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Prevalence and Perceived Causes of Halitosis Among Young Adults

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Abstract

Background: Halitosis is a common oral health condition with multifactorial etiology, impacting social interactions, self-esteem, and quality of life. Despite its prevalence, awareness and preventive behaviors among young adults remain inadequately studied.

Objective: To assess the awareness, perceived causes, preventive practices, and social attitudes toward halitosis among young adults in Chennai.

Methods: A descriptive, questionnaire-based survey was conducted among 101 participants using a pre-validated structured questionnaire covering demographics, general awareness, causes, habits, medical and dental understanding, dietary habits, lifestyle, social impact, and dental care practices. Data were collected electronically via Google Forms and analyzed descriptively using frequencies and percentages.

Results: Overall awareness was moderate; 55.4% correctly identified halitosis, while 75.2% recognized poor oral hygiene as a primary cause. Preventive knowledge was adequate, but only 41.6% had visited a dentist in the past six months. Temporary masking solutions were commonly relied upon, and misconceptions regarding systemic causes persisted. Social attitudes were largely positive, with participants open to discussing halitosis.

Conclusion: Awareness of halitosis exists among young adults, yet gaps in knowledge, preventive behavior, and understanding of systemic associations highlight the need for targeted educational interventions.

Keywords: Halitosis, Awareness, Young Adults, Oral Hygiene, Preventive Practices

Introduction

Halitosis, commonly referred to as bad breath, is a prevalent oral health condition that can significantly affect social interactions, self-esteem, and overall quality of life. It is medically defined as an unpleasant odor emanating from the oral cavity, resulting from a complex interplay of local and systemic factors. The condition has multifactorial etiology, with primary contributors including poor oral hygiene, periodontal diseases, tongue coating, dental caries, dry mouth, and certain systemic conditions such as gastrointestinal disorders, respiratory tract infections, and metabolic diseases.1 Secondary causes may involve dietary habits, smoking, alcohol consumption, and the use of certain medications. Despite its widespread occurrence, halitosis remains under-recognized and inadequately addressed, particularly among young adults, who often experience it due to lifestyle and behavioral factors.2

The psychosocial impact of halitosis is substantial. Individuals affected by persistent bad breath may experience embarrassment, anxiety, social withdrawal, and diminished self-confidence, which can extend to professional and personal interactions.3 Studies have demonstrated that self-perceived halitosis is associated with decreased quality of life and heightened psychological distress, highlighting the importance of early identification and management. Young adults, in particular, are susceptible due to the interplay of emerging lifestyle patterns, academic or professional stressors, and evolving oral hygiene habits.4

Awareness and understanding of halitosis play a pivotal role in its prevention and management. Adequate knowledge about its etiology, contributory factors, and appropriate oral hygiene practices can lead to timely interventions and reduce reliance on temporary masking solutions, such as chewing gum or mouthwash.5 However, evidence suggests a gap between awareness and actual preventive behaviors.6 Several studies have reported that although young adults may recognize poor oral hygiene as a leading cause, misconceptions persist regarding systemic associations and effective management strategies.7,8 Furthermore, the frequency of dental visits and professional consultation for halitosis remains low, indicating a disconnect between perceived knowledge and healthcare-seeking behavior.9

Given the potential implications of halitosis on both oral and systemic health, as well as its psychosocial burden, there is a pressing need to evaluate the awareness, perceptions, and practices related to this condition among young adults.10 This study aims to assess the knowledge, awareness, preventive practices, and social attitudes toward halitosis among young adults.

Materials and Methods

A descriptive, questionnaire-based survey was conducted to evaluate the prevalence and perceived causes of halitosis among young adults. The study recruited 101 participants from Chennai and employed a pre-validated, structured questionnaire designed to capture comprehensive information across multiple domains, including demographics, general awareness, causes and contributing factors, personal habits and perceptions, medical and dental understanding, dietary habits and lifestyle, social impact, and dental visits and treatment awareness. The survey was administered electronically via Google Forms to ensure ease of access and maximize participation. Participants were informed about the study objectives, assured of confidentiality, and reminded that their involvement was entirely voluntary, in accordance with ethical standards. Data from completed questionnaires were compiled in Microsoft Excel, and descriptive statistical analyses, primarily frequencies and percentages, were performed. Findings were presented using tables and graphical illustrations to enhance clarity and facilitate interpretation.

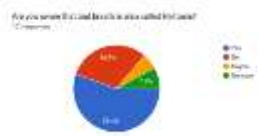
Results

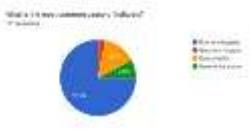
A total of 101 young adults participated in the study, with a mean age of 23.5 years. Overall awareness of halitosis was moderate, as 55.4% of respondents correctly identified bad breath by its medical term, halitosis, while 30.7% reported being unaware and 13.8% were partially aware or unsure, indicating that nearly half of the participants lacked clear knowledge of the terminology and highlighting the need for enhanced oral health education even among young adults. When queried about the most common cause of halitosis, 75.2% correctly cited poor oral hygiene, reflecting a solid understanding of fundamental etiology; however, 24.8% attributed it to eating habits, good oral hygiene, or unrelated causes, highlighting persisting misconceptions. Regarding preventive understanding, 48.5% acknowledged that

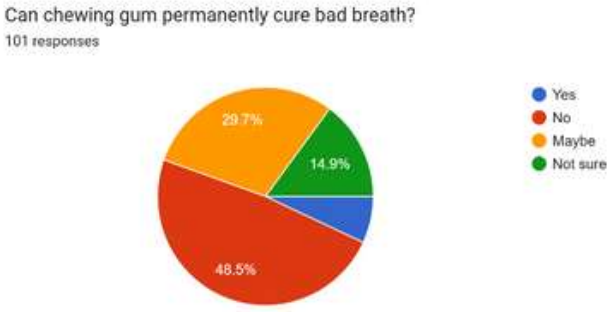
chewing gum cannot permanently resolve bad breath, while 29.7% believed it might help, and the remainder were uncertain, suggesting a reliance on temporary masking rather than addressing root causes.

Awareness of contributing factors was relatively robust, with 60–70% recognizing dehydration, cavities, gum disease, and certain medical conditions as contributors, yet knowledge of systemic disease associations was less consistent, revealing limited understanding of the broader health implications of halitosis. Oral hygiene practices demonstrated mixed trends: while most participants reported awareness of correct habits, including brushing twice daily and tongue cleaning, as well as other beneficial practices such as maintaining hydration and consuming fruits and vegetables, actual dental care behavior showed gaps, with only 41.6% having visited a dentist in the past six months and 43.5% not having seen a dentist for over a year or being unsure of their last visit, highlighting a disconnect between knowledge and preventive action. Social attitudes were largely positive, with 65.3% feeling comfortable discussing halitosis with a dentist and a strong majority believing that friends or peers should inform someone if they have bad breath, indicating reduced stigma and openness. Nonetheless, misconceptions regarding causation persisted: only 16.8% understood that persistent halitosis is not always attributable to poor oral hygiene, while the remainder either believed it was or were unsure, which could delay professional evaluation of underlying medical conditions

General Awareness







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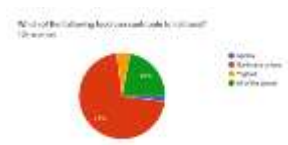

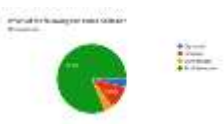

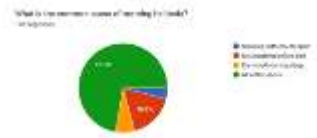

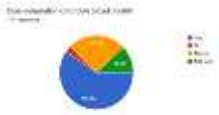

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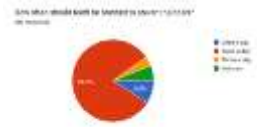

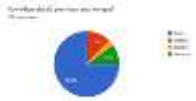

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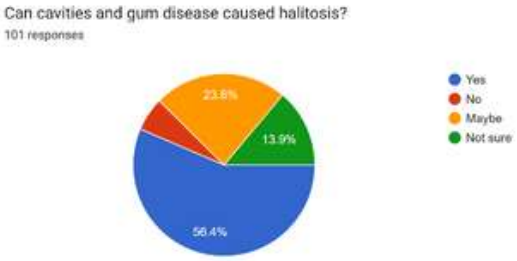

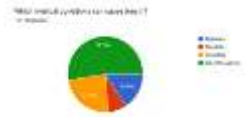

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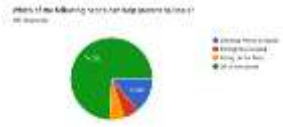
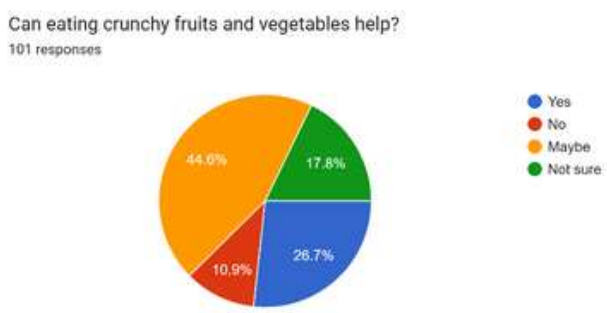
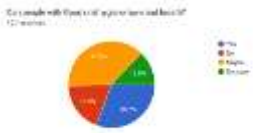
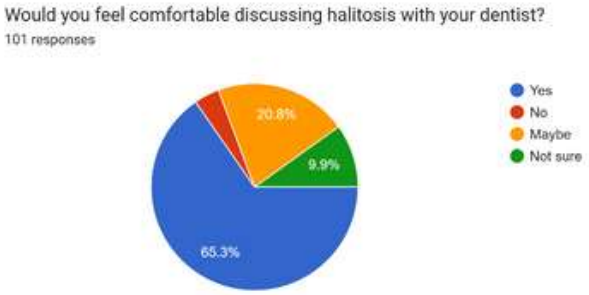




Perception and social impact	
	

Dental visits and treatment awareness	
	
	

Discussion

In the present study, moderate overall awareness of halitosis was observed among young adults, with 55.4% correctly identifying the condition by its medical term, and a majority recognizing poor oral hygiene as its primary cause. These findings align with previous reports highlighting fundamental knowledge of halitosis etiology, yet they also reveal persistent gaps in awareness and preventive behavior. Comparatively, prevalence rates of self-perceived halitosis in other populations vary widely, ranging from 21.4% among Brazilian dental students (Milanesi et al., 2016)12 to 51.5% among institutionalized adolescents in Brazil (Muniz et al., 2022)12, with Dunedin, New Zealand reporting rates of 25.6–31.2% depending on assessment method (Yu et al., 2022)13. Our findings, though focused on awareness rather than prevalence, underscore a similar pattern: while basic knowledge exists, misconceptions regarding causes and preventive strategies are prevalent. The identification of poor oral hygiene as a major contributor in 75.2% of participants mirrors results from Yu et al. (2022)13 and Alawsiy & Radhi (2021)14, who reported strong associations between inadequate oral hygiene and halitosis, whereas dietary factors and systemic conditions remain underestimated by our cohort,

consistent with observations from Azizah Bin Mubayrik et al., where 80.4% of participants attributed halitosis primarily to gastrointestinal causes rather than oral or systemic health.15

Our study also highlighted a reliance on temporary masking measures, with only 48.5% acknowledging that chewing gum cannot permanently resolve bad breath. This finding resonates with reports from Al Sadhan et al. and Bin Mubayrik et al., where participants frequently resorted to mouthwash, chewing gum, or other personal methods to manage halitosis, often without seeking professional guidance.15,16 Notably, only 41.6% of our participants reported a recent dental visit, reflecting a disconnect between knowledge and preventive practice, a trend echoed by Bakhshi et al., who reported higher halitosis odds among individuals with poor oral hygiene habits, infrequent brushing, and inconsistent use of mouthwash or floss.17 Similarly, Nazir et al. noted that despite high self-perception of halitosis, professional evaluation and treatment were low, suggesting that awareness does not necessarily translate into appropriate action.18

Social attitudes in our study were largely positive, with a majority expressing comfort discussing halitosis with dentists and endorsing peer feedback, which aligns with findings from Mento C et al., who emphasized the psychosocial impact of halitosis, including anxiety, embarrassment, and social discomfort.19 However, misconceptions regarding causation persisted; only 16.8% of participants recognized that persistent halitosis is not solely due to poor hygiene. This mirrors Annesha Dey et al.'s observations that lifestyle factors—such as obesity, smoking, alcohol consumption, unhealthy diet, and oral hygiene lapses—significantly influence halitosis prevalence, indicating that multi-factorial understanding remains limited among young adults.20

Conclusion

In conclusion, our results corroborate previous literature showing moderate awareness of halitosis among young adults but reveal continued gaps in comprehensive knowledge, clinical understanding, and translation into preventive behavior. Consistent with global evidence, while participants recognize basic etiological factors, misconceptions regarding systemic associations, temporary remedies, and the importance of professional dental care remain prevalent. These findings emphasize the need for targeted oral health education programs that integrate behavioral, clinical, and psychosocial aspects, aiming not only to improve daily hygiene practices but also to enhance understanding of halitosis as a potential indicator of broader health concerns.

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