Maternal Behavior of Child Malocclusion Dental Treatment in Gayungan Health Center Surabaya

Ananda Firman Putranto, Thalca Hamid[2], Gilang R. Sabdho Wening[3], Dinna Fitria Greisya[4], Amalia Wimarizky[4], Aisyah Marwah[4], Muhammad Faisal[5]

[1]Lecturer, [2]Professor, Department of Orthodontic, Faculty of Dental Medicine Universitas Airlangga Surabaya-Indonesia, [3]Lecturer, [4]Post Graduate Dental Student, [5]Dental Student, Departement of Public Health, Faculty of Dental Medicine Universitas Airlangga, Surabaya-Indonesia

Abstract

Context: based on Gayungan Health Center Surabaya's patient visit data obtained from April-June 2018 primary teeth persistence is the most common dental case, with percentage 42.6% in April, 20.8% in May and 48.6% in June. The most common cause of primary teeth persistence is the absence of successor permanent teeth. It has connection with the physiological process of primary tooth shed and change to permanent teeth, which occurs to the school-age children, and requires more attention from parents to take care of their children's dental health.

Aims: To determine the effect of maternal behavior and sociodemographic factors on child malocclusion dental treatment in area of Gayungan Health Center Surabaya.

Methods and Material: This research is an analytic-observational study. Using instruments in the form of questionnaire that developed from the Theory of Planned Behavior. Results: poor maternal knowledge of dental health may results to not to bring the child to get malocclusion treatment.

Results: poor maternal knowledge of dental health may results to not to bring the child to get malocclusion treatment

Conclusions: perceived control of orthodontic treatment history (perceived control that characterized by history of orthodontic treatment?), maternal's level of knowledge, usage of health insurance, and maternal's perceptions of the child's dental condition have the opportunity to influence the maternal behavior to make dental visit to get malocclusion treatment.

Key-words: *maternal behavior, child malocclusion, Gayungan Health Center, Theory of Planned Behavior*

Introduction

The results of the 2013 Basic Health Research (RISKESDAS), the percentage of people who have dental and mouth problems according to Riskesdas in 2007 and 2013 increased from 23.2% to 25.9%. This can be caused by several factors, one of which is the lack of public knowledge and awareness of the importance of maintaining oral and dental hygiene.[1]

Based on data from the Gayungan Surabaya Health Center, monthly patient visits were obtained from April to June 2018. From these data it can be seen that persistence is the most frequently encountered case at the Puskesmas, with a percentage of 42.6% in April, 30 , 8% in May and 48.6% in June. Based on preliminary survey data conducted on 151 children at SDN Gayungan 1 Surabaya, the highest percentage of persistence was found to be 37%. The second most common problem encountered is caries which is 69.58%. The last problem most frequently encountered was pulp disease and periapical tissue by 28.22%.

Corresponding Author:
Ananda Firman Putranto
Jl Prof Dr Moestopo No 47 Surabaya
E-mail: anandafirman2019@gmail.com

Persistence of deciduous teeth is a condition where deciduous teeth are not has the ability to exfoliate when it's time to exfoliate, but the permanent teeth that will replace the deciduous teeth have erupted[1]. In some cases persistence can cause clinical problems such as periodontitis, deep caries, ankylosis and even malocclusion.[1]

In connection with the physiological process of turning primary teeth into permanent teeth that takes place during school-age children, it requires more attention from parents in the dental and oral health care of their children. Until now, the knowledge that parents have about oral health is still relatively low. Parents do not apply the maintenance of children's dental and oral health properly, a reason that is often cited is because of the lack of access to information about dental and oral health maintenance, parents' busy work, high costs and so forth. Even though the behavior of parents who maintain good dental and oral health of children can affect the growth and development of permanent teeth and children's quality of life.[3]

One model used to predict behavior, including malocclusion treatment behavior is Theory of Planned Behavior , theories of attitude that is widely used in behavior. The Planned Behavior Theory is a prediction of good behavior because it is balanced by the intention to carry out the behavior[4]. In Planned Behavior Theory, the behavior displayed by individuals arises because of the intention to behave. The emergence of intention to behave is determined by three determinants, namely: (1) attitude towards behavior; (2) subjective norms; and (3) perceived perception control.[5]

Based on the survey results and background above, the author's interest arises to examine the influence of maternal sociodemographic and behavioral factors on the behavior of child malocclusion treatment to dentists in the Gayungan Public Health Center in Surabaya. Hypothesis of this research is there are influences on maternal sociodemographic and behavioral factors on the behavior of child malocclusion treatment to dentists in the Gayungan Health Center

Subjects and Methods

This research is an analytic-observational study with a cross sectional study design. The population in this study was the mother of Gayungan I Elementary School students in the Gayungan region, Surabaya city as many as 151 people. Sampling using simple random sampling method. Research subjects were asked questions by questionnaire method to find out the factors that influence the behavior of mothers bringing children to dental and oral health services in the Keputih area, Surabaya City. The questionnaire was developed based on the Theory of Planned Behavior which contains questions that contain closed ended questions. As supporting data, a check on the prevalence of malocclusion in children. Then the data obtained is processed data and results.

Findings

The research data were obtained from epidemiological studies on 18 and 20 August 2018 at SDN Gayungan 1 Surabaya. Data was collected by dental examination and questionnaires for students in grades 1-4 with an age range of 7-12 years at SDN Gayungan 1 Surabaya. The sample of this study was 151 students selected by simple random sampling.

Based on data, there is information that there is no tendency for a relationship between risk factors in academic level with orthodontic visit experience. This is indicated by the p value of p = 0.078. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group with higher education and the lowest is the risk factor group with primary education

Based on data, there is information that there is no tendency for a relationship between risk factors in job status with orthodontic visit experience. This is indicated by the p value of p = 0.091. In the table illustrated, both of risk factor has the same percentage of orthodontic visit experience.

Based on data, there is information that there is tendency for a relationship between risk factors in daily working hour with orthodontic visit experience. This is indicated by the p value of p = 0.007. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group with scheduled working hour and the lowest is the risk factor group with unscheduled working hour.

Based on data, there is information that there is tendency for a relationship between risk factors in shift working hour with orthodontic visit experience. This is indicated by the p value of p = 0.003. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group with morning

shift working hour and the lowest is the risk factor group with afternoon shift working hour.

Based on data, there is information that there is tendency for a relationship between risk factors in salaries with orthodontic visit experience. This is indicated by the p value of p = 0.005. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group with well paid salaries and the lowest is the risk factor group with under paid salaries.

Based on data, there is information that there is no tendency for a relationship between risk factors in residential with orthodontic visit experience. This is indicated by the p value of p = 0.076. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group in sub-urban residential and the lowest is the risk factor group in urban residential.

Based on data, there is information that there is no tendency for a relationship between risk factors in insurance with orthodontic visit experience. This is indicated by the p value of p = 0.098. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group with covered by insurance and the lowest is the risk factor group with uncovered by insurance.

Based on data, there is information that there is tendency for a relationship between risk factors in mother orthodontic treatment experience with orthodontic visit experience. This is indicated by the p value of p = 0.000. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group with mother with orthodontic treatment experience and the lowest is the risk factor group with mother wih no orthodontic treatment experience.

Based on data, there is information that there is tendency for a relationship between risk factors in family orthodontic treatment experience with orthodontic visit experience. This is indicated by the p value of p = 0.001. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group with family with orthodontic treatment experience and the lowest is the risk factor group with family with no orthodontic treatment experience.

Based on data, there is information that there is tendency for a relationship between risk factors in children orthodontic treatment experience with orthodontic visit experience. This is indicated by the p value of p = 0.000. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group with children with no orthodontic treatment experience and the lowest is the risk factor group with children with orthodontic treatment experience.

Based on data, there is information that there is tendency for a relationship between risk factors in dental alignment with orthodontic visit experience. This is indicated by the p value of p = 0.002. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group with bad dental alignment and the lowest is the risk factor group with good dental alignment.

Based on data, there is information that there is no tendency for a relationship between risk factors in total children in family with orthodontic visit experience. This is indicated by the p value of p = 0.076. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group with total children in family is 1 and the lowest is the risk factor group with total children in family more than 1.

Based on data, there is information that there is tendency for a relationship between risk factors in orthodontic treatment need basic knowledge with orthodontic visit experience. This is indicated by the p value of p = 0.004. In the table illustrated from the results of the highest orthodontic visit experience in the risk factor group with family with good orthodontic treatment need basic knowledge and the lowest is the risk factor group with bad orthodontic treatment need basic knowledge.

Discussion

The Planned Behavior Theory is a prediction of good behavior because it is balanced by the intention to carry out the behavior. In this theory, a behavior is influenced by several variables, namely attitudes that are influenced by the strength of beliefs about the behavior, subjective norms that are influenced by social pressures that motivate individuals to behave, and perceptual controls that take into account ease and difficulty factors in carrying out the behaviour [10]. In this research, it is known that actions are not influenced by intention but are directly influenced by perception control. Based on Theory of Reasoned Action (TRA) that connects beliefs, attitudes, intentions and behavior. Intention is the best predictor of behavior, meaning that if you want to know

what someone will do, the best way is to know that person's intentions. However, one can make judgments based on completely different reasons (not always based on intention).[2]

An important concept in this theory is the focus of attention (salience), which is to consider something that is considered important, namely control of perception. More simply, this theory says that a person will take an action if he views the action positively and if he believes that he can do the action. Knowledge has a direct influence on perceptual control and on behavior. The characteristics that have an influence on perception are the condition of the child's teeth, insurance, history of child stirrup, history of maternal stirrup and family stirrup history.

In this epidemiological study begins with a preliminary study to determine the severity of malocclusion in Gayungan I Public Elementary School Surabaya in the Gayungan Surabaya Public Health Center area by using the Angle classification. The number of research subjects was 151 students from classes I to IV at SDN Gayungan I Surabaya. The severity of malocclusion can be influenced by many things such as parental income, ability to buy services and participation in health insurance.

Based on the results of research and data analysis found that mothers who have insurance and do not have insurance do not visit the dentist. This is because orthodontic treatment is not included in the BPJS dependents and therefore mothers have or do not have insurance must continue to pay orthodontic treatment costs so that there is no difference with mothers who don't have insurance. History is an event that someone has experienced in interacting with their environment. An unfavorable history is soon forgotten, if it is pleasant it will become an imprint in mental emotions and eventually form a positive attitude in his life[9]. Based on the results of research and data analysis, it was found that mothers who had no history of orthodontic treatment did not visit the dentist to treat their malocclusion teeth. That is because there is no encouragement from the nearest party, namely the family to take care because of the low level of knowledge about the dentist.

Based on the results of research and data analysis, it was found that mothers who had children with poor dental conditions as much as 58.3% did not come to the dentist, while mothers who had children with good dental conditions as many as 100% did not visit the dentist. This is caused by the perception of parents who assess the child's dental condition is good, and does not require a visit to the dentist. Based on the results of research and analysis obtained results that mothers with poor knowledge of 73.3% did not visit the dentist while mothers with good knowledge of 53.8% did not visit the dentist. If parents have good knowledge, it will be directly proportional to their behavior. Parents who have high knowledge will show positive behavior in performing dental care, including treatment of malocclusion. A theory revealed that before having a behavior, a person must pass through the stages of awareness, interest, evaluation, trial and adoption[10]. Malocclusion care behavior of children by mothers to dentists based on theory of planned behavior is associated with attitudes, subjective norms, perception control perceptions, intentions and actions of mothers towards pediatric malocclusion treatment to dentists. Attitudes, subjective norms, perception control perception, positive intention will produce positive behavior.

Conclusion

From this study it can be concluded that the perception of perception control with the characteristics of the mother's orthodontic treatment history, the level of maternal knowledge, the use of health insurance, and the mother's perception of the condition of the child's teeth have a chance of influencing the behavior of the mother's visit to perform treatment of children's malocclusion in the dentist.

Ethical Clearance taken from Ethical Committee Faculty of Dental Medicine Airlangg University

Source(s) of Fundings: Faculty of Dental Medicine, Airlangga University

Conflicting Interest (If present, give more details): The authors declare that there is no conflict of interest

References

1. Bamanikar S. Knowledge, Attitude and Practice of Oral and Dental Healthcare in Pregnant Women. Oman Med J. 2013;28(4): 288-91
2. Hasibuan S. Perawatan dan Pemeliharaan Kesehatan Gigi dan Mulut pada Masa Kehamilan. 2004. USU Digital Library. 1-6
3. Agueda A, Echevarria A, Manau C. Association between periodontitis in pregnancy and preterm

or low birth weight: Review of the literature. Med Oral Patol Oral Cir Bucal 2008;13(9):609-15

4. Krejci CB, Bissada NF. Women's health: Periodontitis and its relation to hormonal changes, adverse pregnancy outcomes and osteoporosis. Oral Health Prev Dent 2012;10(1):83-92.
5. Annan B, Nuamah K. Oral pathologies seen in pregnant and non-pregnant women. Ghana Med J 2005;39(1):24-7.
6. Page RC, Kornman KS. The pathogenesis of human periodontitis: An introduction. Periodontol 2000 1997;14:9-11.5.
7. American Academy of Periodontology. The Pathogenesis of Periodontal Diseases, Chicago: The American Academy of Periodontology; 1999.
8. Rai B, Kharb S, Anand SC. Is periodontal disease a risk factor for onset of preclampsia and fetal outcome? Adv Med Dent Sci 2008;2:16-9.
9. American Academy of Periodontology, Committee on Research, Science and Therapy. Periodontal Disease as a Potential Risk Factor for Systemic Diseases, Chicago: The American Academy of Periodontology; 1998.
10. D'Onofrio, C.N. (1992) Theory and Empowerment of Health Education Practitioners. Health Education Quarterly 19:385-403.