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Psihološki status pacijenata s temporomandibularnim poremećajima u turskoj populaciji

The Psychological Status in Patients with Temporomandibular Disorders in Turkish Population

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Sažetak
Svrha rada bila je ispitati odnos između psihološkog statusa i boli kod pacijenata s temporomandibularnim poremećajima (TMP-om) u Izmiru, u Turskoj. **Materijal i metode:** Stotinu dvadeset i troje pacijenata s TMP-om (102 žene prosječne dobi 31,31±12,58) i 21 muškarac (prosječne dobi 39,52±15,3)) upućeni su u Zavod za protetiku Stomatološkog fakulteta Sveučilišta Ege i svima je uzeta povijest bolesti. Postavljena im je dijagnoza na temelju kliničkih nalaza, a zapisane su i pritužbe na bol. Psihološki status ocijenjen je uz pomoć Symptom Checkliste 90-R (SCL-90-R). Nakon toga su podaci statistički analizirani (Studentovim t-testom, jednosmjernoma ANOVA-om i hi-kvadratom α=0,05). **Rezultati:** Ukupno je bilo 70 pacijenata (14 muškaraca -20 % i 56 žena -80 %) s dijagnozom mišićnih poremećaja. Osamdeset pet pacijenata (69,1 %) s pritužbama na bol, znatno je koreliralo sa somatizacijom (p=0,020). Vrijednosti za depresiju iz podljestvica testa SCL-90-R od pacijenata s pomaknutim zglobnim diskom, bili su jako visoki (p=0,023). Većina pacijenata s TMP-om u turskoj populaciji bila je ženskoga spola, kao što je to slučaj i u drugim populacijama. Rezultati psihološke evaluacije upozorili su na visoku pojavnost somatizacije (p=0,039). **Zaključak:** Pacijenti s pomakom zglobnoga diska pokazali su visoku razinu depresije. Kako bi se dobili podaci za širu populaciju, trebalo bi obaviti multicentrično istraživanje.

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Ključne riječi
bol; depresija; somatoformni poremećaji; temporomandibularni poremećaji; temporomandibularni zglob

Uvod

Za poremećaje temporomandibularnoga zgloba (TMP smatra se da imaju višečimbeničnu etiologiju, s mnogobrojnim lokalnim i sustavnim čimbenicima koji, u međudjelovanju, imaju važnu ulogu u različitim oblicima tih poremećaja (1,2).

Introduction

Temporomandibular disorders (TMD) are considered to have a multifactorial etiology, with a number of local and systemic factors that, mutually interacting, play a more or less important role in the different forms of disorders (1,2).

Osim toga, TMP se smatra glavnim uzrokom neodontogene boli u orofacijalnoj regiji, što se ubraja u podrazred općenitih muskuloskeletalnih i bolnih poremećaja s multidimenzijskim i biopsihosocijološkim aspektima koji se odražavaju na tom stanju. Pregledom literature potvrđena je snažna povezanost između psihosocijalnih čimbenika i TMP-a, barem kod nekih podskupina pacijenata, što upućuje na multidisciplinarnu perspektivu u ocjenjivanju i liječenju (3,4).

Uz predispoziciju, početak i nastavljeno trajanje TMP-a, vezani su psihosocijalni čimbenici (4-8). Oni bi mogli isto tako imati i utjecaj na ishod liječenja pacijenata s TMP-om (8,9). Moramo istaknuti da je opće priznat složen odnos između psihosocijalnih čimbenika i fizičkih simptoma (10).

TMP se smatra najčešćim uzrokom kronične orofacijalne boli (11-13). Ta je bol često udružena s psihološkom patnjom – posebice s depresijom i somatizacijom, a može biti pridružena psiholsocijalnoj hendikepiranosti, što uključuje i poteškoće na poslu, u kući i u međuljudskim odnosima te je vezana i za korištenje zdravstvenih usluga (14-18).

Ljudi koji se tuže na teškoće u žvačnoj funkciji, na primjer na bol ili disfunkciju u temporomandibularnoj regiji, često ističu i ostale somatske ili psihološke probleme (19). U sklopu specijalistike medicine boli, također je općepoznato da određeni čimbenici, uglavnom psihološki i psihosocijalni, mogu biti važni u određivanju pacijentove tolerancije na simptome, potrebu za liječenjem, rizik od razvoja kroničnih poremećaja i izliječenje simptoma (19, 20).

Posljednjih nekoliko desetljeća sve je istaknutija važnost psihosocijalnih čimbenika. Kod pacijenata s TMP-om u kliničkim su studijama kontrole slučajeva pronađene povišene razine stresa, anksioznosti i depresije, a često su imali i somatske poremećaje u spavanju te narušeno opće zdravlje (9, 21-27).

Recentni pregledni rad upozorio je na to da se psihometrijski i instrumenti koji čine zlatni standard, tek rijetko primjenjuju u istraživanjima TMP-a (28). Primjena formalnih psihijatrijskih mjera u dijagnostici pokazala je da pacijenti s TMP-om imaju povišene razine stresa, depresije, anksioznosti i somatizacije u usporedbi s ispitanicima iz zdrave kontrolne skupine (9, 26). Isto je tako jasno da ti pacijenti dijele neke zajedničke psihosocijalne čimbenike s oboljelima od kroničnih stanja (29).

Kronična bol može uzrokovati depresiju (5). Postavljanje dijagnoze u prilog kliničke depresije obično zahtijeva sudjelovanje psihologa ili psihija-

TMD are further considered as a major cause of non-dental pain in the orofacial region, a subclassification of musculoskeletal and pain disorders in general and with multidimensional and biopsychosocial aspects to the condition. Recent literature reviews have in general acknowledged a strong relationship between psychosocial factors and TMD, at any rate in subgroups of TMD patients, which suggests that a multidisciplinary perspective is required both in the assessment and management of TMD (3, 4).

Psychosocial factors have been implicated in the predisposition, initiation, and perpetuation of TMD (4-8). These factors may also affect the treatment outcome of TMD patients (8, 9). The complex relationship between psychosocial factors and physical symptoms is widely recognized (10).

TMD are considered the most frequent cause of chronic orofacial pain condition (11-13). The TMD pain is frequently accompanied by psychological distress-notably depression and somatization, and can be associated as well with psychosocial disability, including pain-related interference with usual work, home, and interpersonal activities and extensive use of health care services (14-18).

People who report problems with their masticatory function, eg. pain or dysfunction in the temporomandibular region, commonly report other somatic and psychological problems (19). It is also generally understood in the field of pain medicine that certain factors, mainly psychological and psychosocial factors, could be important in determining the patient`s tolerance of symptoms, need for treatment, risk of developing chronic disorders, and resolution of symptoms (19,20).

The importance of psychosocial factors has been emphasized increasingly during the past few decades. In clinical and case-control studies it has been found that many TMD patients showed increased levels of stress, anxiety and depression, and they often had sleep disturbances, somatic complaints and impaired general health (9, 21-27).

Recent review showed that gold-standard psychometric tools have found scarce application in TMD research (28). The use of formal psychiatric diagnostic measures has shown that TMD patients show increased stress, depression, anxiety and somatization compared with healthy controls (9,26). It has also been shown that TMD patients share some psychosocial factors with patients with chronic conditions (29).

Chronic pain can cause depression (5). Diagnosis of clinical depression usually requires evaluation by psychologists or psychiatrists. An alternative method

tra. Alternativa toj metodi je upitnik o procjeni razina depresije, poput upitnika SCL-90-R (30), koji predlaže Derogatis (31). Popis simptoma - Symptom Checklist 90 (SCL-90) izravan je popis znakova boli, a pacijent jednostavno upisuje do kojeg su stupnja ti simptomi njemu predstavljali poteškoće na ljestvici od 0 do 4 boda. Ljestvice za depresiju i somatizaciju često se koriste kod pacijenata s kroničnim bolima (32). Depresija je psihološko raspoloženje koje karakteriziraju osjećaji tuge, bespomoćnosti, beznađa, krivnje i besmislenosti; somatizacija je, pak, proces kojim se proživljeno mentalno stanje doživljava kao fizički simptom (33) i sastoji se od nekoliko fizičkih pritužbi koji se ponavljaju, što uzrokuje traženje liječničke pomoći, a ne mogu se objasniti fizičkim stanjima (34). Bodovanjem prema SCL-90, mjeri se broj i jakost nespecifičnih fizičkih simptoma bez definicije uzroka koji čini njihovu podlogu (35).

Svrha je ovog rada ispitati postoji li odnos između pacijenata s TMP-om i boli te psiholoških čimbenika (depresije, somatizacije, anksioznosti, itd.) određenih primjenom obrasca SCL-90.

Ispitanici i postupci

Sudionici

U ispitivanju su sudjelovali pacijenti odabrani iz skupine onih koji su se Zavodu za protetiku Stomatološkog fakulteta Ege u Izmiru, u Turskoj, javili sa simptomima TMP-a u razdoblju od studenoga 2003. do veljače 2005. Pritom su odmah bili isključeni pacijenti mlađi od 18 godina. Ukupno su sudjelovala 123 ispitanika (102 žene, prosječne dobi 31,31±12,58; 21 muškarac, prosječne dobi 39,52±15,3) i svi su potpisali pristanak.

Klinička evaluacija

U evaluaciji svih ispitanika, od svakoga je zatražena glavna pritužba. Sudionici su ponovno govorili o boli u temporomandibularnim zglobovima (TMZ-u), glavobolji, vratobolji, uhobolji i facijalnoj boli, bez obzira na trenutačnu bol.

Etiologija uzroka glavne pritužbe ispitana je u trima traumatskim skupinama: makro traume (padovi, prometne nezgode, športske ozljede, itd.), mikrotraume (dentalne intervencije, zijevanje, erupcijske poteškoće s umnjacima, itd.) te emotivne traume (razočaranje, tuga, bolest ili smrt bliskog rođaka, itd.). Za potrebe statističke analize makrotraume i mikrotraume objedinjene su u „fizičke traume".

U dijagnostici i klasifikaciji TMP-a primijenjeni su istraživački dijagnostički kriteriji kod temporo-

is to use questionnaires to evaluate the levels of depression as in the SCL-90-R (30), proposed by Derogatis (31). The Symptom Checklist 90 (SCL-90) is a straightforward checklist of symptoms, and the patients simply indicate the extent to which they have been bothered by specific symptoms in the past on a 0 to 4 scale. The depression and somatization scales have been widely used with chronic pain patients (32). Depression is the psychological mood characterized by feelings of sadness, helplessness, hopelessness, guilt, despair, and futility; somatization is the process whereby a mental condition is experienced as a bodily symptom (33) and it is the pattern of multiple recurring physical complaints, resulting in seeking medical treatment, that are not explained by physical conditions (34). SCL-90 somatization score measures the number and severity of nonspecific physical symptoms without identifying the underlying cause of symptom (35).

The objective of this study was to examine if there is any relationship between TMD patients with pain and psychological factors (depression, somatization, anxiety, etc.) determined by using SCL-90 form.

Material and methods

Participants

Participants in the study were selected from patients applied with TMD to Ege University, School of Dentistry, Department of Prosthodontics, Izmir, Turkey in the period between November 2003 and February 2005. Patients younger than 18 years were excluded from the study. A total of 123 subjects (102 women, mean age 31.31±12.58; 21 men, mean age 39.52±15.3) were enrolled. Informed patient consents were taken from all subjects who had participated in the study.

Clinical Evaluation

In the evaluation of all subjects, the presence of primary complaint, pain, was asked. The subjects were questioned again in terms of presence of pain around temporomandibular joints (TMJs), headache, neck pain, earache and facial pain regardless of the answer to present pain.

The aetiology that triggered the complaint was questioned under 3 trauma groups: macro trauma (falling down-crash, traffic accident, sports injuries, etc.), micro trauma (dental interventions, yawning, eruptional problems associated with third molars, etc.), and emotional trauma (disappointment, sadness, close relative illness or death, etc.). Macro trauma and micro trauma were combined as "physical trauma" for statistical analyses.

mandibularnih poremećaja (IDK/TMP)(36). Klinički pregled IDK/TMP-a sadržava kliničku procjenu znakova i simptoma TMP-a, a uključuje lokalitet boli (a), raspon pokretnosti mandibule i pridruženu bol (b), zvukove TMZ-a (c) i bol kod palpacije mišića i zglobova (d). Skupina IDK/TMP-a uključuje najčešće oblike TMP-a podijeljene u tri dijagnostičke kategorije ili skupine (mišićni poremećaji, pomaci zglobnog diska i druga stanja zgloba - arthralgia, osteoarthritis i osteoarthrosis). Pacijenti kod kojih je ustanovljen pomak diska poslani su na magnetsku rezonanciju.

Psihološka evaluacija

Psihološki simptomi pacijenata određeni su primjenom upitnika s SCL-90-R.

On služi za procjenu velikog raspona psiholoških problema i psihopatoloških simptoma. Taj test pomaže u mjerenju devet primarnih dimenzija simptoma (somatizacije, opsesivno-kompulzivnih poremećaja, međuljudske osjetljivosti, depresije, anksioznosti, hostiliteta, fobičnih strahova, paranoidne ideacije, psihoticizama) i osmišljen je da bi dao pregled nad pacijentovim simptomima i njihovu intenzitetu kod određene točke u vremenu (31, 35). U toj smo populaciji prvi put primijenili taj test, te smo se zato koristili svim podljestvicama.

U svim statističkim analizama korišten je softver SPSS 12.0 za Windows (1999 SPSS Inc., Chicago, IL, SAD). Odabran je stupanj znatnosti od 0,05. U analizi općih demografskih i kliničkih karakteristika pacijenata, korišteni su hi-kvadrat testovi. Rezultati psihometrijskih mjerenja uspoređeni su s kliničkim nalazima jednosmjernom analizom varijance.

Rezultati

Bračno stanje svih 13 sudionika bilo je sljedeće: 59 -% bilo je u braku, 54 - 43,1% bili su samci, 5 -4,1% bili su razvedeni, 5 - 4,1% bili su udovci ili udovice. Procijenjena je bila i razina njihove izobrazbe: 16 -13% završilo je osnovnu školu, 71 - 57,7% imalo je završenu srednju školu, a 36 - 28% diplomiralo je na različitim fakultetima.

Bol je bila prisutna kod 87 (70%) sudionika. Etiološka distribucija među sudionicima bila je sljedeća: 47 njih - 38,2% bilo je bez traume, 9 - 7,3% imalo je fizičku traumu, 27 - 22% imalo je emotivnu traumu i 40 -32,5% emotivno-fizičku traumu.

Ukupno je 70 pacijenata (14 muškaraca – 20% i 56 žena -80%) imalo mišićne poremećaje (56,9%).

The Research Diagnostic Criteria for Temporomandibular Disorders (RDC/TMD) were used diagnosing and classifying TMD patients (36). The RDC/TMD clinical examination involves clinical assessment of TMD signs and symtomps including (a) pain site, (b) mandibular range of motion and associated pain, (c) TMJ sounds and, (d) muscles and joint palpation or tenderness. The RDC/TMD group the most common forms of TMD into 3 diagnostic categories or groups (muscle disorders, disc displacements, and other joint conditions [arthralgia, osteoarthritis, and osteoarthrosis]). Patients exhibiting disc displacement of determination of disc position were directed for magnetic resonance imaging (MRI).

Psychological Evaluation

Psychological symptoms of the patients were assessed by SCL-90-R. The Symptom Checklist-90-R (SCL-90-R) evaluates a broad range of psychological problems and symptoms of psychopathology. The test helps measure nine primary symptom dimensions (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism) and is designed to provide an overview of patient's symptoms and their intensity at a specific point in time (31, 35). We used all subscales because of applying this test for the first time in this population.

SPSS 12.0 for Windows (1999 SPSS Inc.,Chicago,IL,USA) software was used for the statistical analyses of the obtained data. The level of significance was chosen as 0.05. The general demographic and clinical characteristics of the patients were analysed by Chi-Square tests. The scores obtained from psychometric measurements were compared with clinical findings by one-way analysis of variance.

Results

Among 123 participants marital status was as follows; 59 people (48%) were married, 54 (43.1%) were single, 5 (4.1%) were divorced, 5 (4.1%) were widowed. When the educational status of the 123 participants were evaluated; 16 (13%) had primary school education, 71 (57.7%) had secondary school education and 36 (28.5%) had university education.

Pain was present in 87 (70%) participants. Among participants aetiological distribution was as follows; 47 people (38.2%) had no trauma, 9 (7.3%) had physical trauma, 27 (22%) had emotional trauma and 40(32.5%) had emotional-physical trauma.

In a total of 70 patients (14 males (20%), and 56 females (80%), muscle disorders were involved (56.9%).

Kod 22 žene (17,8%) dijagnosticiran je pomak zglobnog diska, a 31 pacijent (25,2%) uvršten je u skupinu "drugo" za potrebe statističke analize.

Hi-kvadrat testom otkrivene su sve moguće povezanosti među demografskim i kliničkim nalazima. Bila je znatna razlika između pojavnosti boli i dobi ($\chi^2(1)= 5,476$, p= 0.019). Broj žena koje osjećaju bol bio je zantno veći od broja muškaraca (Tablica 1.).

Bila je velika razlika između postavljenih dijagnoza i stupnja obrazovanja ($\chi^2(4)= 16,218$, p= 0,003). Pacijenti sa srednjom školom pokazivali su znatno više stope pomaka zglobnog diska i mišićnih poremećaja (Tablica 2.).

Komparativno su procijenjeni rezultati pribavljeni obrascem SCL-90-R te klinički i demografski nalazi. Ustanovljeno je da učinak spola nije znatan (p>0,05) u svim podskupinama, osim kod somatizacije. Među ženama je bilo prijavljeno više somatskih simptoma nego kod muškaraca (p=0,039) (Tablica 3.).

Rezultati pribavljeni od pacijenata o boli na temelju obrasca SCL-90-R, prikazani su u Tablici 3. Učinak boli nije bio znatan (p>0,05), i to u svim skupinama, osim kod somatizacije. Vrijednosti za somatizaciju koje su dali pacijenti s pritužbom na bol bile su znatno više (p=0.020) nego kod pacijenata bez boli.

Analizirani su odnosi između SCL-podljestvica i dijagnostičkih skupina te vrijednosti za depresiju kod pacijenata s TMP-om uz pomak zglobnoga diska - bile su mnogo više nego kod mišićnih poremećaja i drugih skupina (p=0,023) (Tablica 3.).

Twenty-two females (17.8%) were diagnosed with disc displacement; 31 patients (25.2%) were grouped under the heading "other" for statistical analyses.

Chi-square test revealed all possible relationships among demographic and clinical findings. There was a significant difference between pain and gender ($\chi^2(1)= 5.476$, p= 0.019). Women patients with pain were significantly more numerous than men (Table 1).

There was a significant difference between diagnosis and education ($\chi^2(4)= 16.218$, p= 0.003). Patients educated on a secondary school level had significantly higher rates of disc displacement and muscle disorders (Table 2).

The scores of the patients from SCL-90-R and clinical and demographical findings were comparatively evaluated. The effect of gender was found to be insignificant (p>0.05) among all subgroups except for somatization. Women reported more somatic symptoms than men (p=0.039) (Table 3).

The scores of the patients from SCL-90-R and pain are shown in Table 3. The effect of pain was insignificant (p>0.05) among all subgroups except for somatization. The somatization values for patients that referred with the complaint of pain were significantly (p=0.020) higher than patients with the absence of pain.

When the relationships among SCL subscales and diagnostic groups were evaluated, the depression values for the TMD patients with disc displacement were significantly higher than muscle disorders and other groups (p=0.023) (Table 3).

Tablica 1. Odnos spola i boli ($\chi^2(1)= 5,476$, p= 0,019)
Table 1 Relationship of gender and pain ($\chi^2(1)= 5.476$, p= 0.019)

Spol • Gender	Bol • Pain		
	Prisutno • Present (%)	Odsutno • Absent (%)	Ukupno • Total
Muški • Male	10 (11,8)	11 (28,9)	11
Ženski • Female	75 (88,2)	27 (71,1)	102

Tablica 2. Odnos između dijagnoze i stupnja obrazovanja ($\chi^2(4)= 16,218$, p= 0,003)
Table 2 Relationship of diagnosis and education ($\chi^2(4)= 16.218$, p= 0.003)

Dijagnoza • Diagnosis	Obrazovanje • Education			
	Primarno • Primary (%)	Sekundarno • Secondary (%)	Sveučilišno • University (%)	Ukupno • Total
Mišićni poremećaji • Muscle Disorders	3 (4,3)	42 (60,9)	25 (34,8)	70
Pomak zglobnog diska • Disc Displacement	8 (364)	10 (455)	4 (182)	22
Drugo • Other	5 (161)	19 (61,3)	7 (22,6)	31

Tablica 3. Odnos između bodova postignutih na podljestvicama obrasca SCL-90-R , spola, boli i dijagnoze (* p<0,05; BZ, beznačajno).
Table 3 Relationship among SCL-90-R subscales' scores, gender, pain, and diagnosis (* p<0.05; NS, not-significant).

	Žene • Women		Muškarci • Men			Bol odsutna • Pain Absent		Bol prisutna • Pain Present		
SCL-90 Scales	(n=102)		(n=21)		p	(n=37)		(n=86)		p
	Srednja • Mean	SD	Srednja • Mean	SD		Srednja • Mean	SD	Srednja • Mean	SD	
SOM	1.12	0.72	0.77	0.75	*	0.83	0.47	1.15	0.75	*
O-C	1.14	0.62	0.88	0.53	BZ • NS	1.08	0.50	1.11	0.65	BZ
I-S	0.83	0.76	0.88	0.67	BZ • NS	0.86	0.66	0.83	0.77	BZ
DEP	0.93	0.62	0.67	0.48	BZ • NS	0.82	0.55	0.91	0.62	BZ
ANX	0.82	0.66	0.60	0.45	BZ • NS	0.69	0.44	0.81	0.69	BZ
HOS	0.81	0.74	0.83	0.69	BZ • NS	0.85	0.61	0.79	0.77	BZ
PHOB	0.54	0.62	0.48	0.60	BZ • NS	0.44	0.49	0.56	0.65	BZ
PAR	0.79	0.74	0.65	0.68	BZ • NS	0.76	0.65	0.76	0.76	BZ
PSY	0.48	0.45	0.46	0.39	BZ • NS	0.51	0.37	0.45	0.46	BZ

Mišićni poremećaji • Muscle Disorders		Pomak diska • Disc Displacement		Drugo • Other		
(n=70)		(n=22)		(n=31)		p
Srednja • Mean	SD	Srednja • Mean	SD	Srednja • Mean	SD	
1.06	0.72	1.16	0.75	0.95	0.58	BZ • NS
1.15	0.62	1.21	0.64	0.89	0.50	BZ • NS
0.93	0.74	0.91	0.94	0.58	0.48	BZ • NS
0.91	0.57	1.10	0.76	0.65	0.48	*
0.79	0.64	0.93	0.74	0.62	0.47	BZ • NS
0.84	0.76	0.94	0.81	0.63	0.56	BZ • NS
0.57	0.63	0.62	0.65	0.37	0.51	BZ • NS
0.78	0.71	0.97	0.94	0.56	0.52	BZ• NS
0.45	0.39	0.65	0.60	0.39	0.36	BZ • NS

Rasprava

U sklopu ovog istraživanja 85 (69,1%) pojedinaca poslano je u Zavod s pritužbama na bol. Ipak, kad su svi ispitani o vrsti boli (bol u TMZ-u, glavobolja, uhobolja, facijalna bol), među oblicima boli nisu pronađene veće razlike. Pacijentice su imale imale više vrijednosti od muškaraca s bolima. Što se tiče SCL-90 podljestvice, somatizacija je bila češća kod pacijenata s boli. Iako je bol samo jedan od mnogih simptoma što ih doživljavaju pacijenti koji pate od TMP-a, može biti uzrok dubokog utjecaja na društvenu integraciju, kakvoću života i raspoloženja tih pacijenata (25, 37). Osim nelagode prouzročene boli, može se javiti i psihološko opterećenje pojačano pacijentovim pojedinačnim stajalištem u to kako bol koju osjeća može značiti pogoršanje njezine ili njegove bolesti (38).

Nismo se bavili ulogom izobrazbe u dijagnostici TMP-a. U našem su istraživanju pacijenti sa srednjom školom bili svrstani u skupinu sa sekundarnom edukacijom. Fakultetski klasifikacijski ispit

Discussion

In the present study, 85 (69.1%) individuals referred with the complaint of pain. However, when all individuals were questioned in terms of pain types (TMJ pain, headache, earache, facial pain), no significant differences were found among pain types. The female patients that referred with pain were more numerous than male patients referred with pain. SCL-90 subscale; somatization was higher in patients that referred with pain. Although pain is only one of the many symptoms experienced by patients suffering from TMD, it can be a result in a profound impact on the social integration, quality of life and mood state of these patients (25,37). Other than the discomfort caused by the pain process, psychological distress can also be increased by the individual belief of the patient that an increase in the intensity of pain being felt might signify that his/her illness is worsening (38).

The role of education in the diagnosis of TMD has not been addressed. In our study, patients partic-

važan je učenicima u našoj zemlji, i mogao bi objasniti pomake zglobnog diska i mišićne poremećaje u tom razdoblju.

Neki su autori došli do spoznaje da je kod pacijenata s miofascijalnom boli veća i depresija negoli kod onih s patologijama TMZ-a (9, 26, 37). Manfredini i suradnici pretpostavljaju da su pacijenti s miofascijalnom boli pokazali najveću prevalenciju psihopatologije raspoloženja i tjeskobe u usporedbi s onima bez TMP-a i pomaka zglobnog diska (39). Pacijenti kod kojih je dijagnosticirana miofascijalna bol i druga stanja zgloba, imali su mnogo više razine depresije i somatizacije od onih samo s pomakom diska (36). Michelotti i suradnici objavili su jednakost u prevalenciji psihopatologije između pacijenata s miofascijalnom boli i problemima s TMZ-om (7). Trenutačno su vrijednosti u skladu s onima do kojih su došli Marbach i suradnici (21), a oni nisu našli razlike u razinama nelagode, tjeskobe i depresije u usporedbi s pacijentima s miofascijalnom boli i patologijama TMZ-a. Rezultati našeg ispitivanja u skladu su sa studijama Michelottija i Marbacha, a podljestvice obrasca SCL-90 kod pacijenata s TMP-om i miofascijalnom boli nisu otkrile veće razlike.

Znatan dio pacijenata s TMP-om u kliničkoj su depresiji i imaju povišene stupnjeve izraženosti nespecifičnih simptoma. To opravdava psihološko promatranje (screening) pacijenata s TMP-om, kako bi se evaluirala tendencija prema razvoju depresivnih stanja i somatskih briga koje utječju na liječenje. I depresija i somatizacija mogu pridonijeti razvoju ili održavanju TMP-a i/ili smetati prihvaćanju i slaganju s liječenjem (8). Zatim, depresija/somatizacija može biti udružena s većom stopom samoprijave poteškoća s čeljustima te boli tijekom palpacije žvačnih mišića i zglobova u kliničkom ispitivanju (30). To otežava dijagnozu TMP-a, a i ishod liječenja (40). Mogući čimbenici rizika u psihosocijalnom području uključuju stres, depresiju i somatsku patnju (11). Trenutačno sre ističe važnost psiholoških čimbenika uključenih u TMP (41). Posebice se spominju stresni čimbenici i depresija (4, 27). Zajedničke karakteristike TMP-a uključuju somatizaciju i depresiju (42). Rezultati nekoliko studija upućuju na to da je samo dio pacijenata s TMP-om u kliničkoj depresiji (45). Znatan dio takvih pacijenata bio je u depresiji i osjećao umjerenu do izraženu somatizaciju (26). Količina depresije kod pacijenata s pomakom zglobnog diska u ovoj je studiji bila znatno veća od one u skupini pacijenata s miofascijalnom boli (p=0,023), a vrijednosti za psihoticipating in high school were involved in the secondary education group. The university entrance exam in our country is an important step for students and it might be explained by the occurrence of disc displacement and muscle disorders at this time period.

Some authors found that patients affected with myofascial pain had greater depression than patients with TMJ pathologies (9,26,37). Manfredini et al. suggested that myofascial pain patients showed the highest prevalence of both mood and anxiety psychopathology when compared with TMD-free, disc displacement and joint disorders subjects (39). Patients diagnosed with myofascial pain and other joint conditions had significantly higher levels of depression and somatization than patients diagnosed with only disk displacement (36). Michelotti et al. reported no differences in the prevalence of psychopathology between subjects with myofascial pain and TMJ problems (7). The current observations are consistent with those of Marbach et al. (21), who did not find any difference in levels of distress, anxiety, or depression when comparing patients with only myofascial pain and TMJ pathologies. The results of our study are in accordance with Michelotti and Marbach studies and the subscales of SCL-90 of TMD patients with myofascial pain did not reveal significant differences.

A considerable portion of TMD patients are clinically depressed and have elevated degrees of nonspecific physical symptoms. This justifies the necessity of psychological screening of TMD patients in order to evaluate a tendency toward depression and somatic worry that could influence the treatment. Both depression and somatization may contribute to the development or maintenance of TMD and/or interfere with acceptance of and compliance with treatment (8). In addition, depression/somatization may be associated with heightened self-report of jaw disability and pain as masticatory muscles or joints are palpated during the course of clinical examination (30), thereby complicating TMD diagnosis and treatment outcome (40). Potential risk factors in the psychosocial domain include stress, depression and somatic distress (11). There is currently an emphasis on the importance of the psychological domain of psychosocial factors in TMD (41). In particular, stress factors and depression have been highlighted (4, 27). Common psychological features of TMD include somatization and depression (42). The results of several studies indicated that only a portion of TMD patients were clinically depressed (9,36). There is evidence that some TMD patients experience more

zam bile su visoke kod pacijenata s pomakom diska, ali su pribavljene vrijednosti bile statistički neznatne (p>0,05). Teško je objasniti pomak diska pomoću depresije, i obrnuto.

U jednom ranijem istraživanju, u kojem su spolovi analizirani odvojeno, ističe se kako se pacijenti s miofascijalnom boli razlikuju od drugih pacijenata prema prisutnosti simptoma hipohondrije kod muškaraca te stresa, osjetljivosti i simptoma tjeskobe kod žena (39). U drugom se istraživanju kaže da su pacijenti s TMP-om uglavnom žene, većinom zbog stresa i depresije (45). I u našem su istraživanju većina pacijenata u skupini s mišićnim poremećajima te svi u skupini s pomakom zglobnog diska bile žene. U suprotnosti s nalazima Manferennija i suradnika (39), u našem je istraživanju količina somatizacije kod pacijentica bila veća. To bi moglo značiti da žene imaju sklonost izražavanju psihološke napetosti tjelesnim simptomima češće negoli muškarci. Iako nisu statistički znatna, tu su navedena dva nalaza koja su bila blizu razine statističke znatnosti, kako bi ih se uzelo u obzir u studijama s populacijama. Žene su postizale više bodova od muškaraca na podljestvicama SCL-90R-a kojima su se mjerili opsesivnost i kompulzivnst te depresija.

Depresija i tjeskoba, vezane za velike životne događaje, mogu promijeniti pacijentovu percepciju i snošljivost prema fizičkim simptomima, pa oni odlaze liječniku. Somatizacija, tendencija prema prijavljivanju nespecifičnih fizičkih simptoma kao bolnih ili otežavajućih, već se pokazala kod drugih kao najava ishoda liječenja TMP-a (46). Ona može biti vezana za više bihevioralnih mjera boli (42), a izrazita somatizacija može biti vezana za pojačanje čeljusne nesposobnosti (40).

Zaključci

Zbog ograničenja ovog istraživanja, došlo se do sljedećih zaključaka:

anxiety than healthy control groups (43,44). Patients with TMD and normal TMJs have higher psychometric scores denoting pain, chronic disability, and depression (45). A substantial portion of TMD patients were depressed and experienced moderate to severe somatization (26). The amount of depression in disc displacement patients in the present study were significantly higher than the myofascial pain group (p=0.023) while the value of psychotism in disc displacement groups was high, but the obtained values were statistically insignificant (p>0.05). It is difficult to explain that depression might cause disc displacement or vice versa.

In a previous study, when genders were considered separately, as suggested by the significantly higher number of women in the myofascial pain group, myofascial pain patients differed from the other groups for the presence of hypochondria symptoms in men and stress sensitivity and anxiety symptoms in women (39). Another study pointed out that the women subjects were more affected by TMD, and it resulted mainly from stress, depression (45). The majority of the patients in the muscle disorders group and all patients in the disc displacement group were women in our study. In contradiction with the findings of Manferenni et al. (39), the amount of somatization in the female patients was higher in our study. This might mean that women tend to express the psychological tension they experience with bodily symptoms more than men. Although not statistically significant, in order to be considered for further studies with populations, two findings that were close to being significant have also been reported here. Females got higher scores on obsessive-compulsive and depression subscales of SCL-90R than males.

Depression and anxiety related to major life events might alter patient` perception of and tolerance for physical symptoms causing them to seek treatment. Somatization, the tendency to report nonspecific physical symptoms as noxious or troublesome, has already been shown by others to be a predictor of TMD treatment outcome (46). Somatization may be related to more attentional and perceptual measures of clinically relevant pain while depression may be related to more behavioral measures of pain (42). Severe somatization can be related to an increase in jaw disability (40).

Conclusions

Within the limitations of this study, the following conclusions can be drawn:

1. većina pacijenata koji prijavljuju bol ženskog je spola;
2. količina somatizacija veća je kod žena;
3. somatizacija je izraženija kod pacijenata upućenih sa simptomom boli;
4. depresija je izraženija kod pacijenata s dijagnozom pomaka zglobnog diska.

1. The majority of the patients referring with pain were women.
2. The amount of somatization in women was higher than men.
3. The somatization was higher in patients that referred with pain.
4. Depression was higher in disc displacement diagnosed patients.

Abstract

Objective: To examine the relationship between psychological status and pain in patients with temporomandibular disorders (TMD) in Izmir, Turkey. **Material and methods:** One hundred and twenty-three TMD patients (102 women (mean age 31.31±12.58), 21 men (mean age 39.52±15.3)) referred to Ege University, School of Dentistry, Department of Prosthodontics. A history of pain was asked to all patients. Patients were diagnosed based on clinical examination and the complaint of pain was recorded. Psychological status was assessed with the Symptom Checklist-90-R (SCL-90-R). Data were analyzed statistically. (Student t-test, One-way ANOVA and Chi-Square, α=0.05) **Results:** In a total of 70 patients (14 males (20%), and 56 females (80%), muscle disorders were involved (56.9%). Twenty-two females (17.9%) were diagnosed having disc displacement. Eighty-five patients (69.1%) referred with the complaint of pain which was significantly correlated to somatization (p=0.020). The depression values from subscales of SCL-90-R of the disc displacement diagnosed patients were significantly high (p=0.023). The majority of the patients referred with TMD in Turkish population were women, as seen in other populations. The psychological evaluation results revealed high somatization (p=0.039). **Conclusion:** Patients with disc displacement exhibited high depression levels. For data on greater populations, a multicenter study model is required.

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Key words
Pain;Depression; Somatoform Disorders; Temporomandibular Joint Disorders

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