THE EFFECT OF MODE OF DELIVERY AND OTHER MATERNAL AND INFANT FACTORS ON ACQUISITION OF SOME ORAL MICROFLORA IN A GROUP OF EGYPTIAN INFANTS

Thesis

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DEDICATION

I dedicate this thesis to all my family and friends for their endless love and support

My Father, for all the encouragement and motivation to fight and face all the obstacles and to keep pushing. You have been the best symbol of a great father, I Hope I always make you proud

My Mother, the symbol of love and giving, she always leads me through valleys of darkness with light and hope. Her unconditional and pure love, moral support and prayers day and night are the reasons I am who I am today

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List of contents

List of figures

List of tables

List of Abbreviations

Abb.	*Full term*
AAP	**The American Academy of Pediatrics**
AAPD	**American Academy of Pediatric Dentistry**
AWHONN	**The Association of Women's Health, Obstetric and Neonatal Nurses**
CDCP	**The Center for Disease Control and Prevention**
C–section	**Cesarean-section**
DMFT/dmft	**D/d = decayed** **M/m = missing** **F/f = filled** **T/t = tooth**
EAPD	**European Academy of Pediatric Dentistry**
ECC	**Early childhood caries**
HS	**High significant difference**
MDSA	**Maternally Derived Streptococcus mutans Disease**
MS	**Mutans Streptococci**
NS	**No significant difference**
S	**Significant difference**
S.mitis	**Streptococcus mitis**
S.mutans	**Streptococcus mutans**
S.oralis	**Streptococcus oralis**
S.salivarious	**Streptococcus salivarius**

S.sobrinus	**Streptococcus sobrinus**
SD	**Standard deviation**
S-ECC	**Severe Early Childhood Caries**
SIgA	**secretary immunoglobulinA**
USDHHS	**The United State Department for Health Education and Human Service**
WHO	**World Health Organization**

Introduction

Dental caries affects humans of all ages throughout the world and remains the major dental public health problem among school children globally. (1)

Dental caries can be defined as a bacterial disease of the calcified tissues of the teeth. It is characterized by demineralization of the inorganic substrate and destruction of the organic substrate of the tooth. (2) It is a major cause of tooth loss, pain and discomfort worldwide; especially amongst children. (3)

Dental caries has a multifactorial etiology, and although it is a preventable disease, its prevention is complicated by the complex interaction of cultural, social, behavioral, nutritional, and biological risk factors that are associated with its initiation and progression. (4)

Early childhood caries (ECC) is a virulent type of dental caries. It is characterized by early onset and rapid progression. ECC is a major public health problem, being the most common chronic infectious childhood disease, which is hard to control. Although it's not life-threatening, its impact on individuals and communities is extensive, resulting in pain, impairment of function, harmful effects on the child's growth rate, body weight, and ability to thrive, thus reducing quality of life. (5)

ECC is etiologically associated with bacterial colonization in deciduous dentition. Mutans streptococci (MS), especially Streptococcus mutans (S.mutans) and Streptococcus sobrinus (S.sobrinus), have been related to dental caries based on well-defined cariogenicity. (6-9)

A body of evidence suggests that children acquire S. mutans primarily from their mothers, [10-13] and possibly other sources. [14,15]

Some studies suggested that mode of child delivery whether cesarean-section (C-section) or vaginal can lead to differences in the initial foundation of microbiota in the gut and, consequently, contribute to variations in child health. Whether the mode of child delivery can alter the infant's oral microbiota and the development of ECC in the future still remains unclear. [16,17]

Therefore, the main objective of the present study was to investigate the relation between the mode of child delivery (vaginal versus C-section), and other maternal and infant factors to the colonization of oral microflora in infants.