

# POTENTIAL CAUSAL RELATIONSHIPS BETWEEN PSYCHOLOGICAL CHARACTERISTICS AND PATHOLOGIC SUBJECTIVE HALITOSIS

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## Biography

Toshihiro Ansai graduated from Kyushu Dental University, Japan, in 1988, and completed a post-graduate course to earn a PhD (Public Health and Oral Health) in 1992 from the same university. From 1995-1996, he worked as a visiting professor in the Dept. of Biochemistry and Molecular Biology, College of Medicine, University of South Alabama, USA. Thereafter, he became a professor in the Div. of Community Oral Health Development, Kyushu Dental University, in 2011. Ansai has published more than 130 international papers to date, including epidemiological and clinical studies. Since 2017, he has been serving as chief editor of the *Journal of Dental Health* (in Japanese).

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Patients with pathological subjective halitosis often visit general medical and dental clinics for treatment. Pathological subjective halitosis is defined as a halitosis complaint without objective confirmation by halitometer results, i.e., the patient believes that they have halitosis, but no odor is clinically detectable. The clinical approach for such patients remains to be standardized. Our recent study showed that social anxiety may be a causal factor related to pathologic subjective halitosis and olfactory reference syndrome. In this study, in addition to those, other pathologic scales including body dysmorphic disorder, motivation for avoiding rejection, and public self-consciousness were used for assessments. A total of 1360 female students (mean age 19.6 years) answered a self-administered questionnaire regarding pathologic subjective halitosis and the aforementioned pathological scales, as well as preoccupation with odor of body parts such as the mouth, body, armpits, and feet. Next, we used the scale for pathologic subjective halitosis developed by Tsunoda et al., with the participants divided into 3 groups based on their scores (e.g., level of pathological subjective halitosis). We found statistically significant differences in the results for social anxiety, body dysmorphic disorder, motivation for avoiding rejection, and public self-consciousness among the various levels of pathologic subjective halitosis. Furthermore, Bayesian network analysis showed that body dysmorphic disorder and motivation for avoiding rejection directly influenced pathologic subjective halitosis, while social anxiety and public self-consciousness were found to be indirect causes of pathologic subjective halitosis. Our results suggest the need for medical and dental professionals to recognize these psychological characteristics when treating patients with pathologic subjective halitosis.

**Keywords:** *pathologic subjective halitosis, social anxiety, body dysmorphic disorder, motivation for avoiding rejection, public self-consciousness.*