Social Determinants Of Early Childhood Caries

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MCH Concern

•Dental caries is the single most common chronic disease of childhood [1]

•Early Childhood caries is disproportionately concentrated among preschool-aged children from low-income and ethnic minority groups [2]

•There is no conclusive evidence that oral hygiene and dietary efforts significantly reduce caries in these groups

•Research has shifted toward understanding parental beliefs and psychosocial determinants that increase caries risk, including utilization of preventive care, oral hygiene, and dietary practices [2]

A Framework of Social Influences on Caries

Compositional Effects

Income

•Higher income is protective against dental caries [2]
•Children in the lowest income groups are at least five times more likely to have untreated dental caries [1, 2]

Race

•African American and Mexican-American children are about twice as likely to experience caries as white children [1, 2]

Socioeconomic position

•Parental stress is a good predictor of dmft (decayed, missing, filled teeth) [4]

Parental Education

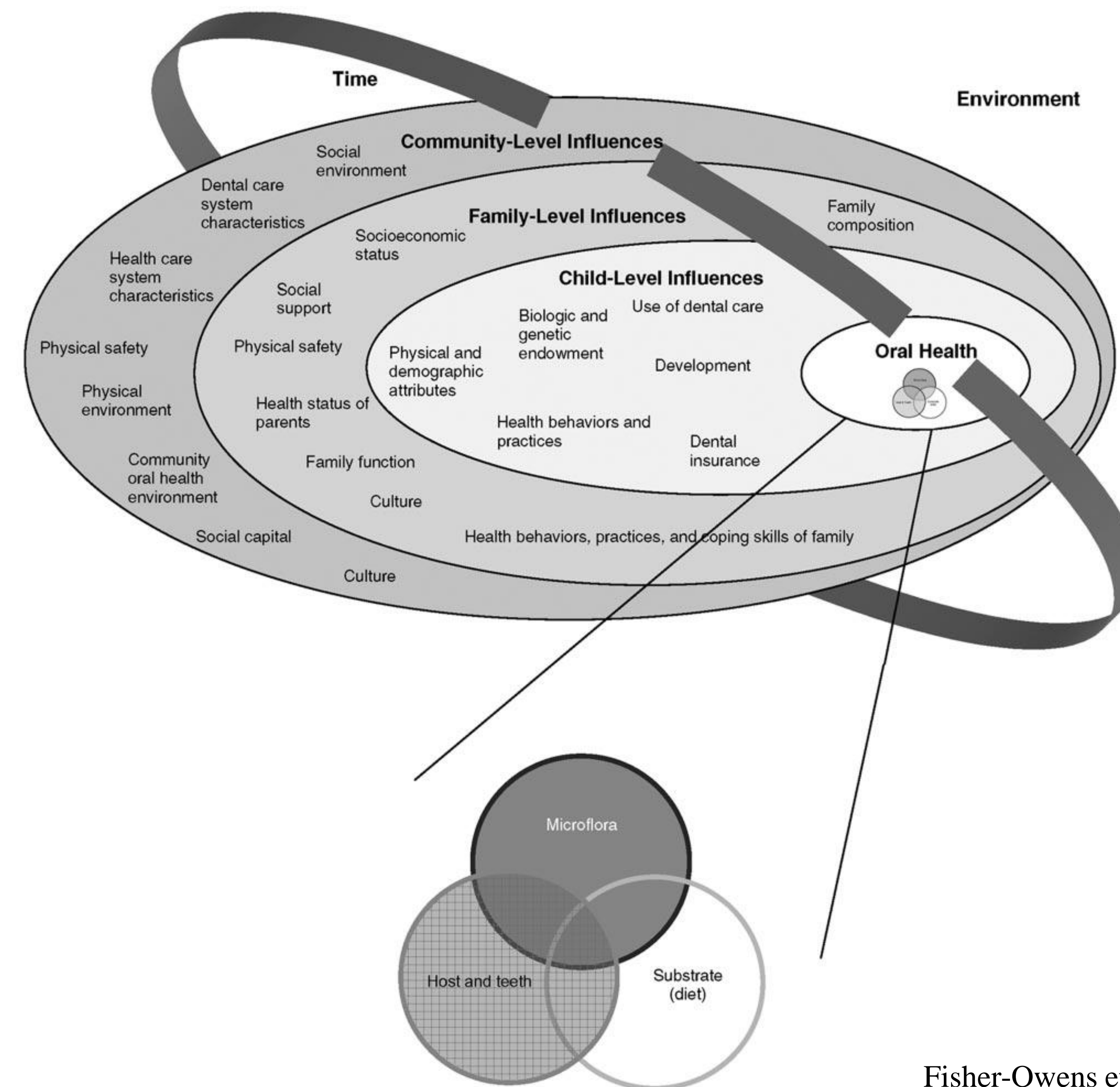
•Low education is a better predictor of decay than presence of sealants, equal to infrequent toothbrushing, and nearly as good a predictor as poor diet [3]

•ECC occurs in 2.5 times as many children of parents who didn't finish high school [2].

Self-efficacy

•Mothers with fatalistic (acceptance of predetermined, potentially negative, fate) oral health beliefs have children with nearly 3 times the rate of early childhood caries.

•One of the most predictive factors for childhood tooth decay is the parent's perceived ability to control a child's toothbrushing and snacking habits [5]



Fisher-Owens et al

Contextual Effects

•Neighborhood factors such as the availability of healthy foods and individual health outcomes [6]

•Community water fluoridation [4]

•Public housing residencies and inadequate access to transportation are predictors of caries in young children [6]

Health Care Effects

•Lack of insurance is linked to a higher probability of caries [2]

•Groups of lower SES are more likely to have negative opinions of medical care and less likely to pursue it. [7]

•Minorities are more likely to visit healthcare providers in response to symptoms rather than for preventive reasons [8]

•Minorities are more likely to report barriers to care [9]

•Many providers will not see children with Medicaid insurance.

Findings

•Dental caries is mediated by social factors
•Caries follows the same pathways as other chronic diseases

Implications

Effective interventions for the highest-risk populations should focus on social determinants

Example: Target Compositional Effects

Modify Parental Self Efficacy Through ***Motivational Interviewing***

•The parent is matched to their stage of readiness, and provided a menu of choices of changes they may feel comfortable making
•Parents are asked to look at a menu and determine which, if any, of the changes they may be able to make in a specified time period
•Allows ownership over the problem and a sense that they may be able to accomplish the task chosen [10].

MENU OF CARIES-PREVENTIVE OPTIONS FOR PARENTS.

•Do not let anyone add anything sugary to your child's bottle.
•Clean your baby's teeth as soon as they appear. Cleaning can be done with a small soft toothbrush or face cloth.
•Use a very small amount (smaller than a pea) of fluoride toothpaste.
•Hold your baby when feeding him or her, then lay the baby down to sleep; if the baby awakens, give him or her water, not milk or juice.
•Limit the time your child spends in sipping and snacking, because the longer he or she takes, the greater the chance of decay.
•Use a cup.
•Offer no more than two or three snacks per day.
•Bring your child to the dental clinic at least twice a year so the dentist can protect the baby's teeth by painting a safe fluoride medicine on them [13]

Example: Target Medical Effects

Improve Patient Attendance and Provider Acceptance of Medicaid Patients Through ***Text Message Reminders***

•Low SES/Medicaid patients are more likely to miss appointments

•An overwhelming majority of dentists state that broken appointments among the Medicaid population was very important in their decision not to accept these patients into their practice [11]

•High rates of geographic mobility and transience are well documented for younger, lower income, and minority people [12].

•African Americans and Hispanics have adopted cell phones at particularly high rates [13]

• Text messages may improve rates of attendance in this group

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