

# Self-Perception and Awareness of Halitosis among Female College Students: An Extensive Examination

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Abstract: This paper presents an extensive examination on selfperception and awareness of halitosis among female college students.

Keywords: self-perception, halitosis

## 1. Introduction

Halitosis is a widespread problem in the general population. Due to increasing media exposure in recent years, halitosis has gotten the attention and awareness of patients and dentists. Nevertheless, it is still a taboo subject. Since the oral cavity is the source of halitosis in most cases, a nurse should be the first person to contact. Before visiting a professional halitosis clinic, the majority of patients try to treat halitosis themselves. The most commonly used anti-halitosis products are chewing gum, candies, and mouth rinse. However, it is known that these products only have a masking effect, and thus they are not able to influence the cause of bad breath.

More than half of the patients have, prior to their appointment at a halitosis clinic, already visited one or more general practitioners or medical specialists. Often, patients have a long history of suffering from halitosis, and the resulting social and psychological stress can be very high. Common etiologies of bad breath include periodontal diseases, tongue coating, caries, and decreased salivary flow. The importance of halitosis is heavily related to its psychological and social impact. Bad breath has been associated with psychiatric symptoms such as phobias, depression, considerable worry, and changes in behavior and can adversely affect self-esteem, self-confidence, and impact on social participation.

## 2. Materials and methods

A cross-sectional study was implemented with a randomly selected sample. Self-administered questionnaires were distributed anonymously to 200 students from various colleges in Kollam Dist. The purpose of the study was explained, and any questions raised were addressed. Of the 200 young women who received the questionnaire, 197 completed it and 3 withdrew from the study due lack of time. Structured questionnaire was used for conducting the survey, the questionnaire was pilot-tested, and no changes were required as a result.

The questionnaire consisted of demographic questions, and substantive questions exploring the respondents' selfperception and awareness of halitosis along with their knowledge about causes and management of oral mal odour. The collected data were analyzed using Statistical Package for the Social Sciences (SPSS) Version 22.

# 3. Results

The response rate was 88.1%. Participants ranged in age from 18 to 25 years, with a mean age of  $21\pm1.9$  years. The students' majors included 50 in health sciences, 50 in science colleges, and 100in humanities colleges. More than three-quarters of the respondents (78.6%) indicated that they did not suffer from halitosis. Most of the respondents who reported having halitosis (18.9%) admitted to having discovered it on their own.

As for the primary origins of halitosis, 44.5% cited the stomach, followed by the periodontal pocket (36.5%) and the tongue (34.7%). A strong majority (78.9%) agreed that an important cause of halitosis was not brushing one's teeth, followed by dry mouth (32.3%), smoking (20.5%), and ear, nose, and throat (ENT) diseases (27.9%). Systemic diseases were cited as related to halitosis with the following frequency: gastrointestinal tract, 89.4%; respiratory diseases, 15.6%; and diabetes, 12.5%.

More than three-quarters of the sample (68.0%) thought that bad breath can be managed through a self-care plan involving product such as mouthwash. Almost one-third of the sample (32.1%) said that they would go to their dentist for help with this problem.

A significant difference was found between respondents with SPH and those without SPH in terms of their belief that the source of the bad breath is not brushing (p=0.011) and their likelihood of visiting a dentist for help (p=0.020). Individuals with SPH were less to consider teeth brushing and visiting a dentist for halitosis. An analysis of variance showed significant variation between age groups (p=0.032) in self-perception of bad breath. A post hoc Tukey test showed that the 18–20 age



group had significantly more perceptions of halitosis compared to those over age 22 (p=0.027). The origin of halitosis was attributed to stomach problems significantly more often by respondents aged 21–23 years (p=0.033) than by those aged 18– 20 years. The youngest group (i.e., those aged 18–20 years) was less likely to believe that ENT diseases contributed to bad breath than those over 22 (p=0.031). Treating halitosis by going to an ENT specialist was opposed significantly more often by the 21–22 age group than by other respondents (p=0.004)

### 4. Discussion

Bad breath is a common worldwide problem with substantial psychological and social implications, including a negative impact on marital relationships. Finds of this study reveals that stomach problems most frequently as a main cause of bad breath, followed by periodontal diseases and tongue coating. This result could be explained by age differences, as the 21–23 age group especially held this view. It could also be related to the respondents' extent of knowledge, since individuals who were majoring in health sciences selected the tongue as the main source.

Our investigation revealed poor knowledge of the extra oral factors associated with halitosis other than gastrointestinal tract disorders. It has been shown that halitosis could be associated with or caused by various factors such as chronic sinusitis, upper respiratory tract infections, diabetes, older age, being female, and lower education and socioeconomic status. Improper breathing could also contribute to this problem via mouth dryness. Further emphasis should be placed on the normal causes of halitosis, such as ENT and pulmonary pathology metabolic disorders along with some medications.

The vast majority of respondents were unwilling to tell a friend or colleague about his/her bad breath, and very few would recommend, upon noticing a friend's oral mal odour, that he/she goes to the dentist. These responses may reflect social perceptions about the psychological effects of halitosis. On the other hand, they also imply increased responsibility for professionals who have the opportunity to identify and address this problem in their patients. They also indicate the importance of covering such issues in dental training curriculum.

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