

Periodontitis among non-Hispanic African Americans versus other populations

Category: Public Health & Environmental Medicine, Poster Presentation

Disclosure: The authors did not report any financial relationships or conflicts of interest

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BACKGROUND:

- A study completed in 2009 reports that periodontitis affects about 46% of American adults (64 million people).¹
- Periodontitis is a chronic inflammatory oral disease that damages the gums and supporting structures of the teeth.
- It is triggered by bacteria in dental plaque and typically manifests from the worsening progression of gingivitis.²
- Symptoms include loosened teeth, tooth loss, erythematous and swollen gums that are tender to the touch, gum line recession, halitosis, and easy gum bleeding.³
- Periodontitis is of public health concern because of the high potential for exacerbated comorbidities to the underserved communities that are most commonly affected.
- Non-Hispanic blacks are genetically predisposed to heart disease and periodontitis has been shown to increase the risk of development and progression of heart disease.⁴
- There are systemic diseases that can directly cause secondary periodontitis, however, discerning if a disease is the main cause or just a contributing factor to periodontitis is often difficult. This is typically seen in patients who have a significant ratio of inflammation versus plaque.
- Risk factors that also contribute to periodontal disease include smoking, obesity, and diabetes (especially type 1).² Addressing these concerns can potentially improve treatment outcomes.

IMPORTANCE OF THIS ISSUE FROM A PUBLIC HEALTH POINT OF VIEW:

- Dental care is extremely expensive and when conditions are left untreated it is then up to government provided insurance to cover the procedures or commercial insurance.
- Periodontitis is easily avoidable with regular oral hygiene and becomes an unnecessary burden on the healthcare system which will in turn, increase premiums for everyone covered because of the increase of insurance payments to dentists.
- If periodontitis can be avoided all together, these large sums of money not being spent by insurance companies can go towards lowering premiums and will allow for a greater amount of people to afford dental coverage and further prevent oral diseases.
- This poses a threat to the healthcare system because dental care is very expensive when dealing with diseases that are left untreated and that can easily be prevented with oral health care education with regular flossing, brushing at least twice daily, avoiding tobacco products and excessive consumption of alcohol.

HEALTH DISPARITIES WITH NON-HISPANIC BLACKS

- There was a higher prevalence of periodontitis in non-Hispanic blacks compared to non-Hispanic white and Hispanic American populations.⁵
- Periodontal disease has a greater prevalence in minorities and in those with lower socioeconomic status (SES).⁵ With less disposable income, this limits access and ability to purchase dental products that could prevent infection.
- African American participants of this study were more likely to be obese and current smokers than the rest of the races/ethnicities, which increases the risk for periodontitis.⁵

-Exposure to stress is another risk factor for periodontitis and thus is a potential explanation for the unequal distribution of periodontal disease across different races and ethnicities. Black and Hispanic Americans may experience greater levels of stressors including perceived discrimination than non-Hispanic white Americans.⁵
-In all racial populations, self-reported cases of periodontitis had higher prevalence in those with health insurance and those who experienced stress.⁵

INTERVENTIONS:

-Increase dental screenings at local churches and shelters to prevent Periodontitis among African American patients. Screening, early diagnosis and treatments increase better outcomes.
-Provide additional screening for diabetes, and discussions about smoking cessation and obesity at local churches and shelters to spread awareness of Periodontitis prevention among African American patients.
-Large donations of toothbrushes, floss, and toothpaste will be very helpful.
-Teachers should be educated about oral health by dental professionals who can then pass down the information to all of their students to solidify the importance of oral care at a younger age. Since periodontitis is a slowly progressing disease, it is important to begin prevention at the youngest age possible to decrease the risk of developing oral diseases.

LIMITATIONS:

-Sufficient numbers of willing dentists, dental hygienists, or dental students to perform screenings.
-Not enough donations to supply all those that need dental hygiene products.
-Getting school's approval to educate the current faculty on the effects of poor oral hygiene and the comorbidities.

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Learning Objectives

Identify the Health Disparities of Periodontitis among non-Hispanic African Americans versus Other Populations

Table 1⁵

Distribution of selected characteristics of MESA study participants overall and by racial/ethnic group at baseline examination: 2000–2002

Covariates	Overall (N=6256), %	Whites (n=2450), %	Blacks (n=1642), %	Hispanics (n=1400), %	Chinese (n=764), %	P-value ^a
Gender						0.0214
Male	47.4	48.2	44.2	48.9	49.0	
Female	52.6	51.8	55.9	51.1	51.1	
Education Categories						<.0001
<HS diploma	17.8	4.8	11.1	44.6	24.6	
HS diploma	17.6	16.2	18.3	20.3	16.1	
Some College/ Tech school	23.5	24.0	28.9	21.6	13.7	
College degree +	41.1	55.1	41.8	13.5	45.6	
Income Categories						<.0001
≤\$24,999	31.3	15.8	30.2	49.9	49.4	
\$25,000–49,999	28.6	26.3	31.9	32.4	22.0	
\$50,000–74,999	17.1	20.8	20.0	10.5	11.3	
\$75,000+	23.0	39.2	18.0	7.2	17.4	
Smoking status						<.0001
Never	50.5	44.2	45.9	53.7	75.1	
Former	36.6	44.3	36.5	32.9	19.4	
Current	12.8	11.5	17.7	13.4	5.5	
BMI Categories						<.0001
Non-obese (<30 kg/m ²)	68.1	72.1	54.3	62.4	95.6	
Obese (≥30 kg/m ²)	31.9	27.9	45.7	37.6	4.5	
Diabetes Status						<.0001
Non-diabetic	87.6	94.2	82.8	82.1	86.5	
Diabetic	12.5	5.8	17.2	17.9	13.5	
Perceived Discrimination						<.0001
0	57.8	62.4	38.7	60.1	80.1	
1	22.3	23.7	25.6	21.6	12.0	
2 or more	19.9	14.0	35.7	18.3	7.9	