

Awareness, Challenges and Impact of COVID-19 Lockdown: Orthodontic Patient's Perspective

Keywords

Awareness; Challenges; COVID 19; Lockdown; Orthodontics; Impact; Pandemic, Survey

Abstract

Context: Owing to the increase in COVID 19 cases, a lockdown was declared in India on 24th March 2020. All the dental facilities except for emergency procedures were suspended. Due to the lockdown, the periodic visit to the Orthodontist became difficult, which would eventually affect the Orthodontic treatment.

Aim: The aim of this study was to assess the awareness, challenges and impact of COVID-19 Lockdown on Orthodontic patients.

Materials & Methods: A self-designed online questionnaire of 24 questions was designed and distributed among 450 participants via WhatsApp messenger and email.

Statistical analysis used: Comparison of frequencies was done using chi square test.

Results: The study revealed that majority patients were affected due to the pandemic and feared increase in duration of the treatment due to the same. Most common problems were loose bands/brackets and poking wire. Some faced resistance from family for visiting the Orthodontist during pandemic.

Conclusions: Majority found it necessary to continue treatment even after all difficulties. Continuous reassurance to the patients by the Orthodontist is required, by doing regular follow ups. At the same time, the awareness about the pandemic should be increased amongst the patients so that precautionary measures can be taken from their side to prevent the spread while continuing their orthodontic treatment.

Introduction

In December 2019, there was an outbreak of a severe pneumonia of unknown etiology in Wuhan China. The concerned virus was initially called the novel coronavirus 2019-nCoV, then as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) by the International Committee on Taxonomy of Viruses [1]. COVID 19 was declared a pandemic by WHO on January 30, 2020 and since then there has been a rapid spread throughout the world. There have been 214,468,601 confirmed cases of COVID-19 globally, including 4,470,969 deaths, reported to WHO. In India, from January 3, 2020 to August 27, 2021, there have been 32,603,188 confirmed cases of COVID-19 with 436,861 deaths, reported to WHO [2].

Patients reported with COVID-19 show symptoms of lower respiratory tract infection, including coughing, fever, generalized fatigue, sneezing, vomiting, and severe pneumonia [3,4]. The symptoms range from mild, moderate, severe, critical, and sometimes



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leading to death. Many are asymptomatic while others present with symptoms like Acute Respiratory Distress Syndrome, sepsis, septic shock, and multiple organ failures in critical patients with high reported deaths [5].

The mode of transmission includes sneezing, coughing, close contact talking, aerosol contamination and direct contact with any contaminating surfaces. The incubation period is 14 days up to 24 days [3,6,7].

Various orthodontic procedures such as bonding, debonding, replacement of debonded brackets are aerosol generating. These travel short distance and settle on dental surfaces, operator and/or patients, posing high risk of cross infection. However, meticulous infection control measures could reduce the risk of cross infection [8].

Owing to the rising cases in India, a lockdown was declared on March 24, 2020. In the initial phases of the COVID-19 "lockdown" in India, dental clinics were shut as it was feared that aerosols generated in dental practice could fuel the spread of the virus and other factors [9,10].

With the pandemic increasing, the importance and need for oral health emergency requirements was understood, strict regulations and guidelines were issued, and emergency services were opened up.

Orthodontics is an elective specialty, dealing with the treatment of malocclusion, with the treatment lasting for about two-three years and the need for regular reporting of the patient to the clinic every six-eight weeks. Thus, delaying the treatment until the end of pandemic will inadvertently prolong the treatment. COVID 19 has not only affected the orthodontic treatment due to missed appointments and fear of contracting the disease, but also due to emotional, psychological and financial crisis [11].

This study aims to assess the impact of COVID-19 lockdown and the challenges it posed on the orthodontic patients. It will also assess the knowledge and attitude of the patients towards the disease and

evaluate the changes post the lockdown in reference to the treatment and patient's expectations.

Material and Methods

This was a cross-sectional descriptive study carried out in 2021. Self-formulated structured multiple-choice questionnaire consisting of 24 questions, were distributed to consenting participants. The participants were patients undergoing treatment in our institute. Simple random sampling technique was used.

The questionnaires were distributed in form of an online data collection platform (Google Forms) amongst 450 participants. The respondents were reached using WhatsApp and via emails. The questionnaire consisted of demographic characteristics such as age, sex, occupation and address followed by questions regarding the participants perceived impact of the pandemic and lockdown on their orthodontic treatment.

Data was subjected to statistical analysis using Statistical package for social sciences (SPSS v 26.0, IBM). Comparison of frequencies of categories of variables with groups was done using chi square test. For all the statistical tests, $p < 0.05$ was considered to be statistically significant, keeping α error at 5% and β error at 20%, thus giving a power to the study as 80%.

Results

450 participants responded to the survey. The questionnaire consisted of questions, categorized into three domains (Tables 1-3):

The predominant age group was found to be >20 years (53.3%) with a female predominance (60%). A majority of the respondents were students (74.7%) [Table 1].

A set of questions addressed the details about the ongoing orthodontic treatment and the challenges faced due to the COVID-19 Lockdown. A majority of the respondents had been undergoing orthodontic treatment since 12-24 months (29.3%). Maximum patients had not visited their orthodontist for a span of less than three months (74%) with the majority having visited their orthodontist less frequently than usual (57.3%). A majority of the patients did not experience any appliance breakage during the pandemic (62%) and did not encounter any kind of pain or discomfort (38.7%). Amongst the ones who experienced pain and discomfort, the problem in the majority was broken brackets/bands (14%) and poking wires (13.3%). Most of these respondents handled their problem over the call with their orthodontist (39.3%) and very few visited a local dentist (6%). Majority felt that their treatment was delayed due to the pandemic (60%) [Table 2].

Questions were asked to assess the perceived risk assessment and the impact of COVID 19 Lockdown. A majority of the respondents preferred their Orthodontist to be wearing an N-9 5 mask (27.3%) and the found the standard of care provided by their Orthodontist to be better than before (60.7%). Majority was satisfied by the protocols adopted by the Orthodontist (95.3%). Amongst the participants

unsatisfied with the protocols, the major reason was unclean instruments (4%) and the Orthodontist not wearing surgical gown (3.3%). Only 18.67% of participants reported of change in fees. A majority of respondents did not find any difficulty in travelling (55.3%). 20.7% participants faced definite resistance from the family to visit the Orthodontist during the pandemic. A majority of the patients feel the necessity to visit the Orthodontist even after all these challenges (80.7%) [Table 3].

Significant associations were observed between the questions

Table 1: Demographic characteristics.

Variable	Frequency (%) n=450
Age (year)	
Less than 10	0.7
10-20	46
>20	53.3
Sex	
Male	40
Female	60
Occupation	
Student	74.7
Employed (Commuting to work)	14.7
Employed (Working from home)	10.7

asked and demographic characteristics [age, sex]. [Table 4-7]

Descriptive analysis in Figures 1-15.

Discussion

Coronavirus pandemic has affected the health care delivery significantly globally. Orthodontic treatment, though an elective treatment, requires regular follow up every four-six weeks. Some orthodontic procedures are time consuming and aerosol producing, which puts the patient and the orthodontist both at a greater risk of contracting COVID-19. Owing to the lockdown, which was announced in March 2020 in India, there were restrictions on travelling, strict laws pertaining to leaving the home unless necessary. Dental clinics were also not functioning except for emergency procedures.

The objectives of this study to assess the impact of COVID-19 lockdown and the challenges it posed on the orthodontic patients.

70% of the participants replied that it has been less than three months since their last follow up. Fixed Orthodontic treatment includes brackets and bands fixed into the patient's mouth, which increases the plaque accumulation and increased oral hygiene care. This requires repeated reinforcement and inspection by the Orthodontist. Along with oral hygiene assessment, the change of elastics periodically is vital since the elastic force decays over time, which would significantly affect the treatment. However, the patient due to the unawareness often overlooks this. Sixty-two percent participants replied that they experienced no breakages of appliances

Table 2: Responses to questions on the ongoing orthodontic treatment and the challenges faced due to the COVID 19 lockdown.

Question asked and responses	Frequency (%)
How long have you been in Orthodontic treatment?	
12 to 24 months	132 (29.3)
6 to 12 months	111 (24.7)
Less than 6 months	90 (20)
More than 24 months	117 (26)
How long have you not seen your Orthodontist for Orthodontic treatment?	
3 to 6 months	69 (15.3)
Less than 3 months	333 (74)
More than 6 months	48 (10.7)
How frequently have you visited your Orthodontist during the pandemic?	
As usual	165 (36.7)
Less frequently	258 (57.3)
More frequently	27 (6)
Did you encounter any breakages of your appliance during the pandemic?	
No	279 (62)
Yes	171 (38)
Did you feel any pain and discomfort from your appliance during the pandemic?	
Mild	147 (32.7)
Moderate	111 (24.7)
No pain	174 (38.7)
Severe	9 (2)
Worst possible	9 (2)
How frequent was the discomfort?	
Everyday	9 (2)
Few times a week	111 (24.7)
Less than that	105 (23.3)
No discomfort	156 (34.7)
Once a week	69 (15.3)
What was the nature of your problem?	
Hurting retainer/ ulcers	51 (11.3)
Loose brackets/ bands	63 (14)
Loose brackets/ bands, Hurting retainer/ ulcers	3 (0.7)
Loose brackets/ bands, None of the above	3 (0.7)
Loose brackets/ bands, Poking wire	45 (10)
Loose brackets/ bands, Poking wire, Hurting retainer/ ulcers	6 (1.3)
Loose brackets/ bands, Poking wire, Loose mini-screws, Hurting retainer/ ulcers	3 (0.7)
Hurting retainer/ ulcers	9 (2)
Loose mini-screws	183 (40.7)
None of the above	60 (13.3)
Poking wire	18 (4)
Poking wire, Hurting retainer/ ulcers	3 (0.7)
Poking wire, Loose mini-screws	3 (0.7)
Poking wire, Loose mini-screws, Hurting retainer/ ulcers	
How did you handle the problem?	
By myself	114 (25.3)
Emergency appointment	36 (8)
Local dentist	27 (6)
None of the above	96 (21.3)
Over a call with your Orthodontist	177 (39.3)
Did you have difficulty in contacting your Orthodontist during the pandemic?	
No	294 (65.3)
Sometimes	81 (18)
Yes	75 (16.7)
If you don't wish to visit your Orthodontist, what would be your preferred means to communicate with them to inform them about your problem during the pandemic?	
By text messages	147 (32.7)
None of the above	54 (12)
Over a audio call	228 (50.7)
Over a video call	21 (4.7)
Do you feel your treatment will be delayed due to the pandemic?	
Maybe	72 (16)
No	108 (24)
Yes	270 (60)

Table 3: Responses to questions on the perceived risk assessment and impact of COVID19 lockdown.

Question asked and responses	Frequency (%)
What do you prefer your Orthodontist to do?	
Face shield	93 (20.7)
Full PPE	81 (18)
Full PPE, Face shield	3 (0.7)
Full PPE, N95 Mask	15 (3.3)
Full PPE, N95 Mask, Face shield	54 (12)
N95 Mask	123 (27.3)
N95 Mask, Face shield	81 (18)
How do you think is the standard of care provided by your Orthodontist?	
Better	273 (60.7)
Same as before	171 (38)
Worse	6 (1.3)
Do you feel the necessity to visit the Orthodontist even after all these challenges?	
No	87 (19.3)
Yes	363 (80.7)
Are you satisfied with the protocols followed by your Orthodontist?	
No	21 (4.7)
Yes	429 (95.3)
What are you not satisfied with?	
Nil	12 (2.7)
No PPE/ Surgical gown was worn by your Orthodontist	15 (3.3)
No PPE/ Surgical gown was worn by your Orthodontist,	3 (0.7)
Unclean instruments	12 (2.7)
No pulse oximeter/ Temperature gun check was done	3 (0.7)
No pulse oximeter/ Temperature gun check was done, No	381 (84.7)
PPE/ Surgical gown was worn by your Orthodontist	18 (4)
None of the above	3 (0.7)
Unclean instruments	
Unclean instruments, Unclean operatory	3 (0.7)
Unclean instruments, Unclean operatory, None of the above	
Were there any changes in fees for your Orthodontist?	
No	294 (65.33)
Not applicable	72 (16)
Yes	84 (18.67)
Did you face any travelling issues to visit the Orthodontist during the pandemic?	
Maybe	57 (12.7)
No	249 (55.3)
Yes	144 (32)
How do you usually commute for your appointments?	
Nil	3 (0.7)
Private vehicle	207 (46)
Public transport	195 (43.3)
Walking	45 (10)
Was there any resistance from your family to visit the Orthodontist during pandemic?	
Nil	6 (1.3)
Maybe	78 (17.3)
No	273 (60.7)
Yes	93 (20.7)

Table 4: Association between demographic characteristic (age) and responses to the questions (significant findings) [Part1].

Questions asked and responses	Age (years)			P Value	χ ²
	<10 n (%)	10-20n (%)	>20 n (%)		
How long have you been in Orthodontic treatment?					
12 to 24 months	0 (0)	60(45.45)	72(54.55)	.021*	14.918
6 to 12 months	0 (0)	45(40.54)	66(59.46)		
Less than 6 months	3(3.33)	42(46.67)	45 (50)		
More than 24 months	0 (0)	60(51.28)	57(48.72)		
How frequently have you visited your Orthodontist during the pandemic?					
As usual	3(1.82)	75(45.45)	87(52.73)	.002**	17.170
Less frequently	0 (0)	111(43.02)	147(56.98)		
More frequently	0 (0)	21(77.78)	6(22.22)		
Did you encounter any breakages of your appliance during the pandemic?					
No	3(1.07)	117(41.93)	159(56.99)	.043*	6.316
Yes	0 (0)	90(52.63)	81(47.37)		
What was the nature of your problem?					
Hurting retainer/ ulcers	0 (0)	12(23.53)	39(76.47)	.005**	45.398
Loose brackets/ bands	0 (0)	36(57.14)	27(42.86)		
Loose brackets/ bands, Hurting retainer/ulcers	0 (0)	3 (100)	0 (0)		
Loose brackets/ bands, None of the above	0 (0)	3 (100)	0 (0)		
Loose brackets/ bands, Poking wire	0 (0)	18 (40)	27 (60)		
Loose brackets/ bands, Poking wire, Hurting retainer/ ulcers	0 (0)	3 (50)	3 (50)		
Loose brackets/ bands, Poking wire, Loose miniscrews, Hurting retainer/ ulcers	0 (0)	3 (100)	0 (0)		
Loose miniscrews	0 (0)	6 (66.67)	3 (33.33)		
None of the above	3(1.64)	72(39.34)	108(59.02)		
Poking wire	0 (0)	36 (60)	24 (40)		
Poking wire, Hurting retainer/ ulcers	0 (0)	9 (50)	9 (50)		
Poking wire, Loose miniscrews	0 (0)	3 (100)	0 (0)		
Poking wire, Loose miniscrews, Hurting retainer/ ulcers	0 (0)	3 (100)	0 (0)		
How did you handle the problem?					
By myself	0 (0)	54(47.37)	60(52.63)	.003**	23.699
Emergency appointment	0 (0)	18 (50)	18 (50)		
Local dentist	0 (0)	18(66.67)	9(33.33)		
None of the above	3	30(32.26)	63(67.74)		
Over a call with your Orthodontist	0 (0)	87(49.15)	90(50.85)		

* - Statistically significant difference (p<0.05); ** - Statistically highly significant difference (p<0.01)

during the pandemic and only 57.4% experiences mild to moderate pain. Majority reported back to the dentist due to loose bands or brackets (14%) or poking wire (13.3%). Other problems like loose mini-screws, hurting retainers/ulcers were also reported of, but they were not many.

% handled the problem over the call with their orthodontist and only 8% required an emergency appointment. Caprioglio et al and Suri et al have also mentioned in their article that the patients could handle emergencies themselves by a few simple solutions like using a nail cutter to cut the distal end of wire, use of wax to block the hurting wire or tube, etc [12,13].

This study revealed that about 60% of the participants were worried about the pandemic causing the delay in their treatment. Treatment length and patient compliance are inversely proportional to each other. This provides a possible explanation for the reduced patient compliance during the pandemic [14]. Twenty-four percent patients were not concerned about the pandemic causing the delay in treatment. This was in concordance with the results of survey performed by Shenoj et al [14]. This can be attributed to the external motivation for treatment or lack of interest.

Table 5: Association between demographic characteristic (age) and responses to the questions (significant findings) [Part 2].

Questions asked and responses	Age (years)			P Value	χ ²
	<10 n (%)	10-20 n (%)	>20 n (%)		
Did you have difficulty in contacting your Orthodontist during the pandemic?					
No	0 (0)	132(44.90)	162(55.10)	.002**	17.334
Sometimes	3(3.70)	33(40.74)	45(54.22)		
Yes	0 (0)	42 (56)	33 (64)		
What do you prefer your Orthodontist to do?					
Face shield	0 (0)	51	42	0.00**	94.188
Full PPE	0	33	48		
Full PPE, Face shield	0	0	3		
Full PPE, N95 Mask	3	6	6		
Full PPE, N95 Mask, Face shield	0	24	30		
N95 Mask	0	57	66		
N95 Mask, Face shield	0	36	45		
Are you satisfied with the protocols followed by your Orthodontist?					
No	0 (0)	3(14.29)	18(85.71)	.010*	9.294
Yes	3(0.70)	204(47.55)	222(51.75)		
What are you not satisfied with?					
Nil	0 (0)	9 (75)	3 (25)	.005**	34.203
No PPE/ Surgical gown was worn by your Orthodontist	0 (0)	6 (40)	9 (60)		
No PPE/ Surgical gown was worn by your Orthodontist, Unclean instruments	0 (0)	3 (100)	0 (0)		
No pulse oximeter/ Temperature gun check was done	0 (0)	0 (0)	12 (100)		
No pulse oximeter/ Temperature gun check was done, No PPE/ Surgical gown was worn by your Orthodontist	0 (0)	0(0)	3 (100)		
None of the above	3(0.79)	186(48.82)	192(50.39)		
Unclean instruments	0 (0)	3(16.67)	15(83.33)		
Unclean instruments, Unclean operatory	0 (0)	0 (0)	3 (100)		
Unclean instruments, Unclean operatory, None of the above	0 (0)	0 (0)	3 (100)		
Was there any resistance from your family to visit the Orthodontist during pandemic?					
Nil	0 (0)	0 (0)	6 (100)	.025*	14.459
Maybe	0 (0)	27(34.61)	51(65.39)		
No	3(1.10)	129(47.25)	141(51.65)		
Yes	0 (0)	51(54.84)	42(45.16)		

* - Statistically significant difference (p<0.05); ** - Statistically highly significant difference (p<0.01)

Questions pertaining to the standard of care taken by the orthodontist in the pandemic revealed that 60.7% patients felt that their Orthodontist took better care than before. 95.3% were satisfied with the protocols followed by their orthodontist. The 4.7% who were not satisfied had major concerns with the unclean instruments. Majority of the patients (27.3%) found the use of N95 mask alone adequate. About 18% respondents preferred their orthodontist to wear a PPE kit and about 12% wanted their Orthodontist to wear PPE kit+ mask+ face shield.

Significant relations were found between age and sex with reference to a few responses by the participants. There was a highly significant difference with high frequency for response mild pain and discomfort with females. Higher frequencies of females were concerned about there being a delay in their treatment due to the pandemic.

Highly significant difference with higher frequency in the age group > 20 years was found for less frequently visiting their orthodontist during the pandemic. They preferred handling their problem over the call with their orthodontist. Majority of the

respondents who were not satisfied with the protocols followed by their orthodontist were > 20 years of age. Resistance from the family to visit their orthodontist during the pandemic was more in 10-20 years of age, next in > 20 years of age. These all results imply the possibility of there being a greater fear of encountering COVID 19 in the age group > 20 years [15-18].

Limitation of this study included the sample chosen included patients undergoing treatment from varied period. The restrictions imposed have reduced with time with the gradual easing of the lockdown. Thus, the response would vary.

Significance

This study elaborates on the difficulties faced by the patients during the pandemic and the impact it had on their orthodontic treatment. With the emergence of different variants of coronavirus, this study will provide transitory changes for better patient management, in such uncertain situations in future.

A swift shift to effective electronic and postal means of communication is necessary. Incorporating illustrative videos,

Table 6: Association between demographic characteristic (sex) and responses to the questions (significant findings) [Part 1].

Questions asked and responses	Sex		P Value	χ ²
	Female	Male		
Did you feel any pain and discomfort from your appliance during the pandemic?				
Mild	105(71.43)	42(28.57)	0.000**	23.324
Moderate	54(48.65)	57(51.35)		
No pain	99(56.90)	75(43.10)		
Severe	9 (100)	0 (0)		
Worst possible	3(33.33)	6(66.67)		
What was the nature of your problem?				
Hurting retainer/ ulcers	42(82.35)	9(17.65)	0.000**	42.162
Loose brackets/ bands	39(61.90)	24(38.10)		
Loose brackets/ bands, Hurting retainer/ ulcers	3 (100)	0 (0)		
Loose brackets/ bands, None of the above	3 (100)	0 (0)		
Loose brackets/ bands, Poking wire	21(46.67)	24(53.33)		
Loose brackets/ bands, Poking wire, Hurting retainer/ ulcers	0 (0)	6 (100)		
Loose brackets/ bands, Poking wire, Loose miniscrews, Hurting retainer/ ulcers	0 (0)	3 (100)		
Loose miniscrews	6(66.67)	3(33.33)		
None of the above	108(59.02)	75(40.98)		
Poking wire	39 (65)	21 (35)		
Poking wire, Hurting retainer/ ulcers	9 (50)	9 (50)		
Poking wire, Loose miniscrews	0 (0)	3 (100)		
Poking wire, Loose miniscrews, Hurting retainer/ ulcers	0 (0)	3 (100)		
Did you have difficulty in contacting your Orthodontist during the pandemic?				
No	186(63.27)	108(36.73)	.049*	6.047
Sometimes	39(48.15)	42(51.85)		
Yes	45 (60)	30 (40)		
Do you feel your treatment will be delayed due to the pandemic?				
Maybe	45(62.5)	27(37.5)	.040*	6.424
No	75(69.44)	33(30.56)		
Yes	150(55.56)	120(44.44)		

* - Statistically significant difference (p<0.05)
 ** - Statistically highly significant difference (p<0.01)

reminder messages and video calls could manage the situation better. This would ensure constant contact with the patient and provide reassurance to the patient.

During this period, emphasis should be placed on maintaining proper oral hygiene practices. This would reduce the adverse effects of decalcifications, gingival recession and root resorption in the patient.

Conclusion

Even after all the challenges, 80.7% of the participants found it necessary to continue the treatment. Thus, it becomes necessary for the orthodontist to give their patients a sense of comfort and reassurance by regularly checking up on them, empathizing with them. This would assure the patient that their doctor cares for their treatment and this would improve the patient compliance in these difficult times. At the same time, they should be informed about the

Table 7: Association between demographic characteristic (sex) and responses to the questions (significant findings)[Part 2].

Questions asked and responses	Sex		P Value	χ ²
	Female	Male		
What do you prefer your Orthodontist to do?				
Face shield	60(64.52)	33(35.48)	0.000**	24.709
Full PPE	60(74.07)	21(25.93)		
Full PPE, Face shield	0 (0)	3 (100)		
Full PPE, N95 Mask	3 (20)	12 (80)		
Full PPE, N95 Mask, Face shield	30(55.56)	24(44.44)		
N95 Mask	75(60.98)	48(39.02)		
N95 Mask, Face shield	42(51.85)	39(48.15)		
How do you think is the standard of care provided by your Orthodontist?				
Better	150(54.95)	123(45.05)	.016*	8.209
Same as before	117(68.42)	54(31.58)		
Worse	3 (50)	3 (50)		
What are you not satisfied with?				
Nil	3(33.33)	9(66.67)	.003**	23.771
No PPE/ Surgical gown was worn by your Orthodontist	9 (60)	6 (40)		
No PPE/ Surgical gown was worn by your Orthodontist, Unclean instruments	3 (100)	0 (0)		
No pulse oximeter/ Temperature gun check was done	6 (50)	6 (50)		
No pulse oximeter/ Temperature gun check was done, No PPE/ Surgical gown was worn by your Orthodontist	3 (100)	0 (0)		
None of the above	231(60.63)	150(39.37)		
Unclean instruments	15(83.33)	3(16.67)		
Unclean instruments, Unclean operatory	0 (0)	3 (100)		
Unclean instruments, Unclean operatory, None of the above	0 (0)	3 (100)		
Were there any changes in fees for your Orthodontist?				
No	192(65.31)	102(34.69)	0.001**	13.818
Not applicable	42(58.33)	30(41.67)		
Yes	36(42.86)	48(57.14)		
Did you face any travelling issues to visit the Orthodontist during the pandemic?				
Maybe	36(63.16)	21(36.84)	0.001**	13.070
No	165(66.27)	84(33.73)		
Yes	69(47.92)	75(52.08)		
How do you usually commute for your appointments?				
Nil	0 (0)	3 (100)	0.003**	14.287
Private vehicle	114(55.07)	93(44.93)		
Public transport	120(61.54)	75(38.46)		
Walking	36 (80)	9 (20)		
Was there any resistance from your family to visit the Orthodontist during pandemic?				
Nil	0 (0)	6 (100)	0.000	18.404 ^a
Maybe	45(57.70)	33(42.30)		
No	180(65.94)	93(34.06)		
Yes	45(48.39)	48(51.61)		

* - Statistically significant difference (p<0.05); ** - Statistically highly significant difference (p<0.01)

seriousness of the pandemic and the required personal protection measures they should employ to reduce the spread. Only by increasing the awareness among the patients can the spread of this disease be reduced along with not having their treatment affected.

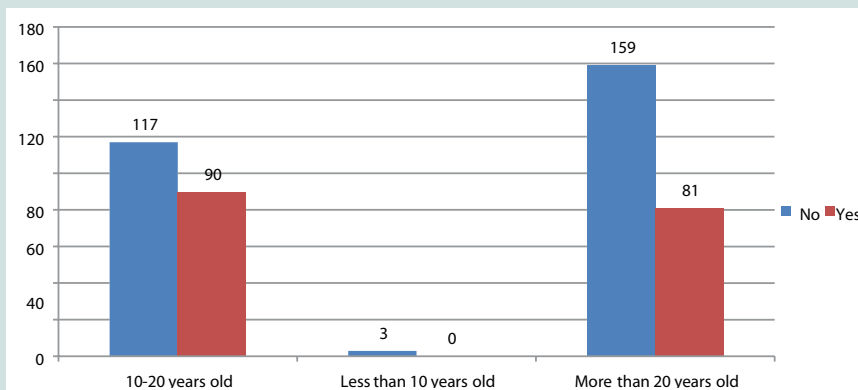


Figure 1: Did you encounter any breakages of your appliance during the pandemic? * Age group.

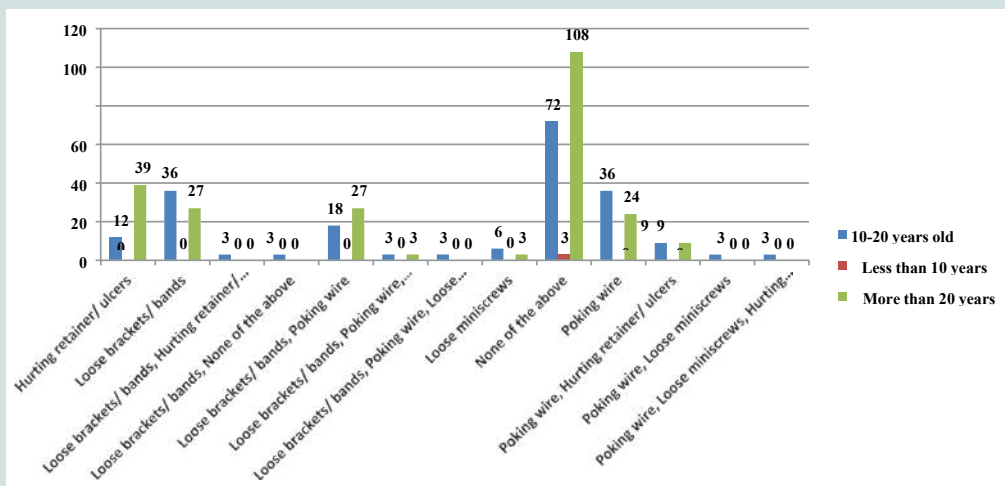


Figure 2: What was the nature of your problem? *Age group.

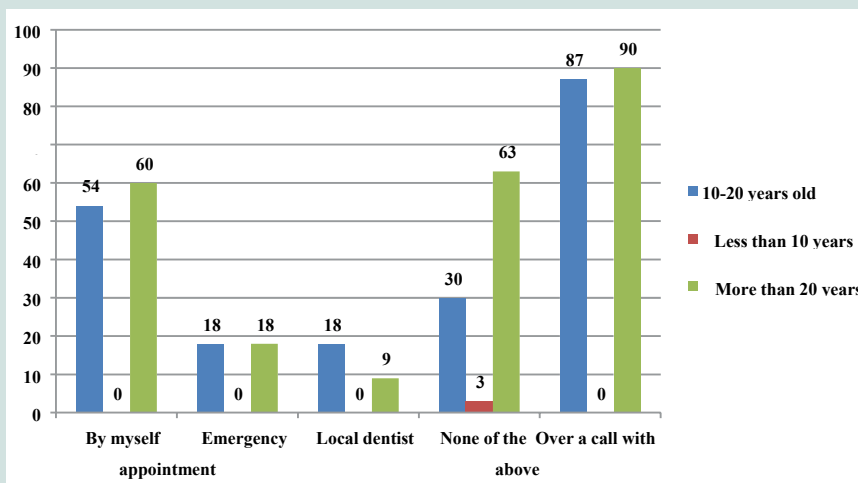


Figure 3: How did you handle the problem? *Age group.

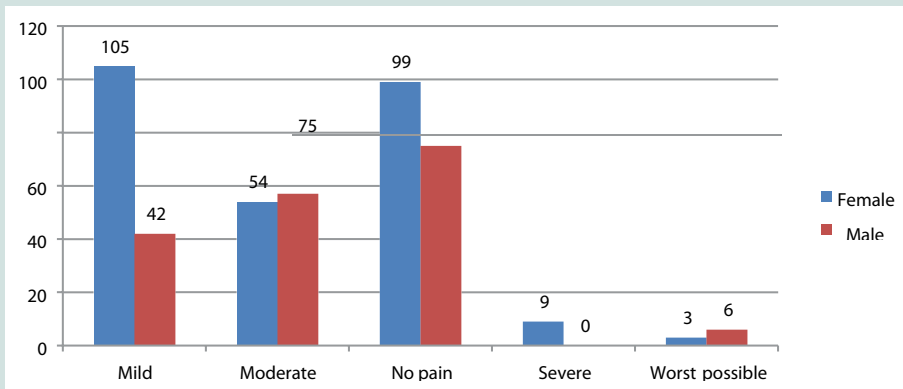


Figure 7: Did you feel any pain and discomfort from your appliance during the pandemic? *Sex.

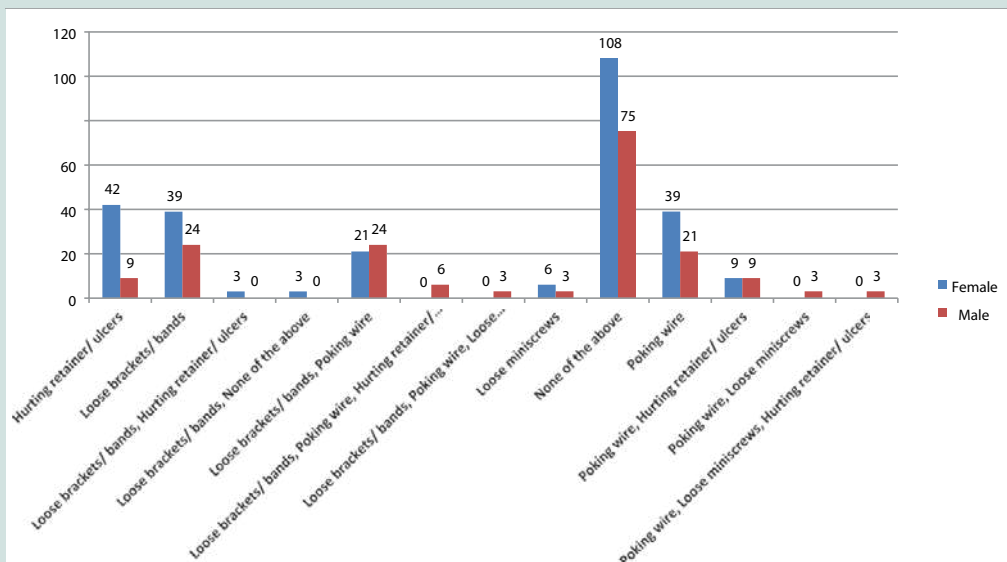


Figure 8: What was the nature of your problem? *Sex

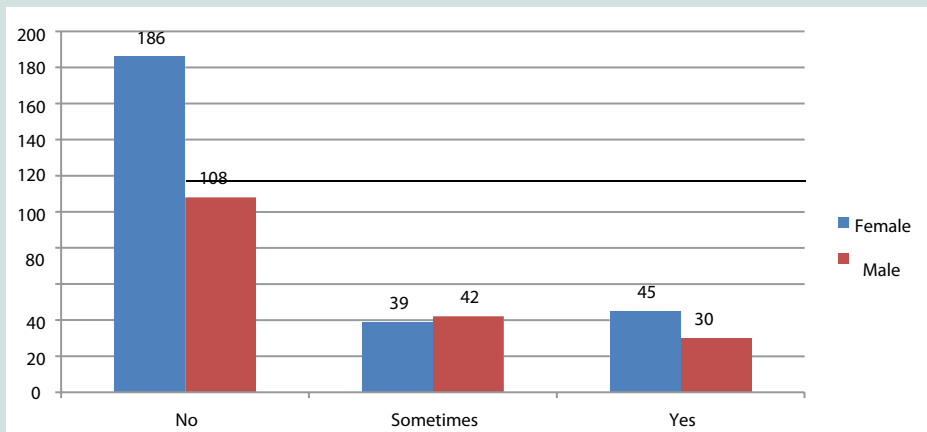


Figure 9: Did you have difficulty in contacting your Orthodontist during the pandemic? *Sex.

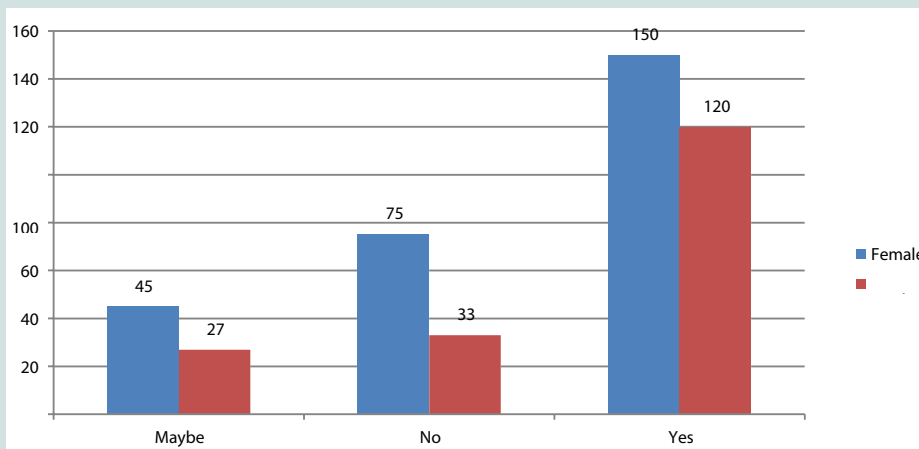


Figure 10: Do you feel your treatment will be delayed due to the pandemic? *Sex.

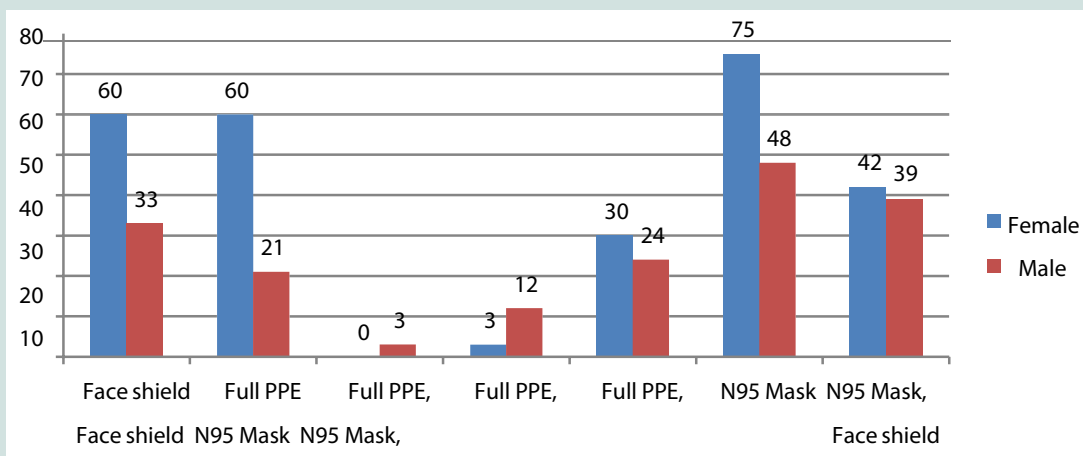


Figure 11: What do you prefer your Orthodontist to do? *Sex

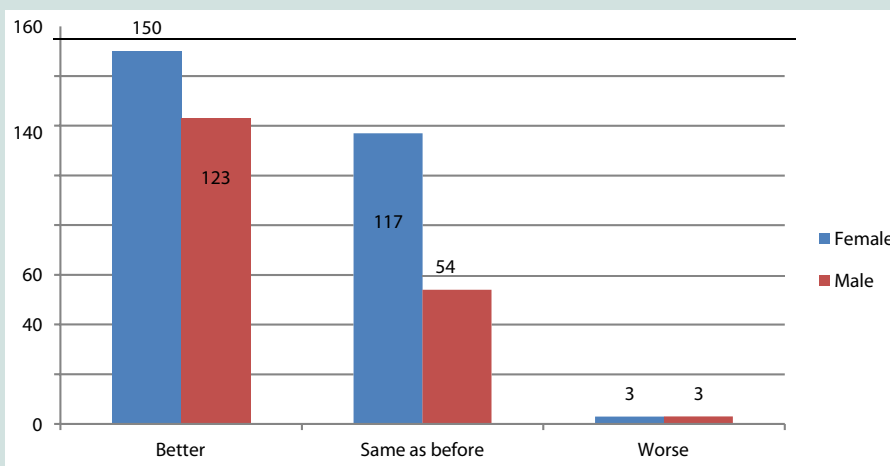


Figure 12: How do you think is the standard of care provided by your Orthodontist? * Sex

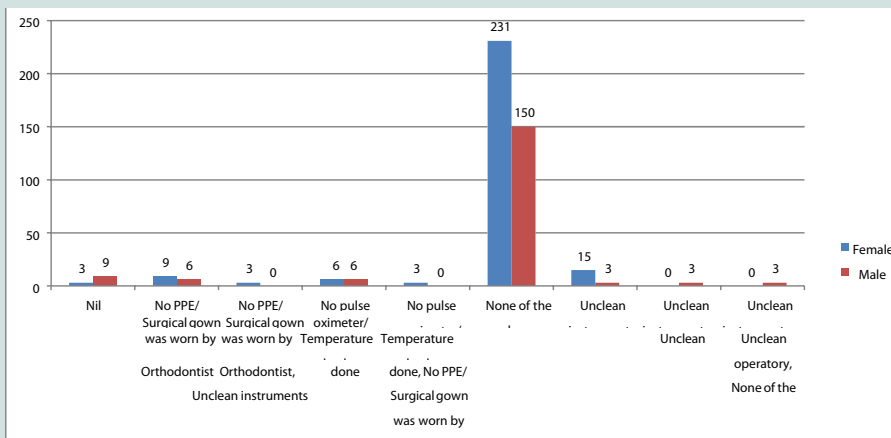


Figure 13: What are you not satisfied with? *Sex.

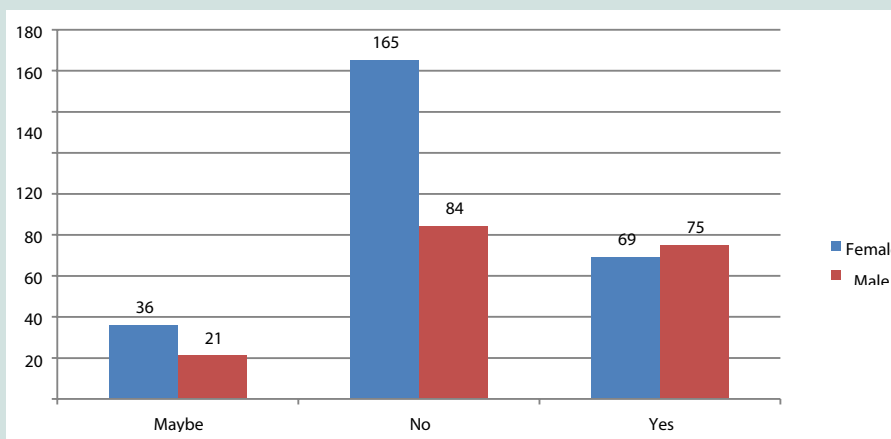


Figure 14: Did you face any travelling issues to visit the Orthodontist during the pandemic? *Sex.

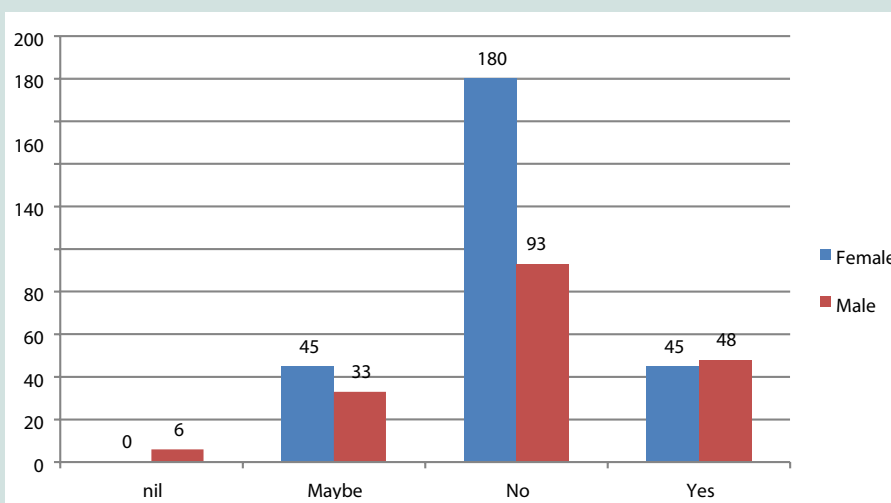


Figure 15: Was there any resistance from your family to visit the Orthodontist during pandemic? *Sex.

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