



Finalist: **Michaela Rachel Kyer**

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Title: **Analysis of Periodontal Trends within the United States in Comparison to Developing Countries to Further Oral Disease Prevention Understanding**

Abstract:

Periodontitis, also referred to as periodontal disease, is a disease affecting 42.7% (64 million) of United States citizens alone. Periodontitis is a gum infection resulting in damage of the soft tissues within the oral cavity and contributes to destruction of bone that supports the oral cavity structure. Three problems addressed by experimentation were the increasing number of periodontitis cases within specific ethnic and age groups (developing countries), diets high in foods with little or no nutritional value thereby lowering the integrity of the oral environment; and finally, inconsistencies of oral hygiene regimen. The goals were to determine if race/ethnicity, gender, age, diet, and oral hygiene integrity affect the incidence of periodontitis. The methodology consisted of the Competition Entrant working with a dental professional to create questions for patient completion questioning periodontitis risk factors demonstrated and oral hygiene regimen. Tremendous insight was gained as a total of 1,687 responses were collected. It was determined that age is a factor in the development of periodontitis, and without a consistent oral hygiene regimen precursors will manifest. Future research could aim to determine the most effective holistic oral hygiene regimen to be utilized in developing countries.