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Abdullah Mubarak Rasheed
Dental Practitioner and Team
Leader, Ministry of Health,
Kuwait

Mahmoud Sedky Adly
Member of the Royal College of
Surgeons of Edinburgh,
Edinburgh, Scotland, United
Kingdom

Patients' and parents' orthodontic treatment expectations in Egypt: A questionnaire survey

Abdullah Mubarak Rasheed and Mahmoud Sedky Adly

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Abstract

Aim: This study is to report both patients' and parents' orthodontic treatment expectations by utilizing a questionnaire.

Materials and Methods: A sample of 160 individuals that were equally divided into patients and parents and were asked to fill a questionnaire regarding their expectations towards orthodontic treatment before the start of any procedure. The filled questionnaires of both patients and parents were compared and statistically analysed.

Results: The results showed significant differences between patients and parents in regards to scores of the questionnaire where the parents gave significantly higher scores than the patients expressing a more like hood of the procedure ($p < 0.05$).

Conclusion: Most of the parents had more realistic expectations about orthodontic treatment especially in regards to the orthodontic treatment duration and retention which can be attributed to past subjective and/or objective experience in orthodontic treatment.

Keywords: Patients', parents', orthodontic, Egypt, questionnaire

Introduction

Measuring parents' expectations is considered one of the prime concerns in orthodontic treatment. It is not only important from the psychological point of view but also from a legal prospective, as the patient may find the results of treatment disappointing to his or her expectations. So it is mandatory to understand the patient expectations and to clarify whether these expectations are attainable or not before any orthodontic treatment is started [1, 2].

Many studies that focused on orthodontic treatment expectations have not precisely measured these expectations [3, 4]. These questionnaires were lacking psychometric validation in terms of validity and reliability tests [4, 5]. Another obvious shortage in these studies was their measurement of the expectations during orthodontic treatment, which cause bias in the results [5, 6]. Patients' expectations were also measured regarding pain resulting from wearing fixed orthodontic appliances, but this study did not measure the general expectations of orthodontic treatment [7].

One of the most important factors that affect expectations is time, as with the recent advances in orthodontics and the expansion of the social media networks information social and cultural expectations has risen dramatically in the last few years. A study in the USA states that the expectations of the teeth appearance were changed with time as more cultural and social pressure towards a higher expectations are seen [8, 9].

In Saudi Arabia social and cultural environment may influence to a great extent the expectations from orthodontic treatment [10, 11]. There is an actual need to explore the relationship between orthodontic expectations in patients and parents. Thus the aim of the study was is to report both patients' and parents' orthodontic treatment expectations by utilizing a questionnaire.

Materials and Methods

A questionnaire was utilized for measuring orthodontic treatment expectations of the patients' and their parents' (in appendix).

Corresponding Author:
Abdullah Mubarak Rasheed
Dental Practitioner and Team
Leader, Ministry of Health,
Kuwait

A visual analogue scale (VAS) was used that is marked at 10-mm intervals.

In this study, 160 subjects were invited for participating before attending their orthodontic consultations. They were divided equally into patients and parents. For both the patient and parent, an information sheet was provided before the written consent. The patients filled their questionnaires separately from their accompanying parents.

Inclusion criteria

- New patients and their parents who were presented to orthodontic consultant clinic
- Patients that finished their record but did not start the active treatment yet
- Patients that have no previous history of any orthodontic treatment
- Consent should be obtained from both a child and a parent.

The data were tabulated and analysed using the statistical package Statistical Package for Social Sciences - SPSS, version 9. Comparisons of child and parent expectations, was

reported using unpaired t test.

Results

The studied sample consisted of 160 patient and their parents, and there was predominance of females (71%) and most of the patients were between 17 and 21 years of age and most of the parents were also females (Table 1).

Variable	Number	Percentage
Gender of patients	Female = 55	68.75 %
	Male = 25	31.25%
Age of patients	Above 21 = 11	13.75%
	17 and 21 = 46	57.5%
	Below 17 = 23	28.75%
Gender of parent	Female = 67	83.75%
	Male = 13	16.25%

The results of the questionnaire showed significant differences between the patient expectations and the parent expectations ($p < 0.05$). As the parents showed higher scores in the questionnaire regarding their expectations in the orthodontic treatment.

Question		Average score of patients	Average score of parents
At your initial appointment do you expect to:	Have a brace fitted?	3	9
	Have a check-up and diagnosis?	5	9
	Have a discussion about treatment?	8	9
	Have X-rays?	2	7
	Have impressions?	3	8
	Have oral hygiene checked?	5	9
How long do you expect orthodontic treatment to take?		1 year	2.5 years
What type of orthodontic treatment do you expect?	Teeth extracted?	1	2
	Head brace?	1	3
	Jaw surgery?	1	2
Do you think orthodontic treatment will give you any problems?		3	6
Do you think wearing a brace will be painful?		2	5
Do you think orthodontic treatment will produce problems with eating?		2	7
Do you expect orthodontic treatment to restrict what you can eat or drink?		3	8
Do you expect to wear orthodontic elastics in your mouth?		1	4
Do you expect orthodontic treatment to:	Straighten your teeth?	9	9
	Produce a better smile?	8	9
	Make it easier to eat?	4	7
	Make it easier to speak?	5	4
	Make it easier to keep my teeth clean?	8	7
	Improve my chances of a good career?	9	8
	Give you confidence socially?	6	8
How long do you expect the retention of teeth will take?		1 month	1 year
What type of orthodontic retainer do you expect?	Permanent retainer	1	1
	Removable retainer	7	6
	Clear retainer	8	7

Note: the higher score indicates that the patient/parent is highly expecting this procedure

Discussion

This study was done to assess the patient and parent expectations regarding orthodontic treatment. One hundred and sixty patient and parents filled the questionnaire. The results showed predominance of females in the sample which is in accordance to Souza et al., who also found that females are seeking orthodontic treatment much more than males^[12]. This can be explained by the difference in attitude between males and females as it was found that females are more concerned about their looks and their parents are also concerned about their female child appearance more than males^[13, 14].

Expectations regarding initial appointment varied significantly between the patients and parents with the parents having more accurate expectation about the diagnostic process in orthodontics. This may be due to past experience of parents by either being previously went to do orthodontic treatment or have witnessed someone having orthodontic treatment.

Concerning the duration of the orthodontic treatment, patients expected much shorter duration of treatment than parents as most of the patients thought that their problem is easy and can be rapidly managed even if it was complicated. However, most of the patients and parents expectations were falling between the range of 1 to 3 years which was in accordance to a study done by Mirzaie et al., which reported that 80% of patients and 84% of parents expected a duration of 1 to 3 years^[15]. Also the type of orthodontic appliance that is expected to be used were more realistic in parents than in patients.

The expectations of the duration of retention after orthodontic treatment was significantly unrealistic in the patients as most of the patients did not think they need a prolonged duration of retention. On the other hand, most of the parents had better expectations about the retention duration which can be attributed to past subjective and/or objective experience in orthodontic treatment.

Conclusion

Patients' and parents' expectations were found to vary significantly especially in regards to duration of orthodontic treatment and retention. Parents' expectations were more realistic as a result of their previous experience in orthodontic treatment. Patients on the other hand, had many unrealistic expectations which should be corrected by proper patient education before the start of orthodontic treatment to avoid any disappointment from the patient regarding the procedure or the outcome of orthodontic treatment.

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Appendix

Questionnaire to measure patients' expectations of orthodontic treatment

This questionnaire is to help you tell the orthodontists about your expectations regarding you're coming treatment.

Answer each question by placing a mark on the number nearest to your expectation.

هذه الأسئلة تساعدك في أن تخبر طبيب تقويم الأسنان عن توقعاتك فيما يخص علاجك القادم
أجب عن كل سؤال عن طريق وضع علامة على الرقم الأقرب لتوقعاتك

Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely
غير محتمل جداً												محتمل جداً
	٠	١	٢	٣	٤	٥	٦	٧	٨	٩	١٠	

Name:	الاسم:
Date of birth:	تاريخ الميلاد:
Gender: *Male *Female	الجنس: *ذكر *أنثى
Address:	العنوان:
1. At your initial appointment do you expect to:	1. عند أول موعد لك هل تتوقع:
a) Have a brace fitted?	سيتم تركيب التقويم الثابت
Extremely Unlikely	0 1 2 3 4 5 6 7 8 9 10 Extremely Likely
غير محتمل جداً	
	٠ ١ ٢ ٣ ٤ ٥ ٦ ٧ ٨ ٩ ١٠
b) Have a check-up and diagnosis?	سيتم عمل الفحص والتشخيص؟
Extremely Unlikely	0 1 2 3 4 5 6 7 8 9 10 Extremely Likely
غير محتمل جداً	
	٠ ١ ٢ ٣ ٤ ٥ ٦ ٧ ٨ ٩ ١٠
c) Have a discussion about treatment?	سيتم مناقشة العلاج؟
Extremely Unlikely	0 1 2 3 4 5 6 7 8 9 10 Extremely Likely
غير محتمل جداً	
	٠ ١ ٢ ٣ ٤ ٥ ٦ ٧ ٨ ٩ ١٠
d) Have X-rays?	سيتم عمل اشاعات؟
Extremely Unlikely	0 1 2 3 4 5 6 7 8 9 10 Extremely Likely
غير محتمل جداً	
	٠ ١ ٢ ٣ ٤ ٥ ٦ ٧ ٨ ٩ ١٠
e) Have impressions?	أخذ مقاسات؟
Extremely Unlikely	0 1 2 3 4 5 6 7 8 9 10 Extremely Likely
غير محتمل جداً	
	٠ ١ ٢ ٣ ٤ ٥ ٦ ٧ ٨ ٩ ١٠
f) Have oral hygiene checked?	فحص صحة الفم؟

Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely
غير محتمل جداً											محتمل جداً	
0 1 2 3 4 5 6 7 8 9 10						0 1 2 3 4 5 6 7 8 9 10						
2. How long do you expect orthodontic treatment to take?						2. كم المدة التي تتوقع أن يستغرقه تقويم الأسنان؟						
4 years	3.5 years	4 years	3.5 years	4 years	3.5 years	4 years	3.5 years	4 years	3.5 years	4 years	3.5 years	4 years
أربعة سنوات	ثلاثة سنوات ونصف	أربعة سنوات	ثلاثة سنوات ونصف	أربعة سنوات	ثلاثة سنوات ونصف	أربعة سنوات	ثلاثة سنوات ونصف	أربعة سنوات	ثلاثة سنوات ونصف	أربعة سنوات	ثلاثة سنوات ونصف	أربعة سنوات
3. What type of orthodontic treatment do you expect?						3. ما نوع العلاج التقويمي الذي تتوقعه؟						
a) Teeth extracted?						خلع الأسنان؟						
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely
غير محتمل جداً											محتمل جداً	
0 1 2 3 4 5 6 7 8 9 10						0 1 2 3 4 5 6 7 8 9 10						
b) Head brace?						جهاز على الرأس؟						
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely
غير محتمل جداً											محتمل جداً	
0 1 2 3 4 5 6 7 8 9 10						0 1 2 3 4 5 6 7 8 9 10						
c) Jaw surgery?						جراحة الفك؟						
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely
غير محتمل جداً											محتمل جداً	
0 1 2 3 4 5 6 7 8 9 10						0 1 2 3 4 5 6 7 8 9 10						
4. Do you think orthodontic treatment will give you any problems?						4. هل تظن أن العلاج التقويمي سيسبب لك أي مشاكل؟						
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely
غير محتمل جداً											محتمل جداً	
0 1 2 3 4 5 6 7 8 9 10						0 1 2 3 4 5 6 7 8 9 10						
5. Do you think wearing a brace will be painful?						5. هل تظن أن وضع التقويم الثابت سيكون مؤلماً؟						
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely
غير محتمل جداً											محتمل جداً	
0 1 2 3 4 5 6 7 8 9 10						0 1 2 3 4 5 6 7 8 9 10						
6. Do you think orthodontic treatment will produce problems with eating?						6. هل تظن أن تقويم الأسنان سيتسبب في مشاكل عند الأكل؟						
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely
غير محتمل جداً											محتمل جداً	
0 1 2 3 4 5 6 7 8 9 10						0 1 2 3 4 5 6 7 8 9 10						
7. Do you expect orthodontic treatment to restrict what you can eat or drink?						7. هل تظن أن تقويم الأسنان سيعيقك عن الأكل والشرب؟						
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely
غير محتمل جداً											محتمل جداً	
0 1 2 3 4 5 6 7 8 9 10						0 1 2 3 4 5 6 7 8 9 10						
8. Do you expect to wear orthodontic elastics in your mouth?						8. هل تظن أنك ستضع مطاط في فمك؟						

Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely	
غير محتمل جداً											محتمل جداً		
						0 1 2 3 4 5 6 7 8 9 10							
10. Do you expect orthodontic treatment to:						10. هل تتوقع من تقويم الأسنان أن:							
a) Straighten your teeth?						يعدل أسنانك							
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely	
غير محتمل جداً											محتمل جداً		
						0 1 2 3 4 5 6 7 8 9 10							
b) Produce a better smile?						يعطسك ابتسامة أفضل							
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely	
غير محتمل جداً											محتمل جداً		
						0 1 2 3 4 5 6 7 8 9 10							
c) Make it easier to eat?						المضغ سيكون أسهل؟							
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely	
غير محتمل جداً											محتمل جداً		
						0 1 2 3 4 5 6 7 8 9 10							
d) Make it easier to speak?						الكلام سيكون أسهل؟							
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely	
غير محتمل جداً											محتمل جداً		
						0 1 2 3 4 5 6 7 8 9 10							
e) Make it easier to keep my teeth clean?						نظافة الأسنان ستكون أسهل؟							
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely	
غير محتمل جداً											محتمل جداً		
						0 1 2 3 4 5 6 7 8 9 10							
f) Improve my chances of a good career?						سيحسن فرصك في مستقبل جيد؟							
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely	
غير محتمل جداً											محتمل جداً		
						0 1 2 3 4 5 6 7 8 9 10							
g) Give you confidence socially?						سيعطيك ثقة اجتماعية؟							
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely	
غير محتمل جداً											محتمل جداً		
						0 1 2 3 4 5 6 7 8 9 10							
11. How long do you expect the retention of teeth will take?						11. كم المدة التي تتوقع أن يستغرقه تثبيت الأسنان؟							
4 years	3.5 years	3 years	2.5 years	2 years	1.5 year	1 year	6months	3months	1 month	Don't know			
أربعة سنوات	ثلاثة سنوات ونصف	ثلاثة سنوات	سنتين ونصف	سنتين	سنة ونصف	سنة	3 شهور	شهرين	شهر	لا أعلم			
12. What type of orthodontic retainer do you expect?						12. ما نوع جهاز التثبيت الذي تتوقعه؟							
a) Permanent retainer						تثبيت دائم							
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely	
غير محتمل جداً											محتمل جداً		
						0 1 2 3 4 5 6 7 8 9 10							

b) Removable retainer						تثبيت متحرك						
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely
غير محتمل جداً											محتمل جداً	
	٠	١	٢	٣	٤	٥	٦	٧	٨	٩	١٠	
c) Clear retainer						تثبيت شفاف						
Extremely Unlikely	0	1	2	3	4	5	6	7	8	9	10	Extremely Likely
غير محتمل جداً											محتمل جداً	
	٠	١	٢	٣	٤	٥	٦	٧	٨	٩	١٠	