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PUBLIC INTEREST IN TEMPOROMANDIBULAR DISORDERS AND OROFACIAL PAIN IN BRAZIL: A GOOGLE TRENDS STUDY

INTERESSE PÚBLICO EM DISFUNÇÕES TEMPOROMANDIBULARES E DOR OROFACIAL NO BRASIL: UM ESTUDO COM O GOOGLE TRENDS

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Abstract. The aim of this study was to analyze temporal trends and search behavior related to temporomandibular disorders (TMD) and orofacial pain in Brazil from 2004 to 2024 using Google Trends data. This quantitative, descriptive, and analytical infodemiological study was based on monthly time-series data extracted from Google Trends between January 2004 and October 2025. Statistical analyses were performed using Jamovi software (v.2.7; R v.4.5), applying linear regression, ANOVA, and Spearman correlation tests. A total of 32 search terms were selected based on lay and commonly used expressions associated with painful, functional, and behavioral manifestations of TMD and were organized into six thematic groups. For each group, a composite monthly index was calculated using the weighted mean of relative search volumes (RSV). Five of the six groups showed a significant increasing trend over the study period ($p < 0.001$), particularly those related to mandibular pain, functional limitation, and bruxism, whereas the cervical and craniofacial pain group remained stable ($p = 0.780$). Correlations among the groups were positive and strong, with no evidence of seasonality ($p < 0.001$). The findings suggest that TMD represents a relevant public health issue that drives individuals to seek information about pain and functional limitations through digital platforms. Furthermore, Google Trends proved to be a valuable tool for understanding public interest and supporting communication, education, and surveillance strategies in oral health.

Keywords: Temporomandibular Joint Disorders; Craniomandibular Disorders; Temporomandibular Joint Dysfunction Syndrome; Infodemiology.

Resumo. O objetivo deste estudo foi analisar as tendências temporais e o comportamento de busca relacionados às disfunções temporomandibulares (DTM) e à dor orofacial no Brasil, no período de 2004 a 2024, utilizando dados do Google Trends. Este estudo infodemiológico, de natureza quantitativa, descritiva e analítica, foi baseado em dados de séries temporais mensais extraídos do Google Trends entre janeiro de 2004 e outubro de 2025. As análises estatísticas foram realizadas no software Jamovi (v.2.7; R v.4.5), aplicando regressão linear, ANOVA e testes de correlação de Spearman. Um total de 32 termos foi selecionado com base em expressões leigas e populares associadas às manifestações dolorosas, funcionais e comportamentais das DTM, sendo organizados em seis grupos temáticos. Para cada grupo, foi calculado um índice mensal composto a partir da média ponderada dos volumes relativos de busca (RSV). Cinco dos seis grupos apresentaram tendência crescente significativa ao longo do período de estudo ($p < 0{,}001$), especialmente aqueles relacionados à dor mandibular, limitação funcional e bruxismo, enquanto o grupo de dor cervical e craniofacial permaneceu estável ($p = 0{,}780$). As correlações entre os grupos foram positivas e fortes, sem evidência de sazonalidade ($p < 0{,}001$). Conclui-se que as DTM representam um relevante problema de saúde pública que leva os indivíduos a buscar informações sobre dor e limitações funcionais por meio de plataformas digitais, e que o Google Trends constitui uma ferramenta valiosa para compreender o interesse público e apoiar estratégias de comunicação, educação e vigilância em saúde bucal.

Palavras-chave: Transtornos da Articulação Temporomandibular; Transtornos Craniomandibulares; Síndrome da Disfunção da Articulação Temporomandibular; Infodemiologia.

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INTRODUCTION

Temporomandibular disorders (TMD) and specific orofacial pain (OP) are frequent challenges in dental practice, with high prevalence and impact on quality of life. They encompass multiple etiological factors (anatomical, biomechanical, psychological, and social) and have been the subject of growing interest in epidemiological, clinical, and public health research[1-2]. It is estimated that approximately 29.5% of the global population exhibits some degree of TMD[3]. Recent studies indicate that TMD affects from 5% to 12% of adults, with a higher prevalence among women, reflecting not only biological factors but also behavioral and psychosocial influences[1]. This high prevalence may be associated with lifestyle changes, increased stress levels, presence of sleep disorders, and parafunctional habits such as bruxism and teeth clenching[4]. Given the high prevalence of these conditions and their biopsychosocial impact, understanding how the population seeks information related to orofacial pain and temporomandibular disorders becomes an important tool for health planning[3]. In this context, the analysis of data obtained from digital tools such as Google Trends has become an innovative method for assessing population information-seeking behavior and identifying temporal and geographical patterns of health-related interest[5]. Google Trends is an online database and analytics tool provided by Google (Google LLC, Mountain View, CA) that reports the relative popularity of a particular search term on Google compared to the peak number of Google searches related to that term over a certain period of time[6-7]. Kardeş et al.[8] analyzed global Google Trends searches for terms related to bruxism during the COVID-19 pandemic and observed a significant increase in public interest.

Studies such as those by Patthi et al.[9] and Aguirre et al.[5] further reinforce the potential of Google Trends as an infodemiological tool for monitoring information-seeking behavior in oral health. In recent years, the expansion of internet access and the widespread use of search engines have profoundly transformed the way people search health-related information. Google, in particular, has become a primary source for medical and dental inquiries, reflecting collective interests, concerns, and perceptions regarding symptoms and clinical conditions.

This phenomenon, known as infodemiology, allows online search patterns to serve as indirect indicators of health behavior and public interest. By monitoring the volume and temporal variation of these searches, it is possible to identify emerging trends, seasonal fluctuations in interest, and potential impacts of social or health-related events on public attention[10]. Therefore, digital tools such as Google Trends provide an innovative and accessible approach to understanding collective health-related behavior, complementing traditional epidemiological surveillance methods[11]. Given this scenario, the present study aims to map and analyze the temporal and regional trends of Google searches related to TMD and orofacial pain in Brazil from 2004 to October 2025 as well as to characterize search peaks to provide a comprehensive understanding of Brazilian population behavior and the underlying phenomena associated with public interest and information-seeking patterns in health-related topics.

METHODOLOGY

Study Design

This is a quantitative, descriptive, and analytical study of an epidemiological nature, based on monetary time series obtained through Google Trends, covering the period from January 2004 to October 2025. The design is based on secondary data from an open-access digital platform that provides normalized search volume values (Relative Search Volume – RSV), ranging from 0 to 100. The investigation aimed to identify long-term (secular) trends, possible seasonal variations, and patterns of public interest related to TMDs and orofacial pain.

Search Setting and Filters

All extractions were performed in Google Trends using the "search term" filter (instead of "topic"), restricted to Brazil (geo = BR), Category: Health, Period: 2004 to October 2025, with monthly frequency. All search queries were conducted exclusively using Portuguese-language terms. Data were extracted under the default "all categories" option to ensure a broad representation of public search interest.

Term Curation and Semantic Grouping

Because Google Trends reflects lay search behavior, terms were curated privileging clinical relevance, social relevance, and lay accessibility. The selection combined the features described in Table 1-2.

Table 1. Workflow for term selection and organization of semantic groups.

Step	Procedure / Source	Purpose
(1)	Review of prior literature on TMD and orofacial pain.	Identification of clinically relevant symptoms and terminology used in scientific and lay contexts.
(2)	Exploratory queries in Google Trends (volume consistency and "related queries" overlap).	Verification of search volume stability and semantic convergence across terms.
(3)	Clinical experience with common TMD-related complaints.	Validation of terms based on frequent patient-reported symptoms and everyday language.

Source: The authors.

Table 2. Final organization of Portuguese terms into six semantic groups.

Group	Theme	Examples of Terms (Portuguese)
(G1)	Bruxism/Teeth Clenching	bruxismo; ranger os dentes; apertar os dentes.
(G2)	Mandibular/Periarticular Pain	dor na mandíbula; dor no maxilar; dor perto do ouvido.
(G3)	Joint Clicking/Articular Sounds	estalo no maxilar; mandíbula estalando; barulho ao mastigar.
(G4)	Joint locking/Dislocation	mandíbula travada; maxilar sai do lugar; boca travada.
(G5)	Limited mouth opening and functional pain	dor ao abrir a boca; dificuldade para abrir; dor ao mastigar.
(G6)	Associated cervical/Craniofacial pain	dor cervical; dor na cabeça e pescoço; dor de cabeça e rosto.

Source: The authors.

Construction of Composite Monthly Indices (Within-Group Aggregation)

For each group (G1–G6), a monthly composite index was calculated using a weighted-average approach: $RSV_{group(t)} = (\Sigma\ RSV_{i(t)} \times \text{mean}(RSV_i)) / (\Sigma\ \text{mean}(RSV_i))$ in which RSV_i represents the monthly Relative Search Volume (RSV) of term "i" at time "t", and mean (RSV_i) corresponds to its historical mean RSV. This procedure assigns greater weight to terms with consistently higher search volumes, thereby preventing overrepresentation of low-frequency or sporadic queries and reducing potential lexical bias among semantically related terms. As a result, the composite index reflects a more stable and representative measure of public interest for each thematic group rather than a simple arithmetic mean. The methodological justification for constructing composite indices from multiple Google Trends queries followed the approach proposed by France and Shi[12], who recommended harmonizing and aggregating search-series data to improve conceptual coherence.

Data Extraction and Harmonization

All series were then merged into a single dataset containing the variables year, month, group (G1–G6), and the group-level composite index computed using the previously defined weighted aggregation formula, following the approach of France and Shi[12].

Statistical Analysis

All statistical analyses were conducted in Jamovi (version 2.7) and running on R (v4.5). Descriptive statistics were calculated for each semantic group and across month and year strata, including mean, standard deviation, minimum, maximum, and 95% confidence intervals. Distributional assumptions were verified using the Shapiro–Wilk test for normality. For the temporal trend analysis (within-group), simple linear regressions were fitted using the weighted mean RSV as the dependent variable and time (month/year) as the independent variable. Regression outputs included the slope (β), correlation coefficient (R), coefficient of determination (R^2), 95% confidence intervals, and p-values, providing an estimate of the secular (long-term) increase or decrease in public interest.

Seasonality (monthly pattern)

Seasonal effects were examined by testing whether the group indices varied across months using one-way ANOVA, with Month as a fixed factor. Because non-normality is common in RSV time series, both Fisher's and Welch's ANOVA results were performed. When significant effects were detected, post-hoc pairwise comparisons were explored.

Between-group differences

Differences in overall public interest across the six semantic groups (G1–G6) were assessed using one-way ANOVA with Group as a fixed factor over the full Period from January 2004 to October 2025. Both Fisher's and Welch's tests were reported. Tukey's HSD was applied for pairwise contrasts. Homogeneity of variances was evaluated with Levene's test. When violated, Welch's ANOVA results and the inherent robustness of Tukey's procedure (for large, balanced samples) were considered in interpretation. As a sensitivity check, the Kruskal Wallis test was pre-specified for non-parametric confirmation.

Inter-association between groups

Co-movements among the six group time series were quantified using Spearman's rank correlation (ρ) applied to the monthly composite indexes (2004 - October 2025).

Significance and software

All tests were two-sided with $\alpha = 0.05$. Analyses were conducted in Jamovi (v2.7) running on R (v4.5).

RESULTS

The descriptive examination of the aggregated search indexes revealed substantial variability in public interest across the six thematic groups (Table 3). Bruxism-related searches (G1) exhibited the highest overall volume throughout the 262-month period, with a weighted mean (WM) of 48.5 (SD = 17.5), followed by cervical and craniofacial pain (G6; WM = 39.2, SD = 25.6) and mandibular or periarticular pain (G2; WM = 30.8, SD = 24.9). Lower weighted averages were observed for limitations in mouth opening and functional pain (G5; WM = 25.6, SD = 28.1), joint sounds (G3; WM = 23.5, SD = 26.5), and locking or displacement events (G4; WM = 20.8, SD = 22.6).

A one-way ANOVA confirmed that these differences were statistically significant (Table 3) (Welch $F = 69.7$, $p < 0.001$), and Tukey's post hoc comparisons indicated that G1 was significantly higher than all other groups ($p < 0.001$), while G6 also demonstrated significantly greater search volumes compared with G3, G4, and G5 ($p < 0.001$). Most comparisons among lower-volume groups were significant, with the exception of the contrast between joint sounds and locking ($p = 0.801$), and between mandibular pain and functional pain ($p = 0.150$).

Table 3. Summary of weighted means and between-group differences (ANOVA and Tukey's Test)

	ANOVA		
Group	**Mean**	**Standard deviation (SD)**	**Standard error (SE)**
G1	48,5	17,5	1,08
G2	30,8	24,9	1,54
G3	23,5	26,5	1,64
G4	20,8	22,6	1,40
G5	25,6	28,1	1,74
G6	39,2	25,6	1,58
	Tukey's post-hoc test		
		Mean difference	**p-value**
G1 × G2		17,80	< 0,001
G1 × G3		25,05	< 0,001
G1 × G4		27,77	< 0,001
G1 × G5		22,94	< 0,001
G1 × G6		9,29	< 0,001
G2 × G3		7,29	0,009
G2 × G4		10,01	< 0,001
G2 × G5		5,17	0,150

Source: Data obtained from the authors' own analyses.

Temporal analyses demonstrated robust and statistically significant long-term positive trends in public searches for five of the six thematic groups (Table 4-5). Linear regression models revealed strong secular increases for G1–G5, with large coefficients of determination, indicating consistent growth in population interest over the 20-year period. The strongest temporal trend was observed for mandibular pain (G2; $R = 0.919$; $R^2 = 0.845$; $p < 0.001$), followed by functional pain (G5; $R = 0.859$; $R^2 = 0.737$; $p < 0.001$), joint sounds (G3; $R = 0.802$; $R^2 = 0.643$; $p < 0.001$), and bruxism (G1; $R = 0.771$; $R^2 = 0.595$; $p < 0.001$). Locking or displacement (G4) also demonstrated a significant upward trajectory, though with comparatively smaller effect sizes ($R = 0.729$; $R^2 = 0.531$; $p < 0.001$). In contrast, cervical and craniofacial pain (G6) did not exhibit a statistically significant temporal trend and remained essentially no explained variance ($R^2 \approx 0\%$), suggesting that population interest in these symptoms did not increase at the same pace as search interest related to classical manifestations of temporomandibular disorders.

Table 4. Model fit measures for linear regression models (G1–G6)

Group	R	R²
(G1)	0.771	0.595
(G2)	0.919	0.845
(G3)	0.802	0.643
(G4)	0.729	0.531
(G5)	0.859	0.737
(G6)	0.0173	0.0003

Source: Data obtained from the authors' own analyses.

Table 5. Regression coefficients for linear models (G1–G6)

Group	Predictor	Estimate	Standard Error	t	p-value
G1	Intercept	-4265,75		-19,3	< 0,001
	Períod	2,14	0,110	19,5	< 0,001
G2	Intercept	-7277,07	194,227	-37,5	< 0,001
	Períod	3,63	0,096	37,6	< 0,001
G3	Intercept	-6762,35	313,513	-21,6	< 0,001
	Períod	3,37	0,156	21,6	< 0,001
G4	Intercept	-5085,03	297,571	-17,1	< 0,001
	Períod	2,53	0,147	17,2	< 0,001
G5	Intercept	-7669,47	284,997	-26,9	< 0,001
	Períod	3,82	0,141	27,0	< 0,001
G6	Intercept	40,074	3,378	11,863	< 0,001
	Period	-0,129	0,462	-0,279	0,780

Source: Data obtained from the authors' own analyses.

No evidence of seasonal variation was identified in any of the groups (Table 6). Monthly comparisons performed through one-way ANOVA yielded nonsignificant results for all thematic categories, indicating that the pattern of search activity is not cyclical and does not follow annual fluctuations. This absence of seasonality suggests that online search behavior related to TMD symptoms is predominantly driven by individual episodic complaints or ongoing symptomatology rather than by recurring temporal patterns.

Table 6. One-way anova results for weighted mean across groups (G1–G6)

Grupo	Test	F	df_1	df_2	p
G1	Welch	1.17	11	98.4	0.316
	Fisher	1.22	11	250	0.273
G2	Welch	0.0803	11	98.4	1.000
	Fisher	0.103	11	250	1.000
G3	Welch	0.210	11	98.4	0.997
	Fisher	0.221	11	250	0.996
G4	Welch	0.320	11	98.4	0.980
	Fisher	0.349	11	250	0.973
G5	Welch	NaN	21	NaN	NaN
	Fisher	66.3	21	240	< .001
G6	Welch	0.474	11	98.5	0.915
	Fisher	0.504	11	250	0.900

Source: Data obtained from the authors' own analyses. NaN - No evidence of seasonal variation was identified

Correlation analyses further demonstrated strong and positive associations among all six groups (Table 7). Spearman coefficients (ρ) ranged from 0.73 to 0.89 ($p < 0.001$ for all combinations), indicating substantial temporal co-movement among the search indices. The strongest correlations emerged between functional pain and mandibular pain ($\rho = 0.886$). These findings indicate that increases in search interest for one symptom cluster tend to be accompanied by parallel increases in others, supporting the conceptual interdependence of musculoskeletal, articular, and functional dimensions of TMD. Although locking presented the lowest correlation coefficients among the clusters, its associations remained strong (ρ between 0.74 and 0.81), suggesting that even the least frequent search patterns follow the overall temporal structure of interest in TMD-related terms.

Table 7. Spearman correlations between groups

Comparison	Spearman's ρ	p-value
G1 × G2	0.759	<0.001
G1 × G3	0.757	<0.001
G1 × G4	0.799	<0.001
G1 × G6	0.753	<0.001
G2 × G3	0.812	<0.001
G2 × G4	0.886	<0.001
G2 × G6	0.855	<0.001
G3 × G4	0.803	<0.001
G3 × G6	0.761	<0.001
G4 × G6	0.769	<0.001
G5 × G6	0.833	<0.001

Source: Data obtained from the authors' own analyses.

Overall, these results demonstrate three central patterns: clear and statistically significant long-term increases in public search interest for bruxism, mandibular pain, joint clicks, locking episodes, and functional pain; absence of seasonal behavior in any of the symptomatic categories; and strong intercorrelations among all groups, reflecting shared temporal dynamics and potential overlap in population perception of TMD-related manifestations. Collectively, these findings underscore a consistent expansion of public engagement with online information about TMD symptoms, especially those more closely associated with painful, functional, and parafunctional presentations.

DISCUSSION

The progressive increase in online search interest observed for most symptom clusters in this study must be interpreted within the broader sociotechnological and epidemiological landscape. Although TMD has long been recognized as highly prevalent, affecting approximately 31% of adults globally13, public engagement with digital information resources has changed profoundly over the past two decades. At the beginning of the study period, Brazilian internet penetration and smartphone ownership were markedly limited, restricting the extent to which symptoms could translate into online search behavior. Thus, the upward trajectories identified in G1–G5 reflect not only potential changes in symptom occurrence but also the expansion of technological access and the cultural normalization of consulting digital tools for health information. Similar interpretations have been emphasized in recent infodemiological analyses[3-4], underscoring the necessity of contextualizing long-term search patterns within evolving digital ecosystems.

Even when accounting for improvements in internet access and health-seeking behavior, the magnitude and distribution of the growth observed across clusters align closely with existing epidemiological tendencies. Bruxism (G1), mandibular pain (G2), and functional pain (G5) displayed the most pronounced increases, an effect consistent with the global rise in stress, sleep disturbances, and psychosocial overload, particularly in post-pandemic populations[15-16]. During periods of social isolation, parafunctional behaviors intensified, daily routines shifted toward prolonged screen exposure, and mobile device use increased dramatically. These behavioral changes contributed not only to heightened symptom perception but also to an escalation in digital health-seeking behavior. Parallel phenomena have been reported across various health domains, where pandemic-related stressors modulated both symptom experiences and online engagement[14,17].

Taken together, these findings indicate that increases in public interest in TMD-related symptoms reflect not only symptom prevalence but also broader cultural, technological, and psychosocial changes that influence how individuals perceive and interpret bodily discomfort. Although the acceleration of online searches during specific periods cannot be attributed solely to stress, it appears to result from its interaction with concurrent behavioral factors such as prolonged screen exposure, ergonomic strain, and sleep disturbances, which are recognized risk factors for jaw and facial pain[14, 17]. Beyond event-driven influences, the sustained upward trends observed in G1–G5 over two decades suggest a persistent pattern of public attention rather than a transient response, aligning with biopsychosocial models of TMD that emphasize dynamic interactions among muscular, articular, and psychological components[1, 18], as well as with growing clinical recognition of the coexistence between TMD symptoms, stress-related parafunctions, and somatic symptomatization[19].

In contrast to the upward trajectories of G1–G5, the stability of online searches related to cervical and craniofacial pain (G6) reveals an important discrepancy between scientific evidence and public perception. Although clinical studies consistently report strong interactions between cervical dysfunction and temporomandibular pain through neuromuscular and biomechanical pathways[20-22], lay understanding of this association remains limited. The absence of growth in G6 may indicate that neck pain is still interpreted as a generalized musculoskeletal complaint rather than as a potential manifestation of TMD, echoing patterns described by Kang23 and other studies highlighting patient difficulty in recognizing the cranio-cervico-mandibular connection. This gap has important implications for clinical practice, as under recognition of cervical contributions to TMD can delay diagnosis and diminish treatment effectiveness, suggesting that targeted patient education strategies remain necessary.

Another key observation in this study is the exceptionally strong correlation among symptom clusters, with Spearman coefficients ranging from 0.73 to 0.89. These associations indicate that increases in search interest for one symptom cluster tend to be accompanied by parallel increases in others, reflecting the inherent co-occurrence of TMD manifestations. This pattern is consistent with neurophysiological and psychosocial models suggesting that orofacial symptoms rarely emerge in isolation but rather accumulate in multidimensional clusters[1-2]. The triad of mandibular pain (G2), functional impairment (G5), and joint sounds (G3) exhibited particularly strong intercorrelations, mirroring the diagnostic criteria outlined in the DC/TMD framework and supporting the clinical observation that patients frequently present with overlapping muscular and articular symptoms[24-26].

Cannatà[14] and Colonna[15] demonstrated robust associations between parafunctional behaviors, somatic symptoms, and psychological distress, findings that align closely with the interconnected temporal dynamics observed in the present analysis. Together, these converging lines of evidence reinforce the relevance of infodemiological tools as proxies for population-level symptom perception and for understanding how lay interpretations of bodily sensations map onto established clinical constructs. Additionally, the absence of seasonal variation across all six search groups supports the chronic and non-cyclical nature of TMD-related concerns, which appear to be driven predominantly by psychosocial stressors, behavioral patterns, ergonomic factors, and episodic symptom exacerbations rather than by recurrent seasonal triggers.

From a clinical perspective, the sustained rise in digital interest in bruxism, mandibular and periarticular pain, joint clicking, articular noises, jaw locking, articular displacement and functional limitation and pain reflects increasing public engagement with symptoms commonly linked to TMD. This trend carries important implications. Online search behavior has been shown to precede and predict greater healthcare utilization[28], and large-scale analyses of mobile search logs demonstrate that such data can accurately anticipate future medical visits[29], supporting the value of infodemiological monitoring. The strong correlations observed among symptom clusters further align with evidence that digital search patterns validly mirror public attention to health issues[30].

These findings highlight opportunities for targeted educational initiatives focused on early recognition of mechanical symptoms, ergonomic guidance, and psychosocial contributors to orofacial pain. Such efforts are particularly relevant because individuals facing barriers to healthcare access tend to rely more heavily on online health information and digital communication with clinicians[31], positioning digital platforms as key environments for improving symptom awareness and early self-assessment.

This study presents limitations inherent to infodemiological designs. Google Trends provides relative, rather than absolute, search volume, reflecting proportional public interest rather than true clinical prevalence. Search behavior may also be influenced by media exposure, curiosity, or external events, and regional differences in internet access, device use, or terminology may introduce bias. Similar challenges have been highlighted in evaluations of web-based surveillance systems, including the need for large, digitally active populations and the susceptibility of search data to fluctuations unrelated to actual symptom experience[7,32]. Still, when understood as indicators of collective attention, search trends offer meaningful complementary insights into population behavior and emerging public health concerns, consistent with findings that emotional and behavioral determinants strongly shape digital health engagement.

Despite these limitations, the present findings demonstrate a substantial expansion in long-term digital interest in TMD in Brazil, driven largely by behavioral and painful symptom clusters. The stability of cervical pain searches, alongside strong intercluster correlations and sustained upward trajectories for G1–G5, underscores the complex interplay between symptom perception, psychosocial determinants, and evolving digital health behaviors. As digital platforms increasingly shape how individuals conceptualize and interpret bodily discomfort, infodemiological surveillance may serve as a critical adjunct to clinical and epidemiological data, supporting early detection of emerging trends, informing public education strategies, and guiding resource allocation during periods of social disruption or heightened stress.

CONCLUSION

This study demonstrates that long-term digital search patterns provide valuable insight into how the population perceives and engages with symptoms related to temporomandibular disorders. The sustained rise in interest for TMD, together with strong correlations among symptom clusters, underscores the relevance of infodemiological tools for monitoring public attention to orofacial conditions. While search data do not replace clinical prevalence estimates, they offer a complementary perspective that can inform health communication, guide educational initiatives, and support early recognition of TMD-related complaints. Integrating digital surveillance with epidemiological and clinical approaches may enhance public awareness and contribute to timelier, patient-centered care in dentistry.

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