

## Abstract

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### **Application of the Health Belief Model to preventive dental behaviors among college students**

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Periodontitis and dental caries are two significant oral diseases that impact 47 and 28 percent of U.S. adults, respectively. Individuals' beliefs about oral diseases can influence their preventive dental behaviors such as tooth brushing, flossing, and regular dental checkups. The Health Belief Model (HBM) has been frequently utilized in behavioral studies to better understand health behaviors, and it can be applied to assess students' preventive dental behaviors. **PURPOSE:** To evaluate college students' preventive dental behaviors based on HBM and to identify key constructs of HBM to promote preventive dental behaviors. **METHODS:** This study enlisted the participation of 550 college students (ages 18 to 25; 69.8% female). An online survey was used for data collection. After adjusting demographic characteristics, a multivariate analysis of variance was used to examine the relationship between HBM constructs and protective dental behaviors. In addition, chi-square was used to determine the prevalence of preventive dental behaviors associated with dental knowledge level. **RESULTS:** Perceived barriers and self-efficacy were significant predictors of preventive dental behaviors among college students ( $p < 0.001$ ). Also, a significantly higher proportion of students with sufficient dental knowledge met the recommendations for tooth brushing and regular dental checkups compared to those with deficient and moderate dental knowledge ( $p < 0.05$ ). **CONCLUSION:** The Health Belief Model could be an effective framework to promote preventive dental behaviors for college students, particularly, using perceived barriers and self-efficacy. In addition, increasing dental knowledge could be an effective strategy to promote preventive dental behaviors among college students.

