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## **Aim:**

During the first stages of an orthodontic treatment, patients have to familiarize themselves with the orthodontic device used for their treatment. The aim of this study was to estimate the patients' Oral Health Related Quality of Life (OHRQoL) and its association with anxiety during the first month of orthodontic treatment with aligners.

## **Material and Methods:**

A total of 21 adult orthodontic patients from a private practice, treated with aligners, volunteered to participate in this study. According to study's inclusion criteria, patients should have never undergone previous orthodontic treatment, should be older than 17 years old and should be treated non-extractions. Patients were asked to answer a validated OHRQoL questionnaire consisting of 17 multiple choice questions at the beginning of the treatment (Day 0), after one day (Day 1), a week (Day 7) and a month of treatment (Day 30). The Greek version of the adult form of State-Trait Anxiety Index (STAI) questionnaire was also distributed. Patients were asked to answer both STAI subscales (Y1 and Y2) at the Days 0 and 30. The data were collected, double checked and statistically analyzed using non-parametric Wilcoxon signed-rank test with SAS<sup>®</sup> University Edition software [Cary, NC: SAS Institute Inc.].

## **Results:**

The ability for food intake was affected only initially between Days 0 and 1, the presence of ulcers just for a week between Days 0 and 7 while discoloration of the teeth between Days 0 and 30 was reported.

Summary statistics of differences from 'Day 1' to 'Day 2' of HWQoL Q1, Q3-Q17

Patients with available data: N=21					
	Mean (SD)	Median	Q1-Q3	Min-Max	p-value*
Q6: Were there any foods you could not eat today?	0.9 (1.3)	0.0	0.0-1.0	0.0-4.0	0.008

Summary statistics of differences from 'Day 1' to 'Day 7' of HWQoL Q1, Q3-Q17

Patients with available data: N=21					
	Mean (SD)	Median	Q1-Q3	Min-Max	p-value*
Q13: Do you have sores on your cheeks?	0.4 (0.8)	0.0	0.0-1.0	-1.0-2.0	0.047

Summary statistics of differences from 'Day 1' to 'Day 30' of HWQoL Q1, Q3-Q17

Patients with available data: N=21					
	Mean (SD)	Median	Q1-Q3	Min-Max	p-value*
Q17: Have you noticed a change in the color of your teeth?	0.6 (1.1)	0.0	0.0-1.0	-1.0-3.0	0.028

No statistical significant changes were observed in any STAI subscales between Days 0 and 30.

Summary statistics of differences from 'Day 1' to 'Day 30' of State-Trait Anxiety Inventory (STAI) questionnaire

Patients with available data: N=21					
	Mean (SD)	Median	Q1-Q3	Min-Max	p-value*
State-Anxiety scale (STAI Y1)	-3.5 (8.5)	-1.0	-9.0-1.0	-22.0-13.0	0.071
Trait-Anxiety scale (STAI Y2)	-1.3 (6.7)	-1.0	-3.0-0.0	-12.0-14.0	0.373
Total STAI	-4.9 (13.3)	-2.0	-9.0-3.0	-34.0-16.0	0.201

## **Conclusions:**

Orthodontic treatment with aligners may affect patient's OHRQoL during the first month, however it does not affect patients' anxiety.

## **References:**

- Zhang B, Huang X, Huo S, Zhang C, Zhao S, Cen X, Zhao Z. Effect of clear aligners on oral health-related quality of life: A systematic review. *Orthod Craniofac Res.* 2020
- Sari Z, Uysal T, Karaman AI, Sargin N, Ure O. Does orthodontic treatment affect patients' and parents' anxiety levels? *Eur J Orthod.* 2005

## **The Health-Related Quality of Life questionnaire used in the present study.**

It's important for us to know how the orthodontic appliance has affected your daily life in order to improve the quality of care. Please choose the number that corresponds to your assessment over the past 24 hours.

1. Rate the worst pain you have felt during the past 24 hours on a scale of 1 to 10 (1- not at all, 10 - very much).

2. Have you taken any medication to relieve pain today? (0 = no, 1 = yes).

For the following questions, please use this rating:  
1 = no instances, 2 = few instances, 3 = some instances, 4 = several instances, 5 = numerous instances.

3. Has it been difficult to speak today?

4. Has it been difficult to swallow today?

5. Has it been difficult to open your mouth today?

6. Were there any foods you could not eat today?

7. Have you enjoyed your food today?

8. Have you noticed a change in your sense of taste today?

9. Was it difficult to sleep last night?

10. Does the appliance disturb you at work or when studying today?

11. Has it been difficult to continue your daily activities today?

12. Do you have sores on your tongue?

13. Do you have sores on your cheeks?

14. Do you have sores on your lip?

15. Have you had a bad taste or bad smell in your mouth today?

16. Has there been any food debris under the appliance today?

17. Have you noticed a change in the color of your teeth?

Please report any complaints you may have.