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Relationship Between Early Childhood Caries and Adult Use Disorder

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GENERAL OVERVIEW

Childhood caries (ECC) is a commonly encountered disease that is growing in prevalence. Caries is the most common chronic childhood condition in the United States (Henshaw et al., 2018, Blackburn et al., 2017).

- Children of low-income families are the least likely to follow these preventive recommendations and more likely to have untreated dental caries (Da Fonseca and Avenetti, 2017).
- A factor that has been linked with the living of the parents/caregiver and the child has been substance abuse.
- Substance use is linked to dental neglect, and maternal substance use has been identified as an important factor in advanced childhood caries.
- Parental oral health behavior is a known predictor of offspring's caries experience in childhood and it is difficult to establish preventive dental care for children if the parents functioning is low. (Levin and Currie)

The goal of this study is to establish a potential relationship between substance use disorder (SUD) and caries rate of the children by looking a the different ethnic groups that are affected the most by each conditions.

MATERIALS AND METHODS

The caries rate information was collected from the Center for Disease Control and Prevention (CDC) and the information referenced comes from their report entitled: "Prevalence of Total and Untreated Dental Caries Among Youth: United States, 2015–2016". In the report they presented the prevalence of total and untreated caries in primary or permanent teeth among youth aged 2–19 years for 2015–2016.

The information on Substance Use Disorder was collected from brief survey conducted by the office of assistant secretary for Planning and Evaluation as they looked at data from a report conducted by National Survey on Drug Use and Health (NSDUH) that look at the differences in substance abuse and SUD across different races and ethnicities over a 5 year period of 2014-2019.

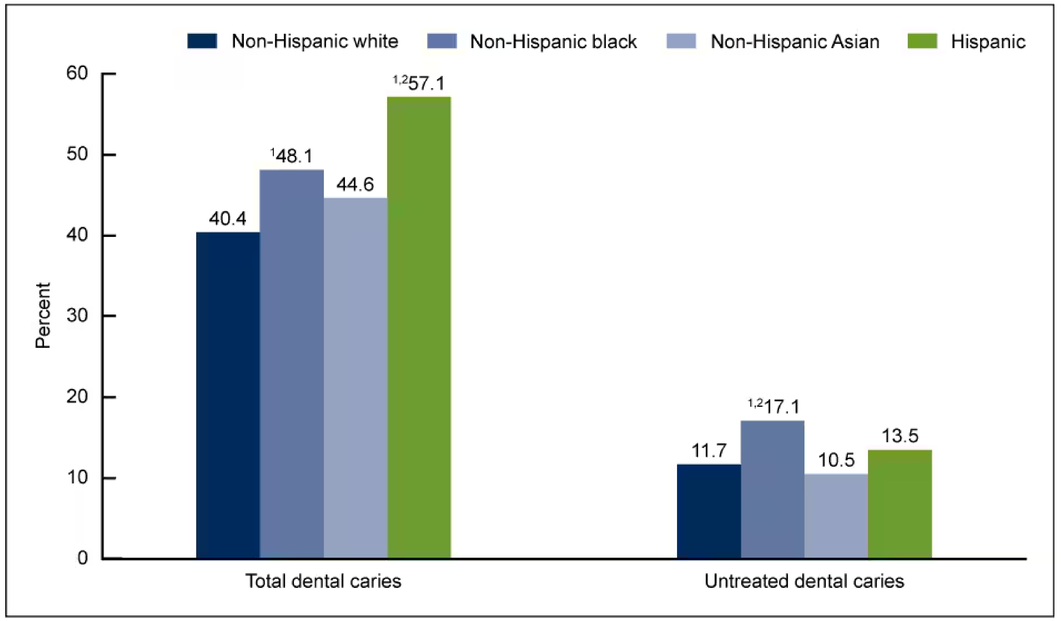
The variations of SUD looked at in the report were the following: alcohol use, marijuana use, cocaine, methamphetamine use, hallucinogen use, pain reliever misuse, stimulant misuse, sedative misuse.

CONCLUSIONS

- There was no similarity in the groups of adults that were observed to have the most substance use problems and the ethnicities that had more children affected with dental caries
- There is still a potential for a relationship between the 2 parameters studied as Indian Americans were not included in the ethnic groups in the dental caries prevalence study.
- More clarification has to be made in determining the ethnic makeup of the subjects that identify as 2 or more races, and they also need to be included in the dental caries prevalence study.

RESULTS

Figure 2. Prevalence of total dental caries and untreated dental caries in primary or permanent teeth among youth aged 2–19 years, by race and Hispanic origin: United States, 2015–2016



[1]Significantly different from non-Hispanic white youth.
[2]Significantly different from non-Hispanic Asian youth.
NOTES: Total dental caries included untreated and treated caries. Access data table for Figure 2 at: https://www.cdc.gov/nchs/data/databriefs/db307_table.pdf#2.
SOURCE: NCHS, National Health and Nutrition Examination Survey, 2015–2016.

The group that showed the highest number of any alcohol use and heavy alcohol use was white/non-Hispanic (74.1%;7.7%), followed by American-Indian/non-Hispanic

- Marijuana consumption was seen to be higher in subjects that identified as 2 or more races/non-Hispanic(25.6%) and American-Indian/Non-Hispanic(22.0%)
- The 2 or more races/non-Hispanic and American Indian were also the highest self-reported for cocaine use (3.8%;2.6%), hallucinogen use(4.2%;2.6%) and pain reliever misuse(6.2%;5.8%)
- The group with the most total dental caries was Hispanic patients at 57%
- The group with the most untreated dental caries was non-Hispanic black patients at 13.1 %

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