



# Patients' Perceptions of Orthodontic Treatment Experiences During COVID-19: A Cross-Sectional Study

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## INTRODUCTION

COVID-19 has impacted the care of patients undergoing orthodontic treatment. We aimed to provide an overall view of patients' perspectives, concerns, and expectations towards their treatment throughout the clinic lockdown during the pandemic; and to assess patients' levels of mental distress and its association with their confidence in resuming care.

## METHODS & MATERIAL

An anonymous, validated, in-person paper questionnaire was distributed to adult orthodontic patients' post-lockdown at an academic institution.

The survey focused on the clinical aspects and patients' perspectives regarding orthodontic treatment during the pandemic. The Kessler Mental Distress Scale (K10) was used to evaluate their psychological status. Survey responses were descriptively summarized and confidence in resuming care was compared between normal patients and patients with mental distress using Mann-Whitney tests.

## RESULTS

One hundred fifty-four patients were surveyed from July to October 2020.

Mean age of the participants was 29.30 (SD = 12.01) years and 62% were females.

Emergencies during the closure (21%, 32/154) involved primarily irritation with protruding wires. Patients were neutral regarding tele-dentistry and preferred their current fixed appliances over clear aligners.

Upon resuming care, 80.51% were extremely pleased with the restrictive protocols and with high level of confidence in resuming treatment.

The average level of anxiety was low, and a modest association was found between mental distress and reduced confidence in resuming treatment.

## RESULTS

K10 all items	Mean	SD	25%	Median	75%	Complete observations
Did you feel tired for no good reason?	1.44	0.95	1	1	1	132 (86%)
Did you feel nervous	1.55	0.95	1	1	2	132 (86%)
Did you feel so nervous that nothing could calm you down	1.30	0.78	1	1	1	128 (83%)
Did you feel that everything was an effort	1.63	1.22	1	1	2	129 (84%)
Did you feel sad that nothing could cheer you up	1.24	0.77	1	1	1	132 (86%)
Did you feel worthless?	1.20	0.69	1	1	1	133 (86%)
Did you feel restless or fidgety	1.41	0.90	1	1	1	133 (86%)
Did you feel so restless that you could not sit still	1.23	0.64	1	1	1	132 (86%)
Did you feel depressed?	1.35	0.89	1	1	1	133 (86%)
Did you feel hopeless?	1.20	0.67	1	1	1	132 (86%)
<b>Total</b>	<b>13.16</b>	<b>6.63</b>	<b>10</b>	<b>10</b>	<b>13</b>	<b>121 (79%)</b>

Questions related to the level of confidence in resuming treatment in the pandemic	Mean	SD	25%	Median	75%	Complete observations
I am confident in resuming my orthodontic treatment and finishing it while at the pandemic	4.59	0.85	4	5	5	153 (99%)
I trust my orthodontist to deliver the same standard of care during the pandemic	4.61	0.81	4	5	5	153 (99%)
I have maintained the same standards of oral hygiene as instructed by my provider during the pandemic	4.54	0.80	4	5	5	153 (99%)
I have maintained the post-operative instructions and took care of my appliance during the pandemic	4.39	0.89	4	5	5	152 (99%)
It is necessary for an orthodontist to follow up on their patients during the pandemic or any similar emergencies	4.12	0.87	4	4	5	150 (97%)
Do you feel it is safe to see your orthodontist for full adjustment appointment during the pandemic?	4.21	0.82	4	4	5	150 (97%)
I like to postpone my treatment until the pandemic is over (negative correlated; coding reversed)	4.21	0.88	4	4	5	150 (97%)
I would like to discontinue my treatment and remove my braces because of the pandemic (negative correlated; coding reversed)	4.40	0.97	4	5	5	149 (97%)
I agree with the idea of reducing the number of visits to an orthodontic clinic during the pandemic (negative correlated; coding reversed)	2.95	1.11	2	3	4	149 (97%)
It is difficult to interact and communicate with my orthodontist while at the clinic during the pandemic (negative correlated; coding reversed)	3.98	0.89	4	4	4	133 (86%)
I am pleased with the way my appointment was handled during the pandemic.	4.39	0.87	4	5	5	146 (95%)
<b>Total score</b>	<b>46.47</b>	<b>4.75</b>	<b>44</b>	<b>47</b>	<b>50</b>	<b>128 (83%)</b>

Questions related to the level of confidence in resuming treatment in the pandemic	Normal: K10 total ≤ 19 (n = 106)		Mental Distress: K10 total > 19 (n = 15)		P-Value
	Mean ± SD	Median (25%, 75%)	Mean ± SD	Median (25%, 75%)	
I am confident in resuming my orthodontic treatment and finishing it while at the pandemic	4.61 ± 0.88	5.00 (5.00, 5.00)	4.44 ± 0.62	4.50 (4.00, 5.00)	0.038*
I trust my orthodontist to deliver the same standard of care during the pandemic	4.61 ± 0.83	5.00 (4.50, 5.00)	4.56 ± 0.70	5.00 (4.00, 5.00)	0.468
I have maintained the same standards of oral hygiene as instructed by my provider during the pandemic	4.56 ± 0.79	5.00 (4.00, 5.00)	4.39 ± 0.92	5.00 (4.00, 5.00)	0.449
I have maintained the post-operative instructions and took care of my appliance during the pandemic	4.35 ± 0.93	5.00 (4.00, 5.00)	4.67 ± 0.49	5.00 (4.00, 5.00)	0.225
It is necessary for an orthodontist to follow up on their patients during the pandemic or any similar emergencies	4.08 ± 0.88	4.00 (4.00, 5.00)	4.44 ± 0.70	5.00 (4.00, 5.00)	0.086
Do you feel it is safe to see your orthodontist for full adjustment appointment during the pandemic?	4.26 ± 0.81	4.00 (4.00, 5.00)	3.89 ± 0.83	4.00 (3.25, 4.00)	0.056
I like to postpone my treatment until the pandemic is over (negative correlated; coding reversed)	4.27 ± 0.85	4.00 (4.00, 5.00)	3.83 ± 1.04	4.00 (3.00, 5.00)	0.071
I would like to discontinue my treatment and remove my braces because of the pandemic (negative correlated; coding reversed)	4.44 ± 0.95	5.00 (4.00, 5.00)	4.11 ± 1.13	5.00 (3.00, 5.00)	0.267
I agree with the idea of reducing the number of visits to an orthodontic clinic during the pandemic (negative correlated; coding reversed)	2.95 ± 1.08	3.00 (2.00, 4.00)	2.94 ± 1.30	3.00 (2.25, 4.00)	1.000
It is difficult to interact and communicate with my orthodontist while at the clinic during the pandemic (negative correlated; coding reversed)	4.07 ± 0.84	4.00 (4.00, 5.00)	3.41 ± 1.00	4.00 (2.00, 4.00)	0.004*
I am pleased with the way my appointment was handled during the pandemic.	4.43 ± 0.86	5.00 (4.00, 5.00)	4.11 ± 0.90	4.00 (4.00, 5.00)	0.081
<b>Total score</b>	<b>46.78 ± 4.68</b>	<b>47.00 (45.00, 50.00)</b>	<b>44.41 ± 4.85</b>	<b>44.00 (42.00, 48.00)</b>	<b>0.035*</b>

## CONCLUSION

- Few numbers of minor emergencies occurred during the clinic closure.
- Despite the rising interest in tele-dentistry, patients were neutral on considering this option to monitor treatment and were content with fixed appliances.
- Patients had high confidence levels to resume their care based on the protocols established upon reopening.
- The association of mental distress and confidence in resuming care is suggestive and needs further investigation.