

Treatment-Seeking Patterns of Facial Pain Patients: Many Possibilities, Limited Satisfaction

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Knowledge about the different kinds of treatment provided to patients with nonmalignant musculoskeletal facial pain is limited. The present study was based on 206 consecutive patients who were referred to a university-based tertiary care clinic for the diagnosis and management of persistent facial pain. Its purpose was to get information about the number and specialty of providers consulted by patients prior to their referral, and to follow the underlying treatment-seeking patterns. The results showed that on average 4.88 providers from 44 different categories were consulted. A general dentist or a dental specialist was seen by about 70% of patients. For patients whose first provider was a dentist, the most likely subsequent provider was another dentist. Conversely, if the first provider was a physician, chances were greater that the subsequent provider was a physician rather than a dentist. Among the nondental therapies patients received, physical therapy was chosen most frequently (42.2%). More than 60% of patients had at least one nondental treatment; however, the majority of these patients experienced two or more different types of such therapy (eg, chiropractic, osteopathic, relaxation training). Patients' satisfaction with care and treatment was moderate, since only 18.5% of the patients were very satisfied, while 27.7% were dissatisfied or very dissatisfied. The present findings, which corroborate a recent study from the Kansas City, Missouri, region, indicate that patients with persistent facial pain see a large number of different providers, and that nonmedical/nondental treatment approaches are common. The moderate satisfaction experienced with any of the therapies points out that much needs to be done before this patient population is served satisfactorily.

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key words: persistent facial pain, temporomandibular disorders, referral pattern, treatment satisfaction, alternative treatment

Little information is available about the number and kinds of treatment given to patients suffering from nonmalignant musculoskeletal facial pain. The most current information available is based on a study performed by Glaros et al¹ at the University of Missouri-Kansas City, which used retrospectively collected data from 257 patients suffering from temporomandibular disorders. Patients had seen on average more than three providers, had undergone 1 or more of 23 different diagnostic procedures, and had received 1 or more of 27 different diagnoses. That study also demonstrated that many facial pain patients have a long history of treatment seeking. Since the investigation by Glaros et al was the first of its kind, it is not known if their findings are characteristic of facial pain patients in general, or if they are typical only for the local situation in the Kansas City area. The aim of this study was to analyze the treatment-seeking experiences of facial pain patients from another U.S.

Table 1 Health Professionals Consulted by Patients (n = 206)

Health professional	n	Percent
General dentist	112	54.4
Family physician	56	27.2
Physical therapist	49	23.8
Maxillofacial/oral surgeon	46	22.3
Neurologist	34	16.5
Chiropractor	30	14.6
Periodontist	25	12.1
Psychologist	25	12.1
Ear, nose, and throat specialist	25	12.1
Orthodontist	23	11.2
"TMJ specialist"	22	10.7
Osteopath	21	10.2
Internal medicine	19	9.2
"Pain specialist"	12	5.8
Rheumatologist	9	4.4
Acupuncturist	8	3.9
Psychiatrist	7	3.4
Neurosurgeon	6	2.9
Gynecologist	6	2.9
Prosthodontist	5	2.4
Allergist	5	2.4
Endodontist	4	1.9
Gastroenterologist	4	1.9
Massage therapist	4	1.9
Anesthetist	3	1.5
Ophthalmologist	3	1.5
Orthopedist	3	1.5
Orthopedic surgeon	3	1.5
Optometrist	2	1.0
Family counselor	2	1.0
Social worker	2	1.0
"Therapist"	1	0.5
Specialist for infectious diseases	1	0.5
Pediatric neurologist	1	0.5
Pediatrician	1	0.5
"Facial pain surgeons"	1	0.5
"Bone specialist"	1	0.5
Homeopath	1	0.5
"Cancer specialist"	1	0.5
Specialist for sports medicine	1	0.5
Cardiologist	1	0.5
Dermatologist	1	0.5
Sleep clinic	1	0.5
Doctors of unknown specialty	64	31.1

Dentists and dental specialists are in bold.

region, as well as to examine the level of satisfaction of these patients regarding the care they received.

Materials and Methods

Patient Demographics

The present study was based on data from 206 consecutive patients referred to the University of Michigan's Facial Pain Clinic for the diagnosis and management of persistent facial pain. Patients came

predominantly from suburban and rural areas, most of them from the southeastern part of Michigan. Of these referrals, 190 patients (92.2%) were women. The vast majority of patients (about 95%) were referred because of (or having been diagnosed with) musculoskeletal problems in the face region, which are commonly embraced under the term temporomandibular disorders (TMD).

The patients' mean age was 37.2 years (SD 13.7 years) (median 37.5 years; minimum = 9, maximum = 74), with a mean pain duration of 69 months (SD 78 months) (median 48 months; minimum = 1, maximum = 488) since onset. Almost 90% of patients were of European descent, and 54% were married with a spouse in the household. Patients reported a median school education of 14 years and a median salary range between \$25,000 and \$34,999. The median average pain intensity, ie, the usual pain intensity these patients had experienced in the past 6 months, was rated as 6 on an 11-point numerical scale, where "0" represented "no pain" and "10" represented "pain as bad as could be." This information was gathered with the help of the history questionnaire of the TMD Research Diagnostic Criteria.²

Data Collection

Patients were asked to note on the questionnaire which nondental therapies they had received prior to their referral. Treatment modalities included in the checklist were physical therapy, transcutaneous nerve stimulation, acupuncture, chiropractor/osteopath, nerve blocks, operations, psychologic/psychiatric counseling, family or marriage counseling, biofeedback, and/or relaxation training. Patients were then asked to list the names, specialties, and dates of consultations of all the health care professionals they had seen to date for their facial pain. Patients were also asked to report their satisfaction with previous treatment(s) by selecting one of five choices: very satisfied, somewhat satisfied, barely satisfied, dissatisfied, or very dissatisfied.

Results

Although most subjects reported that they had seen between one and four providers prior to their referral, a considerable number of patients had consulted many more (up to 33). On average, 4.88 (SD 4.84) providers were seen (median = 4; minimum = 1, maximum = 33).

The kinds of specialists consulted by these patients for their facial pain are shown in Table 1. The list includes 44 different categories of health professionals.

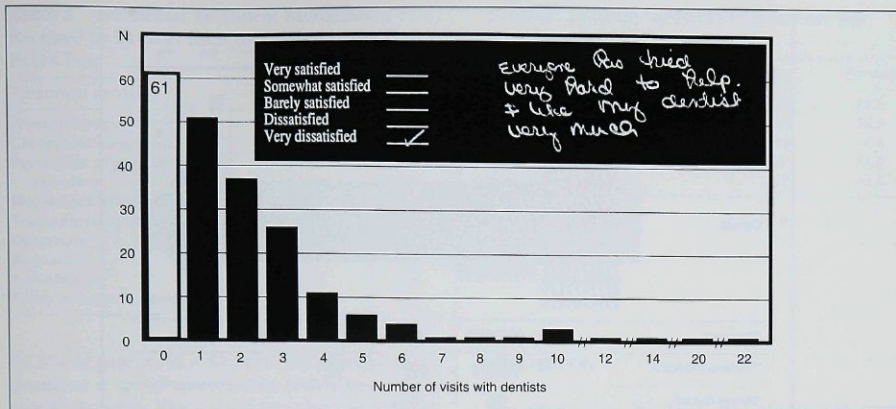


Fig 1 Total number of dentists or dental specialists seen by patients ($n = 206$). Despite their dissatisfaction with the treatment outcome, many patients chose to continue seeing the same dentists. As one patient explained, "Everyone has tried very hard to help. I like my dentist very much."

Table 2 Patients' Treatment-Seeking Patterns For Their First, Second, and Third Providers

	Total	Subsequent provider (no. and percentage of patients)				
		FPC	Dentist	Physician	Other	Unknown
First provider						
Dentist	80	13 (16.9)	49 (63.6)	7 (9.1)	8 (10.4)	3
Physician	61	5 (8.6)	16 (27.6)	25 (43.1)	12 (20.7)	3
Other	65	19 (34.5)	12 (21.8)	8 (14.5)	16 (29.1)	10
Total	206	37 (19.5)	77 (40.5)	40 (21.1)	36 (18.9)	16
Second provider						
FPC	37					
Dentist	77	24 (31.6)	35 (46.1)	10 (13.2)	7 (9.2)	1
Physician	40	5 (12.8)	7 (17.9)	20 (51.3)	7 (17.9)	1
Other	36	3 (9.1)	13 (39.4)	9 (27.3)	8 (24.2)	3
Unknown	16	7 (58.3)	3 (25.0)	0	2 (16.7)	4
Total	206	76 (38.6)	58 (29.4)	39 (19.8)	24 (12.2)	9
Third provider						
FPC	76					
Dentist	58	15 (26.3)	29 (50.9)	5 (8.8)	8 (14.0)	1
Physician	39	5 (13.9)	13 (36.1)	16 (44.4)	2 (5.6)	3
Other	24	3 (18.8)	8 (50.0)	2 (12.5)	3 (18.8)	8
Unknown	9					9
Total	206	99 (53.5)	50 (27.0)	23 (12.4)	13 (7.0)	21

FPC = Facial Pain Clinic; "Unknown" = provider of unknown specialty. (Data labeled "unknown" were not used in computing percentages.)

The category "doctors of unknown specialty" refers to providers (physicians and dentists) for whom there was insufficient data to assign a particular specialty.

More than 50% of subjects had consulted one or more general dentists, with some patients visiting up to 22 different general dentists. In total, 145 patients (70.4%) had seen a general dentist or a dental specialist before their referral to the authors' clinic.

Conversely, almost one third of facial pain patients were not previously seen in any kind of dental office for their facial pain prior to their referral. The total number of visits with dentists of any kind is shown in Fig 1. In contrast, visits to physicians never exceeded six different medical doctors.

Table 2 summarizes patients' treatment-seeking patterns for the first three providers consulted. In

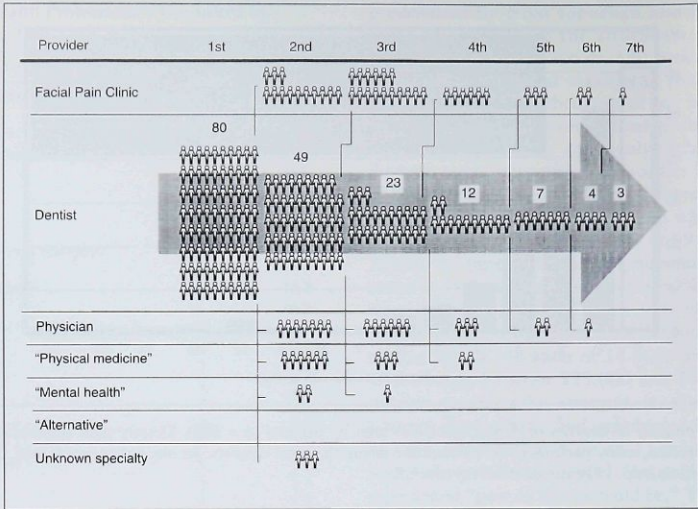


Fig 2a Referral pattern of those facial patients who had their first consultation with a dentist/dental specialist (n = 80). Note the frequency of subsequent treatment-seeking with another dentist.

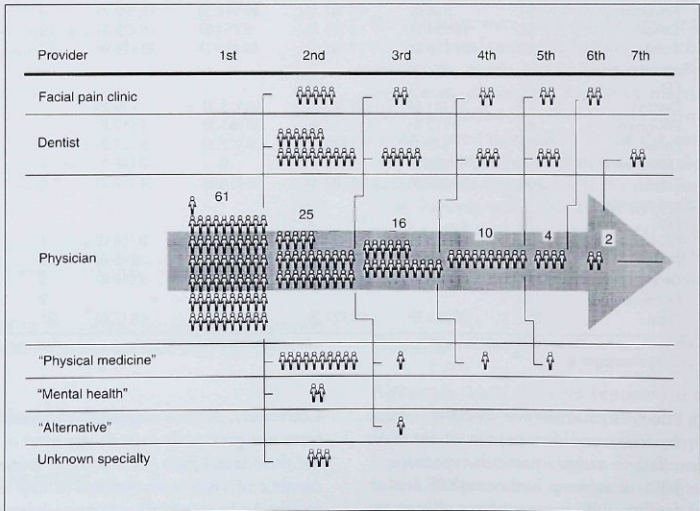


Fig 2b Referral pattern of those facial patients who had their first consultation with a physician/medical specialist (n = 61). Note the frequency of subsequent treatment-seeking with another physician.

Table 3 Nondental Treatment Modalities Received by Patients Prior to Referral to the Facial Pain Clinic

Treatment modality	n	Percent
Physical therapy	87	42.2
Chiropractic/osteopathy	60	29.1
Psychologic or psychiatric counseling	49	23.8
Biofeedback/relaxation training	33	16.0
Transcutaneous electrical training	32	15.5
Operations	22	10.7
Acupuncture	17	8.3
Nerve blocks	16	7.8
Family or marriage counseling	13	6.3

38.8% of patients ($n = 80$), the first provider was a dentist or a dental specialist; in 29.2% ($n = 61$), it was a physician. The second provider consulted by patients was a dentist in 37.4% ($n = 77$), and a physician in 19.4% ($n = 40$). For patients whose first provider was a dentist, the most likely subsequent provider was another dentist. If, on the other hand, the first provider was a physician, there was a greater chance that the subsequent provider was also a physician rather than a dentist.

After their first visit to any type of health care provider, 19.5% of patients were referred to the authors' facial pain clinic. This number increased after patients had been seen by a second and a third provider to 38.6% ($n = 76$) and 53.5% ($n = 99$), respectively. The specific treatment-seeking pattern of those facial pain patients who had their first consultation with a general dentist/dental specialist or a primary care physician/medical specialist is depicted in Figs 2a and 2b. The arrow emphasizes the treatment-seeking of patients who, beginning with the first consultation, continued to see dentists (Fig 2a) or physicians (Fig 2b). These figures also show that a switch in care-seeking from a dentist to a physician was less common than vice-versa.

Of nondental therapies the patients received prior to their referral, physical therapy was the most common choice; it was prescribed to 87 patients (42.2%) (Table 3). More than 60% of patients received at least one nondental treatment; the majority of these patients received two or more different types of therapies.

Patients' satisfaction with care and treatment is summarized in Table 4. Seventeen percent of patients ($n = 34$) were only barely satisfied with previous treatments, while 53.4% ($n = 104$) were either somewhat satisfied or very satisfied. Unfortunately, 29.3% of patients ($n = 57$) were either somewhat dissatisfied or very dissatisfied with the treatments they had received.

Table 4 Patients' Satisfaction With Care and Treatment ($n = 195$)

Degree of satisfaction	n	Percent
Very satisfied	36	18.5
Somewhat satisfied	68	34.9
Barely satisfied	34	17.4
Dissatisfied	29	14.9
Very dissatisfied	28	14.4

Discussion

Our results show that facial pain patients seek treatment with a variety of care providers. We were surprised to find that 44 types of care providers were consulted. The fact that 61 individuals (29.6%) had not seen a dentist prior to their referral to us indicates that facial pain occupies an important position in the intersection between dentistry and medicine. Once patients see a dentist, there is a greater likelihood that the subsequent provider is a dentist too. In contrast, the majority of the patients whose first provider was a physician were subsequently seen by another physician.

Our overall findings are consistent with the study by Glaros et al,¹ whose patients came from the greater Kansas City (Missouri) area as well as from neighboring rural regions. As in our study, patients in that study were seen by more than three providers prior to the referral to their pain center, indicating that their observations do not appear to be unique to the Kansas City, Missouri, region.

Our patients were most frequently exposed to reversible modalities, such as physical therapy and relaxation training. Twenty-nine percent of patients were seen by a chiropractor or osteopath, 16% had biofeedback or relaxation training, and 8% experienced sessions of acupuncture. According to a recent national survey, in 1990 approximately one third of all American adults used some form of alternative medicine, including relaxation techniques, chiropractic, acupuncture, and massage.³ Facial pain patients do not appear to be different in regard to this type of treatment-seeking behavior.

As can be inferred from the large number of providers consulted by these patients and the many types of therapies they received to alleviate their pain, reported treatment satisfaction with any of the therapies was only moderate. As one patient commented: "I think all of my doctors have done their best—but I

still hurt!" This indicates that some degree of satisfaction with a doctor's care is possible even in the absence of symptom relief. On the other hand, it also shows that much needs to be done before this patient population is served satisfactorily.

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Resumen

Patrones sobre la forma de buscar tratamiento que presentan pacientes con dolor facial: Muchas posibilidades, pero satisfacción limitada

El presente estudio está basado en 206 pacientes consecutivos que fueron remitidos a una clínica universitaria de cuidado terciario para establecer el diagnóstico y el manejo del dolor facial persistente. El propósito del estudio fue el de obtener información acerca del número y especialidad de los proveedores consultados por los pacientes antes de ser remitidos, y el de seguir los patrones implícitos sobre la forma de buscar tratamiento. Los resultados demostraron que en promedio 4,88 proveedores de 44 categorías diferentes fueron consultados. Odontólogos generales u odontólogos especialistas fueron consultados por el 70% de los pacientes. En el caso de los pacientes cuyo primer proveedor era un odontólogo, el proveedor subsiguiente sería muy probablemente un odontólogo. A la inversa, si el primer proveedor era un médico, las posibilidades de que el proveedor subsiguiente fuera un médico en lugar de un odontólogo, eran mayores. Entre las terapias no odontológicas recibidas por los pacientes, la terapia física fue la seleccionada más frecuentemente (42.2%). Mas del 60% de los pacientes tenían por lo menos un tratamiento no odontológico; sin embargo, la mayoría de estos pacientes experimentaron dos o más tipos diferentes de terapias tales como: la quiropráctica, osteopática, y entrenamientos de relajación. La satisfacción de los pacientes con el cuidado y el tratamiento fue moderada, ya que sólo el 18,5% de los pacientes quedaron muy satisfechos, mientras que el 27,7% quedaron descontentos o muy descontentos. Los hallazgos actuales, que confirman un estudio reciente del área de la ciudad de Kansas en el estado de Missouri, indican que los pacientes con dolor facial persistente consultan a un gran número de proveedores diferentes, y que los enfoques de tratamiento que no son de tipo médico ni odontológico son comunes. Este tipo de satisfacción "moderada" experimentada con cualquiera de las terapias indica que hay mucho que hacer antes de que esta población sea atendida satisfactoriamente.

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Zusammenfassung

Behandlung von Gesichtsschmerzen: viele Behandlungsmöglichkeiten, beschränkte Patientenzufriedenheit

Ziel der vorliegenden Untersuchung war es, Informationen über die Anzahl, Art und Reihenfolge der verschiedenen Therapien zu gewinnen, denen 206 Patienten mit nicht-malignen, vorwiegend muskuloskeletalen Schmerzen im Gesichtsbereich unterworfen waren, bevor sie zwecks Weiterbehandlung an eine Universitäts-Spezialklinik überwiesen wurden. Die Ergebnisse zeigten, daß die Patienten vor der Überweisung im Durchschnitt bei 4,88 Therapeuten aus 44 unterschiedlichen Sparten in Behandlung waren. Rund 70% der Studienteilnehmer hatten wegen ihrer Beschwerden einen Zahnarzt oder zahnärztlichen Spezialisten aufgesucht. Wandten sich Patienten aufgrund ihrer Schmerzen als erstes an einen Zahnmediziner, so war der nachfolgende Behandler in der Regel ebenfalls ein Zahnmediziner. Suchte der Patient demgegenüber zunächst einen Humanmediziner auf, so war der nachfolgende Behandler häufig ein Medizinerkollege. Bei mehr als 60% aller Patienten kam mindestens eine nicht-zahnmedizinische Behandlungsmethode zur Anwendung (z. B. physikalische Therapie, Chiropraktik, Osteopathie, Entspannungstraining); physikalische Therapie war dabei mit 42,2% am häufigsten vertreten. Die Zufriedenheit der Patienten mit der bislang erfolgten Betreuung und Behandlung war insgesamt eher mäßig. Zwar äußerten 18,5% der Patienten, sie seien sehr zufrieden, jedoch waren 27,7% unzufrieden oder sehr unzufrieden. Unsere Ergebnisse bestätigen die Befunde einer von Glaros und Mitarbeitern durchgeführten Untersuchung aus Kansas City (Missouri). Aus dieser im Jahre 1995 publizierten Studie ging hervor, daß Patienten mit persistierenden muskuloskeletalen Schmerzen im Gesichtsbereich in der Regel verschiedene Behandler konsultieren und zu ihrer Behandlung häufig nicht-(zahn)medizinische Methoden zur Anwendung kommen. Die in unserer Untersuchung festgestellte mäßige Zufriedenheit der Patienten mit den erfolgten Therapiemaßnahmen ist ein Hinweis darauf, daß trotz aller Bemühungen in vielen Fällen derzeit nur ein relativ beschränkter Behandlungserfolg erzielt wird.

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