# Physical and Sexual Abuse Among Orofacial Pain Patients: Linkages With Pain and Psychologic Distress

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Correspondence to: Dr Charles R. Carlson Department of Psychology 115 Kastle Hall University of Kentucky Lexington, Kentucky 40506–0044 This study examines the incidence of and the potential correlates of sexual and physical abuse among facial pain patients. An anonymous survey composed of standardized self-report measures of abuse, pain, and psychologic status was distributed to 120 adult facial pain patients following their initial evaluations. Forty-five questionnaires were returned by mail. In addition, 206 charts were randomly selected from a population of 520 new patients seen at the Orofacial Pain Center during the same time period that data from the anonymous survey were collected. Results of the anonymous survey indicated that 68.9% of the patients reported a history of abuse. Conversely, a chart review revealed that only 8.5% of the patients indicated a history of abuse on the clinic questionnaire. History of abuse was significantly related to greater pain severity, depression, psychologic distress, and various personality characteristics. Overall, this study indicates that the assessment of the history of abuse may be an important factor in the evaluation and treatment of facial pain.

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epression, anxiety, posttraumatic stress disorder, somatization disorders, borderline personality disorder, and substance abuse are consistent psychologic correlates of sexual and physical abuse found in the general population.<sup>1-6</sup> Only recently, however, have investigators explored physical sequelae of abuse and their potential relationships with various medical disorders.<sup>7-11</sup> Correlates of sexual and/or physical abuse have been examined in patients with chronic headaches,12 gastrointestinal disorders,<sup>7,13</sup> chronic pelvic pain,<sup>14-18</sup> chronic lower back pain, and myofascial pain syndrome.14,19 Common findings in these studies suggest that a history of sexual and/or physical abuse may be associated with greater levels of depression, chronic pain severity, somatic symptoms, substance abuse, marital problems, and visits to health professionals. However, these findings are limited because of problems such as the use of nonstandardized methods to assess abuse history and the small number of factors included in the investigation of potential correlates related to abuse.

Increased anxiety, depression, and psychologic distress are also common findings associated with facial pain disorders.<sup>20-23</sup> However, literature regarding the potential correlates of sexual and/or physical abuse in facial pain patients is scarce. Harness and Donlon<sup>24</sup> presented two case studies of facial pain patients who had undergone medical treatment but were still suffering from pain and dysfunction. These patients were also treated by physical therapists and trained in techniques of biofeedback and stress management with almost no improvement. When the patients were able to discuss past physical abuse by a family member and to process feelings associated with the incident (eg, writing about the trauma), they experienced significant reductions in symptoms of headache, muscle-tension levels, bruxism, and depression. Although these findings are limited as a result of methodologic problems often associated with case studies that include a small sample size and no formal assessment of symptoms, the results do suggest the need for future research with this population. In addition, the importance of examining the potential impact of sexual and physical abuse within a facial pain population is illustrated by the fact that both abuse and facial pain disorders are experienced more frequently by females than males.<sup>1,25,26</sup>

One of the difficulties in examining the impact of abuse is the large extent to which these experiences are underreported.<sup>1,27</sup> A study involving women with gastrointestinal disorders found that almost one third of the abused patients (identified through a self-report questionnaire) had never told anyone about their abuse experience, and only 17% of these women had informed their physician.13 Reported rates of abuse also appear to vary according to the method of assessment employed. For example, abuse rates reported from a confidential survey were twice as high as those obtained from a standardized psychiatric interview.28 These results identify important issues in the assessment of abuse and suggest possible limitations in previous findings derived from nonstandardized interview questions.

The purpose of this study was to examine the incidence and potential influence of sexual and physical abuse among facial pain patients. A standardized, self-report measure of sexual and physical abuse was used to assess the incidence and nature of abuse experienced by facial pain patients.29 In addition, several standardized measures of pain, depression, anxiety, emotional distress, and personality traits were included to evaluate the relationship between these physical and psychologic factors and a history of abuse. Given the probable underreporting of abuse, this examination used an anonymous survey format to ensure the confidentiality of information provided by the subjects. The potential to underreport abuse was investigated by conducting a concurrent chart review to determine whether a cohort of patients seen during the same period responded positively to an item on history of abuse included in the clinic questionnaire (which contains identifying information).

# Materials and Methods

## Patients and Data Collection

An anonymous survey was distributed to 120 adults who were new patients at the Orofacial Pain Center at the University of Kentucky, College of Dentistry, Lexington, KY. Each new patient received information about this study from a doctoral-level research assistant. If interested, the patient was given the packet of questionnaires and a self-addressed, stamped envelope. Forty-five questionnaires were returned by mail. This response rate of 37.5% is equivalent to the response rate found in a study using a similar battery of questionnaires.<sup>11</sup> The sample consisted of 39 women and six men (87% and 13% of the total sample, respectively) with a mean age of 35.3 years (range, 18 to 69 years). Marital status of the patients was as follows: 59.1% married; 22.7% single; 15.9% divorced; and 2.3% widow/widower. The mean pain duration was 4.6 years (range, 0 to 25 years), with an average current pain intensity of 6.1 (0-to-10 scale, where 0 = no pain and 10 = worst possible pain).

In addition, 206 charts were randomly selected from a population of 520 new patients who were seen at the Orofacial Pain Center during the same time period as the anonymous survey data collection. This sample consisted of 171 women and 35 men (83% and 17% of total sample, respectively). The mean age of these patients was 34.5 years (range, 18 to 83 years), with a mean pain duration of 3.6 years (range, 0 to 25 years). The chart review consisted of data gathered from the Orofacial Pain Center's screening questionnaire that patients completed prior to their initial evaluation appointment. This clinic questionnaire included an item in which patients were asked to indicate whether they had ever experienced physical and/or sexual abuse. The presence or absence of a history of abuse was recorded based on this self-report item. The charts were reviewed by a graduate student clinician who had no prior contact with the patients.

## **Dependent Measures**

Abuse Questionnaire. Sexual and physical abuse was measured using a modified version of a standardized interview developed by Finkelhor<sup>29</sup> assessing childhood victimization. The self-report measure used in this study contained four main questions regarding sexual and physical abuse experienced as a child and as an adult. Each of these questions include several qualitative items to examine the nature of the abuse; however, this information will be reported in a later study.

Physical abuse was defined as experiencing one or more of the following physical traumas at a rate of two or more times a year during an average year: slapped; hit really hard; beat; punched; and kicked. Childhood physical abuse was defined as physical abuse occurring before age 18 and inflicted by either a mother, father, or other parental figure(s). Adult physical abuse was defined as physical abuse occurring since age 18 and inflicted by either a spouse, significant other, family members, friends, or strangers.

Childhood sexual abuse was assessed by asking subjects to describe the two most important sexual experiences they had before the age of 18 with people at least 5 years older, including strangers, friends, or family members.<sup>29</sup> Adult sexual abuse was assessed by asking subjects to describe the two most important sexual experiences they had since the age of 18 that they did not want to occur, with strangers, friends, or family members.

A total abuse score was calculated as the sum of the presence of child physical abuse (0 or 1), adult physical abuse (0 or 1), and the number of sexual abuse experiences reported as a child (0 to 2) and as an adult (0 to 2). This total abuse score (range, 0 to 6) was used in the correlational analyses of potential correlates of abuse. In addition, incidence of a history of abuse was defined as the number of patients with a total abuse score greater than zero.

Beck Depression Inventory (BDI). The BDI contains 21 items and was developed to measure severity of depressive symptoms.<sup>30</sup>

State-Trait Personality Inventory (STPI). The STPI was designed to measure anxiety, anger, and curiosity. The state scales measure the degree to which an individual is experiencing these three emotional dimensions at the time of testing, and the trait scales measure an overall tendency to experience these emotions over time.<sup>31</sup>

Symptom Checklist 90-Revised (SCL90-R). The SCL90-R is a revised version of the Hopkins Symptom Checklist.<sup>32</sup> This self-report measure was designed to assess current psychologic symptom status.<sup>33</sup> It contains 90 symptoms that are rated on a five-point Likert scale of distress (0 = not at all, 4 = extremely). This measure yields three global scores of psychologic distress (general severity index, positive symptom distress index, positive symptom total) and nine subscale scores (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism). Internal consistency estimates and test-retest reliability values of the subscales range between .77 to .90, and .78 to .90, respectively. The global severity index score was used in this study as a measure of overall psychologic distress.

Hardiness Scale. Hardiness is a construct defined as a set of personality characteristics associated with people who remain healthy in response to stressful life events.<sup>34</sup> This 50-item self-report scale measures three components of hardiness: control; commitment; and challenge. The control subscale measures the tendency to feel and act as if in control of one's life and the events that occur. The commitment subscale measures the tendency to participate actively in one's life and find meaning in one's life. The challenge subscale measures the tendency to view change as normal and exciting in one's life rather than as a threat to security. This instrument also yields a global, composite score of hardiness.

McGill Pain Questionnaire-Short Form (MPQ-SF). The MPQ-SF is a shorter version of the original MPQ, which was designed to measure the qualitative aspects of pain. This short form contains four measures of pain, including sensory and affective scores as well as two indexes of total pain experience, and it correlates highly with the original MPQ.<sup>35</sup>

## Results

Results of the anonymous survey indicated that 68.9% of the patients reported a history of sexual and/or physical abuse. The nature of this abuse is described as follows:

- 1. Child sexual abuse was experienced once by 8.9% of the patients.
- 2. Child sexual abuse was experienced at least twice by 20.0% of the patients.
- 3. Adult sexual abuse was experienced once by 15.6% of the patients.
- 4. Adult sexual abuse was experienced at least twice by 6.7% of the patients.
- 5. Child physical abuse was experienced by 42.2% of the patients.
- 6. Adult physical abuse was experienced by 22.2% of the patients.

In contrast to the anonymous survey format, results of the chart review found only 8.5% of the patients publicly reported a history of sexual and/or physical abuse.

Correlational analyses (Table 1) revealed that a history of abuse was significantly related to greater

levels of depression and psychologic distress. A history of abuse was also significantly correlated with several personality characteristics. Results from the STPI indicated a significant relationship between abusive history and increased levels of anxiety and a tendency to avoid new experiences. In addition, results of the Hardiness Scale revealed a significant relationship between abuse and a decreased capacity to cope with stressful events. A history of abuse was related to feeling overwhelmed and helpless with little sense of meaning in one's life. The mean scores of the various psychologic and pain measures for abused and nonabused facial pain patients are shown in Table 2. Finally, results of the MPQ-SF indicated that greater pain severity was also related to a history of abuse (see Table 1). This relationship was significant for both the sensory and affective dimensions of pain.

## Discussion

The large proportion of facial pain patients reporting a history of abuse in this study (approximately 69%) is similar to rates found in other populations with pain disorders.<sup>12,14</sup> Greater levels of depression and psychologic distress were associated with a history of abuse in facial pain patients, as well as several personality characteristics. Results indicated that patients with a past history of abuse tend to have increased levels of anxiety and are less open to new experiences. They frequently feel alienated from their environment and others, and they lack a sense of meaning in their lives. Finally, these abused patients also had a tendency to report feeling helpless and overwhelmed by events in their lives.

The personality characteristics of facial pain patients with a history of abuse are similar to those individuals in the general population known to be suffering long-term consequences of abuse.<sup>6,36</sup> This suggests that abused individuals may have greater difficulty adjusting to facial pain problems and may not use effective coping strategies in response to this pain stressor. For example, abused patients may feel unable to control their pain symptoms and may believe that their pain will persist. Such beliefs can exacerbate and/or prolong their facial pain symptoms.<sup>7</sup> In addition,

Table 1	Relationship of History of Abuse and
Psycholog	gic and Pain Status

	History of abuse (r)
Depression (BDI)	.66**
Psychologic Distress (SCL90-R)	.42**
State-Trait Personality Inventory (STPI)	
Trait anxiety	.34*
Trait curiosity	33*
Trait anger	.30*
Hardiness Scale	35*
Commitment	42**
Control	47**
Challenge	35
McGill Pain Questionnaire	
Sensory subscale	.35*
Affect subscale	.49**

\*P≤.05. \*\*P<.01

 Table 2
 Mean Values of the Psychologic and Pain Measures as a Function of Abuse Status\*

and the second second second second second	Abused	Nonabused
Depression (BDI)	14.12	10.80
Psychologic Distress (SCL90-R)	61.27	55.12
State-Trait Personality Inventory (STPI)		10.10
Trait anxiety	23.32	19.40
Trait curiosity	25.29	23.80
Trait anger	22.70	17.30
Hardiness Scale	64.75	67.20
Commitment	71.09	76.70
	65.16	71.30
Control Challenge	57.50	54.10
McGill Pain Questionnaire		
Sensory subscle	12.79	8.60
Affect subscale	4.35	2.30

\*n = 34 abused patients, n = 10 nonabused patients.

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the increased likelihood that these abused patients experience greater psychologic distress in general may contribute to various etiologic factors associated with facial pain disorders such as bruxism, sleep problems, and increased myofascial triggerpoint activity.<sup>23,37-41</sup>

The relationship between facial pain and abuse may also lie in the psychologic and physical factors involved in pain perception. The results of this study indicated greater pain severity in facial pain patients with a history of abuse. This relationship may be linked to factors such as reduced levels of pain threshold or an inability to discriminate differences in pain intensity. A recent study by Scarinci et al42 included these factors in the examination of pain perception and history of abuse in medical patients. This study used a signal detection method to examine pain threshold levels, ability to discriminate various painful stimuli, and response biases in women with gastrointestinal (GI) disorders. Results demonstrated that abused patients with GI disorders had significantly lower pain threshold levels than did patients with GI disorders who did not report a history of abuse. These two groups also differed statistically in response bias such that abused patients with GI disorders tended to label stimuli as noxious at lower intensity levels as compared to the nonabused patients with GI disorders. However, these two groups did not differ statistically in ability to discriminate between different intensities of painful stimuli. These results suggest that psychologic factors associated with measures such as pain threshold levels and response bias, rather than the more physical factor of discrimination ability, may be responsible for the increased pain sensitivity found in abused patients.

Differences found in reported abuse rates related to method of abuse assessment indicate potential problems associated with previous research in this area and emphasize the difficulty in investigating potential factors of abuse. Similar research findings suggest caution in accepting initial denials of a history of abuse in response to interview questions.19,28 These methodologic issues and the general underreporting of abuse experiences lead to an increased likelihood of missing this potentially important factor in the initial evaluation of a facial pain patient. Guidelines for facilitating disclosure of sexual and/or physical abuse include providing privacy for the patient during an initial evaluation and informing the patient of the consequences regarding disclosure.28 In addition, asking specific detailed questions may also aid in disclosure of this difficult experience.43

## Summary

This preliminary study provides evidence of the high incidence of abuse in facial pain patients and identifies potential psychologic and physical factors associated with abuse. These factors may directly affect facial pain symptoms through mechanisms linked to ineffective coping strategies in response to this stressor, and/or indirectly by exacerbating various etiologic factors associated with facial pain (eg, bruxism). Assessing history of abuse can assist in understanding a patient's response to treatment and aid in planning comprehensive and effective treatment.<sup>44</sup>

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### Resumen

Abuso físico y sexual entre los pacientes con dolor orofacial: Nexos con las aflicciones psicológicas y de dolor

Este estudio examina la incidencia y las posibles correlaciones entre el abuso físico y sexual entre los pacientes con dolor facial. Se distribuyó una encuesta anónima compuesta de medidas estandarizadas auto-reportables de abuso, dolor y estado psicológico, a 120 pacientes adultos que sufrían de dolor facial luego de su evaluación inicial. Se recibieron 45 cuestionarios a vuelta de correo. Además, se seleccionaron al azar 206 fichas, de una población de 520 pacientes nuevos examinados en el Centro de Dolor Orofacial durante el mismo periodo que se reunió la información de la encuesta anónima. Los resultados de tal encuesta indicaron que el 68,9% de los pacientes tenían antecedentes de abuso. Por otro lado, la revisión de las fichas reveló que sólo el 8,5% de los pacientes indicaron en los cuestionarios clínicos que tenían antecedentes de abuso. El abuso fue relacionado significativamente a una mayor severidad del dolor, depresión, aflicciones psicológicas, y varias características de personalidad. En conjunto, este estudio indica que la evaluación de los antecedentes de abuso puede ser un factor importante en la evaluación y tratamiento de dolor facial.

#### Zusammenfassung

Körperlicher und sexueller Missbrauch bei Patienten mit orofacialen Schmerzen: Der Zusammenhang zwischen Schmerz und psychologischem Distress

Diese Studie untersucht die Inzidenz und die möglichen Korrelate von sexuellem und körperlichem Missbrauch bei Patienten mit Gesichtsschmerzen. Eine anonyme Befragung-bestehend aus Fragebögen über Missbrauch, Schmerz und psychologischem Status-wurde im Anschluss an eine Initialuntersuchung an 120 erwachsenen Patienten mit Gesichtsschmerzen durchgeführt. Zusätzlich wurden 206 Krankengeschichten zufällig aus einer Population von 520 neuen Gesichtsschmerzpatienten ausgewählt, die zur selben Zeit das Gesichtsschmerzzentrum besucht hatten. Die Resultate der anonymen Studie ergaben, dass 68,9% der Patienten eine Geschichte von Missbrauch vermeldeten. Im Gegensatz dazu konnte in nur 8,5% der gesichteten Aufzeichnungen eine Geschichte von Missbrauch gefunden werden. Missbrauch war signifikant assozijert mit stärkeren Schmerzen, Depression, psychologischem Distress und verschiedenen Charakteristika der Persönlichkeit. Insgesamt lässt diese Studie darauf schliessen, dass die sorgfältige Aufnahme einer allfälligen Geschichte von Missbrauch einen wichtigen Faktor in der Abklärung und Therapie von Gesichtsschmerzen darstellt