

Prevalence of Orofacial Pain and Treatment Seeking in Hong Kong Chinese

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***Aims:** To estimate the prevalence and pattern of self-reported orofacial pain symptoms and treatment-seeking behavior in adult Cantonese-speaking Chinese people in Hong Kong. **Methods:** A cross-sectional population survey involving a telephone survey technique was used to identify 1,222 randomly selected Cantonese-speaking people aged at least 18 years. Standard questions were asked on the experience of 8 orofacial pain symptoms in the previous month and on treatment-seeking behavior. **Results:** Orofacial pain symptoms were reported by 41.6% of respondents when tooth sensitivity was included and by 24.2% when it was excluded. There was no gender- or age-related difference in pain prevalence ($P > .010$). Tooth sensitivity was the most common symptom (27.7%), followed by toothache (12.5%), and shooting pain in the face was the least common (1.1%). Almost half those with symptoms reported the pain as moderate to severe, and a fifth had frequent pain. Only 20.3% with pain symptoms sought professional treatment, and use of self-prescribed medication was very low (12.4%). **Conclusion:** Orofacial pain symptoms appear to affect more than a quarter of the adult population in Hong Kong, and prevalence estimates were consistent with those in Western countries. A substantial proportion of the pain symptoms were frequent and of moderate to severe intensity, with the potential for significant morbidity. Professional treatment seeking was very low and may be related to specific pain behaviors and effective coping strategies in this ethnic group. J OROFAC PAIN 2006;20:218–225*

Key words: epidemiology, orofacial, pain, prevalence, treatment seeking

Pain is a common symptom of conditions affecting the orofacial tissues. Epidemiologic studies in the United States, Canada, and the United Kingdom have shown that the prevalence of orofacial pain symptoms in adult populations ranges from 14% to 40%.^{1–4} Gender- and age-related differences in orofacial pain prevalence have also been noted, with women and younger adults at apparently greater risk of pain symptoms.^{3,5}

Pain is closely associated with poor health and may considerably impair one's ability to perform activities of daily living. Despite this impact, not all pain sufferers seek professional help; some symptoms are ignored, while others prompt attention.^{3,6–8} In an investigation of treatment seeking for back pain, Papageorgiou and Rigby⁹ observed that only 1 in 4 people consulted a medical doctor for the condition. Macfarlane et al³ noted that less than half of their sample of subjects with orofacial pain sought professional

care. Various characteristics of the pain appeared to prompt treatment seeking, although the time course of these factors was unclear.⁸ Locker and Grushka² observed that more than half of those with orofacial pain described the pain as moderately severe or severe, and yet only 40% of those reporting pain sought advice from a doctor or dentist.

There is presently very little information on the prevalence and impact of orofacial pain in southern Chinese adults in Hong Kong, and none available on Chinese people residing in mainland China. Most orofacial pain prevalence studies have focused on predominantly Caucasian populations. However, a recent study in Korean elders suggested that the prevalence was higher in this ethnic group than in Caucasians.¹⁰ In a previous population-based survey, it was shown that self-reported pain symptoms associated with temporomandibular disorders are relatively common in the Hong Kong Chinese population.¹¹ However, the nature of the pain differed from Western counterparts; frequent intense pain was less common, no gender bias in pain symptoms was observed, and treatment seeking was much less common.

Therefore, the present study was initiated to test the hypothesis that there is a substantial amount of orofacial pain in the Hong Kong community, much of which is not subject to professional attention. This study aimed to estimate (1) the prevalence of self-reported orofacial pain symptoms and (2) treatment-seeking behavior in adult, community-dwelling, Cantonese-speaking Chinese people in Hong Kong. Presumptive associations between pain characteristics and treatment seeking were also examined.

Materials and Methods

The design was a cross-sectional population study using a telephone survey method. This method was adopted because almost all households in Hong Kong have telephones.¹² Approval from the Ethics Committee of the University of Hong Kong was obtained prior to commencement of the study. Verbal informed consent was obtained from participants after the nature of the study had been fully explained.

The study was conducted by the Telephone Survey Unit at the Social Sciences Research Centre of the University of Hong Kong. The survey took place over 7 days in November 2004. A sample of Cantonese-speaking Chinese people aged at least 18 years and living in Hong Kong was generated for the survey by a random-digit dialing technique. This

group represents 95% of the population of Hong Kong.¹³ Interviews were conducted by trained staff using a standard approach. When there was more than 1 potential participant in a household, 1 of them was randomly selected to take part in the study.¹⁴ At the end of the survey, 10% of the sample were contacted again to ensure that they had taken part and answered the questions in the survey.

Interviews were conducted using a computer-assisted telephone interview method and a standardized sequence, viz, the research questionnaire followed by 4 demographic questions (age, gender, educational level, monthly income). A Chinese questionnaire was used that was based on an orofacial pain and discomfort screening measure described previously by Locker and Grushka.² The questionnaire was translated into Chinese, back-translated into English, then pilot-tested on patients attending the Prince Philip Dental Hospital in Hong Kong. Patient feedback was evaluated, and the precise wording of the questionnaire was then determined.

Questionnaire

The questionnaire incorporated questions on current and recent orofacial pain experience. There were 8 main questions about various types of pain. Participants were asked, "In the past 4 weeks have you had any of these types of pain?" Pain was defined as present if the participant responded positively with respect to any of the following:

- Toothache
- Pain in the teeth with hot or cold liquids
- Pain in the jaw joint/s
- Pain in the jaw while chewing
- Pain in the jaw joint/s while opening the mouth wide
- Pain in the face in front of the ear
- A prolonged burning sensation in the tongue or other parts of the mouth
- Sharp shooting pains across the face and/or cheeks

Those who reported pain were asked about pain frequency, intensity, and duration; professional treatment seeking; and whether they had taken self-prescribed medication for the orofacial pain. The response choices for pain frequency were *rarely*, *sometimes*, *quite often*, and *very often*. For pain severity, they were *mild*, *moderate*, *severe*, and *very severe*. For pain duration, they were 1 to 5, 6 to 10, 11 to 15, 16 to 20, and more than 20 days. For professional treatment seeking, those who reported having sought professional treat-

Table 1 Demographic Data of the Survey Sample (n = 1,222) and the General Population of Hong Kong

	Survey sample (%)	General population (%)
Gender		
Male	41.3	49.5
Female	58.7	50.5
Age (y)		
18 to 34	32.2	37.4
35 to 54	46.8	38.7
≥ 55	21.0	23.9
Educational attainment		
Primary or below	16.4	32.1
Secondary	51.0	52.7
Tertiary	32.6	15.2
Income/mo (HK\$)*		
0 to 14,999	41.8	74.3
15,000 to 24,999	23.7	15.3
25,000 to 39,999	17.0	5.7
≥ 40,000	17.5	4.7

*Household income/mo reported for survey sample; personal income/mo reported for general population.

ment were asked whether they had seen a doctor, dentist, or traditional Chinese medicine practitioner.

The validity of the questionnaire was tested in 20 patients at the primary dental care unit in the Prince Philip Dental Hospital. The patients completed the questionnaire prior to a clinical assessment by a dentist not involved in the study. Patients' pain self-reports were then compared with clinical diagnostic data. In all cases, there was agreement between patient-based and clinical data in terms of the type of pain experienced.

Response Rate and Survey Sample

A total of 5,727 randomly dialed calls were made. Of these calls, 1,401 were not available (no eligible person present in the household at the time of the call), 1,311 calls were not answered (after 3 attempts), 1,154 were invalid, 219 were fax numbers, 164 were business numbers, 146 people refused to be interviewed, 69 cases were partially done, and 41 had language problems. A total of 1,222 respondents were successfully interviewed, giving a response rate of 85.0% and an overall contact rate of 53.1%.

The survey sample and the general population distribution are described in Table 1. The characteristics of the study sample were relatively similar to the data described in the 2001 Hong Kong population census,¹³ although there were more women and more middle-aged and tertiary-educated people

in the study sample. Since 1.3% and 1.1% of respondents refused to provide their age and educational level, respectively, and 18.2% were unable to give accurate details of household income, the relevant categories were calculated as a percentage of those who did respond. With respect to income, no direct comparisons could be made between the survey sample and the general population.

Data Analysis

SPSS software (version 12) was used to enter data into a computer. The prevalence of orofacial pain symptoms and corresponding 95% CIs were obtained. Because of some differences in terms of gender, education, and income between the survey respondents and the general population, both unweighted and weighted overall prevalence estimates were calculated. The weighted estimate was calculated by assigning weights according to the actual general population profile for gender, age, and educational level.¹³ Chi-square or chi-square exact tests were used to compare differences in the prevalence, frequency, and intensity of orofacial symptoms according to gender and age group. Associations between treatment seeking for orofacial pain and pain characteristics (symptom, frequency, and intensity) were analyzed using chi-square tests. Because of the multiple testing performed in the data analysis, in order to lower the type I error rate, the level of significance was set at .01.

Results

Prevalence of Orofacial Pain

Of the 1,222 survey respondents, 508 (unweighted prevalence, 41.6%; 95% CI, 38.8% to 44.3%) reported some form of orofacial pain (Table 2). The weighted prevalences were 41.5% (95% CI, 38.7% to 44.3%) by gender, 41.4% (95% CI, 38.6% to 44.2%) by age, and 42.5% (95% CI, 39.7% to 45.3%) by educational level, indicating that the data from the survey respondents did not appear to have induced significant bias. When the symptom tooth sensitivity was excluded, 296 (unweighted prevalence, 24.2%; 95% CI, 21.8% to 26.6%) reported at least 1 orofacial pain symptom. The weighted prevalences (24.7% by gender, 24.5% by age, and 24.9% by educational level) were very similar to the unweighted estimates. There was no statistically significant gender- or age-related difference in overall pain prevalence ($P > .010$). Responses to the 8 questions concerning type and location of orofacial pain

Table 2 Distribution (%) of Orofacial Pain Symptoms by Gender and Age Group

Pain symptoms	%	Gender		P	Age			P
		Males	Females		18–34	35–54	≥ 55	
	(n = 1,222)	(n = 505)	(n = 717)		(n = 389)	(n = 564)	(n = 253)	
Toothache	12.5 (10.6–14.4)	14.3	11.3	.124	12.1	11.5	15.0	.363
Tooth sensitivity	27.7 (25.2–30.2)	22.8	31.2	.001*	25.7	30.1	24.5	.154
Burning sensation	3.7 (2.6–4.8)	5.0	2.8	.048	1.8	4.1	5.9	.022
Pain in the jaw joint(s)	5.0 (3.8–6.2)	6.7	3.8	.019	6.4	4.8	3.2	.171
Jaw pain while chewing	6.1 (4.8–7.4)	7.3	5.2	.118	6.9	4.1	8.7	.022
Jaw pain while opening	3.2 (2.2–4.2)	5.0	2.0	.003*	3.9	2.8	3.2	.681
Pain in front of the ear	6.9 (5.5–8.3)	6.7	7.0	.870	7.7	7.1	5.5	.563
Shooting pain	1.1 (0.5–1.7)	1.2	1.0	.722	0.3	0.9	2.8	.070
Overall prevalence of orofacial pain	41.6 (38.8–44.3)	40.8 (36.5–45.1)	42.1 (38.5–45.7)	.643	43.2 (38.3–48.1)	41.7 (37.6–45.7)	37.9 (32.0–43.9)	.412
Overall prevalence of orofacial pain, excluding tooth sensitivity	24.2 (21.8–26.6)	27.5 (23.6–31.4)	21.9 (18.9–24.9)	.024	27.8 (23.3–32.2)	22.5 (19.1–26.0)	22.5 (17.4–27.7)	.139

95% CI shown in parentheses; * $P < .01$.

Table 3 Overall Frequency of Orofacial Pain Symptoms and Those Occurring Frequently (Very Often/Quite Often), by Gender and Age Group

Pain symptoms	Frequency (%)				Gender (% very often/ quite often)		Age (y) (% very often/ quite often)		
	Very often	Quite often	Sometimes	Rarely	Males	Females	18–34	35–54	≥ 55
Toothache (n = 153)	13.7	3.9	58.9	23.5	19.4	16.0	6.4	23.1	21.1
Tooth sensitivity (n = 339)	15.3	4.8	56.6	23.3	24.3	17.9	15.0	19.4	29.0
Burning sensation (n = 45)	17.8	8.9	60.0	13.3	20.0	35.0	14.3	26.1	33.3
Pain in the jaw joint/s (n = 61)	4.9	3.3	55.7	36.1	5.9	11.1	4.0	3.7	25.0
Jaw pain while chewing (n = 74)	12.2	8.1	52.7	27.0	18.9	21.6	11.1	17.4	27.3
Jaw pain while opening (n = 39)	7.7	5.1	59.0	28.2	12.0	14.3	13.3	0.0	37.5
Pain in front of the ear (n = 84)	3.6	4.8	47.6	44.0	5.9	10.0	6.7	2.5	28.6*
Shooting pain (n = 13)	0.0	0.0	61.5	38.5	0.0	0.0	0.0	0.0	0.0
Overall orofacial pain (n = 508)	15.4	4.7	57.3	22.6	20.4	19.9	14.3	19.1	31.1*
Overall orofacial pain, excluding tooth sensitivity (n = 296)	12.8	4.4	55.8	27.0	16.5	17.8	10.2	17.3	28.1

* Significant difference between age groups ($P < .01$).

are described in Table 2. The most prevalent pain symptom was tooth sensitivity (27.7%), followed by toothache (12.5%). The least prevalent symptom was shooting pain in the face (1.1%).

Orofacial pain symptoms, including and excluding tooth sensitivity, were reported frequently (quite often or very often) by about 20% of the respondents (20.1% including tooth sensitivity and 17.2% excluding it). Data on the frequency of pain symptoms are shown in Table 3. There was a significantly higher prevalence of orofacial pain including tooth sensitivity in the ≥ 55-year age

group ($P = .004$). Frequent pain in front of the ear ($P = .008$) was also significantly more common in the ≥ 55-year group.

Overall, orofacial pain symptoms of moderate to very severe intensity were reported by 46.1% of respondents including tooth sensitivity and 47.6% of respondents excluding tooth sensitivity. Details of the distribution by pain type are shown in Table 4. Pain intensity was greater in the ≥ 55-year group for pain during jaw opening ($P = .004$). There was no gender-related difference in the prevalence of pain of moderate to very severe intensity ($P > .010$).

Table 4 Overall Intensity of Orofacial Pain Symptoms and Those of Moderate/Severe/Very Severe Intensity by Gender and Age Group

Pain symptoms	Intensity (%)				Gender % moderate/severe/very severe		Age (y) % moderate/severe/very severe		
	Mild	Moderate	Severe	Very severe	Males	Females	18-34	35-54	≥ 55
	Toothache (n = 153)	49.0	34.0	12.4	4.6	50.0	51.9	46.8	49.2
Tooth sensitivity (n = 339)	58.1	34.8	5.9	1.2	42.6	41.5	40.0	40.6	46.8
Burning sensation (n = 45)	35.6	44.4	15.6	4.4	68.0	60.0	42.9	60.9	80.0
Pain in the jaw joint/s (n = 61)	54.1	34.4	6.6	4.9	35.3	59.3	24.0	55.6	75.5
Jaw pain while chewing (n = 74)	45.9	45.9	4.1	4.1	62.2	45.9	40.7	47.8	72.7
Jaw pain during opening (n = 39)	48.7	41.1	5.1	5.1	52.0	50.0	20.0	62.5	87.5*
Pain in front of the ear (n = 84)	70.2	23.8	3.6	2.4	35.3	26.0	23.3	27.5	50.0
Shooting pain (n = 13)	53.8	23.1	7.7	15.4	50.0	42.9	100.0	40.0	42.9
Overall orofacial pain (n = 508)	53.9	34.1	8.7	3.3	47.1	45.4	42.3	44.7	54.2
Overall orofacial pain, excluding tooth sensitivity (n = 296)	52.3	32.8	9.8	5.1	49.6	45.9	39.8	48.0	59.6

*The ≥ 55 age group was significantly different from the other 2 age groups for this symptom ($P < .01$).

Table 5 Overall Duration of Pain Symptoms and Those Lasting 1 to 5 Days by Gender and Age Group

Pain symptoms	Duration (d) (%)					Gender % with duration of 1-5 d		Age (y) % with duration of 1-5 d		
	1-5	6-10	11-15	16-20	20+	Males	Females	18-34	35-54	≥ 55
	Toothache (n = 153)	73.9	10.5	3.9	0.6	11.1	73.6	74.1	80.9	76.9
Tooth sensitivity (n = 339)	78.4	8.0	2.1	0.9	10.6	77.4	79.0	87.0	76.5	71.0
Burning sensation (n = 45)	75.6	13.3	2.2	2.2	6.7	76.0	75.0	85.7	73.9	73.3
Pain in the jaw joint/s (n = 61)	86.9	4.9	0.0	1.6	6.6	85.3	88.9	92.0	88.9	75.0
Jaw pain while chewing (n = 74)	73.0	10.8	0.0	1.3	14.9	75.7	70.3	77.8	78.3	68.2
Jaw pain during opening (n = 39)	71.8	10.3	5.1	0.0	12.8	76.0	64.3	86.7	62.5	62.5
Pain in front of the ear (n = 84)	90.4	3.6	2.4	0.0	3.6	94.1	88.0	96.7	92.5	71.4
Shooting pain (n = 13)	100.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0

$P > .01$ for all statistical tests.

Most respondents had experienced orofacial pain symptoms for 1 to 5 days, with relatively few having pain that lasted for more than 5 days. The duration of symptoms by pain type is shown in Table 5. There were no age- or gender-related differences in the duration of pain symptoms ($P > .010$).

Treatment Seeking for Orofacial Pain

Overall, 20.3% (103 of 508) of respondents reporting orofacial pain symptoms had sought professional treatment. Most of them had con-

tacted a dentist (82.5%) and/or a medical doctor (22.3%); only 1.8% had consulted a traditional Chinese medical practitioner. Only 12.4% of respondents with orofacial pain took self-prescribed medication because of the pain. There was no gender-related difference in treatment seeking ($P > .010$). There was a significant age-related difference in treatment seeking ($P < .001$), with 11.3% in the 18-to-34-year group, 23.8% in the 35-to-54-year group, and 29.2% in the ≥ 55-year group. Within the treatment-seeking group, 55.3% had more than 1 orofacial pain symptom. The

Table 6 Percentage of Respondents Seeking Treatment and Associations Between Pain Symptoms (Frequency, Intensity, Duration) and Treatment Seeking

Treatment sought	% of patients seeking treatment	Frequency (%)			Intensity (%)			Duration (%)		
		Frequent pain	Infrequent pain	<i>P</i>	Moderate to severe	Mild	<i>P</i>	1–5 d	> 5 d	<i>P</i>
Toothache (n = 153)	36.6	51.9	33.3	.070	44.9	28.0	.030	32.7	47.5	.096
Tooth sensitivity (n = 339)	19.5	36.8	15.1	< .001	22.5	17.3	.226	14.7	37.0	< .001
Burning sensation (n = 45)	35.6	75.0	21.2	.002	44.8	18.8	.080	23.5	72.7	.005
Pain in the jaw joint/s (n = 61)	24.6	40.0	23.2	.589	39.3	12.1	.014	20.8	50.0	.093
Jaw pain while chewing (n = 74)	25.7	46.7	20.3	.050	37.5	11.8	.012	18.5	45.0	.021
Jaw pain while opening (n = 39)	25.6	60.0	20.6	.096	40.0	10.5	.065	14.3	54.5	.017
Pain in front of the ear (n = 84)	21.4	28.6	20.8	> .99	28.0	18.6	.339	19.7	37.5	.360
Shooting pain (n = 13)	38.5	0.0	38.5		50.0	28.6	.592	38.5	0.0	

most common combination was toothache and tooth sensitivity, which occurred in more than half of those with multiple symptoms. A significantly higher proportion of respondents who experienced pain frequently (38.2%) and those who had moderate to severe pain (27.8%) sought treatment, compared with those who had less frequent pain (15.8%, $P < .001$) and only mild intensity pain (13.9%, $P < .001$).

People with shooting pain, toothache, and burning sensation were more likely to seek professional treatment, and those with frequent pain due to tooth sensitivity and burning sensation were more likely to seek professional care ($P < .010$) (Table 6). Pain due to tooth sensitivity and burning sensation that lasted more than 5 days was also associated with treatment seeking ($P < .010$).

Discussion

The present population-based survey yielded insight into the prevalence of orofacial pain symptoms and treatment seeking in adult Chinese people in Hong Kong, a predominantly ethnic Chinese urban community, and provides the first estimates of the magnitude and distribution of orofacial pain in this ethnic group. With the awareness of some differences in the profile of the surveyed subjects compared to the general population, the unweighted and weighted prevalence estimates

were calculated and found to be very similar. Thus, the differences between the responders and the general population do not appear to have induced significant bias. As no face-to-face interviews or clinical assessment took place, the reliability of the data collected by telephone interview was pivotal. A professional team of interviewers using contemporary techniques was employed, and the high response rate (85%) was an indication of their skill. In addition, a previous population-based health survey in Hong Kong where data were acquired by telephone and face-to-face interview showed a close correlation between the 2 approaches.¹⁵ Nonetheless, without clinical examination, there remains the possibility that, in some instances, patient-described pain symptoms were misinterpreted.

Since the survey method was similar in approach to a community-based mail survey by Locker and Grushka,² and there were elements comparable with a mail survey by Macfarlane et al,³ relevant comparisons could be made with these studies of Western populations. The 1-month period prevalence of orofacial pain in adult Hong Kong Chinese people was 42% when the symptoms tooth sensitivity to hot and cold liquids were included and 24% when this condition was discounted; this finding was consistent with estimates by Locker and Grushka² and MacFarlane et al.³ There were no age-related differences in overall orofacial pain prevalence with or without the inclusion of tooth

sensitivity, whereas previous studies have shown a greater risk of symptoms among younger people.^{1-3,16} However, there was a trend toward burning sensation being more common in the ≥ 55 -year age group, which is in agreement with previous findings.^{2,3} Jaw pain while chewing also tended to be more common in the oldest age group; this was likely due, at least in part, to a reduction in the number of natural teeth available for chewing and the higher number of removable partial denture prostheses typically worn in this group,¹⁷ especially given the fibrous nature of many Cantonese foods. There was no overall gender difference in the prevalence of orofacial pain, although tooth sensitivity was more common in women, whereas pain during jaw opening was more common in men. No gender difference in prevalence of pain reports was described by Locker and Grushka.² Higher pain prevalences among women have been noted in other orofacial pain studies, although these studies varied in study group characteristics and pain items explored compared with the present study.^{1,3} A previous population-based study on symptoms of temporomandibular disorders in Hong Kong Chinese showed no gender-related differences in overall symptom prevalence, in contradiction with the female bias reported in Caucasian populations.¹¹ A similar distribution pattern of pain symptoms was observed compared with previous orofacial pain studies.¹⁻³ Tooth sensitivity was the most common symptom, followed by toothache, with shooting pain being the least common. Tooth sensitivity was a significant symptom in all age groups and is probably related to tooth roots that are sensitive to features of the local diet, such as sweet-and-sour foods.

Almost half of the subjects reported orofacial pain that was moderate to very severe in intensity, which confirms the findings of Locker and Grushka.² About one fifth of the total surveyed sample had marked orofacial pain symptoms in the 4 weeks prior to the survey, which suggests that a relatively sizeable proportion of community-dwelling adults in Hong Kong may have appreciable orofacial pain-related morbidity. More severe temporomandibular disorder-related pain symptoms were observed in the ≥ 55 -year age group, which is in agreement with previous studies.^{11,18} No gender bias was noted in relation to pain frequency and severity, which is contrary to the predominant view that women report more frequent and severe pain,¹⁹ although other reports support the present findings.^{2,20}

Respondents who sought treatment for orofacial pain tended to have multiple symptoms and more

frequent and severe pain, as expected.^{8,21} However, only 20.3% of those in pain sought treatment, which is considerably lower than previous reports of 44% to 46%.^{3,8,21} In addition, only 12.4% had taken self-prescribed medication for pain symptoms, compared with 29% to 64% in related studies.^{3,21} The lack of treatment seeking and limited pain medication usage may have been because the duration of symptoms was mainly 1 to 5 days in the previous 4-week period, which is slightly lower than the average 6.2 days reported by Locker and Grushka.² Furthermore, the chronicity of the pain symptoms was unknown, as this variable was not explored in the present survey. However, since the magnitude and distribution of pain symptoms were no less than those reported in similar studies in Canada and the United Kingdom, symptom duration alone is unlikely to account for the reduced treatment seeking and self-medication in the present study. Treatment, when sought, was provided mainly by dentists, as in Western countries. Although the provision of treatment by traditional Chinese medicine practitioners is common in Hong Kong, it is most widely used for accidental and relatively minor injuries,²² which may explain its low utilization in relation to the orofacial pain symptoms described in this survey. Nonetheless, in another study, 19% of Hong Kong Chinese adults who sought treatment for common chronic pains consulted a traditional Chinese medicine practitioner.¹²

Locker⁷ has described treatment seeking as a multi-stage decision-making process that involves "changes in the perception of symptoms and the interpretation of their meaning and significance" and is closely related to illness behavior. The high level of untreated orofacial pain symptoms in adult Hong Kong Chinese people is another example of the iceberg-like nature of illness⁶; in a community setting, only a small amount of overall symptoms give rise to a professional consultation. Although potential barriers to treatment seeking for orofacial pain in Hong Kong Chinese people are presently unclear, it is likely that the characteristics of the pain, the social and psychological consequences of the pain, and access to affordable care were key features.^{7,8,23}

There may also be cultural differences in treatment seeking for pain where pain behavior based on ethnic norms may influence pain perception, interpretation, and responses.^{24,25} Clear differences in pain coping according to ethnic group have been demonstrated.^{26,27} Thus, it is conceivable that Hong Kong Chinese people may have more effective pain-coping strategies based on culturally mediated responses to the pain experience.

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