Influence of Parental Beliefs on the caries experience of their Children

Dr. Ashwini R MDS*, Dr. Arathi MDS R**, Ms. Asha K***, Dr. Peter S. Sequeira MDS****, Dr. Soben Peter MDS****

ABSTRACT

This survey was carried out to find out if parental beliefs have an influence on the caries experience of their children. A total of 595 children aged 4-15 years and their parents took part in the survey. The study involved a 15-item questionnaire, for the parent, which was a modification of the Dental Coping Belief Scale (DCBS). It was divided into 4 clusters - Internal locus of control, external locus of control, self-efficacy and oral health beliefs. An oral examination of the child was carried out to determine the dental caries experience.

When the beliefs of the parents were examined, the results showed that among the four clusters of the DCBS, the cluster External Locus of Control was positively associated with dental caries experience of the children. Based on factor analysis, the experience of no decayed teeth could be reduced to 2 factors, the first one comprising of Internal Locus of Control and Self - Efficacy and the second one made up of External Locus of Control and Oral Health Beliefs. Both these explain about 38% of no caries in the deciduous dentition and 43% in the permanent dentition. The findings suggest that internal factors are protective for caries compared to external factors.

INTRODUCTION

Parents constitute important social models for their offspring. In the early years, it is mainly from parents, especially the mother that children learn what they are supposed to do and what behavior is forbidden. Socialization to oral health behaviors may be considered a modeling process, in which children imitate the behavior of their parents.

The Dental Coping Belief Scale (DCBS)1 is a questionnaire, which has been effectively used in various studies to determine the relationship of dental beliefs and oral hygiene. However, very few studies have used the DCBS to find out the relationship between beliefs of the parents and the oral health of their children with almost no studies at all coming from India, where family is considered the most important primary group in society.

Keeping this in mind, this survey was carried out to find out if parental beliefs have an influence on the caries experience of their children.

MATERIAL AND METHODS

The survey instrument used was a modification of The Dental Coping Belief Scale (DCBS)1, a 15 item questionnaire divided into 4 clusters - Internal Locus of Control, External Locus of Control, Self-Efficacy and Oral Health Beliefs.

The locus of control concept refers to people's beliefs regarding the source of control over events in their lives. Those whose locus of control is internal tend to believe that control over events resides within themselves, whereas those with an external locus of control tend to believe that events are controlled by forces external to them such as by powerful others or by chance. Perceptions of self-efficacy refer to people's confidence in their capabilities to execute given levels of performance. Health Beliefs Model postulated that individuals would adopt preventive dental health behaviors if they felt susceptible to disease, that the disease was severe and would have some social consequences and that the benefits of preventive actions would outweigh the costs of the behavior1.

A pilot study was carried out on 23 school children and their parents. A caries prevalence of 82.6% was got among these children. Using 1% level of significance and a permissible error of 5% of the prevalence, we got a sample size of 543.

In the area of study, there were a total of 4 schools. Using the cluster sampling technique, the first school, which was selected, gave us a sample of 612 students. Therefore, all the students in this school were considered for our study. They ranged in age from 4 - 15 years. Questionnaires were sent to the parents and they were requested to tick the answer, which they felt justified their belief. It was requested that the mother fill the questionnaire. However, in cases were it was not possible, the guardian was allowed to fill the questionnaire. A consent form was enclosed along with the questionnaire.

A total of 595 parents responded and consented after 2 reminders, giving a response rate of 97.22%. An oral examination was carried out, which consisted of recording the dental caries experience of the children using the DMFT index for permanent teeth and the DMF index for deciduous teeth in accordance with the WHO criteria2 for recording dental caries.

The examinations were carried out in the school auditorium using mouth mirrors and explorer under natural light. The examinations were scheduled in such a way that the regular school timetable was not affected in any way and were carried out by a single examiner using a trained recorder to record the data. The parents were then sent a prescription informing them of the oral health status of the child and the type of intervention needed.

The results obtained were analyzed using the Spearman's Rank Correlation Test, The Kruskal-Wallis Test and Factor Analysis. The principal axis factor analysis was used on the correlation matrix of 15 variables measured on 595 subjects. The variables selected for factor analysis were such that the absolute values of inter correlation coefficients did not exceed 0.5. Those factors with Eigen value > 1 were retained.

* Assistant Professor, Department of Community Dentistry.
** Assistant Professor, Department of Pedodontics & Preventive Dentistry.
*** Lecturer cum Statistician, Department of Preventive & Social Medicine.
**** Professor, Department of Community Dentistry.