

PATIENTS' EXPECTATIONS OF ORTHODONTIC TREATMENT DURING THEIR INITIAL VISIT: A QUESTIONNAIRE STUDY

¹MUTAZ H. SHAKHATREH, ²ISSA G. MAJLATON, ³OMAR S. JUMEAN,
⁴A' SEM M. ALBATAYNEH, ⁵RA'ED H. ALRBATA

ABSTRACT

The goal of the present study is to determine what patients expected from orthodontic treatment to deliver the best treatment possible according to their expectations causing the satisfaction of patients. One hundred fifty patients' expectations were measured by filling up a questionnaire form that involved 9 questions regarding the patients' initial visit expectations, the orthodontic treatment type they expected, problems related to the treatment, attendance's duration as well as frequency, and treatment's complications and benefits. The replies of the patients were calculated using frequency. Most prevalent expectations among patients in both genders were enhanced dento-facial attractiveness, benefits, and increased confidence. Measuring patients' expectations from orthodontic therapy before the orthodontists begin treatment may result in greater satisfaction and less disappointment.

KEYWORDS: Patients' Visits; Patients' Treatment expectations; Orthodontic Treatment

This article may be cited as: Shakhathreh MH, Majlaton IG, Jumean OS, Albatayneh, MA, Alrbata RH. Patients' expectations of orthodontic treatment during their initial visit: a questionnaire study. Pak Oral Dent J 2022; 42(3):163-167.

INTRODUCTION

Undoubtedly, it is essential that there should be a serious focus on the awareness delivered to the patients seeking orthodontic treatment, specifically, about the procedures and the results of the treatment before starting the treatment¹⁻². Indeed, such focus may monitor the impacts of psychosocial factors in clinical treatment outcomes. In addition, orthodontists have to know the anticipated expectations of patients³⁻⁵. It is always observed that the desires of patients are necessary to be fulfilled on this stage in order to not be underestimated by the health care providers⁶⁻⁷.

The study of patients' expectations provides further reliable knowledge of the patients' demands initiating persuasive discussions about the unrealistic expectations. This can be seen when a patient does not have a clear knowledge about some important consequences including pain with eating, treatment duration, some issues of cleaning and speaking, and the dentofacial appearance's expectations and comparing them with reality for a proper treatment⁸⁻¹⁰.

Orthodontists concentrate on accomplishing the patients' desires as well as expectations through productive clinical discussions¹¹⁻¹². This helps them under-

stand the oral health needs. It also helps in enhancing treatment satisfaction and the patients' overall health quality. Additionally, this can provide the possibility for a proper assessment of patients' expectations from the orthodontic treatment¹¹⁻¹³. On the other hand, when treatments cannot meet a patient's desire, this may result in the patient's decreased satisfaction.

Hence, there is an always need for offering a high treatment quality continuously and systematically to be evaluated and documented through clinical assessments utilizing standardized surveys. Accordingly, the goal of this study was to determine what patients expected from orthodontic treatment to deliver the best treatment possible based on their expectations causing the satisfaction of patients.

MATERIALS AND METHODS

A questionnaire was used to collect data from the participants. This questionnaire includes 8 questions. The questions are built to serve the main research aim. Accordingly, this questionnaire intends to address the expectations of the first visits, the orthodontic treatment times, types, issues, durations, frequency, benefits, and complications. Questionnaires and responses to patients' expectations regarding orthodontic treatment on their first visit are shown in Tables 1.

As for the study sample, the sample included a total of 150 subjects both male and female by period

All authors are from Royal Jordanian Royal Medical Sciences For
Correspondence: mghuzlam79@yahoo.com

Received for Publication: Aug 15, 2022

Revised: Sept 29, 2022

Approved: Sept 30, 2022

starting from the first of July till the end of September 2021. The study sample was collected in Jordanian Royal Medical Services, Princess Haya Bent Alhussain hospital, Prince Hashim Hospital to the patients with no previous history of orthodontic treatment in quiet consultation room and asking the patients to fill up questionnaire form in the interview. The interviewers who collected data were: First two authors. The age group of the participants for this questionnaire is between 12 to 16 years old patients with gender consideration.

RESULTS

Tables 1 shows the 9 questions which were asked to the participants. Firstly, they were asked what could be their own expectations of first visit? Their answers were varied. 32% of the patients indicated that their visit is going to be for examination and diagnosis as being the highest frequency replies. It is followed by 23.3% of them who said they are going to receive braces. 17.3% of them expect that they may receive X-ray; while 14.1% of them think of having discussion in their first visit. The lowest frequency was for those who said that they receive impression with the percentage of 13.3%.

Next question was asked to identify what are the types of orthodontic treatment expected by patients? It is shown that 51.3% of them expect to have fixed braces. It is illustrated that 32.8% of these patients expected removable appliances. 15.3% of them expected extraction of teeth. Only 0.6% of the participants expected to have jaw surgery from the first visit.

This study also asked them to identify what experiences/side effects do you expect from orthodontic treatment? It displays 20.7% of the patients expected difficulty cleaning teeth, 27.4% of them expected restrict eating or drinking, also, 11.3% of them expected to have speech problems. In addition, 10.6% of them expected embarrassment with appliances. 8% of the participants expected ulcers of mouth. In regard to problems of gums, it is illustrated that 6% of them expected such experience effect. None of the participants indicated that they did not expect headache.

Besides, this study asked patients to explore the benefits of orthodontic treatment that patients expect. It shows 42.6% of the patients expect to improve appearance of teeth. 20.6% of them expect to gain confidence. 12.6% of the participants think they can improve chewing and speech. The lowest expectations went to improving smile with the percentage of 7.6 and improving psycho-social wellbeing 7.3%. 5.3% of them expected to break habits.

Next question was asked to identify the duration of orthodontic treatment do you expect. It presents that patients expected different years. 34% of them expected the duration to be 2 years. 30.7% of them expected

1 year. 20.7% of them expected 3 years. 14.6% of the patients expected 6 months. 1.3 of them expected 4 years and none of them expected 2 months.

This question "What reaction do you expect from others/public towards your treatment?" was also raised. The responses display that 65.4% of the patients indicated that the people's reactions will be positive; while 30% of them will be negative. It also shows that 4.6% will be neutral. Next question is the eighth one, it was asked to identify the expectations about frequency of orthodontic visits. 60.7% of the patients indicated they may visit once a month. 17.3% of them expected twice a month. 12.6% expected every two months. 4.6% thought they may visit once a week. 2.1% of them expected every 4 months.

Patients were also asked to identify which complications of treatment do you expect? They answered as follows: 34.7% of the patients were asked to have pain in jaw muscles & joints. 29.3% expected to have bleeding & swollen gums. 16% thought of having mobility of teeth. 18% expected tooth decay. 4.7% expected to have relapse (return of orthodontic problem). However, none of the participants expected to have root shortening. Lastly, 89.3% also answered that their appearance will be changed right after their treatment.

Subjects have varying expectations for orthodontic treatment. The majority of patients had no prior orthodontic treatment experience. Pain, difficulties eating, discomfort, speaking, and cleaning teeth, as well as embarrassment, were all expected side effects of wearing fixed orthodontic appliances.

DISCUSSION

In the last few decades, the number of adult patients seeking orthodontic treatment has increased. Patients with periodontal disease and those who have implants are seeking orthodontic treatment in greater numbers. Orthodontic therapy has even been found in studies to help treat the underlying condition of periodontitis in periodontitis sufferers. In these patients, tooth alignment provides additional stability to the teeth, causing new bone formation and strengthening the teeth, as well as an improvement in oral hygiene¹⁴⁻¹⁵.

Undoubtedly, the discrepancy between our expectations and our experience has been termed as quality of life, which is becoming an increasingly significant component of the evaluation of treatment outcomes. There are few studies on the impact of orthodontics on health-related quality of life, and clinicians are held accountable for treatment effectiveness and budget efficiency.

When measuring health-related quality of life, this approach revealed three flaws. To begin with, various

TABLE 1: RESPONSES TO PATIENTS' EXPECTATIONS FROM ORTHODONTIC TREATMENT

Questions	No. of responses	Percentage
Q1. In your first visit as a patient what do you expect?		
a. Examination and diagnosis	48	32
b. Discussion	21	14.1
c. X-rays	26	17.3
d. Braces	35	23.3
e. Impressions	20	13.3
Q2. Select the treatment type you expect to have.		
a.Fixed braces	77	51.3
b.Extraction of teeth	23	15.3
c.Removable appliances	49	32.8
d.Jaw surgery	01	0.6
Q3. Please select the side effects that you may expect from orthodontic treatment		
a.Restrict eating or drinking	41	27.4
b.Pain/discomfort in teeth	24	16
c.Speech problems	17	11.3
d.Difficulty cleaning teeth	31	20.7
e.Embarrassment with appliances	16	10.6
f.Ulcers of mouth	12	8
g.Problems of gums	9	6
h.Headache	00	0
Q4. Please provide us with the orthodontic treatment benefits that you expect during your visit		
a.Improved appearance of teeth	64	42.6
b.Improved chewing & speech	19	12.6
c.Improved smile	11	7.6
d.Improved oral & dental health	06	4
e.Gain confidence	31	20.6
f.Improvement in psycho-social wellbeing	11	7.3
h.Break habits	08	5.3
Q5. How long do you think your orthodontic treatment will take?		
a.2 months	00	
b.6 months	22	14.6
c.1 year	46	30.7
d.2 years	51	34
e.3 years	29	19.4
f.4 years	2	1.3
Q6.What reaction do you expect from others/public towards your treatment?		
a.None	07	4.6
b.Positive	98	65.4
c.Negative	45	30
Q7. Please select what frequency of orthodontic visits do you expect?		
a.4 months	3	2.1

b.2 months	19	12.6
c.6 months	04	2.7
d.Once a month	91	60.7
e.Twice a month	26	17.3
f.Once a week	07	4.6
Q8. In regard to the treatment complications, what do you expect to experience?		
a.Tooth decay	23	15.3
b.Mobility of teeth	24	16
c.Relapse (return of orthodontic problem)	07	4.7
d.Pain in jaw muscles & joints	52	34.7
e.Bleeding & swollen gums	44	29.3
f.Root shortening	00	0
Q9. Will your appearance be changed right after the treatment that you will receive?		
a. Yes, it will	134	89.3
b. No, it will not	16	10.7

people have different expectations. Second, individuals are in various phases of their condition. Finally, people's expectations fluctuate throughout time. When working with these individuals, we must adjust their expectations, transform their bad experiences into positive ones, and encourage health⁷.

Accordingly, the goal of this study was to determine the expectations of patients about orthodontic treatment after their first consultation. The individuals' most common expectations, according to our data, were enhanced dento-facial attractiveness and increased confidence. This agreed with findings of other authors with the exception of variations in the study sample selected.

Many researches in the literature have looked at the expectations of patients for orthodontic treatment. The majority of studies on patient expectations have focused their inquiries on the parents of the children involved. Very few studies have measured the expectations directly from the patient involved in the orthodontic treatment. Studies had reported differences among gender in reasons for seeking orthodontic treatment. Whilst, females focused more on their improved appearance, males presented for orthodontic treatment with expectations of improved social well-being¹⁶⁻¹⁷. However, in our study both the genders had the same expectation of improved appearance and gain in confidence after orthodontic treatment.

Most studies conducted previously on expectations of orthodontic treatment provided little information regarding response to the problems and complications related to orthodontic treatment and, the duration and frequency of the treatment¹⁸. In the present study, we found increased awareness among the patients about

the possible complications and also the duration and frequency of the orthodontic treatment.

Barriers to orthodontic treatment include the visibility of appliances, discomfort, and difficulties in chewing and maintenance of oral hygiene. Recent advances in the orthodontic appliances including the use of clear aligners has been reported to reduce these barriers including sequelae such as white spot lesions, dental caries and periodontal disease. These clear aligners are becoming more popular due to its marketing campaign utilizing evolving technologies in internet and media platforms¹⁶⁻¹⁸. Subjects in the present study showed increased awareness regarding the type of orthodontic treatment, especially the use of clear aligners appliance system. Most patients' showed preference to this clear aligners system among their expectations in the type of treatment.

CONCLUSION

In this study, patients aged 12 to 16 years old were given a psychometrically validated measure of orthodontic expectations. This questionnaire contains the following information:

- A reliable indicator of patients' orthodontic treatment expectations.
- A validated measure of patients' orthodontic treatment expectations.
- It assesses the orthodontic expectations of 12-16 year-olds prior to their first orthodontic consultation in terms of the initial appointment, type of treatment, expected experiences during treatment, duration of treatment, frequency of appointments, and orthodontic benefits.

85.4% of the patients did not receive any orthodontic treatment before. Additionally, patients' responses to the questionnaire were varied. Most of them expect that at their first visit, they will receive examination and diagnosis. These patients expected that the frequently type of treatment is going to be fixed braces. 27.4% of them expected to have side effects related to restrict eating or drinking. 42.6% expected to get benefits such as improving appearance of teeth. 30.7% of the patients expected that the length of the orthodontic treatment period will be 1 year. 65.4% of them expected that public will be positive towards their treatments. In regards to the frequency of orthodontic visits, 60.7% expected to visit once a month. The current study should be regarded as a pilot for further comprehensive studies.

Discussions with patients about their expectations from orthodontic therapy before the orthodontists begin treatment may result in greater satisfaction and less disappointment.

REFERENCES

- 1 Khalid, A., & Quiñonez, C. (2015). Straight, white teeth as a social prerogative. *Sociology of health & illness*, 37(5), 782-796.
- 2 Kathmandu, N. (2015). Is orthodontic treatment important? An assessment of attitude towards malocclusion among students of Jorpati, Nepal. *Nepal Med Coll J*, 17(3-4), 153-156.
- 3 Booyesen, J. (2018). Orthodontic treatment need and demand in the Upington area of the Northern Cape Province.
- 4 Roccuzzo, M., Marchese, S., Dalmasso, P., & Roccuzzo, A. (2018). Periodontal Regeneration and Orthodontic Treatment of Severely Periodontally Compromised Teeth: 10-Year Results of a Prospective Study. *International Journal of Periodontics & Restorative Dentistry*, 38(6).
- 5 Brkanović, S., Varga, M. L., & Meštrović, S. (2022). Knowledge and Attitude towards Orthodontic Treatment among Non-Orthodontic Specialists: An Online Survey in Croatia. *Dentistry Journal*, 10(1), 5.
- 6 Meyer, H. M., Mocarski, R., Holt, N. R., Hope, D. A., King, R. E., & Woodruff, N. (2020). Unmet expectations in health care settings: Experiences of transgender and gender diverse adults in the Central Great Plains. *Qualitative health research*, 30(3), 409-422.
- 7 Nymberg, V. M., Bolmsjö, B. B., Wolff, M., Calling, S., Gerward, S., & Sandberg, M. (2019). 'Having to learn this so late in our lives...' Swedish elderly patients' beliefs, experiences, attitudes and expectations of e-health in primary health care. *Scandinavian journal of primary health care*, 37(1), 41-52.
- 8 Walker, R. C., Tong, A., Howard, K., & Palmer, S. C. (2019). Patient expectations and experiences of remote monitoring for chronic diseases: systematic review and thematic synthesis of qualitative studies. *International journal of medical informatics*, 124, 78-85.
- 9 Meyer, H. M., Mocarski, R., Holt, N. R., Hope, D. A., King, R. E., & Woodruff, N. (2020). Unmet expectations in health care settings: Experiences of transgender and gender diverse adults in the Central Great Plains. *Qualitative health research*, 30(3), 409-422.
- 10 Stein Duker, L. I., Floríndez, L. I., Como, D. H., Tran, C. F., Henwood, B. F., Polido, J. C., & Cermak, S. A. (2019). Strategies for success: A qualitative study of caregiver and dentist approaches to improving oral care for children with autism. *Pediatric dentistry*, 41(1), 4E-12E.
- 11 Thomas, N., Blake, S., Morris, C., & Moles, D. R. (2018). Autism and primary care dentistry: parents' experiences of taking children with autism or working diagnosis of autism for dental examinations. *International journal of paediatric dentistry*, 28(2), 226-238.
- 12 Jopson, J. L., Ireland, A. J., Fowler, P. V., Sandy, J. R., & Neville, P. (2021). Are dentists considering a career in orthodontic clinical academia? A qualitative study into the factors influencing a career in orthodontics. *British Dental Journal*, 230(5), 308-313.
- 13 Kahn, S., & Ehrlich, P. R. (2018). *Jaws: The Story of a Hidden Epidemic*. Stanford University Press.
- 14 Gkantidis, N.; Christou, P.; Topouzelis, N. The orthodontic-periodontic interrelationship in integrated treatment challenges: A systematic review. *J. Oral Rehabil.* 2010, 37, 377–390. [Google Scholar] [CrossRef] [PubMed]
- 15 Sim, H.Y.; Kim, H.S.; Jung, D.U.; Lee, H.; Lee, J.W.; Han, K.; Yun, K.I. Association between orthodontic treatment and periodontal diseases: Results from a national survey. *Angle Orthod.* 2017, 87, 651–657. [Google Scholar] [CrossRef] [PubMed]
- 16 Michelogiannakis, D., Gajendra, S., Pathagunti, S. R., Sayers, M. S., Newton, J. T., Zhou, Z., ... & Rossouw, P. E. (2021). Patients' and parents' expectations of orthodontic treatment in university settings. *American Journal of Orthodontics and Dentofacial Orthopedics*, 159(4), 443-452.
- 17 Shrestha, B. V., Piya, A., Khapung, A., & Bhattarai, P. (2021). Patient's expectation of orthodontic treatment attending tertiary care dental hospital in Kathmandu. *Orthodontic Journal of Nepal*, 11(2), 34-38.
- 18 Kolasani, S, Thirunavukkarasu R, & Yugandhar G (2016) Patients' expectations of orthodontic treatment during their initial visit: a questionnaire study *Annals and Essences of Dentistry* (9) 1, 1a-4a

CONTRIBUTIONS BY AUTHORS

- | | |
|------------------------|--|
| 1 Mutaz h. Shakhatreh: | Study planning, data collection, manuscript writing |
| 2 Issa g. Majlaton: | Data collection |
| 3 Omar s. Jumean: | Paper writing and editing |
| 4 A'sem m. Albatayneh: | Manuscript editing, proofreading and approval of version |
| 5 Ra'ed h. Alrbata: | Final approval of version |