

## Assessment of patient satisfaction during the process of treatment at postgraduate orthodontics department of Babol Faculty of Dentistry in 2018

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### Abstract

**Introduction:** The aim of this study was to determine satisfaction in patients undergoing orthodontic treatment in the orthodontics department of Babol Dental Faculty.

**Materials & Methods:** Totally, 76 participants answered to a self-administrated questionnaire, categorized into 4 sections: "physician- patient relationship", "social – mental improvement", "admittance and environment-related factors", "patients' overall experience of treatment". The answer to each question was scored in 5 levels from "completely disagree" with -2 scores to "completely agree" with +2 scores. Positive scores (+1 and +2) to questions were considered as high satisfaction.

**Results:** Generally, 90% of participants reported high scores of satisfaction with "patient-physician relationship", 75% with "environmental factors", 72% with "overall experience of treatment" and finally 60% of them had high satisfaction with "social-mental improvement".

**Conclusion:** A high level of satisfaction was reported by orthodontic patients in orthodontics department of Babol Dental Faculty.

**Keywords:** Satisfaction, Orthodontics, Malocclusion, Physician-patient relations

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## بررسی میزان رضایتمندی بیماران تحت درمان در بخش تخصصی ارتودنسی دانشکده دندانپزشکی بابل در سال ۹۷

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### چکیده

**مقدمه:** هدف از تحقیق حاضر تعیین میزان رضایتمندی در بیماران تحت درمان در بخش ارتودنسی دانشکده دندانپزشکی دانشگاه علوم پزشکی بابل بود.

**مواد و روش ها:** ۷۶ بیماره یک پرسشنامه خود ایفا پاسخ دادند. پرسشنامه در ۴ قسمت شامل رابطه پزشک-بیمار، شرایط محیطی پذیرش، تجربه کلی از درمان انجام شده و بهبود روانی اجتماعی بیمار دسته بندی شده بود. پاسخ به سوالات در ۵ سطح از کاملاً موافقم با امتیاز +۲ تا کاملاً مخالفم با امتیاز -۲ امتیازبندی شد. امتیازات مثبت (+۱ و +۲) به عنوان رضایت بالا در نظر گرفته شدند.

**یافته ها:** ۹۰٪ از بیماران رضایت بالا از رابطه پزشک و بیمار، ۷۵٪ از شرایط محیطی پذیرش، ۷۲٪ از تجربه کلی از درمان انجام شده و نهایتاً ۶۰٪ از آنها رضایت بالا از بهبود روانی اجتماعی داشتند.

**نتیجه گیری:** رضایتمندی بالایی توسط بیماران در بخش ارتودنسی دانشکده دندانپزشکی بابل گزارش شد.

**واژگان کلیدی:** رضایتمندی، ارتودنسی، مال اکلوژن، رابطه پزشک و بیمار

### Introduction

Success in orthodontic treatment depends on the patient's collaboration and satisfaction. Therefore, quality of dental services provided in various medical centers, including dental faculties, should be regularly evaluated to help the promotion of services. [1] The success of orthodontic treatment depends on patient cooperation and satisfaction with the treatment process. [2] Main factors in patient satisfaction include the quality of treatment provided, the relationship between patient and physician, duration of treatment, compliance, and improvement in dentofacial status. [3] Researches studied on satisfaction of orthodontic treatments and reported the range from 34% to 95% [4, 5], indicating high satisfaction in patients. Previous studies assessed the effect of several factors such as gender, age, duration of treatment, treatment tolerance and improvement of dentofacial parameters on patient satisfaction. [5, 6] There has been no study to evaluate the patient satisfaction and affecting factors in department of orthodontics, in Babol Dental Faculty. Therefore, the

aim of the current study was to determine patient satisfaction and relationship between patient satisfaction and other related factors in the department of orthodontics, Dental Faculty, Babol University of Medical Sciences in 2018.

### Materials & Methods

This study was conducted with the Ethical Code of IR.MUBABOL.REC.1397.002. The studied patients aged 12-25 years had received orthodontics treatment provided by postgraduate students at least from one year ago in Babol Faculty of Dentistry. Participation in the study was voluntary and patients who didn't accept to participate were excluded. In addition, patients who were candidate for orthognathic surgery were excluded from the study. Only, 76 patients could meet the inclusion criteria and finally completed a self-administered questionnaire. In a previous study, validity and reliability of the questionnaire were verified and

approved with high scores. At first, based on a literature review and by considering additional specific conditions present at the department of orthodontics of shahid beheshti dental faculty, a questionnaire containing 33 questions about patients' satisfaction and perspectives about the process of orthodontic treatment, treatment outcome and psychosocial effects of treatment was designed. Afterwards, the validity of questionnaire was evaluated by 10 experts (5 faculty members of Orthodontics Department, 3 Faculty members of Community Oral Health Department and 2 orthodontists).

Considering the comments of experts, questions with content validity index greater than 0.78 were kept, so 10 questions were omitted. The reliability of 23-item questionnaire was evaluated using test and retest method on 10 patients with a 2-week interval, and the Kappa coefficient was calculated. According to the reliability results, items with a Kappa value greater than 0.8 were kept and seven more questions were deleted from the final questionnaire. [7]

The questionnaire was categorized into 4 sections: "physician- Patient relationship", "psychosocial improvement", "admittance and environment related factors", "patients' overall experience of treatment". The answer to each question was scored in 5 levels from "completely disagree" with -2 scores to "completely agree" with +2 scores. Positive scores (+1 and +2) to questions were considered as high satisfaction. Data were analyzed using SPSS 24 at significant level of 0.05.

## Results

Four questions existed in "physician- patient relationship" section. Totally, 90% patients accredited positive scores to this section, indicating a high level of satisfaction among patients. In environmental section with six questions, 75% of subjects reported positive scores, which confirms relatively high satisfaction. Relatively high satisfaction (72%) was also reported in "overall experience of treatment" section, which comprised of four questions. Finally, 60% of patients had positive scores for psychosocial improvement with four questions. There was no difference between male and female patients ( $P > 0.05$ ). No difference was found between male and female physicians, too ( $P > 0.05$ ).

## Discussion

Due to the long-term nature of orthodontic treatment, patients' cooperation and satisfaction are essential for a successful treatment. This is a gold achievement in all offices and clinics with high quality of services. In this study, there was a high satisfaction of orthodontic treatment in dental faculty of Babol University of Medical Sciences in all aspects of "physician-patient relationship", "environmental factors", "overall experience of treatment" and "psychosocial improvement".

The results of Keles et al. in the College of Amsterdam showed highest satisfaction in physician-patient relationship and environmental factors. [8]

A study by Feldman et al. in Sweden also revealed a high correlation between physician- patient relationship and patient satisfaction. [9] Bos et al. suggested that the highest satisfaction was related to the relationship between patient and physician, [5] which are similar to the findings of the present study.

Roter et al. have stated that when physician explains the treatment steps explicitly and answers patients' questions, patients find opportunity to express their concerns. In this way, patient-physician relationship can develop. [10]

In the study of Al-Shahrani et al. in Saudi Arabia, the highest satisfaction was about admission and therapeutic environment (89.3%). Physician-patient relationship with 82.7% satisfaction was in the next ranking. Differences between the mentioned results and our findings may be attributed to environmental conditions and facilities of Babol Dental Faculty, or racial and cultural differences in dealing with patients. [6] In the current study, there were no differences between male and female patients' satisfaction, representing both genders had high satisfaction of treatment. Furthermore, patient satisfaction in evaluation of male and female physicians had no difference.

## Conclusion

Orthodontic patients, treating in Dental Faculty of Babol University of Medical Sciences, presented high satisfaction with "physician- patient relationship", "environmental factors", "overall experience of treatment" and "psychosocial improvement", respectively.

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**Conflict of interest:** The authors declare that they have no conflict of interest.

### Authors' Contributions:

The study was designed by Reza Ghorbanipour. The study data were collected by Reza Ghorbanipour and Hadis Majd. Analysis and interpretation of data were performed by Soraya Khafri. Manuscript preparation and review was performed by Reza Ghorbanipour. Manuscript was edited by Hadis Majd.

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