

Parental motivation for orthodontic consultation during their child's mixed dentition phase: a questionnaire study

Fareeha Hassan^a, Unber Shafique^b, Amjad Mahmood^c

Abstract

Introduction: Seeking orthodontic treatment during a child's mixed dentition phase is not a popular belief in our part of the country as parents are not aware of the importance of this phase of their child's dentition and its effects in the long run. The aim of this study was to find out parental motivation regarding Orthodontic consultation for various problems in children's mixed dentition phase.

Material and Methods: A questionnaire was distributed among 450 school children, females, aged 6-11 years, to be returned next day after being filled by the parents.

Results: The response rate was 64.4% out of which 100% of the parents considered dentition being an important part of personage. Even being mindful of the significance of dentition on the child's personality, only 51.1% of the parents had dental consultations regarding symmetry/alignment of the child's teeth in the past.

Conclusions: Practice for Orthodontic consultations should be promoted and both children and parents must be made aware of the importance of orthodontic visits starting from a young age.

Keywords: Interceptive Orthodontics; personality; malocclusion

Introduction

Occlusal development starts in the sixth week of intrauterine life and concludes around 24 years of age. It consists of a sequence of events that occur in an orderly and timely manner, genetics and environment being important controlling factors. As per Bahreman A,¹ "the most important stage of the dental occlusion is the transitional dentition. Problems that can occur in either the primary or mixed dentitions are essentially anomalies in the developmental process, functional problems or early presentation of an underlying malocclusion all of which may warrant early treatment. Therefore, early detection of the problem and proper intervention can guide the abnormality toward normality and under

some conditions, can prevent or at least reduce the severity of the problems.¹ However, lack of awareness among school children and parents may result in patients not being referred for timely interceptive intervention. This study has been conducted in a developing country where economic pressures, being a major part of an average person's life prevent people from taking their child to an Orthodontist. The lack of awareness is another contributing factor. In order to find out the parental awareness, Army Public School, located in central Rawalpindi was chosen, as children from various economic and educational backgrounds attend the targeted school. The results of this study are aimed to educate parents regarding the importance of Interceptive Orthodontics.

Material and Method

It was a cross-sectional study that consisted of a survey using a self-administered questionnaire, containing 8 questions, done in Army Public School, Girl's Branch, Hummayun Road, Rawalpindi. The questionnaires were distributed among 450

^a BDS, House officer, Margalla Institute of Health and Sciences, Rawalpindi

^b Corresponding Author: BDS, House officer, Margalla Institute of Health and Sciences, Rawalpindi.
Email: unbershafiq@gmail.com.

^c BDS, FDS RCS Ed (UK), Associate professor, Margalla Institute of Health Sciences, Rawalpindi.

female students, aged 6-11 years (as mentioned in school record) present on the day of data collection, to be delivered to the parents. These were returned the next day and they did not include individual identification.

Female students were selected for this study because parents in this part of the world are more concerned about girls' appearances and prefer to get Orthodontic consultation for them. In another study, in relation to gender (while assessing themselves subjectively), females demonstrated more concern for appearance (56 per cent) than males (44 per cent).² Data was analyzed with the help of Microsoft Office Excel (2010).

Results

Out of 450 distributed questionnaires, 290 were returned. Out of these one was excluded due to improper information given (Table I). The response frequency for the questions varied among varying aged students (Table II , III). All of the participants were of the view that their children's dentition will have a significant impact on their personalities. Despite of this belief, only 71 (51.1%) participating parents took their children to a dentist for improvement of their dental appearance. Almost half of these parents i.e.,

39 (54.9%) were referred to an Orthodontist by the general dentists. Out of those referred, 31 (79.5%) actually consulted an Orthodontist while the rest did not. Out of the 31 participants of the study who consulted an orthodontist for their child's orthodontic problem, 18 are going through with the suggested treatment plan and the remaining 13 are not.

Table I: Questionnaire response rate

Questionnaire distributed	450
Questionnaire returned	290
Response rate	64.4%

Table II: Age distribution of the children

Age In Years	Count	Percentage
6 years	11	3.8%
7 years	60	20.7%
8 years	61	21.1%
9 years	88	30.4%
10 years	56	19.4%
11 years	13	4.5%
Total	289	Mean (S.D) 8.5±1.8

Table III: Questions Response Chart Incorporating The Percentages

2. Do you think that your child's teeth would ever have a significant impact on his/her personality?	YES	289 (100%)
	NO	0%
3. Do you think your child has some problem with the positioning/alignment/symmetry of his/her teeth?	YES	139 (48.1%)
	NO	150 (51.9%)
Those who answered yes proceeded on to question no. 4 and percentages were calculated out of 139. Multiple options were also checked		
4. If YES, what problem is it?	You think that your child's teeth are coming forward	37 (26.6%)
	There are spaces between teeth	36 (25.9%)
	Your child's teeth are crooked/not in proper position	102 (73.4%)
	You think that a tooth or teeth are missing	13 (9.3%)
	You think that your child has extra teeth	23 (16.5%)

	You are not sure about the problem of your child's teeth but you think that his/her smile is not pleasing.	40 (28.8%)
5. Have you ever consulted a dentist about it?	YES	71 (51.1%)
	NO	68 (48.9%)
Those who answered YES proceeded on to question no. 6 and percentages were calculated out of 71		
6. Have you ever been referred to an Orthodontist about your child's problem?	YES	39 (54.9%)
	NO	32 (45.1%)
Those who answered YES proceeded on to question no. 7 and percentages were calculated out of 39		
7. If yes, did you consult an Orthodontist?	YES	31 (79.5%)
	NO	8 (20.5%)
Those who answered yes proceeded on to question no. 8 and percentages were calculated out of 31		
8. If yes then is your child going through with the required treatment?	YES	18 (58.1%)
	NO	13 (41.99%)

Discussion

Medicine in the 21st century attempts to be dominantly preventive. Therefore, preventive and interceptive treatments hold once more an important place in the armamentarium of modern medicine. Orthodontics and Dentofacial Orthopedics is no exception to this rule.

The American Association of Orthodontists' Council of Orthodontic Education defines interceptive orthodontics as "that phase of the science and art of orthodontics employed to recognize and eliminate potential irregularities and malpositions in the developing dentofacial complex."³

Nevertheless, current orthodontic practice still comprises two schools of thoughts: some orthodontists think of early treatment, before the eruption of permanent teeth, as being reasonable and logical, since it allows partial or even total correction of an unfolding orthodontic anomaly in a growing child, while others refuse this approach. Whether or not the child is a candidate for early interceptive orthodontics would be the specialist's decision but consultation at an early age is important. As the American Association of Orthodontists states, "The ideal time for a child to have his or her first visit is at age seven."⁴

The aim of this study was to find out parental motivation regarding Orthodontic consultation in children's mixed dentition phase. All of the participating parents of the study believed that their children's teeth would have a significant impact on their personalities. This result of the current study is in agreement with the findings of Dann et al. that dentofacial appearance undoubtedly plays an important part in establishing the overall attractiveness of individuals.⁵

It was pointed out that the earlier the treatment was applied, the better the face adapted to it, whereas the longer it was deferred, the more it would have to adapt to the face.³ Orthodontists who have favored early orthodontic treatment include Bench, Dale, Delaire, Frankel, Graber, Gugino, McNamara and Ricketts.

The College of Diplomats of the American Board of Orthodontics held workshop discussions on early treatment during their meeting in 1997, concluding that almost all types of malocclusions could benefit from the early treatment.⁶

Early orthodontic treatment aims to maintain or improve arch integrity for the eruption of permanent teeth, prevents the development of a more complicated malocclusion,⁷ enables improved control of growth; presents better and more stable results,⁸ allows for the

normal eruptive sequence, correct the anteroposterior, transverse and vertical skeletal discrepancies, diagnose and eliminate, or at least reduce problems with the occlusion before they are carried out to the permanent dentition and have a detrimental impact on the child's psychosocial and behavioral personage. Advantages associated with early treatment as listed by Bishara, Justus, and Graber, include reduced incidence of premolar extraction, possible elimination of the need for a second phase of treatment and minimum need for surgical orthodontics.⁹

Almost half of the study population (48.1%) thought that their child had some problem with the positioning / alignment of their teeth. According to the study conducted by Birkeland et al. the number of parents/guardians dissatisfied with the appearance of their children's teeth were 75 per cent.¹⁰

Of the above mentioned 48.1%, 51.1% consulted a dentist and 54.9% of those were referred for Orthodontic consultation. Another study confirms that the final decision of parents/guardians for their child to undergo orthodontic treatment was not solely their own but also influenced by the referring dentists, other physicians and speech therapists.²

Tung and Kiyak studied the psychological influences on the timing of orthodontic treatment and suggested that younger children are good candidates for Phase I orthodontics, have high self-esteem and body-image and expect orthodontics to improve their lives.¹¹

In the present study, 79.5% of the referred participants consulted an Orthodontist for their child's problem and 58.1% of the children are going through with the required treatment plan. Response revealed that most of the referred children were taken to an Orthodontist and majority of them are going through with the suggested treatment plan.

Conclusions

From this survey, it has been concluded that our study population is aware of the relationship between a pleasing smile and a confident personality. Most of the participating parents took practical steps regarding what they think is wrong with their children's dentition but the remaining half also needs to be made aware about the importance of early Orthodontic consultations. There is evidence to believe that socio-economic background may play a role in the self-perception of malocclusion, with individuals in a higher social class considered to be more critical of their dental aesthetics.^{12,13,14} The current study did not take account the influence of socio-economic factors.

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