

Correlation Between Parenting Stress and Parents' Knowledge and Attitude about Maintaining Dental and Oral Health Cleft Lip and Palate Children

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Abstract

Parenting stress is a form of excessive parental anxiety in caring for and raising children. This condition can be influenced by age at the time of having children, education level, and parental occupation. Cleft lip and palate (CLP) children have physical abnormalities and various oral problems, which cause parenting stress in the early years of parenting. In addition, parenting stress can affect parent knowledge and attitudes about maintaining oral health. This study aimed to determine whether there is a relationship between parenting stress and parents' knowledge and attitudes towards maintaining oral health in children with cleft lip and palate (CLP).

This study uses an analytical method with a sample of 40 subjects. Data were collected using a questionnaire and tested for correlation with Spearman's Rank and Kendall Coefficient of Concordance. The type of questionnaire used is a closed-item questionnaire.

The relationship between parenting stress, knowledge, and attitudes was not statistically significant, with a p-value > 0.05 (0.2930), with a correlation W: 0.031 (0.00-0.25).

The relationship between parenting stress and parents' knowledge and attitudes about maintaining dental and oral health care for CLP children is not statistically significant.

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Introduction

Cleft lip and palate (CLP) is the most common congenital disability or defect. The clinical appearance of this disorder varies widely from mild, i.e. lip indentation, uvula bifida, and submucosal soft palate clefts, to severe, which extends to the nose and palate; some limited to the uvula only or soft palate and hard palate. Anomalies or abnormalities of the lips and oral cavity may significantly influence the aesthetics of facial appearance, eating, speech, malocclusion, hearing loss, social integration, and respiratory and digestive function disorders.¹⁻³ The etiology of CLP is a combination of genetic and environmental factors.^{1,3,4}

Parents of CLP children have challenges in nurturing and raising their children compared to parents of typical children. The need for medical care is high, and the child's physical appearance creates a negative social response to the environment. This condition can have an impact on the psychology of parents.⁵ Parenting stress is the feeling or experience of parents who have difficulty caring for and raising their children.⁶ Parenting stress will impact child care, and harmful care tends to cause traumatic experiences and hinder child development. In contrast, positive parenting will optimally impact prosperous children, happiness, and growth.⁷

Studies on the factors that influence parenting stress in parents with CLP children show high levels of parenting stress and low social support shown in parents with CLP children.⁶ Danizer et al. conducted a study that linked parenting stress with oral health neglect.⁸ Research on parenting stress and parents' knowledge and attitudes about maintaining the dental and oral health of CLP children has never been done in Indonesia; therefore, researchers are interested in conducting this study.

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Materials and methods

This study has been approved by the Health Research Ethical Committee of Universitas Padjadjaran with document number 277/UN6.KEPEC/2022.

Participants

The subjects in this study were 40 parents of children with a history of CLP who had met the predetermined inclusion and exclusion criteria. The inclusion criteria in this study were parents or guardians of children with cleft lip, cleft palate, and cleft lip and palate according to WHO criteria, registered with Yayasan Pembina Penderita Celah Bibir (YPPCBL) in Bandung and had received dental treatment at the Pediatric Dental Clinic, and was willing to sign an informed consent as an agreement to participate in the study. Exclusion criteria in this study included parents or guardians of children with cleft lip, cleft palate, and cleft lip and palate who had never received dental treatment at the Pediatric Dental Clinic YPPCBL and had particular limitations in filling out questionnaires such as physical and mental limitations.

Materials

This study uses a questionnaire to examine parenting stress, namely the Parenting Stress Index Short Form (PSI-SF) questionnaire, which has been tested for validity and reliability by Sesiliana et al.⁹ and the questionnaire Development of Stress Scale Related to Acceptance of Mothers with Children with Special Needs has been conducted validity and reliability by Pertiwi.¹⁰ The criteria for the assessment results include low stress due to high maternal acceptance, moderate stress due to medium maternal acceptance, and high stress due to low maternal acceptance. Parents' knowledge and attitudes about maintaining oral and dental health have been tested for validity and reliability by Ghufroni et al. with high, medium, and low assessment criteria.¹¹

Procedures

The research has obtained approval from Bandung's Ethics Commission of the Faculty of Medicine, Universitas Padjadjaran, and Yayasan Pembina Penderita Celah Bibir (YPPCBL). Researchers sent the informed consent form, personal information, and questionnaires through the Google form application to parents of CLP children using the google form. This research was conducted from February to May 2022.

Methods

The research method is analytical research with a total sample. Data were collected using a closed-ended item questionnaire. The questionnaire tested non-parametric statistics using the 25th version of the International Business Machine Statistical Package for the Social Sciences (IBM SPSS®) software 2018 with the Spearman's Rank correlation test and the Kendall Coefficient of Concordance.

Results

The characteristics of the subjects according to the age of the parents of CLP children who have received treatment at the Pediatric Dental Clinic YPPCBL Bandung are shown in Figure 1. Most parents are between 33-39 years old (20%).

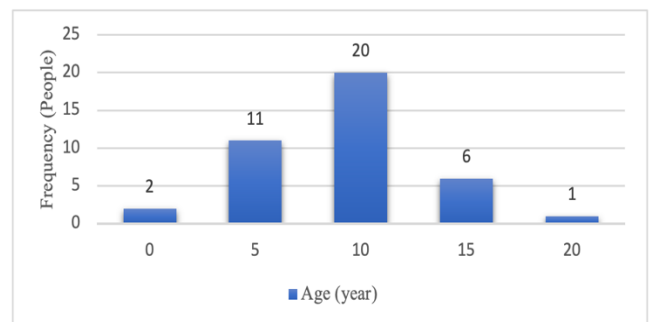


Figure 1. Parental Prevalence Chart of CLP Children by Age.

The characteristic of the subjects based on the last educational level of the parents of CLP children who had received treatment at the Pediatric Dental Clinic YPPCBL Bandung is shown in Figure 2. Most parents of CLP children have a high school education level or equivalent (50%).

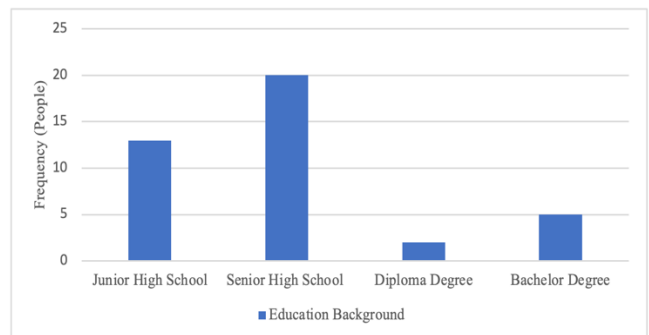


Figure 2. Parental Prevalence Chart of CLP Children by Educational Background.

The prevalence of CLP children with subject characteristics based on the gender of the children who have received it at the Pediatric Dental Clinic YPPCBL Bandung is shown in Figure 3. The majority of CLP children are male (55%).

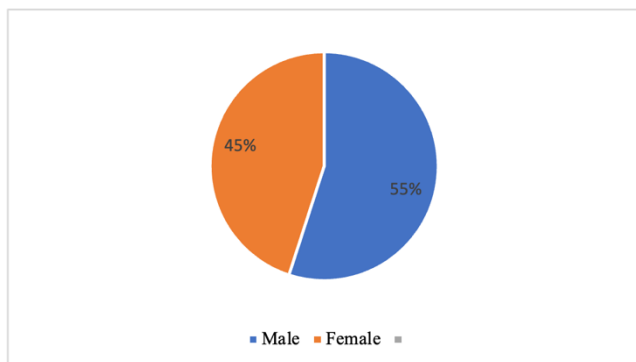


Figure 3. Prevalence of Cleft Lip and Palate Patients at Pediatric Dental Clinic YPPCBL by Gender.

The prevalence of CLP children with subject characteristics based on the age of children who have received dental treatment at the Pediatric Dental Clinic YPPCBL Bandung is shown in Figure 4. Most CLP children are between 4-7 years old (65%).

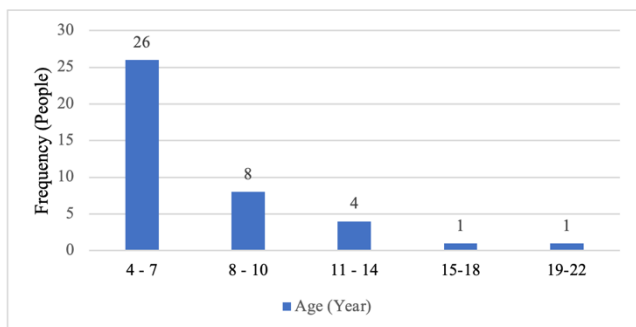


Figure 4. Prevalence of Cleft Lip and Palate Children at Pediatric Dental Clinic YPPCBL by Age.

| Variable | r_s | t count | p-value | Quality | Relationship (%) |
|--------------------------------|-------|---------|---------|----------|------------------|
| Parenting Stress and Knowledge | -0.22 | -1.39 | 0.0863 | Non-sign | 4.84 |

Table 1. Relationship between Parenting Stress and Knowledge About Maintaining Dental and Oral Health Cleft Lip and Palate Children.

Table 1 shows the relationship between parenting stress and parental knowledge about

maintaining dental and oral health. The results of the non-parametric analysis of Spearman's rank correlation test for testing the relationship between parenting stress and parental knowledge of 4.84%. The relationship between the two variables showed a negative result ($r_s = -0.22$), namely, the higher level of parenting stress, the lower of knowledge, but the relationship was not statistically significant because the p-value > 0.05 (0.0863).¹²

| Variable | r_s | t count | p-value | Quality | Relationship (%) |
|-------------------------------|-------|---------|---------|----------|------------------|
| Parenting Stress and Attitude | 0.11 | 0.71 | 0.2418 | Non-sign | 1.30 |

Table 2. Relationship between Parenting Stress and Attitude About Maintaining Dental and Oral Health Cleft Lip and Palate Children.

Table 2 shows the relationship between parenting stress and attitude about maintaining dental and oral health. The result of the non-parametric analysis of Spearman's rank correlation showed that the relationship between parenting stress and parental attitude is 1.30%. The relationship between the two variables showed positive results ($r_s = 0.11$) but was not statistically significant because the p-value > 0.05 (0.2418).

| Variable | W | Chi-Kuadrat (χ^2) | p-value | Quality | Relationship (%) |
|---|-------|--------------------------|---------|----------|------------------|
| Parenting Stress, Knowledge, and Attitude | 0.031 | 2.455 | 0.2930 | Non-sign | 3.1 |

Table 3. Relationship between Parenting Stress, Knowledge, and Attitude About Maintaining Dental and Oral Health Cleft Lip and Palate Children.

Table 3 shows the relationship between parenting stress, knowledge, and attitude about maintaining dental and oral health. The analysis of the three variables using the Kendall Coefficient of Concordance analysis showed the relationship between parenting stress, parents' knowledge, and attitude about dental and oral health maintenance which was 3.1%. The relationship between the three variables was not statistically significant with p-value > 0.05 (0.2930), with a weak attachment, namely W: 0.031 (0.00-0.25).¹²

Discussion

Cleft lip and palate (CLP) is a congenital abnormality that can occur on the lips or palate, or lips and palate caused by impaired growth and development while a baby is in intrauterine. This condition causes aesthetic disturbances, mastication, communication, and hearing impairment, and hurts the individual self-confidence, development of social skills, behavior, and quality of life.^{13,14}

The prevalence of CLP varies depending on the type of cleft, race, and gender. Clefts of the lip and palate occur twice as often as clefts of the lip and palate alone. Unilateral clefts are more common than bilateral clefts, and unilateral clefts are more common on the left than on the right.¹⁵ Studies conducted in Bandung by Sjamsudin showed that there were 1596 CLP patients, 50.53% of patients had CL, and 24.42% had CLP.¹⁶ Cleft lip with or without cleft palate is more common on one side (unilateral) than on two sides (bilateral). Boys have a higher prevalence of cleft lip and palate than girls, with a ratio of 2:1, but girls have a higher prevalence of cleft palate.^{14,17,18}

Research at the YPPCBL Bandung shows that parents of children are in the highest category aged 33-39 years old (20%), with the last education level being high school equivalent (50%). Community norms consider mothers to be the primary caregivers of children, so mothers must know the condition of children, especially children with special needs.¹⁹ The majority of respondents have CLP children who are male (55%) and female (45%) with a range of ages 4-7 years (65%).

The prevalence of CLP children who receive treatment at Pediatric Dental Clinic YPPCBL is the majority ages 4-7 years. This condition affects the acceptance of CLP children's parents who have adopted for at least four years regarding their child's condition. Children aged 4-7 years are beginning to be able to describe themselves in the form of activities such as games, begin to express self-emotions (feeling pride, shame, or guilt), and are strongly influenced by parenting parents, relationships with siblings, and peers, conditions child's place of residence and environment.²⁰

Parenting stress is a complex process that is part of stress and is a psychological reaction that occurs when parents or caregivers

feel they do not have parenting skills. High and untreated parenting stress has a relationship with parenting patterns that are less cooperative, less sensitive, and more intuitive, so it can stretch the relationship between parents and children.^{21,22}

In a study by van Dalen et al., stress on parents of CLP children will decrease after the child has cleft closure surgery, although surgical scars will last a lifetime gap. High stress-conditions were found in parents whose children were diagnosed at birth. This condition is because parents do not have experience providing milk for food intake, demand to meet the criteria so that children can be operated on according to their age, and feelings of guilt because of children have abnormalities.⁵

Maintenance of dental and oral hygiene is one of the efforts to improve dental and oral health. Parents are essential in implementing a healthy lifestyle, especially dental and oral health. Parents' knowledge and attitude about dental and oral health are needed, so they are not wrong in their application.²³

The result of the bivariate statistical analysis using Spearman's rank correlation regarding the relationship between parenting stress and knowledge and parenting stress and parental attitudes about maintaining oral health for CLP children are summarized in Table 2 and 3. When carried out separately, the relationship between parenting stress and knowledge and attitude is insignificant (p -value > 0.05).¹² Knowledge has a higher association level than attitude (4.84% > 1.30%). Knowledge comes from the word "know" and has the meaning, among others, to understand after seeing (witnessing, experiencing, and so on), knowing, and understanding. Notoadmojo defines knowing as the result of knowing, which occurs after someone senses an object.^{11,24}

Attitude is a reaction or response of a person still close to a stimulus or object and is a continuous process from knowing to being emotionally willing to continue towards behavior. For example, maintaining oral health is how parents care for their teeth and mouth.^{11,23} Factors that influence the formation of attitudes include personal experience, culture, people considered influential (people with higher social status, parents, friends, close friends, peers, teachers, and husband or wife), mass media, educational institutions, and religious institutions.^{25,26} Therefore, it is easier for respondents to

know than to behave and have a higher affinity with parenting stress.

Multivariate non-parametric statistical analysis using the Kendall Coefficient of Concordance was conducted to determine the relationship between parenting stress, knowledge, and attitude. Table 3 shows that the p-value > 0.05 (0.2930) has a relationship of 0.031 or is included in the weak category (range: 0.00-0.25). The relationship is not statistically significant.¹² Parenting stress is not only shaped by each other but by several economic factors (such as operating costs and costs to meet daily needs) and contextual factors, including child characteristics (e.g. gender and temperament), parental experiences learned from others, such as family, friends, and cultural system.⁵

Conclusions

The relationship between parenting stress and parents' knowledge and attitude about maintaining dental and oral health care of cleft lip and palate children is not statistically significant.

Acknowledgments

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Declaration of Interest

The authors report no conflict of interest.

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