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Oral Health Literacy and Oral Cancer Prevention: A Narrative Review

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ABSTRACT
Among the cancers that disproportionately affect populations in South and Southeast Asia, oral cancer stands out both for its preventability and for the persistent inadequacy of efforts to detect and interrupt it early. The central argument of this narrative review is that oral health literacy (OHL) — broadly understood as the capacity to access, evaluate, and apply oral health information in everyday decision-making — functions as a fundamental upstream determinant of whether individuals recognise carcinogenic risk behaviours, present for opportunistic screening, and seek timely care upon noticing mucosal changes. Drawing on peer-reviewed literature retrieved from PubMed, Scopus, and Google Scholar (2010–2025), this review examines the conceptual architecture of OHL and its measurement, the epidemiological context of oral squamous cell carcinoma (OSCC) with particular reference to the Indian subcontinent, the mechanisms by which literacy gaps impede prevention and early detection, the evidence base for educational and digital health interventions, and the institutional responsibilities of dental training programmes. Institutional data from three Scopus-indexed studies originating at Saveetha Dental College and Hospitals, SIMATS, Chennai, provide grounding in clinicopathological realities, patient quality-of-life trajectories, and provider knowledge gaps. The review concludes that durable reductions in oral cancer morbidity and mortality require simultaneous investment in OHL measurement tools adapted for Indian language populations, integration of health communication competencies into dental curricula, and enabling policy environments that restrict carcinogenic products at source.

Keywords: oral health literacy, oral squamous cell carcinoma, oral cancer prevention, tobacco cessation, early detection, health education, India, dental public health

1. Introduction

Few cancers offer as stark an illustration of the gap between what medicine knows and what society acts upon as oral cancer. The biology is well understood, the risk factors are legally sold in corner shops across Asia, the precancerous lesions are visible to the naked eye, and the self-examination techniques that could facilitate early patient-initiated detection can be taught in under three minutes. Yet the disease kills roughly 177,000 people each year and, in the countries that carry the heaviest burden, most of those deaths follow a diagnosis made when cure has already become unlikely [1]. Understanding why this prevention-detection-treatment pipeline leaks so badly is the question that motivates the present review.

Geographically, the concentration of oral cancer cases in South and Southeast Asia is not coincidental. India, Bangladesh, Sri Lanka, and Papua New Guinea share not only a high prevalence of tobacco use but also deeply entrenched cultural practices involving areca nut, betel leaf, and their countless commercial combinations — practices that begin in adolescence, persist across decades, and are frequently misunderstood by users as relatively harmless compared to cigarette smoking [2]. India alone contributes close to one-third of global oral cancer incidence, with OSCC accounting for over ninety percent of cases and ranking among the three most common malignancies recorded in Indian men [3]. These numbers reflect years of missed opportunities: in the oral cavity, every mucosal change is technically within reach.

The clinical paradox deepens when one examines presentation data. Retrospective institutional records from Saveetha Dental College and Hospitals, Chennai, covering 111 histopathologically confirmed OSCC patients over a three-year window, found that the dominant presenting stage was T4a — the point at which the tumour has invaded adjacent structures — with male patients constituting more than three-quarters of the cohort and the great majority reporting habit durations exceeding five years before their first consultation [5]. More than half of these individuals entered treatment with severely compromised oral health-related quality of life. These are not statistical abstractions; they are people who used carcinogenic products for years, noticed changes in their mouths, and still did not come forward until the disease had declared itself in an advanced form.

Oral health literacy offers a theoretically coherent and empirically supported framework for explaining this failure. Where individuals cannot obtain accurate information about what their habits are doing to their tissues, cannot interpret the significance of a white patch or a non-healing ulcer, and cannot navigate towards a dental professional or a cancer screening facility even when they are worried, preventive knowledge circulating in the public domain simply does not reach them in actionable form [6]. This review synthesises the evidence connecting OHL to oral cancer prevention outcomes, with the aim of informing both clinical practice and public health programme design.

2. Conceptualising and Measuring Oral Health Literacy

Health literacy as a conceptual category entered formal WHO vocabulary in 1998, but the ideas it assembled had been circulating in health education and social medicine for far longer. The foundational contribution of Nutbeam's three-tier framework was to disaggregate what had often been treated as a single attribute — whether someone could read a medicine bottle label — into a hierarchy of capabilities with meaningfully different implications for health behaviour [7]. At the first tier, functional literacy refers to the basic reading and writing proficiency needed to follow written instructions and complete health forms. Communicative literacy, at the second tier, involves the cognitive capacity to engage with health professionals, extract relevant information from consultations, and translate that information into personal health decisions. Critical health literacy, at the apex of the framework, encompasses the ability to evaluate health claims, weigh competing sources, and act collectively to modify the social conditions that shape health — a form of literacy that is simultaneously personal and political [7].

Translating this general framework into dental and oral health contexts required instrument development tailored to the specific vocabulary and decision-making demands of oral care. The Rapid Estimate of Adult Literacy in Dentistry (REALD-30 and its extended version REALD-99) borrowed directly from the REALM instrument used in general medicine, asking participants to pronounce dental and oral health terms of increasing complexity as a proxy for reading proficiency [8]. The Test of Functional Health Literacy in Dentistry (ToFHLiD) extended this approach by incorporating short passages with embedded questions, testing whether respondents could follow written dental health instructions and interpret numerically presented oral health information [8]. These tools yielded useful epidemiological baselines but attracted persistent methodological criticism: the ability to pronounce the word 'periodontal' tells us relatively little about whether a person understands the relationship between gingival bleeding and systemic disease, let alone whether they would act on that understanding.

Subsequent instrument development has progressively addressed this limitation. The Oral Health Literacy Instrument (OHLI), the Oral Health Literacy Assessment in Spanish (OHLA-S), and the Oral Health Literacy Adult Questionnaire (OHL-AQ) each incorporate wider arrays of literacy-relevant tasks and move closer to measuring the communicative and critical dimensions of Nutbeam's framework [9]. A rigorously

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validated Chinese-language OHL scale, developed through multi-round Delphi consensus with dental and public health experts and evaluated using item response theory, demonstrated strong psychometric properties — Cronbach alpha 0.87 — and mapped OHL onto five interacting dimensions: declarative knowledge, health beliefs and attitudes, self-care practice, clinical skill, and functional reading capacity [9]. The relevance of this multidimensional architecture to oral cancer prevention is direct: an individual might score well on dental vocabulary yet hold entirely inaccurate beliefs about areca nut carcinogenicity, or conversely understand risks abstractly while lacking the navigational capacity to access a screening service. Validated, multidimensional OHL instruments calibrated for Hindi, Tamil, Telugu, and other Indian language populations — and normed on Indian sociodemographic distributions — remain conspicuously absent from the literature and represent a priority research investment.

3. Epidemiology and Aetiology of Oral Cancer in the Indian Context

Globally, age-standardised incidence rates for oral and lip cancers peak in Melanesia, at approximately 22.9 per 100,000 males, followed by South-Central Asia at 12.7 per 100,000 — a geographic pattern that maps almost perfectly onto the prevalence of areca nut and tobacco use [1]. Within India, the epidemiology is further shaped by sub-regional variation in carcinogenic habit profiles. The tongue, buccal mucosa, and gingivobuccal sulcus together account for the great majority of primary sites, with buccal mucosa predominating in populations where gutka and tobacco-containing betel quid chewing is most prevalent, and tongue cancers more frequent in southern states where bidi smoking is common alongside other habits [3]. A nationwide analysis drawing on population-based cancer registry data from twenty-nine Indian registries placed oral cancer consistently among the top three cancer sites in men across almost all regions, with wide variation in absolute rates reflecting differences in the type, frequency, and duration of carcinogenic habit use [3].

The aetiological hierarchy is well-established. Tobacco — whether combusted in cigarettes, bidis, chuttas, or hookahs, or consumed as dry powder (khaini), paste (masheri), or factory-processed products (gutka, zarda, pan masala) — is the principal driver, with combined tobacco and areca nut products associated with risk elevations exceeding seven times that of non-users [10]. Alcohol compounds tobacco risk through shared metabolic pathways and direct mucosal exposure, and the combined effect of heavy tobacco use and regular alcohol consumption is multiplicative rather than simply additive. What is underappreciated in public literacy around oral cancer is that areca nut is independently carcinogenic even without tobacco; this point is frequently lost in messaging that focuses exclusively on cigarette-style tobacco products.

A clinically significant finding from Saveetha Dental College and Hospitals illuminates a further dimension of this aetiological complexity. A ten-year retrospective analysis of OSCC patients at the institution documented a non-trivial subset of individuals with no recorded tobacco or areca nut habits, in whom chronic mechanical irritation — from fractured cusps, ill-maintained prostheses, or habitual cheek biting — was identified as the primary aetiological candidate [11]. This finding has direct implications for OHL: if oral cancer prevention literacy is framed entirely around tobacco avoidance, it will fail both the non-user who is accumulating mucosal risk through mechanical irritation and the provider who does not think to examine the mucosa of a non-smoker for concerning change.

Human papillomavirus infection, specifically genotypes 16 and 18, has driven a well-documented rise in oropharyngeal cancers in Western populations, where HPV-attributable tonsillar and base-of-tongue cancers now comprise a substantial proportion of new head and neck malignancy diagnoses [12]. In India, the epidemiological picture for HPV-associated oral cancer is less clearly characterised, partly because the anatomical boundaries between oral cavity and oropharynx are applied inconsistently in registry data and partly because HPV-testing infrastructure in cancer registries is uneven. Nutritional micronutrient deficiency, particularly of iron, zinc, and vitamins A and C, chronic immune suppression, poor oral hygiene, and low socioeconomic status each contribute additional population attributable risk. Against this multifactorial aetiological background, a person whose oral health literacy encompasses only the tobacco-cancer link is, from a prevention standpoint, incompletely informed.

4. What Oral Health Literacy Studies Tell Us About Cancer Awareness

Population surveys of oral cancer knowledge present a picture that is both discouraging in its consistencies and instructive in its patterns. A 2024 systematic review and meta-analysis examining OHL and oral cancer awareness in Iranian populations — a country that shares several demographic and epidemiological characteristics with India — found that the majority of participants across included studies demonstrated inadequate knowledge of risk factors, with the lowest scores recorded among those with primary schooling or below and among rural dwellers; only a small minority of participants were aware of viral infection or diet as contributing factors [13]. The reviewers attributed this inadequacy primarily to socioeconomic inequality and the absence of sustained public health campaigns that go beyond tobacco messaging to cover the full aetiological spectrum.

Within India, a 2024 cross-sectional study assessing oral cancer knowledge and awareness among dental outpatients in Bengaluru — with co-authorship from the Department of Oral Medicine and Radiology, Saveetha Dental College — found that while tobacco recognition was relatively high, fewer than one in ten participants could identify alcohol, viral infection, or dietary deficiency as risk factors [14]. More strikingly, none of the participants attending regular dental appointments had received a structured oral mucosal examination or cancer counselling during their dental visits, and fewer than ten percent reported ever having been advised by a healthcare provider to perform mouth self-examination [14]. This convergence of incomplete patient knowledge and absent provider-initiated education exemplifies the bi-directional failure that OHL interventions must address: neither end of the consultation is adequately equipped.

Provider-level knowledge deficits are themselves a documented problem. A 2024 cross-sectional survey of dental practitioners in Northeast India found that close to eighty percent demonstrated low or incomplete knowledge of the full oral cancer risk factor spectrum, with particular gaps in awareness of older age as a risk modifier, viral aetiology, and the significance of prior oral cancer history as a predictor of second primary tumours [15]. More consequentially, over ninety percent of the surveyed dentists reported not routinely enquiring about current tobacco use during patient history-taking, and over eighty percent did not ask about prior tobacco exposure in ex-users. From a population perspective, this represents an extraordinary missed opportunity: every dental consultation that passes without a tobacco enquiry is a moment in which a potentially actionable conversation about cancer risk does not occur.

Quality of life data from Saveetha Dental College and Hospitals add an important downstream dimension to this picture. An exploratory study applying the EORTC QLQ-C30 and QLQ-HN43 instruments to thirty-five OSCC patients receiving treatment at the institution found mean overall health and quality of life ratings of 5.4 at diagnosis, declining to 3.4 at twelve-month follow-up — a trajectory reflecting the cumulative physical, psychological, and social costs of living with and beyond oral cancer [16]. Tobacco users, who constituted over eighty percent of the cohort, showed the most adverse functional outcomes across swallowing, speech, and social contact domains. The QOL data do not directly measure OHL, but they make viscerally concrete what the abstractions of literacy research represent: years of unaddressed carcinogenic habit use, delayed care-seeking, late-stage diagnosis, and a quality of life degraded by disease that had a substantial probability of being prevented.

5. How Literacy Deficits Obstruct Prevention and Detection

Understanding why OHL deficits translate into poor oral cancer prevention outcomes requires moving beyond the simple equation of ignorance with inaction and examining the specific mechanisms through which limited literacy disrupts each step in the prevention and detection pathway. At the risk perception stage, individuals who have used areca nut or tobacco since adolescence, who see friends and family members

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doing the same without apparent immediate consequence, and who receive no corrective information from healthcare contacts may hold a sincere — if incorrect — belief that their personal cancer risk is low [17]. Health literacy research has consistently found that risk perception is a modifiable cognitive variable that responds to accurately framed, appropriately delivered information, but that poorly framed messages — for example, those that attribute cancer causation exclusively to cigarette smoking in populations that primarily chew tobacco — can actually reinforce misperceptions by implying that the listener's specific habit falls outside the warning.

At the symptom recognition stage, limited OHL interacts with cultural normalisation of mucosal changes to produce dangerous delays. Oral submucous fibrosis, for instance, produces progressive trismus and mucosal stiffness that restricts mouth opening, often developing so gradually that affected individuals adapt behaviourally rather than seeking evaluation; without literacy about the precancerous nature of this condition and the significance of these functional changes, patients have no framework for recognising an emergency [2]. Similar dynamics apply to persistent leukoplakic patches that are attributed to vitamin deficiency, friction from tobacco chewing, or temporary irritation, and monitored privately rather than presented to a professional.

At the care-seeking and navigation stage, structural barriers compound literacy deficits in ways that are particularly burdensome for low-income and rural populations. A systematic analysis using data from India's National Family Health Survey fifth cycle (NFHS-5) documented oral cancer screening coverage at a remarkably low 4.4 per 1,000 individuals, and found that coverage was paradoxically lower in several states with the highest recorded tobacco use prevalence [18]. This inversion of the epidemiological logic of screening demand — that people most at risk should be most motivated to screen — almost certainly reflects the compound effects of low OHL, geographic distance from screening facilities, cost-related barriers, fatalistic beliefs about cancer outcomes, and language barriers between patients and providers. WHO's Global Oral Health Action Plan for 2023–2030 explicitly names improvement of oral health literacy as a strategic priority within universal health coverage goals, specifically linking OHL to early detection programmes and health worker training [19].

Gender and socioeconomic inequalities further stratify the relationship between OHL and cancer prevention behaviour. In India, women with oral potentially malignant disorders — a clinical population that includes those with oral submucous fibrosis, leukoplakia, and chronic inflammatory changes — show systematically lower rates of healthcare utilisation than men with comparable lesions, a pattern that reflects not only differential access to information but also differences in social permission to seek care, financial autonomy, and decision-making authority within households [2]. These intersecting inequalities mean that health literacy cannot be addressed as a purely individual cognitive problem; it is simultaneously a social justice issue that requires structural intervention alongside educational programming.

6. Evidence-Based Interventions to Strengthen Oral Health Literacy

The design of effective OHL interventions for oral cancer prevention draws on a growing, if still unevenly distributed, evidence base. Interprofessional educational programmes delivered in undergraduate health professions settings have demonstrated statistically significant improvements in OHL scores, with the magnitude of gain consistently greater among learners with lower baseline literacy and those whose primary language differs from the language of instruction [20]. This dose-response relationship carries a practical implication: universal educational interventions calibrated to the average learner will systematically under-serve those with the greatest need. Stratified, needs-based instructional approaches — which identify learners with limited baseline OHL and provide them with additional targeted support — are both more equitable and likely more efficient in producing population-level literacy gains.

Community-based oral health education programmes, delivered through village-level health workers, school health curricula, occupational health initiatives, and faith community outreach, have accumulated reasonable evidence of effectiveness for increasing risk factor knowledge in low-resource settings [21]. The critical limitation documented across this evidence base is that knowledge gains, while consistent, do not reliably produce sustained behavioural change. Knowing that tobacco is carcinogenic and ceasing tobacco use are separated by a complex motivational, social, and economic distance that information transfer alone does not bridge. Motivational interviewing — a structured counselling approach that works with patients' own ambivalence and intrinsic goals rather than providing advice against their current behaviour — has the most robust evidence base for tobacco cessation in dental settings and should be considered a core clinical competency for the oral health workforce [10].

Digital health platforms have emerged as a scale-friendly tool for OHL improvement, offering the dual advantages of geographic reach and interactivity. A 2025 systematic review examining the impact of mHealth and eHealth programmes on OHL across studies from Iran, South Korea, Thailand, and Malaysia found consistent evidence of knowledge improvement over intervention periods ranging from five weeks to one year [22]. Smartphone applications, structured SMS programmes, and interactive web-based modules each demonstrated utility, with interactive formats showing stronger effects than passive information delivery. The significant caveat is that differential access to digital infrastructure — smartphone ownership, reliable internet connectivity, and the digital literacy prerequisite for using health applications — creates a secondary layer of inequity that can direct literacy improvements toward already-advantaged populations unless programme designers explicitly build in equity safeguards such as community device-sharing programmes and offline functionality.

The Delphi methodology has been proposed and tested as a rigorous approach for developing the content of OHL-improving oral cancer health applications. A 2025 publication documented a multi-round expert consensus process that produced validated educational content spanning oral cancer epidemiology, the full aetiology spectrum including non-tobacco risk factors, photographic guides to warning signs, explanations of the diagnostic pathway, treatment overview, and psychosocial support resources — all formatted for accessibility to users without health professional backgrounds and pilot-tested for readability and cultural acceptability [23]. This systematic content development approach, if applied to Indian language contexts, could form the foundation for scalable OHL-improving tools that address the specific knowledge gaps most commonly documented in Indian population surveys.

In India specifically, the cultural authority of public figures in sports and film has been leveraged in tobacco cessation and oral cancer awareness campaigns, with documented impact on awareness metrics in peri-urban and rural communities [24]. The public health challenge in these campaigns has been to move beyond headline awareness — tobacco causes cancer — toward actionable literacy: what the early signs of oral cancer look like, how to examine one's own oral cavity, and where to go if a concerning change is found. Campaigns that integrate this actionable content alongside celebrity messaging, and that are consistently reinforced by dental providers at the point of care, have the potential for substantially greater preventive impact than awareness-only approaches.

7. The Responsibilities of Dental Professionals and Training Institutions

The dental profession holds a position of structural advantage in the oral cancer prevention ecosystem that has yet to be fully exploited. Every dental consultation is an encounter between a trained observer and an oral cavity that may harbour early mucosal changes, and every such encounter is an opportunity — currently seized far less often than the evidence would justify — to enquire about carcinogenic habits, conduct a systematic visual and tactile mucosal examination, communicate findings, and initiate or reinforce tobacco cessation support [25]. Dental hygienists, periodontists, oral medicine specialists, and general dental practitioners all occupy this frontline position, yet survey data from multiple countries, including India, indicate that opportunistic oral cancer screening is not performed routinely in the majority of dental practices [15].

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Vol. 36 Issue 1, 2026, Pages: 3479-3483

Training institutions bear primary responsibility for this gap. A dental graduate who has not practised oral cancer screening, who has not learned to communicate about tobacco risk in a culturally sensitive and motivationally effective way, and who has not been taught the principles of health literacy-sensitive patient education will not spontaneously develop these competencies in busy clinical practice. Incorporating OHL as an explicit curricular theme — with assessed competencies in risk assessment, mucosal examination, patient communication, and brief intervention for tobacco cessation — is an institutional decision with generational population health consequences. Allied health professions face a parallel gap: a 2024 study evaluating OHL among undergraduate nursing students before and after a structured interprofessional educational programme found that oral cancer knowledge was the least-mastered domain both at baseline and at post-intervention assessment, identifying a clear curricular deficiency in nursing education that mirrors the gaps documented in dental training [20].

Tobacco cessation programmes embedded within dental institutions represent an underutilised high-impact intervention point. An eight-year retrospective evaluation of an institutionally housed tobacco cessation centre documented measurable quit rates sustained over multi-year follow-up periods, with pharmacological support, repeated behavioural counselling, and structured follow-up schedules as the key operational components [27]. The dental institution provides a setting in which individuals using tobacco can be reached repeatedly, at low incremental cost, over years of clinical training — an exposure pattern that is particularly well-suited to the long-term behaviour change that tobacco cessation requires.

Integrating oral health literacy counselling within broader cancer care pathways is a further institutional priority that remains underdeveloped. Evidence from oncology settings shows that patients and caregivers who receive structured OHL counselling alongside cancer treatment are more motivated to engage in timely follow-up, to recognise recurrence warning signs, and to adhere to post-treatment monitoring schedules [28]. For a cancer whose recurrence rates and second primary risk are high — as in OSCC — this integration of literacy support into survivorship care is not a luxury but a clinical necessity.

8. Unresolved Challenges and Priorities for Future Research

Several significant challenges stand between the current evidence base and its translation into effective policy and practice. The most fundamental is measurement: without validated, culturally and linguistically calibrated OHL assessment tools for Indian population groups, it is impossible to accurately characterise baseline literacy levels, identify the subpopulations most in need of targeted intervention, or evaluate whether programmes are producing genuine literacy change rather than superficial knowledge recall [8]. The development of such tools — psychometrically rigorous, community-validated, and available in the major Indian languages — is an urgent prerequisite for the rest of the research agenda.

Epidemiologically, the field is dominated by cross-sectional surveys that establish associations between OHL and knowledge or attitude variables but cannot track the causal pathway from literacy to behaviour to health outcome. Longitudinal studies capable of demonstrating that OHL-improving interventions produce downstream reductions in tobacco use, increases in dental attendance, earlier stage at diagnosis, and ultimately improved survival are needed to build the evidence base for policy investment. Randomised controlled trials testing specific OHL interventions against active comparators — and powered to detect meaningful differences in cancer-relevant behavioural outcomes — represent the highest methodological priority [28].

The integration of oral and general health literacy within cancer care systems also requires attention. Patients navigating a head and neck cancer diagnosis simultaneously encounter dental, medical, surgical, radiation oncology, and palliative care teams, each communicating in specialist registers and expecting a degree of health literacy that many patients — particularly those from lower socioeconomic backgrounds — do not possess [29]. Structured health literacy support as a component of multidisciplinary head and neck cancer care, with identified navigators responsible for ensuring that patients can understand and participate in their own treatment, is an evidence-supported but rarely implemented intervention.

Finally, the upstream policy environment must be addressed in parallel with downstream educational interventions. Oral health literacy cannot advance sustainably in a social environment where areca nut and tobacco products are sold cheaply in colourful packets at every street corner, where health warning requirements are weakly enforced, and where the agricultural and economic interests of tobacco cultivation retain strong political protection. WHO's Global Oral Health Action Plan 2023–2030 provides an internationally endorsed framework for the regulatory, educational, and surveillance investments needed to shift population OHL and oral cancer outcomes at national scale [19]. Translating these international commitments into funded, time-bound domestic programmes with accountability mechanisms is where global oral health policy must now focus.

9. Conclusion

Oral cancer kills people who, in a better-functioning preventive system, would have had their risk recognised, their early lesions detected, and their carcinogenic habits interrupted long before malignancy declared itself. The evidence reviewed here positions oral health literacy not as one factor among many but as a central, modifiable determinant that influences how effectively every other element of the prevention system — risk communication, screening services, provider counselling, patient self-monitoring — actually reaches and benefits the people it is designed to serve. The institutional evidence from Saveetha Dental College and Hospitals, SIMATS, gives concrete form to the clinical consequences of this failure: patients presenting with advanced disease, tobacco users carrying the heaviest functional burden, and provider encounters passing without the conversations that might have changed trajectories.

Moving from this recognition to changed outcomes requires action across several simultaneous fronts. Dental schools and allied health training programmes must produce graduates who can assess oral health literacy, communicate about cancer risk in culturally grounded and motivationally effective ways, perform competent opportunistic mucosal screening, and deliver brief tobacco cessation interventions as a routine element of every consultation rather than an exceptional undertaking. Research teams must prioritise the development and validation of Indian-language OHL instruments and the longitudinal trial evidence needed to identify which educational and digital interventions produce durable behaviour change. Public health authorities and policy makers must enforce and extend regulatory frameworks that constrain carcinogen access, mandate oral health literacy content in school curricula, and fund the community-based infrastructure through which underserved populations can access both education and screening.

The oral cavity gives us a rare opportunity in oncology: a site where prevention, precancerous monitoring, and early detection are all accessible without advanced technology, in settings ranging from sophisticated cancer centres to rural health outposts where a torch and a wooden spatula are the only instruments required. Oral health literacy is what determines whether that opportunity is taken.

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References

1. Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, et al. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin. 2021;71(3):209–249. https://doi.org/10.3322/caac.21660
2. Warnakulasuriya S. Global epidemiology of oral and oropharyngeal cancer. Oral Oncol. 2009;45(4–5):309–316. https://doi.org/10.1016/j.oraloncology.2008.06.002
3. Sharma S, Satyanarayana L, Asthana S, Shivalingesh KK, Goutham BS, Ramachandra S. Oral cancer statistics in India on the basis of first report of 29 population-based cancer registries. J Oral Maxillofac Pathol. 2018;22(1):18–26. https://doi.org/10.4103/jomfp.JOMFP_113_17
4. Baj J, Forma A, Sitarz M, Portincasa P, Garruti G, Krasowska D, et al. Salivary microbiome in head and neck cancers — a narrative review. Cancers (Basel). 2021;13(3):520. https://doi.org/10.3390/cancers13030520
5. Prethipa R, Muthukrishnan A, Mathews SM, et al. A comprehensive retrospective institutional study for decoding oral squamous cell carcinoma. Cureus. 2024;16(2):e54001. https://doi.org/10.7759/cureus.54001 [Saveetha Dental College and Hospitals, SIMATS, Chennai — Scopus indexed]
6. Horowitz AM, Kleinman DV, Atchison KA, Weintraub JA. The evolving role of health literacy in improving oral health. Stud Health Technol Inform. 2020;269:95–114. https://doi.org/10.3233/SHTI200020
7. Nutbeam D. The evolving concept of health literacy. Soc Sci Med. 2008;67(12):2072–2078. https://doi.org/10.1016/j.socscimed.2008.09.050
8. Dickson-Swift V, Kenny A, Farmer J, Gussy M, Larkins S. Measuring oral health literacy: a scoping review of existing tools. BMC Oral Health. 2014;14(1):148. https://doi.org/10.1186/1472-6831-14-148
9. Liang W, Deng L, Ruan Y, Li H, Chen H, Wu J, et al. A new comprehensive oral health literacy scale: development and psychometric evaluation. BMC Oral Health. 2021;21(1):440. https://doi.org/10.1186/s12903-021-01795-7
10. Nasseh K, Vujicic M, Yarbrough C. Effects of tobacco product use on oral health and the role of oral healthcare providers in cessation: a narrative review. Tob Induc Dis. 2023;21:18. https://doi.org/10.18332/tid/157203
11. Thomas P, Mathew D, Anisha K, Ramasubramanian A, Ramalingam K, Ramani P, et al. A retrospective analysis of the clinicopathological profile of oral squamous cell carcinoma in tobacco and non-tobacco users: highlighting the significance of chronic mechanical irritation. Cureus. 2024;16(5):e59953. https://doi.org/10.7759/cureus.59953 [Saveetha Dental College and Hospitals, SIMATS — Scopus indexed]
12. Tan Y, Wang Z, Xu M, Li B, Huang Z, Qin S, et al. Oral squamous cell carcinomas: state of the field and emerging directions. Int J Oral Sci. 2023;15(1):44. https://doi.org/10.1038/s41368-023-00249-w
13. Amanpour S, Abdolahi Z, Jahanpour O, Mazyaki A. Health literacy and knowledge of oral cancer: a systematic review and meta-analysis in the Iranian population. Angiotherapy. 2024;8(1). https://doi.org/10.25163/angiotherapy.8109993
14. Reddy J, Hiremath S, Mallikarjun GS, Chandrashekaraiah MM, Sangeetha P. Assessing oral cancer knowledge and awareness among dental patients of Bengaluru city, India. Indian J Med Paediatr Oncol. 2024;45(5):378–385. https://doi.org/10.1055/s-0044-1785221 [Co-author: Department of Oral Medicine and Radiology, Saveetha Dental College, Chennai — Scopus indexed, Thieme]
15. Riba H. Knowledge, attitudes, and practices towards oral cancer among dental practitioners in the northeastern region of India: an online cross-sectional survey. Cureus. 2024;16(5):e60908. https://doi.org/10.7759/cureus.60908
16. Ramalingam K, Krishnan M, Ramani P, Muthukrishnan A. Quality of life assessment with European Organisation for Research and Treatment of Cancer questionnaire (head and neck module 43) and its clinicopathological correlation among patients treated for oral squamous cell carcinoma: an exploratory study. Cureus. 2023;15(2):e34650. https://doi.org/10.7759/cureus.34650 [Saveetha Dental College and Hospitals, SIMATS — Scopus indexed; PubMed PMID: 36895543]
17. Piper ME. The seeds of ignorance — consequences of a booming betel-nut economy. N Engl J Med. 2022;387(11):967–969. https://doi.org/10.1056/NEJMp2203571
18. Rahman SA, Warnakulasuriya S, Bhatt K, Bhatia A. Disparities in oral cancer screening coverage in India: evidence from NFHS-5. Oral Oncol. 2025;169:107693. https://doi.org/10.1016/j.oraloncology.2025.107693
19. World Health Organization. Draft global oral health action plan (2023–2030). Geneva: WHO; 2022.
20. Koo FK, Chen R, Fethney J, Homer C, Cardell E, Bhole S. Evaluating pre- and post-oral health literacy of undergraduate nursing students on an oral-systemic health learning intervention. J Dent Educ. 2024;88(10):1358–1366. https://doi.org/10.1002/jdd.13598
21. Warnakulasuriya S, Kujan O, Aguirre-Urizar JM, Bagan JV, González-Moles MÁ, Kerr AR, et al. Oral potentially malignant disorders: a consensus report from an international seminar on nomenclature and classification. Oral Dis. 2021;27(8):1862–1880. https://doi.org/10.1111/odi.13704
22. Banakar M, Bhardwaj A, Kaur J, Alagarsamy V, Shivapriya PM, Patel B. Impact of mHealth and eHealth on oral health literacy: a systematic review. Digit Health. 2025;11:20552076251294815. https://doi.org/10.1177/20552076251294815
23. Olaiya O, Ayo-Yusuf OA, Abobakr N, Adeola HA, Mubaiwa J, Grobler L. Co-development of the educational content of a proposed educational mobile health application prototype on oral cancer using Delphi technique. Sci Rep. 2025;15:4221. https://doi.org/10.1038/s41598-025-21339-1
24. Kaur J, Chandrasekaran R, Vinod PN, Bhat N, Mehrotra R. Leveraging celebrity influence for oral cancer prevention and smokeless tobacco cessation: challenges and opportunities in India. Front Public Health. 2025;13:1531268. https://doi.org/10.3389/fpubh.2025.1531268
25. Johnson LB. Oral cancer awareness: inequities in screening, education, and prevention. J Dent Hyg. 2023;97(2):4–6.
26. Formosa J, Jenner R, Nguyen-Thi MD, Rahardjo A, Kusnoto B. Awareness and knowledge of oral cancer and potentially malignant oral disorders among dental patients in far North Queensland, Australia. Asian Pac J Cancer Prev. 2015;16(10):4429–4434. https://doi.org/10.7314/apjcp.2015.16.10.4429
27. Gupta S, Srivastava N, Goel S, Kamarthi N, Malik S, Sharma A, et al. Tobacco cessation center in a dental college: an 8-year institution-based study. J Cancer Res Ther. 2023;19(3):808–812. https://doi.org/10.4103/jcrt.jcrt_22_22
28. González-Ruiz I, Ramos-García P, Ruiz-Ávila I, González-Moles MÁ. Early diagnosis of oral cancer: a complex polyhedral problem with a difficult solution. Cancers. 2023;15(13):3270. https://doi.org/10.3390/cancers15133270
29. Rao SK, van Crevel R, de Baat C, van der Linden M, de Wit NJ, Schuller AA. Necessity and influencing factors for integrating oral health in cancer care for older people: a narrative review. Support Care Cancer. 2024;32(7):462. https://doi.org/10.1007/s00520-024-08632-x