Assessment of Psychosocial Risks and Mental Health Status in a Faculty of Dentistry

Bir Diş Hekimliği Fakültesinde Psikososyal Riskler ve Ruh Sağlığı Durumunun Değerlendirilmesi

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Abstract

Objectives: It was aimed to evaluate the psychosocial risks, mental health status of the employees and related factors in a faculty of dentistry.

Materials and Methods: In this cross-sectional study, no sample was selected. It is planned to include all employees at the faculty of dentistry between November 2021 and January 2022. The data collection form included questions on socio-demographic characteristics, working life characteristics and Coronavirus disease-2019, the Turkish Copenhagen Psychosocial Questionnaire (COPSOQ-TR) and the General Health Questionnaire-12. Data were collected using a survey method under observation in the participant's workplace. Chi-square test and logistic regression analysis were applied in statistical analysis. Ethical approval was obtained for the study.

Results: Three hundred three (80% participation rate) employees were included in the study. The percentage of participants with high psychosocial risk scores is highest in the dimensions of lack of job satisfaction, insecurity over working conditions and work pace. The majority (52%) had poor mental health. Those with high risk scores in most dimensions of COPSOQ-TR have significantly poorer mental health status. In regression analysis, the variables of occupational group, access to adequate and appropriate personal protective equipment, lack of predictability, and burnout predicted poor mental health status.

Conclusion: It was found that the most important psychosocial risks are lack of job satisfaction, insecurity over working conditions and work pace. It has been demonstrated that the mental health status of the majority is poor and psychosocial risks are related to the mental health status of the participants.

Keywords: Occupational health, psychosocial factors, risk assessment, dentistry, mental health

Öz

Amaç: Diş hekimliği fakültesinde psikososyal riskleri, çalışanların ruh sağlığı durumunu ve ilgili faktörleri değerlendirmek amaçlanmıştır.

Gereç ve Yöntem: Kesitsel tipte olan çalışmada örneklem seçilmemiştir. Kasım 2021-Ocak 2022 tarihleri arasında diş hekimliği fakültesindeki tüm çalışanları kapsaması planlanmıştır. Veri toplama formunda sosyodemografik özellikler, çalışma yaşamı özellikleri ve Koronavirüs hastalığı-2019'a ilişkin sorular, Kopenhag Psikososyal Risk Değerlendirmesi Ölçeği (KOPSOR-TR) ve Genel Sağlık Anketi-12 yer almıştır. Veriler katılımcının işyerinde gözlem altında anket yöntemi kullanılarak toplanmıştır. İstatistiksel analizde ki-kare testi ve lojistik regresyon analizi uygulanmıştır. Çalışma için etik onay alınmıştır.

Bulgular: Çalışmaya 303 (%80 katılım oranı) çalışan dahil edilmiştir. Yüksek psikososyal risk puanına sahip katılımcıların yüzdesi en fazla iş doyumu eksikliği, çalışma koşulları güvencesizliği ve çalışma hızı boyutlarındadır. Çoğunluğun (%52) ruh sağlığı durumu kötüdür. KOPSOR-TR'nin çoğu

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boyutunda risk puanı yüksek olanların ruh sağlığı durumu anlamlı ölçüde kötüdür. Regresyon analizinde, meslek grubu, yeterli ve uygun kişisel koruyucu donanıma ulaşabilme durumu, öngörülebilirlik eksikliği ve tükenmişlik ruh sağlığı durumunun kötü olması durumunu öngörmüştür.

Sonuç: En önemli psikososyal risklerin iş doyumu eksikliği, çalışma koşulları güvencesizliği ve çalışma hızı olduğu bulunmuştur. Çoğunluğun ruh sağlığı durumu kötüdür ve psikososyal risklerin katılımcıların ruh sağlığı durumuyla ilişkili olduğu gösterilmiştir.

Anahtar Kelimeler: İş sağlığı, psikososyal faktörler, risk değerlendirmesi, diş hekimliği, ruh sağlığı

Introduction

Psychosocial hazards are defined as factors that arise from inappropriate job design, organization and management and can lead to physical and mental illnesses in employees or managerial problems such as lack of productivity and absenteeism (1). Psychosocial risk is the probability that a psychosocial hazard will cause harm (2). However, the concepts of psychosocial hazard and risk, which are intertwined in many sources, are used interchangeably in the literature (3). The concepts of psychosocial risk and work-related stress, one of these risks, are often treated synonymously in the literature (3,4).

A quarter of employees in Europe report experiencing work-related stress. The most common psychosocial hazards are related to the employee's task type and work intensity (5). Different professions tend to involve different types of hazards (3). Work-related psychosocial hazards can have negative effects on the personal and professional relationships, physical and mental health of dental professionals (6). In their study in Taiwan, Lee et al. (7) reported that work stress and professional burnout were common among dental professionals. Severe acute respiratory syndrome-Coronavirus-2, spread rapidly all over the world and caused the coronavirus disease-2019 (COVID-19) pandemic. Although the global public health emergency was declared over in May 2023, the pandemic continues (8). In this process, healthcare workers have been exposed to additional psychological difficulties such as fear of infecting their families, being discriminated against by society as potential virus carriers, interruption of education and research activities, personal protective equipment (PPE) shortage and working under heavy workload and time pressure despite inadequate PPE (9,10). With the COVID-19 pandemic, psychosocial risks in the dental work environment have become even more important. During this period, dental professional practices were interrupted, new practices were introduced in dental procedures, and some dental treatments were postponed (9,11).

Psychosocial risks, like other important health and safety issues, can be managed effectively by applying an appropriate risk management approach (12). Risk assessment, the core element of the risk management process (13), is a systematic step-by-step approach (2).

Lee et al. (7) reported that job stress and burnout are common among dental professionals in their study in Taiwan.

Various studies have found high levels of burnout in dentists (14-16). With the COVID-19 pandemic, psychosocial risk factors in the dentistry work environment have gained even more importance. During this period, dentistry professional practices were interrupted, new practices were implemented in dental procedures due to the high risk of cross-infection, and some dental treatments were postponed (11,17). COVID-19 has been a major concern among dental health workers because they work in close contact with the oral cavity and frequently perform aerosol-generating procedures (18). It has been observed that the number of studies examining psychosocial risks in the field of dentistry is limited, especially during the COVID-19 pandemic. Also in the literature review, there are a limited number of studies examining workplace psychosocial risks and employees' mental health status together. For these reasons, this study aims to evaluate psychosocial risks, mental health status and related factors at the faculty of dentistry; it was also aimed to determine the relationship between psychosocial risks and the mental health status of employees.

Materials and Methods

The cross-sectional study was conducted Ankara University Faculty of Dentistry. The universe consists of all employees working between November 2021 and January 2022. The sample was not selected. It was planned to include all people making up the universe within the scope of the research. Informed consent of the employees was obtained. Ethical approval was obtained from Ankara University Rectorate Ethics Committee (approval no.: 18/198, date: 22.11.2021), and necessary permissions were obtained from the faculty of dentistry and the Ministry of Health. Additionally, scale usage permissions were obtained. This article was extracted from the medical speciality thesis titled "Evaluation of Psychosocial Risks and General Health of Employees in a Faculty of Dentistry" prepared in Ankara, Türkiye in 2023.

Dependant variables are the scores employees received by the Turkish Copenhagen psychosocial questionnaire (COPSOQ-TR) dimensions and the general health questionnaire-12 (GHQ-12). Independent variables are the socio-demographic, health and working life characteristics of the employees, the status of being assigned to the unit related to COVID-19, the ability to access sufficient and appropriate PPE, the possibility of flexible/remote working during the COVID-19 pandemic, the status of having COVID-19 and the most stressful work-related situations

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experienced by employees during the COVID-19 pandemic. In comparisons made with GHQ-12 scores, the scores received by employees from the COPSOQ-TR dimensions were treated as independent variables.

Data were collected by survey method under observation. The data collection form consists of COPSOQ-TR and GHQ-12, as well as questions regarding socio-demographic, health and working life characteristics and COVID-19.

COPSOQ is a scale developed by Kristensen and Borg to collect valid and reliable information about basic psychosocial risk factors (19). The Türkiye validity and reliability study of the COPSOQ-3 scale (3rd edition) was conducted by Şahan et al. (20) in 2018. It was made by and named COPSOQ-TR. COPSOQ-TR consists of 25 dimensions and 87 items (1). The dimensions included in COPSOQ-TR are examined by dividing into five themes. These themes are: the demands theme, impact and development theme, interpersonal relations and leadership theme, other parameters theme and results theme (20). The Cronbach's alpha values of the lack of freedom at work and lack of predictability dimensions are 0.54 and 0.66, respectively. Cronbach's alpha values of the other 23 COPSOQ-TR dimensions are above 0.70 (20). In the analysis conducted in our research, the Cronbach's alpha value of all 25 dimensions is 0.70 and above. The scoring of each dimension was calculated on its own. Lack of job satisfaction was scored on a 4-point Likert scale, and all other dimensions were scored on a 5-point Likert scale. Scores at or above the median value, which is the cut-off point, indicate that the psychosocial risk in the relevant dimension is high, while scores below the median value indicate that the psychosocial risk in the relevant dimension is low (1,21).

GHQ-12 was developed by Goldberg to measure acute mental health problems common in society. Türkiye validity and reliability study was conducted by Kilic (22). While the Cronbach's alpha value in reliability calculations for GHQ-12 is 0.78 (22), it is 0.87 in the analysis conducted in our research. Likert type scoring method was used in our research (22). According to this scoring method, the highest score that can be obtained from the scale is 36, and a higher score indicates poorer mental health (23). The median value of the GHQ-12 total score is the cut-off point. Those with this value and above are categorised as having poor mental health, while those below that value are categorised as having good mental health (21).

Statistical Analysis

Data analysis was done using SPSS® statistics 25 programme. The suitability of numerical variables for normal distribution was evaluated using histograms, probability graphs and the Kolmogorov-Smirnov test. The first stage of an effective psychosocial risk assessment is job analysis (1). For this purpose, three categories are defined for the tasks performed by employees. Chi-square test was applied to compare categorical variables. Bonferroni correction was made from post-hoc tests. Variables predicting poor mental health status were evaluated using Backward Logistic Regression analysis. Multicollinearity between the numerical and ordinal variables in the model was evaluated with the Spearman correlation test. Variables with a significant relationship (p<0.05) in univariate analyses and in the literature, and variables with a p<0.25 although there was no significant relationship, were included in the model. Modelling was done with 29 variables in total. Since the Hosmer-Lemeshow test p-value=0.75, the final model was considered to have a good fit to the data. Statistical significance level was taken as p<0.05 (24,25).

Results

In this study, 305 (80%) people out of 380 people who made up the population were reached. One person was excluded from the research due to insufficient data and another person was excluded from the study due to the fact that she had only been working at the faculty for one day. Ultimately, 303 (80% participation rate) people were included in the research.

Table 1 presents the socio-demographic and working life characteristics of the participants. The average age of the participants is 38.36 (±11.18). The youngest participant is 23 years old, the oldest is 65 years old, 54% are women, 62% are married, 55% have children, 80% are higher education graduates and 18% have at least one of the following chronic physical illness, mental illness or disability.

Table 1: Socio-demographic and working life characteristics of the participants	
Socio-demographic and working life characteristics	n (%)
Age (years) (n=302)	
20-29	105 (35)
30-39	61 (20)
40-49	81 (27)
≥50	55 (18)
Gender (n=303)	
Female	164 (54)
Male	139 (46)
Education level (n=303)	
Primary/Secondary education	62 (20)
Tertiary education	241 (80)
Marital status (n=301)	
Single	96 (32)
Married	188 (62)
Divorced/separated/widow	17 (6)

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Table 1: Continued	
Socio-demographic and working life characteristics	n (%)
Parental status (n=303)	
Children	166 (55)
No children	137 (45)
Occupational group (n=303)	
Dentist[a]	165 (54)
Nurse	21 (7)
Health technician	16 (5)
Non-healthcare professional	101 (33)
Task (n=288)	
Academic unit academic task	168 (58)
Academic unit administrative task	66 (23)
Administrative unit administrative task	54 (19)
Weekly working hours (n=299)	
≤40	237 (79)
>40	62 (21)
Total working time (years) (n=299)	
0-5	104 (35)
6-15	62 (21)
16-25	73 (24)
≥26	60 (20)
[a]One medical doctor participated in the study and was included in the analyses in the dentist group	

In the faculty, 23% of employees stated that they were assigned to a unit related to COVID-19, 66% stated that they had access to sufficient and appropriate PPE during the pandemic, 76% stated that they had the opportunity to work flexibly/remotely during this period and 19% stated that they had COVID-19. One person stated that he had never been vaccinated and 91% of employees have received at least three doses of the COVID-19 vaccine and 99% have received at least two doses. In the study, 80% of the participants stated that the concern of infecting the family with the virus, 55% stated that the fear of contracting COVID-19, 48% stated that uncertainty in working conditions, and 33% stated that the reduced social interaction due to measures requiring physical distancing was one of the most stressful work-related situations during the COVID-19 pandemic.

Table 2 shows the distribution of risk scores of employees according to COPSOQ-TR dimensions. The dimensions with the highest median psychosocial risk score are cognitive demands, work pace and burnout, respectively (median value=75.00, 66.67, 62.50 respectively). When the scores received by employees from the COPSOQ-TR scale are categorised, the highest percentage of participants in the high-risk group is in the dimensions of lack of job satisfaction (57%), insecurity over working conditions (55%) and work pace (54%).

COPSOQ-TR dimension scores were compared according to the participants' occupational group and task. The occupational group was found to be associated with the participants' risk

Table 2: Distribution of participants' risk scores according to COPSOQ-TR dimensions			
COPSOQ-TR dimension (n)	n (%)	COPSOQ-TR dimension (n)	n (%)
Work pace (303)		**Role-conflicts (301)**	
Low score	138 (46)	Low score	197 (65)
High score	165 (54)	High score	104 (35)
Quantitative demands (302)		**Lack of quality of leadership (300)**	
Low score	144 (48)	Low score	153 (51)
High score	158 (52)	High score	147 (49)
Cognitive demands (303)		**Lack of social support from colleagues (301)**	
Low score	178 (59)	Low score	148 (49)
High score	125 (41)	High score	153 (51)
Emotional demands (302)		**Lack of social support from supervisors (300)**	
Low score	164 (54)	Low score	185 (62)
High score	138 (46)	High score	115 (38)
Demands for hiding emotions (303)		**Lack of sense of community (300)**	
Low score	169 (56)	Low score	163 (54)
High score	134 (44)	High score	137 (46)
Lack of influence at work (303)		**Insecurity over employment (301)**	
Low score	171 (56)	Low score	166 (55)
High score	132 (44)	High score	135 (45)

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Table 2: Continued				
COPSOQ–TR dimension (n)	n (%)	COPSOQ–TR dimension (n)	n (%)
Lack of possibilities for development (298)		Insecurity over working conditions (298)	
Low score	163 (55)	Low score	134 (45)
High score	135 (45)	High score	164 (55)
Lack of freedom at work (298)		Work life conflict (299)	
Low score	174 (58)	Low score	179 (60)
High score	124 (42)	High score	120 (40)
Meaninglessness of work (298)		Lack of trust (298)	
Low score	189 (63)	Low score	188 (63)
High score	109 (37)	High score	110 (37)
Lack of commitment to the workplace (297)		Lack of organisational justice and respect (297)	
Low score	140 (47)	Low score	153 (52)
High score	157 (53)	High score	144 (48)
Lack of predictability (298)		Lack of job satisfaction (298)	
Low score	184 (62)	Low score	129 (43)
High score	114 (38)	High score	169 (57)
Lack of recognition (298)		Burnout (298)	
Low score	177 (59)	Low score	173 (58)
High score	121 (41)	High score	125 (42)
Lack of role–clarity (301)			
Low score	182 (60)		
High score	119 (40)		
COPSOQ-TR: The Turkish Copenhagen Psychosocial Questionnaire			

levels of quantitative demands, emotional demands, work-life conflict, lack of influence at work, lack of possibilities for development, lack of predictability, role conflicts, lack of social support from colleagues and lack of social support from superiors (p<0.05). Quantitative demands, emotional demands, work-life conflict, lack of influence at work, lack of possibilities for development, lack of predictability, role conflicts, lack of social support from colleagues, lack of social support from superiors and burnout risk levels were found to be associated with the employee's task (p<0.05).

Comparison of participants' mental health status according to their characteristics related to working life and the COVID-19 pandemic is presented in Table 3. The median of the scores the participants received from the GHQ-12 scale is 12. When evaluated by categorising the GHQ-12 score, 52% of the participants (n=151) had a poor mental health condition. There is no statistically significant difference between the mental health status of the participants according to socio-demographic characteristics (p>0.05). The mental health status of those without a chronic disease or disability is significantly worse than that of people with the relevant condition (p<0.05).

Comparison of the participants' mental health status according to their COPSOQ-TR dimension scores is presented in Table 4. The mental health status of those with a high risk of

quantitative demands, cognitive demands, emotional demands, work-life conflict, lack of influence at work, lack of freedom at work, meaninglessness of work, lack of commitment to the workplace, lack of predictability, lack of role-clarity, role conflicts, lack of quality of leadership, lack of social support from superiors, lack of organizational justice and respect, insecurity over employment, insecurity over working conditions, lack of job satisfaction and burnout is significantly worse than those with a low risk (p<0.05).

Table 5 presents the logistic regression analysis last step results regarding the effects of some characteristics of the participants and COPSOQ-TR dimensions on mental health status. It was found that the variables of occupational group, access to adequate and appropriate PPE, lack of predictability and burnout significantly affected the poor mental health status (p<0.05).

Discussion

It has been found that the most important psychosocial risks in the faculty are lack of job satisfaction, insecurity over working conditions, work pace, and the majority have poor mental health status. The strengths of our research are that it evaluates many problems at the same time and, as far as is known, it is the first

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study in the field of dentistry where psychosocial risks, mental health status and factors related to the COVID-19 pandemic are examined together in all professional groups. Additionally, the risk assessment made a contribution to routine occupational health services. Since the number of studies conducted with COPSOQ for all employees in the field of dentistry is limited, it was thought that the discussion was incomplete in this respect.

Due to the nature of the COPSOQ-TR scale, the workplace must be evaluated within itself (1). Lack of job satisfaction, insecurity over working conditions and work pace, which are the dimensions with the highest percentage of participants in the high-risk group, are the most important psychosocial risks in the faculty. This may be due to reasons such as difficult working conditions, high risk of COVID-19 transmission, frequent changes in instructions, prolongation of practices due to new

procedures, necessity to work with PPE, assignments outside their field, unintentional changes in working hours. In some studies conducted on healthcare workers, the most important psychosocial risks at work are often different from our study (26-28).

Psychosocial risks of dentists and academic staff in academic units are high in the dimensions that appear significant in the theme of demands. Previous studies have also reported that dentists have high risk levels in terms of demands (29-31). This may be due to the high amount of work dentists have to do in a limited time, the fact that they are faced with patient demands, the high probability of doing many tasks, including management, and the fact that dentists are mostly assigned during the pandemic.

Table 3: Comparison of participants' mental health status according to their characteristics related to working life and the COVID-19 pandemic

Characteristics	Mental health status			Characteristics	Mental health status		
	Good	Poor	p-value		Good	Poor	p-value
	n (%)	n (%)			n (%)	n (%)	
Occupational group				**Having COVID-19**			
Dentist	68 (43)	91 (57)	**0.037**	Yes	28 (51)	27 (49)	0.664
Nurse	13 (65)	7 (35)		No	112 (48)	123 (52)	
Health technician	5 (31)	11 (69)		**Fear of getting COVID-19[a]**			
Non-healthcare professional	54 (56)	42 (44)		Yes	71 (45)	87 (55)	0.238
Task				No	69 (52)	64 (48)	
Academic unit academic task	70 (43)	92 (57)	**0.027**	**Concern about infecting the family with the virus[a]**			
Academic unit administrative task	32 (50)	32 (50)		Yes	107 (46)	124 (54)	0.231
Administrative unit administrative task	33 (65)	18 (35)		No	33 (55)	27 (45)	
Total working time (years)				**Obligation to work with PPE[a]**			
0-5	39 (39)	60 (61)	0.205	Yes	36 (40)	54 (60)	0.064
6-15	32 (53)	29 (47)		No	104 (52)	97(48)	
16-25	33 (48)	36 (52)		**Interruption of education-research activities[a]**			
≥26	32 (55)	26 (45)		Yes	41 (46)	48 (54)	0.643
Weekly working hours				No	99 (49)	103 (51)	
≤40	108 (48)	117 (52)	0.864	**Uncertainty in working conditions[a]**			
>40	29 (47)	33 (53)		Yes	57 (41)	82 (59)	**0.020**
Status of being assigned to the unit related to COVID-19				No	83 (55)	69 (45)	
Yes	31 (46)	36 (54)	0.731	**New practices in dental procedures[a]**			
No	109 (49)	115 (51)		Yes	19 (50)	19 (50)	0.803
Availability of access to sufficient and appropriate PPE				No	12 (48)	132 (52)	
Yes	110 (57)	84 (43)	**0.000**	**Reduced social interaction due to measures[a]**			
No	30 (31)	66 (69)		Yes	51 (55)	42 (45)	0.115
Flexible/remote working opportunity during the pandemic				No	89 (45)	109 (55)	
Yes	106 (48)	114 (52)	0.880				
No	33 (47)	37 (53)					
Row percentages are used in the table							
a: During the COVID-19 pandemic, participants who reported the work-related caused the most stress were compared with those who did not							
NS: Not significant; COVID-19: Coronavirus disease-2019, PPE: Personal protective equipment							

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It is noteworthy that the risk of lack of influence at work and lack of possibilities for development differs according to occupational groups, both in our research and in the relevant literature, and that the risk is lowest in the dentist/physician group (26,29,32). This may be due to the fact that dentists/physicians are generally in a supervisory position and education and research activities are mainly carried out among dentists. The risk of lack of influence at work and lack of possibilities for development for those working academically in academic units is significantly lower than other groups. The significant difference in the same dimensions of the theme of demands and impact and development according to occupational group and task is probably due to the fact that 98% of those working in academic units are dentists.

In the dimensions that are significant in the theme of interpersonal relations and leadership, mostly those who are not healthcare professionals and those who work in administrative positions have high psychosocial risks. Findings are diverse, especially in previous studies where evaluations were made according to occupations (29,31-33). The high risk of lack of predictability for those who are not healthcare professionals and those who work in administrative positions suggests that they may have been left in the background in terms of notification of decisions and information, due to reasons such as the fact that most of the managers are dentists and the education network is mainly among dentists. The risk of lack of social support from colleagues and superiors is also high in these groups. Those working in administrative units are more likely to work at a desk

Table 4: Comparison of participants' mental health status according to COPSOQ-TR dimension scores										
COPSOQ-TR dimension		Mental health status			COPSOQ-TR dimension		Mental health status		
		Good	Poor	p-value			Good	Poor	p-value
		n (%)	n (%)				n (%)	n (%)	
Work pace	Low	65 (49)	67 (51)	0.725	Role conflicts	Low	99 (53)	88 (47)	0.038
	High	75 (47)	84 (53)			High	41 (40)	61 (60)	
Quantitative demands	Low	81 (58)	58 (42)	0.001	Lack of quality of leadership	Low	81 (55)	66 (45)	0.018
	High	59 (39)	92 (61)			High	58 (41)	83 (59)	
Cognitive demands	Low	92 (53)	80 (47)	0.027	Lack of social support from colleagues	Low	73 (52)	68 (48)	0.269
	High	48 (40)	71 (60)			High	67 (45)	81 (55)	
Emotional demands	Low	95 (59)	65 (41)	0.000	Lack of social support from supervisors	Low	95 (53)	83 (47)	0.027
	High	45 (35)	85 (65)			High	44 (40)	66 (60)	
Demands for hiding emotions	Low	83 (52)	78 (48)	0.191	Lack of sense of community	Low	79 (51)	76 (49)	0.322
	High	57 (44)	73 (56)			High	60 (45)	73 (55)	
Lack of influence at work	Low	88 (54)	76 (46)	0.031	Insecurity over employment	Low	89 (55)	72 (45)	0.006
	high	52 (41)	75 (59)			high	50 (39)	78 (61)	
Lack of possibilities for development	low	80 (51)	76 (49)	0.292	Insecurity over working conditions	low	76 (58)	56 (42)	0.002
	high	59 (45)	72 (55)			high	61 (39)	94 (61)	
Lack of freedom at work	Low	92 (55)	75 (45)	0.008	Work-life conflict	Low	102 (59)	71 (41)	0.000
	High	47 (39)	73 (61)			High	37 (32)	78 (68)	
Meaninglessness of work	Low	104 (57)	80 (43)	0.000	Lack of trust	Low	96 (52)	87 (48)	0.051
	High	35 (34)	68 (66)			High	43 (41)	63 (59)	
Lack of commitment to the workplace	Low	84 (62)	52 (38)	0.000	Lack of organisational justice and respect	Low	82 (55)	67 (45)	0.012
	High	55 (37)	95 (63)			High	56 (40)	83 (60)	
Lack of predictability	Low	101 (57)	77 (43)	0.000	Lack of job satisfaction	Low	79 (63)	47 (37)	0.000
	High	38 (35)	71 (65)			High	59 (36)	103 (64)	
Lack of recognition	Low	90 (53)	81 (47)	0.084	Burnout	Low	111 (66)	57 (34)	0.000
	High	49 (42)	67 (58)			High	27 (23)	93 (77)	
Lack of role-clarity	Low	96 (55)	78 (45)	0.005					
	High	44 (38)	71 (62)						
Row percentages are used in the table NS: Not significant, COPSOQ-TR: The Turkish Copenhagen Psychosocial Questionnaire										

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Table 5: Last step results of logistic regression analysis on the effect of some characteristics of participants and COPSOQ–TR dimensions on mental health status

Characteristics	OR	95% CI	p–value
Occupational group			**0,005**
Nurse (ref: dentist)	0.28	0.07-1.08	0,064
Health technician (ref: dentist)	3.14	0.77-12.81	0,111
Non-healthcare professional (ref: dentist)	0.37	0.17-0.83	**0,015**
Availability of access to sufficient and appropriate PPE No (ref: yes)	2.05	1.02-4.12	**0,044**
Fear of getting COVID–19 No (ref: yes)	0.55	0.29-1.03	0,063
Reduced social interaction due to measures requiring physical distancing No (ref: yes)	1.92	0.99-3.73	0,053
Quantitative demands High risk (ref: low risk)	1.81	0.92-3.55	0,087
Lack of commitment to the workplace High risk (ref: low risk)	1.88	0.95-3.70	0,068
Lack of predictability High risk (ref: low risk)	3.16	1.41-7.08	**0,005**
Role conflicts High risk (ref: low risk)	0.53	0.25-1.09	0,082
Lack of job satisfaction High risk (ref: low risk)	1.84	0.92-3.65	0,083
Burnout High risk (ref: low risk)	7.15	3.60-14.19	**0,000**

COPSOQ-TR: TThe Turkish Copenhagen Psychosocial Questionnaire, COVID-19: Coronavirus disease-2019, PPE: Personal protective equipment, Ref: Reference, CI: Confidence interval, NS: Not significant, OR: Odds ratio, NS: Not significant

and have the opportunity to work flexibly/remotely, and they are thought to have less contact with their colleagues. The risk of role conflicts for dentists and academic staff in academic units is higher than other professions and task groups. This finding may be due to their low seniority as the majority of the relevant groups are research assistants, their specialist training in addition to clinical work, and the responsibilities imposed by the pandemic.

While the risk of burnout in the results theme was found to be significantly higher in academic staff in academic units, findings in previous studies are diverse (34-36). This may be due to the fact that this group is more likely to be a healthcare member than the comparison groups.

The mental health status of participants with high psychosocial risk is significantly poor in most dimensions of the themes of demands, interpersonal relations and leadership, and in all dimensions of the themes of impact and development, other parameters and results. Our findings are consistent with previous studies conducted in healthcare workers (34,37-40).

Being a dentist, lack of access to adequate and appropriate PPE, lack of predictability and high risk of burnout increase the likelihood of poor mental health. In a study conducted among nurses, the likelihood of poor mental health was increased by a high risk of burnout, similar to our study, and by a high risk of cognitive demands, lack of social support from colleagues, and insecurity over working conditions (37). Although the findings in previous studies are diverse, it is noteworthy that, unlike our study, the mental health status of healthcare workers other than physicians/dentists is worse (30,41-43). In one study, the mental health status of healthcare workers who reported not being provided with adequate PPE was worse, consistent with our research (34).

Study Limitations

Since our study is cross-sectional, the cause-effect relationships between the variables are not strong.

Our results represent the employees of the dentistry faculty where the research was conducted and cannot be generalized to the society.

Although the employees were informed that personal information would be kept confidential, no connection would be established between personal information and individuals through the data, and that they would not encounter any negative situations, many participants did not want to specify the units they worked in detail; therefore, detailed unit analysis could not be conducted.

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Conclusion

As a result, in order to manage psychosocial risks that may have significant consequences in terms of both worker health and safety and work efficiency, infrastructure should be prepared in workplaces with the participation of all parties, within the framework of a positive occupational health and safety culture, and practices should be continuous. The resilience of the workforce should be improved, uncertainties should be avoided, and effective teamwork should be carried out. It is thought that the number of studies examining psychosocial risks and mental health in dental assistant health personnel is insufficient, and studies should be planned to include all professional groups working in this field.

Ethics

Ethics Committee Approval: The ethical approval was obtained from Ankara University Rectorate Ethics Committee (approval no.: 18/198, date: 22.11.2021).

Informed Consent: Informed consent of the employees was obtained.

Footnotes

Authorship Contributions

Concept: B.A., M.E.O., Design: B.A., M.E.O., Data Collection and/or Processing: B.A., Analysis and/or Interpretation: B.A., M.E.O., Literature Search: B.A., Writing: B.A.

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