Oral Health among SWOSU Students

Amanda Kirkpatrick and Monica Miller
Faculty sponsor: Dr. Lisa Appeddu
Southwestern Oklahoma State University, Weatherford, OK
Research support provided by a CPGS Research Grant

Introduction

When meeting someone, their smile is often the first thing you notice. If their teeth are perfect and clean you are more apt to want to continue the conversation - but if their teeth are disgusting and repulsive, you are likely to want to turn and run! However, having clean teeth isn't just about appearances; it is also about maintaining a healthy mouth and overall health. Studies suggest that people with gum disease are twice as likely to develop conditions like heart disease or diabetes (Harvard Health, 2009). To keep up your oral health, it is recommended that you brush your teeth twice a day for two minutes, floss and use mouthwash once a day, and replace your toothbrush after three months of use or after being ill (ADA, 2010; Creeth, 2009; WebMD, 2010).

Therefore, we wanted to compare the SWOSU student oral hygiene habits to the recommended oral health standards, and to determine whether or not having insurance affected the frequency of dentist visits.

Aim of Study

The following research questions were tested in this study:
1. To determine how often SWOSU students brush their teeth, for how long they brush, how often students change out their toothbrushes, student use of mouthwash, and flossing frequency.
2. To compare reported oral hygiene habits to the recommended oral health standards.
3. To determine how many SWOSU students have dental insurance.
4. To determine whether insurance status was an important factor in whether or not a student would visit the dentist biannually.
5. To determine whether there was a correlation between cavity status and oral hygiene habits in SWOSU students.

Materials and Methods

This project was done to meet the course requirements of ALHLT 3043 Health Statistics in Fall 2010.

The following steps were followed:
• Received approval from the SWOSU Protection of Human Subjects Committee.
• Conducted survey using convenience sampling of 43 SWOSU students in ALHLT 1402 on November 22, 2010, and MNGMT 3233 on December 3, 2010.
• Data was organized and summarized using Microsoft Excel®.
• Correlation coefficients were determined using Microsoft Excel® and Chi Square analysis was conducted with PASW® Statistics 17.0 software.
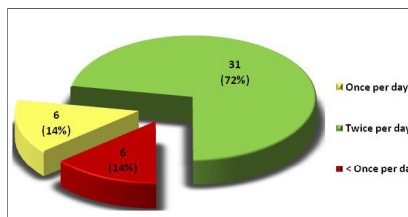• Data were presented using Microsoft PowerPoint ®.

Results

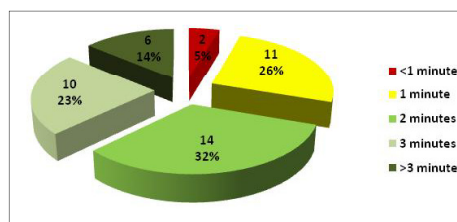**Figure 1.** Number of times students reported to brush their teeth per day.

Figure 2. Length of time students reported to brush their teeth.
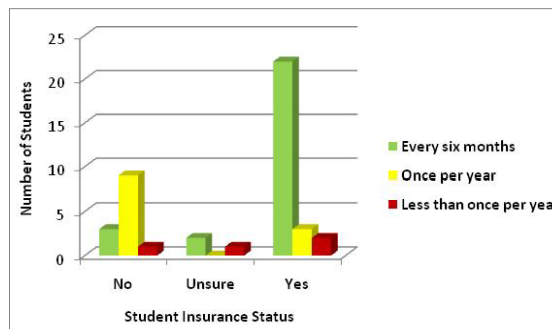

Figure 3. How often students reported to visit the dentist relative to their dental insurance status.
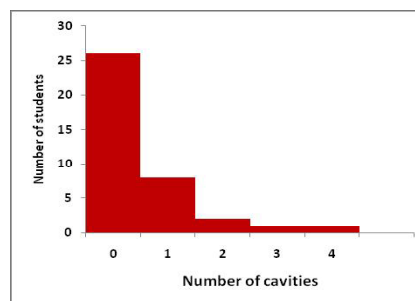

Figure 4. Histogram of number of cavities per student.

Conclusions

• The majority of students reported to brush their teeth for the recommended twice per day (Figure 1) and to brush their teeth for the recommended minimum of 2 or more minutes (Figure 2).
• 36% of students reported to replace their toothbrush at the recommended time of once every 3 months, while 17% replaced it more often and 48% replaced it less often than recommended.
• 37% of students reported to floss at least once a day, as recommended, whereas 37% flossed less often (from twice a week to once a month to "when I remember") and 26% never floss.
• 58% of students reported to use mouthwash for the recommended once per day. 23% reported to use it less frequently, and 19% of students did not use mouthwash.
• Other oral hygiene habits included using a waterpick, chewing sugarless gum, teeth whitening, and wearing a mouth guard at night.
• The majority of students had dental insurance (P < 0.05) (Figure 3). Students were more likely to visit the dentist at the recommended rate of twice per year if they had dental insurance (P < 0.05).
• We found weak relationships between reported number of cavities and recommended oral hygiene habits (Table 1). This may be explained by students having a low number of cavities (Figure 4). Over time and with age, we hypothesize poor oral hygiene habits would result in a higher number of cavities.
• This project would have benefited from having a higher number of subjects, not having as many open-ended questions, and by taking direct measures of oral hygiene habits.
• Overall, the majority of students surveyed met the minimum recommendations for frequency and length of brushing, and mouthwash use. Improvements could be made in replacing toothbrushes and flossing.

Works Cited

Jonathon E. Creeth, P. (2009, Summer). *The Effect of Brushing Time and Dentrifice on Dental Plaque Removal in vivo.* Retrieved December 6, 2010, from The Journal of Dental Hygiene.

Oral Health Topics. (2010). Retrieved December 1, 2010, from American Dental Association: http://www.ada.org

Teeth and Gum Care. (2009). Retrieved December 6, 2010, from WebMD: http://www.webmd.com

Your Oral Health and Overall Health. (2009). Retrieved December 14, 2010, from health.harvard.edu: http://www.health.harvard.edu

Oral hygiene habits	Correlation Coefficient
How often do you brush?	0.05
How long do you brush?	-0.09
How often change toothbrush?	0.09
How often do you floss?	-0.19
How often do you use mouthwash?	0.15
Frequency of dental visits	-0.13

Table 1. Correlation matrix of the association between number of cavities and other oral hygiene habits.