

## Research Paper: Parental assessment of access and barriers to oral and dental health services in the elementary school children in Rasht



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## ABSTRACT

**Introduction:** Equal access and distribution of services among all people is one of the main objectives of health services and patient satisfaction is an important factor in evaluating these objectives. This study aims to investigate the access and satisfaction of elementary school children to dental services in Rasht.

**Materials and Methods:** In this cross-sectional descriptive study, first, we divided different areas of the city into three regions, and by a simple random sampling method selected one school among the schools in each region. Data were collected in the questionnaire. The statistical analysis was performed using SPSS software version 24. Significant p value was set at 0.05.

**Results:** In this study, 78% of study subjects had access to dental care and 22.1% faced barriers. High cost of dental treatments and dental fears were the main barriers. 55/9% of parents were satisfied with the dental care provided.

**Conclusion:** It is concluded that the access of elementary school children to dental services in Rasht is easy and the most important obstacle is child fear of dentistry and high dental costs.

### Keywords:

Oral Health, Health Knowledge, Attitudes, Practice

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## Introduction

Maintaining oral health is essential for overall body health. Children are vulnerable to the negative and long-term effects of caries (1). Though oral health has improved in recent years, there are still problems with dental care. Oral health is recognized as an important aspect of the overall health care of children (2). Children need access to health care systems for diagnosis and treatment of acute and chronic illnesses, treat injuries and receive preventive care (3). Measuring access to health care is an important function of assessing the quality of a community's health system. Therefore, children's oral health services should also be periodically evaluated for appropriate performance outcomes (4). Children's oral health is affected by various factors associated with health providers (1). According to studies, personal, economic, structural and geographical factors are the most important factors in accessing these services (5,6). Dental care is recognized as an important aspect of children's overall health care, and considered to be the most common need (7). The available evidence indicates that parental age, education, oral health literacy, economic status, insurance coverage, availability of dental insurance clinics, fear of dentistry and traffic problems are among the factors affecting access to these services (8,9). Access to health care is a very complex and multidimensional issue (10) which often results delay in receiving dental services (11). Recent studies in Australia, New Zealand, Canada, England and the United States have shown that most people are satisfied with their access to dental care (12,13). The 78.4% of American children in 2009 and more than half of Brazilian children in 2008 had dental appointments (13,14). A study by Morris et al., in the UK showed that only 10% of children had difficulty in receiving dental services (15). Toplagao et al., in Turkey showed that access to oral health services in children and adolescents is low to moderate (16). Parents are supportive of the child in the health care system. Patients satisfaction assessment can improve the quality of care, and this information could be used

to improve management quality improvement programs (17). Since children are very important target groups in the health field, assessing the access to oral health services and its barriers could be an urgent issue.

Since to my knowledge this type of study has not been conducted in Guilan province so far, we aimed to investigate the access and barriers in dental health services in the elementary school children in Rasht from the parents' point of view.

## Materials and Methods

This cross-sectional descriptive study was done in different areas of Rasht city in 2018. Inclusion criteria were parents of children aged 6-12 years and resident of Rasht city. Exclusion criterion were dissatisfaction with participation in the study and lack of complete response to the questionnaire. The participants of this study were 100 people. The parents were interviewed and the obtained data entered in questionnaire. In this study, for sampling, first, different areas of the city were divided into three regions of downtown, middle and suburb high, then using simple random sampling method, one school was selected among the schools in each region. After identifying the three regions under study and numbering of each school in each region, one region was randomly selected using R software version 3.4.3. Then, based on the number of subjects in each region and the total sample size, the share of each region in the total sample was determined. The children's student number and a table of random numbers were used to select the children whose parents were included in the study. We selected the case and then determined the proportion of students in each area according to the number of students in each region. Parents were asked to answer questions about their child's dental problems and not to consult other people when responding.

Frequency and percentage were used to describe qualitative data and mean and standard deviation for quantitative data. Tables and graphs were used for both scales. To evaluate

the normality of the groups, Shapiro-wilk or Kolmogorov-Smirnov test were used and to evaluate the normality of the descriptive method, elongation and skewness indices were used. Islamipour et al., in their relevant study used the same questionnaire (7). This questionnaire consists of 6 domains as follow :

1- demographic characteristics 2- questions to assess overall dental health status 3-examine general information about the current status of dental care of children 4-examine barriers and problems related to children's access to dental services and its causes 5-access to dental services 6-parental Satisfaction with oral health services

Data analysis was performed in SPSS software version 24, descriptive statistics and Linear regression analysis were used to investigate the effect of factors under study on parental satisfaction. ( $p = 0.05$ ).

## Results

In this study, 49.1% of boys and 50.9% of girls participated. Also 54.1% of parents had bachelor's degrees and Post graduate studies. Oral health status of 61.2% of children was reported as very good to excellent.

According to the results, 71.2% of children had dental visits in the past year, and 64.9% of parents stated that their children had a private dentist to receive dental services. We came to know that 73.9% of all people usually go to a private clinic for dental care. The main reason for the most recent dental appointment was for the periodic examinations in 41.9% and 14.9% of children referred for the tooth extraction.

In terms of accessibility metrics, 43.2% of parents waited more than a day for emergency treatment for their child and 78.8% waited less than a month for non-emergency care. Also 89.2% of parents used public or private vehicles and 10.8% of them went on foot to dental services .

The most common barriers and difficulties for parents to access children's dental care were the high costs of treatment and the fear of children (41.9%). Other problems, were the lack of

insurance coverage (39.2), not coverage of dental costs by insurance (38.7%) and spending too much time in the waiting room at dental offices (36.9%).

Most parents' suggestions for improving children's access to dental services are by prioritizing them, providing more information about appropriate dental care for children (24.3%) and a 4-hour access to dental service(9%) (Table 1).

**Table 1: Identify options that can improve your child's access to dental services**

Select options that can improve your child's access to dental services	N	%
A) Help with the problem of commuting	3	1.4
B) More dentist available for visiting	6	2.7
C) Provide 24-hour access to dental services	20	9
D) Guide for introducing dental service centers	6	2.7
G) Providing more information about appropriate dental care for children	54	24.3

According to the results, 55.9% of parents were satisfied with the dental services provided to their children in all areas. The highest level of satisfaction(64%) was found in field of dental health and dentistry centers, while the lowest level noticed in 28.8% of children was seen in time getting appointment (Table2) .

**Table 2: Frequency distribution of the studied individuals according to parental satisfaction**

Questions related to the satisfaction (%)	Satisfied and very satisfied	Medi- um	Unhappy and very unhappy
1. The overall quality of the dental care your child received	138 (62.2)	67(30.2)	17(7.7)
2. Training you received for your child's dental care	121(54.5)	78(35.1)	23(10.4)
3. How the office and dentist are hygienically	142(64)	62(27.9)	18(8.1)
4. Friendly relationships between secretary and dentist	134(60.4)	60(27)	28(12.6)
5. The location and easy access of your child to the dentist	118(53.2)	75(33.8)	29(13.1)
6. Office hours or dental clinics	91(41)	88(39.6)	43(19.4)
7. When you are waiting for your child's dental appointment	64(28.8)	98(44.1)	60(27)
8. Coming of dentist to my home	88(39.6)	82(36.9)	52(23.4)
Overall satisfaction	124(55.9)	72(32.4)	26(11.7)

Based on linear regression analysis, education level variables, having a qualified dentist, waiting time for non-emergency treatments and high treatment costs were identified as factors affecting satisfaction. Education level variable had the highest value in satisfaction score (Table 3).

**Table 3: Table of regression factors affecting health service satisfaction**

Predictors of Significant Satisfaction	B	Sig
Gender	0.95	0.75
Age	0.03	0.06
Degree (Diploma)	-3.98	1.97
Degree Diploma (Diploma)	-5/11	1/59
Bachelor's and higher education level	-6/19	1/58
Having a specific dentist	1/73	0/80
Waiting period for non-emergency treatments	2/95	0/88
High cost of treatment	-2/49	0/77
Child fear	-0/17	0/73

## Discussion

The impact of oral health on the general health of the body is clear and, dental services should be available to everyone. Whereas children are very important target groups in the health field, finding out the degree of access to oral health services and its barriers is important. To my knowledge, no relevant study in Guilan province has been done yet, therefore we aimed to investigate the accessibility and barriers to oral health services in elementary school children in Rasht from the parents' point of view.

We found that most of the students referred to the dentist in a previous year. Also, most of the studied individuals had a private dentist and referred to a personal office for dental services, which indicates that majority of school children in Rasht benefit suitable dental services. For statistical studies, the most important obstacle to visiting a dentist was the child's fear of dentistry and the high cost of dentistry, and the least

difficulty in finding a place to provide dental services for disabled patients. Further, based on the results, it was found that providing information about proper dental care for children has the greatest impact on increasing children's access to oral care.

A survey of parents' qualifications in this study shows that a high percentage of parents have a high school diploma or higher, which is the reason for the high access of children to dental care. On the other hand, the study found that the most common reason for the last visit to the dentist was for checkout, which was attributed to the high level of awareness of the parents to the oral health of children.

Barakian et al., in 2016, reported lack of dental insurance coverage by insurance had the highest frequency and the child's fear of dentistry and the high cost of dental services, respectively, were ranked next in the barriers to accessing dental services (18). Similarly in our study, we highlighted the importance of two factors of dentistry fear and high costs in dental caries. In order to reduce the fear of dental caries, education programs for children and parents could be managed by the responsible agencies. On the other hand, increasing the number of government centers providing dental services can eliminate most of the barriers to access the dental services. Bhagat et al., in their study in 2014 found, particular barriers such as lack of parental awareness about the importance of oral health, treatment costs, treatment time, children's absence from school, daily work pressure, children's fear of dentistry as parental barriers to visit dental clinics for treatment of their children. (19). In line with the results of our study, the negative impact of high costs of health care in India and fear of children on dental care was addressed.

Eslamipour et al., conducted a research on parental evaluation of access to and barriers to oral health services in children and adolescents in Isfahan, showed that access to dental services was above 71% from parents' point of view and the main problem for parents was the high cost of treatment, lack of insurance coverage and

fear of children to the dentist and half of the parents were satisfied with the services provided to their children. (7). It corresponds our findings showing that parents 'access to dental services is appropriate from the parents' point of view. In a cross-sectional study in Brazil, Baldani et al., examined the inequality in access to and use of dental services in an area covered by the Family Health Strategy program. The result showed that better socioeconomic status and the existence of a common source of dental services were factors related to having a dental visit. (8). The results of this study are consistent with the results of our study showing that having one or more fixed dentists can increase children's access to dental services. In a study in 2011, Kakatkar et al., examined the barriers to dental care in India. The cost of treatment also had an impact on dental services (20). The results of this study were also in line with the results of our study. Macek et al., examined dental visits and access to dental care among Maryland children. According to the results of this study, the probability of receiving oral dental prophylaxis services in the past year and having a specific source of dental care was higher among children covered by dental insurance (3). The results of this study are in line with the results of our study and point to the importance of the role of financial costs in referring children to dentistry. In Iran, the main health insurance plan does not cover dental payment and the payments are quite high. Some supplemental insurance plans cover skeptical dentist services, but insurance coverage is not readily available to the general population. Of the 20,000 dentists, 80% work in the private sector and 20% in the public sector, according to statistics released by the Iranian Medical Council. The prevalence of dental lesions in Iran is high. Approximately 50% of 12 - year - old children suffer with tooth caries (21,22,23). Given the current conditions of oral hygiene in Iran.

There is a need for urgent interventions and daily strategies to promote oral health. Due to the lack of health insurance coverage and expensive costs, many people have dental

problems.

## Conclusion

It is concluded that elementary school children have access to dental services and the most important obstacles of referring to the dentist are the child's fear of dentistry and the high cost of dentistry. It was also found that variables, such as education level, having a qualified dentist, waiting time for non-emergency treatments, and high costs of treatment are factors affecting parental satisfaction with oral health services in children.

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### Conflicts of interest

There are no conflicts of interest

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