows that working conditions, social opportunities and special causes explain 28.2% of the variation in depersonalization with the linear regression model.

According to the findings regarding coefficients of regression model, the coefficient of social opportunities is statistically nonsense, the coefficients of working conditions and special causes are statistically significant. According to the standard coefficient, it is expected that 1 unit improvement in the working conditions causes 0.443 unit decrease (improvement) in depersonalization, 1 unit improvement in the special causes leads 0.187 unit decrease in depersonalization. When considered the values of student-t statistics of coefficients, it can be interpreted as the dimension of working conditions has higher significance (effect) on depersonalization.

Table 7. The Effect of Working Conditions, Social Opportunities and Special Causes Perceptions of Doctors on Personal Accomplishment

	Regression Coefficients	Standard Regression Coefficients	t	p
Invariant	3.890		21.955	0.000
Working Conditions	-0.139	-0.154	-2.455	0.015
Social Opportunities	0.107	0.144	2.339	0.020
Special Causes	-0.127	-0.205	-3.556	0.000
R	R square	Corrected R square	F	p

Received: 03 Dec 2019 | Revised: 21 Jan 2020 | Accepted: 18 Feb 2020

0,260	0.068	0.060	8.611	0.000

In Table 7, the significance of linear regression model for the effects of working conditions of doctors, social opportunities and special causes on personal accomplishment was tested with ANOVA test. According to ANOVA test, the model was found statistically significant. In addition, corrected R-square coefficient of the model is calculated as 0.060. This value shows that working conditions, social opportunities and special causes explain 6% of the variation in personal accomplishment with the linear regression model.

According to the findings regarding coefficients of regression model, the coefficients of all three dimensions are statistically significant. According to the standard coefficient, it is expected that 1 unit improvement in working conditions causes 0.154 unit increase (improvement) in personal accomplishment, 1 unit improvement in the social opportunities causes 0.144 unit increase (improvement) in personal accomplishment, 1 unit improvement in the special causes leads 0.205 unit decrease in personal accomplishment. When considered the values of student-t statistics of coefficients, it can be interpreted as the dimension of special causes has higher significance (effect) on personal accomplishment.

IV. DISCUSSION

According to the results of the study, including 250 doctors, which was carried out to determine the effect of working conditions of doctors in Şanlıurfa on their burnout levels, it was found out that the burnout levels of doctors are high and the highest burnout level is at the emotional exhaustion sub-dimension. In parallel with the study, the burnout level of 1 out of 3 doctors was found as high in the study, carried out by Aras et al. (2018). In addition, two or three dimensions of burnout were found as high in almost 1 out 3 participants and the emotional exhaustion was determined as the highest dimension in the study, carried out by Bruce et al. It was also found out that doctors have the highest level of burnout in the health facilities in the study of Chou (Chou et al., 2014). The burnout level of doctors was low in the results of the study, carried out by Baykan et al. on family doctors.

Studies regarding burnout in the United States of America show that almost half of the doctors have experienced burnout at some point throughout their career and the patients of these doctors, having high level of burnout, are also affected negatively (Panagioti et al., 2017; Shanafelt et al., 2015). Likewise, when analysed the literature, the results of the other studies on doctors show the high level of burnout among doctors (Dağdelen, 2012; Dikmetaş et al., 2011). According to the results of the study, low wage, shift working and intense work and stress related to traumatic incidents are seen as the elements, which increase the level of burnout (Kumaş & Beyaztaş, 2007).

When analysed the working conditions, it has been figured out that doctors evaluate their working conditions as moderately positive. In their study, Saygılı and Çelik (2011) have found out that doctors consider that their workload is high, wages are inadequate and their job definitions are not clear. Türk et al. concluded that doctors think that salary system is fair and the number of patient, examined daily, is excessive. According to the results of the study, it has been found out that there is a relationship between the working conditions and burnout levels, the closest relationship is between working conditions and emotional exhaustion and the most distant relationship is between working conditions and personal accomplishment. In addition, a weak relationship between special causes

and working conditions was found out. When analysed the literature, environmental factors play a bigger part in burnout rather than personal factors. The study, carried out by Öztürk et al. (2008) on health managers, suggests that managers who are satisfied with employees, workplace and their job, have fewer levels of burnout and sensitive to their jobs and duties within authority and responsibility. Likewise, it is stated in the study of Öztürk that managers, who are also doctors, feel emotional exhaustion more than managers, who are not doctors (Öztürk et al., 2008).

Unlike the results of these studies, in the study which was carried to analyse the burnout levels of personnel, who works in public hospital in terms of different features, and covered 185 healthcare professional, it has been figured out that the title and the working duration do not have any effect on burnout levels, however; descriptive features such as sex, age, the number of kids, education have effects on burnout levels (Akpolat & Işık, 2009).

According to the results, obtained by analysing the relationship between the working conditions and perception of life of doctors and burnout dimensions, except from the coefficient between personal accomplishment and social opportunities, all correlation coefficients are found as statistically significant. The highest correlation coefficient realizes between working conditions and emotional exhaustion, the lowest correlation coefficient realizes between working conditions and personal accomplishment. In other words, it has been figured out that the dimension of working conditions has more significance (effect) on emotional exhaustion and depersonalization. The dimension of special causes has more significance (effect) on personal accomplishment. Literature also backs up these results. Accordingly, there is a high correlation between working conditions and burnout levels (Baykan et al., 2014; Chou et al., 2014; Esteva et al., 2006). Likewise, Elbi et al. (2014) has found out that the improvement of working conditions decreases the level of burnout. As a result of meta-analysis, Panagioti et al. (2017) has figured out that the improvements of working conditions, made to decrease the burnout levels of doctors, affect considerably the level of burnout. Goehring et al. (2005) has also found out that dissatisfaction with the working conditions is a risk factor for burnout.

In the study, carried to determine the effect of working conditions of doctors on the level of burnout, , it is expected that 1 unit improvement in the working conditions causes 0.618 unit decrease (improvement) in the emotional exhaustion variable of burnout syndrome, 1 unit improvement in the special causes leads 0.137 unit decrease in the emotional exhaustion. There are studies that have similar results with this study in the literature. In the study, carried out by Acar (2016), it was found out that 1 unit increase in the quality of working life causes 0.802 unit decrease in the emotional exhaustion dimension of burnout syndrome.

In this study, it is expected that 1 unit improvement in the working conditions causes 0.443 unit decrease (improvement) in depersonalization of burnout syndrome, 1 unit improvement in the special causes leads 0.187 unit decrease in depersonalization of burnout syndrome. In the study, carried out by Acar (2016), it was found out that 1 unit increase in the quality of working life causes 0.709 unit decrease in the depersonalization dimension of burnout syndrome.

In this study, it is expected that 1 unit improvement in working conditions causes 0.154 unit increase (improvement) in the personal accomplishment of burnout syndrome, 1 unit improvement in the social opportunities causes 0.144 unit increase (improvement) in personal accomplishment and 1 unit improvement in the special causes leads 0.205 unit decrease in personal accomplishment. In the study, carried out by Acar (2016), it was found out that 1 unit increase in the quality of working life causes 0.448 unit increase in the personal

accomplishment dimension of burnout syndrome. In the study, carried out by Shanafelt et al. (2015) between 2011 and 2014, it was found out that there is a negative relationship between the burnout levels of 6.880 doctors in the United States of America and work-life balance and, therefore; more than half of the doctors face professional burnout.

In the studies, carried out in Turkey, it can be seen that studies on preventing and decreasing burnout are so limited, most of the studies are descriptive and cross-sectional. Being cross-sectional hinders the assessment of causality (Günüşen & Üstün, 2010). Hence, doing experimental and extensive study on burnout and making suggestions are recommended. According to Ünal, improving the quality of on-the-job training, preparing special trainings regarding communication, coping and managing stress, providing opportunities for the activities such as regular exercise enable less burnout and more job and life satisfaction (Ünal et al., 2001).

International studies have researched the stress, burnout and related psychiatric morbidity of health professionals in several specialities in order to prevent these negative results. In the studies, basic correlation and possible burnout reasons are determined as the lack of autonomy, excessive bureaucratic attempt, work load, role conflict (Bruce et al., 2005:273). When analysed the national literature, it can be seen that the studies regarding burnout include variables, belonging to individual and environment (workplace).

V. CONCLUSION AND SUGGESTIONS

In this study, the effect of working conditions of doctors on their levels of burnout was analysed. The study was carried out among the doctors, who work in the city centre of Şanlıurfa. In the consequence of the study, it has been found out that doctors are not satisfied with their working conditions and their levels of burnout are high. In addition, as a result of the correlation analyse, made to determine the relationship between working conditions and burnout, except from the coefficient between personal accomplishment and social opportunities, all correlation coefficients are found as statistically significant. As a result of the regression analyses, made to determine the effect of working conditions on burnout level, it has been figured out that the possible improvements of working conditions would decrease the burnout levels of doctors.

It is seen that the status of working conditions and burnout syndrome are important problems among doctors. By eliminating the reasons of these problems, the regulations and alterations of personal, organizational and national healthcare policies are thought as necessary to provide doctors with more qualified education and work environment. In addition, studies, carried to determine level of burnout with the samples, which can represent all healthcare professionals at the national level, should be increased.

REFERENCES

1. Acar A. (2016). Effect of Quality of Work Life on Burnuot Syndrome Level: A Study on Hospitality Industry Enterprises (Master's Thesis). İstanbul University Institute of Social Sciences Department of Tourism Management, İstanbul.
2. Akpolat, M., Işık, O. (2009). "The Levels of Burnout of Health Employees: Sample of a Public Hospital", Hacettepe Journal of Health Management, 11(2), 229-254.

3. Aras A., Guraksın, A., Koşan, Z., Okşan Çalıkoğlu E., Yerli E. B. (2018). "Burnout syndrome, job satisfaction and associated factors among primary health care doctors in Erzurum, Turkey". J SurgMed, 2(2), 105-110. doi: 10.28982/josam.408173
4. Aslan, S.H., Aslan O. (1997). "Gender factors in the burnout of doctors". Çukurova Univ Med J, 22: 132–136.
5. Baykan, Z., Çetinkaya. F., Naçar, M, Kaya A, Işıldak MÜ. (2014). "Burnout among family physicians and its associated factors". Turkish Journal of Family Practice, 18, 122–33.
6. Bruce, S. M., Conaglen, H. M., Conaglen, J. V. (2005). "Burnout in physicians: a Case for Peer-support", Internal Medicine Journal, 35, 272–278.
7. Chou L-P, Li C-Y, Hu SC. (2014). "Job stress and burnout in hospital employees: comparisons of different medical professions in a regional hospital in Taiwan", BMJ Open, 4:e004185. 1-7, doi:10.1136/bmjopen-2013-004185
8. Dağdelen, N. (2012). Burnout Syndrome and Depression Levels and Related Factors in Turkish Radiation Oncology Residents (Dissertation). Dokuz Eylül University Faculty of Medicine, Department of Radiation Oncology, İzmir.
9. Dikmetaş, E., Top, M., Ergin, G. (2011). "An Examination of Mobbing and Burnout of Residents". Turkish Journal of Psychiatry, 22(3), 1-15.
10. Elbi H, Balcı UG, Nazik F, Korkmaz H, Öngel K.(2014). "Burnout Levels of Health Workers in Family Medicine System in Afyonkarahisar City". Smyrna Med J, 36–40.
11. Erkasap, A. (2016). Örgütsel Yabancılaşma Örgüt Yönetiminde Duygular (Editor: Beliz Ülgen) (First Edition). Ankara: Nobel Yayıncılık.
12. Esteva M. Larraz C. Jiménez F. (2006). "Mental health in family doctors: effects of satisfaction and stress at work". Rev Clin Esp, 2, 77-83.
13. Goehring C. Bouvier Gallacchi M. Künzi B. Bovier P. (2005). "Psychosocial and professional characteristics of burnout in Swiss primary care practitioners: a cross-sectional survey". Swiss Med Wkly, 19; 135(7-8): 101-8.
14. Güney, S. (2017). Örgütsel Davranış, (Fourth Edition). Ankara: Nobel Yayıncılık.
15. Mc Shane S.L., Glinow M.A.V. (2016). Örgütsel Davranış (Günsel, A. & Bozkurt, S., Trans.) Ankara: Nobel Yayıncılık. (Original work published in 2003)
16. Günüşen, N. P., Üstün, B. (2010). "Burnout in the Nurses and Doctors Working in Secondary Healthcare Services in Turkey: A Literature Review". Dokuz Eylül University Hemşirelik Yüksekokulu Elektronik Dergisi, 3(1), 40-51.
17. Kumaş, H., Beyaztaş, Yücel, F. (20007). "The Evaluation of the Working Conditions of Physicians in Turkey". Cumhuriyet University Journal of Faculty of Medicine, 29(3), 123-127.
18. Lee, Y.Y., Medford, Halim, A. (2015). "Burnout in Physicians". J. R. Coll Physicians Edinb, 45, 104–107 http://dx.doi.org/10.4997/JRCPE.2015.203.
19. Maslach C, Jackson SE. (1981). "The Measurement of Experienced Burnout". J Organ Behav 2, 99–113. doi:10.1002/job.4030020205.
20. Maslach C, Schaufeli WB, Leiter MP. (2001). "Job Burnout". AnnuRevPsychol, 52, 397–422.
21. Nalbant, Ş. (2006). Working Conditions of Health Sector in Turkey and Right of Trade Union (Master's Thesis). Dokuz Eylül University Institute of Social Sciences, İzmir.

22. Özmen, M. et al. (2010). "Otel Çalışanlarının Tükenmişlik ve İş Tatmin Düzeyleri İlişkisi". Journal of Yaşar University, 5(17), 2922-2293.
23. Öztürk, A., Tolga, Y., Şenol, V., Günay, O. (2008). "Evaluation of Burnout Levels of Health Managers in Kayseri City". Erciyes Medical Journal, 30(2): 92-99.
24. Panagioti, M., Panagopoulou, E., Bower, P. Lewith, G. Kontopantelis, E. (2017). "Controlled Interventions to Reduce Burnout in Physicians A Systematic Review and Meta-analysis", JAMA Intern Med., 177(2): 195 205, doi:10.1001/jamainternmed.2016.7674.
25. Prins JT, Gazendam-Donofrio SM, Tubben BJ, et al. (2007). "Burnout in Medical Residents: A Review". MedEduc, 41,788–800.
26. Saygılı, M. Çelik, Y. (2011). "The Evaluation of Relationship Between Job Satisfaction and Perceptions Relating to Working Environment of Health Staff Working in Hospitals", Hacettepe Journal of Health Management, 14(1): 39-71.
27. Shanafelt T.D., Hasan O, Dyrbye L.N., Sinsky C, Satele D, Sloan J, West C.P. (2015) "Changes in Burnout and Satisfaction With Work-Life Balance in Physicians and the General US Working Population Between 2011 and 2014". Mayo Clin Proc,90(12):1600-13. doi: 10.1016/j.mayocp.2015.08.023.
28. Tait D. Shanafelt, MD; Omar Hasan, MBBS, MPH; Lotte N. Dyrbye, MD, MHPE; Christine Sinsky, MD; Daniel Satele, MS; JeffS loan, PhD; and Colin P. West, MD, PhD. (2015). "Changes in Burnout and Satisfaction With Work-Life Balance in Physicians and the General US Working Population Between 2011 and 2014". Mayo Foundation for Medical Education and Research, 90(12): 1600-1613.
29. Tijdink JK, Vergouwen ACM, Smulders YM. (2013). "Publication pressure and burnout among Dutch medical professors: a nationwide survey". PLoSOne, 8:e73381. http://dx.doi.org/10.1371/journal. pone.0073381
30. Turkish Medical Association (2018). "Araştırma: Ortak Sağlık ve Güvenlik Biriminde Çalışan Hekimlerin Çalışma Koşulları Ve Yaşadıkları Sorunlar". Türk Tabipleri Birliği Mesleki Sağlık ve Güvenlik Dergisi, 49-58.
31. Türk, Y.Z., Çetin, M.; Fedai, T. (2012). "Determinants of Quality of Work Life at Young Physicians", Journal of Health Sciences, 21(3) 172-181.
32. Ünal, S., Karlıdağ, R., Yoloğlu, S. (2001). "Relationships Between Burnout, Job Satisfaction and Life Satisfaction in Physicians", Turkish Journal of Clinical Psychiatry, 4, 113-118.
33. West CP, Tan AD, Habermann TM et al. (2009). "Association of Resident Fatigue And Distress With Perceived Medical Errors". JAMA, 302, 1294–1300. http://dx.doi.org/10.1001/jama.2009.1389