

OPINIONS AND FUTURE PLANS OF ORTHODONTIC RESIDENTS IN GUJARAT

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ABSTRACT:

Aim: The main aim of the study is to explore current orthodontic residents' opinions, demographics, their plans for the future. **Objective:** To evaluate the current perceptions of orthodontic residents on their future plans and to evaluate the interest between males and female on their future plans.

Materials And Methods: 98 residents of department of orthodontics from various colleges of Gujarat participated in the questionnaire study. Questionnaire was sent using google forms and necessary data were recorded. The participants opinion regarding their future orthodontic plans and goals were tabulated. **Results:** Most of the residents are willing to open their own dental clinic (71.4%) or a multi-speciality clinic (73.5%) after their post-graduation. Comparison between male and female showed statistically significant differences on planning to join military services, going abroad after postgraduation and working solely as a consulting orthodontist.

Conclusion Residents are willing to open their own dental clinic or a multi-speciality clinic after their post-graduations. Moreover, majority of residents are willing to keep up with the

technological advancement and artificial intelligence. Interest for conducting research significantly lowers over the period of residency which could be looked into. And lastly, there are areas where male and female have their differences regarding their career options. The data could be of the significant help as baseline data to conduct the same study at a national level. Changes in the curriculum keeping in mind the resident's interest with necessary skill and training can be incorporated.

Keywords: Orthodontic Residents, Gujarat, postgraduate, future plans.

INTRODUCTION

Orthodontics is a speciality that is continuously evolving, and both orthodontist and technological advancement greatly influences how it is carried out.¹ Even though there is little independent scientific data to support the effectiveness of these emerging technologies, orthodontists have demonstrated enthusiasm for and a desire to adopt them into their clinical practises. The attitudes and goals of orthodontic residents will likely influence the practise of orthodontics in the future, along with technological advancement.² There is hardly any study carried out in India and no study has been carried out in Gujarat to assess the future clinical practice plans of the orthodontics residents.

Knowing what residents have planned for the future can provide a glimpse into the future for the profession and help educators create the curriculum that will deliver the best education possible.³ Orthodontics has gained immense popularity as a postgraduate dental specialty program in India in the last decade. The Indian Orthodontic Society (IOS) offers a 3-year post-graduate level clinical training in the field of orthodontics. Gujarat currently has 98 residents including the government colleges and private universities. Several surveys have reported on the job satisfaction, lifestyle, career of orthodontic residents in the United States, Canada and United Kingdom (UK).⁴ These studies showed that most orthodontic residents were interested in private practice after graduation, with only a few expressing an interest in academics.⁵ Understanding the motivating factors behind dental students' decision to focus in orthodontics could reveal important information about how graduates generally see this field.⁶ However, no such study is being carried out in India.

Additionally, research into the future practise habits of orthodontic residents may reveal how this field is evolving. Educators can determine whether their programme structure fits the expectations of their residents by finding out what type of practice they expect to go into after graduation.⁷ Research, into the future practise habits of orthodontic residents may reveal how this field is changing. Also, Educators will be able to determine whether their programmes are keeping up with the most recent technical advancements in orthodontics and meeting the needs of their residents by finding out the precise procedures that orthodontic residents intend to use after graduation.⁸ They can then modify their curricula to guarantee that residents leave with the necessary information, instruction, and expertise in these methods.

Postgraduate orthodontic education is highly challenging and places great demands on both those studying this subject and those teaching, assessing and evaluating the process. Orthodontics was the first branch of dentistry to emerge and gain recognition as a specialty field in the world.⁹

The Indian Orthodontist society could use this data, if necessary, to change their course offerings. This would guarantee that orthodontic residents were happy with their residency programme and graduated with the necessary skills and training.

Hence, study aims to investigate the factors graduate students consider while deciding on an orthodontics career and their long-term goals.

The article looked into the motives, aspirations, perceptions, and future practise goals of Orthodontic residents in Gujarat who made this specialty choice. Moreover, article also provides an insight if orthodontic residents are willing to look into other career options other than orthodontics.

AIM OF THE STUDY

This study aimed to explore current orthodontic residents' opinions, demographics, their plans for the future considering various factors such as location, government jobs as well as their take on the digital orthodontics.

OBJECTIVES OF THE STUDY

- 1) To evaluate the current perceptions of orthodontic residents on their future plans.
- 2) To compare the percentage of interest between males and female on their future plans.
- 3) To compare the differences in the opinions between first, second and 3year orthodontic residents regarding their future aspirations.

MATERIALS AND METHODS

SAMPLE SIZE: 98

INCLUSION CRITERIA:

1. Orthodontic residents from various colleges Gujarat who are currently enrolled in post-graduation course in department of orthodontics and Dentofacial Orthopaedics in Gujarat.
2. Age group for the postgraduate students for kept between 20-35years.
3. Samples were selected irrespective of their gender.
4. Postgraduate students who are willing to consent to share their future plans and demographics.

EXCLUSION CRITERIA

1. Postgraduates in department other than orthodontics were not included.
2. Age group below 20 years and above 35 years.
3. Postgraduate students who were not willing to give their consent

DATA COLLECTION

- 1) The necessary permission for the study was obtained from department of orthodontics and Dentofacial Orthodontics, Narsinhbhai Dental college and Hospital, Sankalchand Patel University, Visnagar, Gujarat.
- 2) The following study is a questionnaire study where current orthodontic residents from all the 3 years in Gujarat were included.
- 3) Questionnaire was sent to them using a google form
- 4) The participants opinion regarding their future orthodontic plans and goals were taken.
- 5) The Questionnaire was filled up by 98 orthodontic residents.
- 6) Questions asked in the questionnaire were mostly related to future goals, marriage plans, whether they intended to join academics, military, if they wished to open a

private or multispecialty dental clinic or if they are willing work solely as a consultant orthodontist. Moreover, Their views on digital orthodontics were also taken into consideration.

- 7) Data were obtained and formulated in Microsoft Excel™
- 8) Data was tabulated according to the year of study, sex and the part of Gujarat they belonged to.
- 9) Statistical analysis was performed using the chi-square test with statistical significance defined as $P < 0.05$ and Fisher's Exact test and comparison was done according to the above-mentioned parameters.

RESULTS

98 Orthodontic residents from all over the Gujarat participated in the study.

Out of 98 students, 34 (34.6%) were studying in 1st year MDS, 33 (33.7%) in 2nd year MDS and 31 (31.7%) in 3rd year MDS. (Table 1)

Groups	Number	Percentages
1 st year PG	34	34.6
2 nd year PG	33	33.7
3 rd year PG	31	31.7
Total	98	100

Table 1: Group wise distribution

Out of 98 students, 28 (28.6%) were male and 70 (71.4%) were female.

Gender	Number	Percentages
Male	28	28.6
Female	70	71.4
Total	98	100

Out of 98 students, 41 (41.8%) were from Central zone, 19 (19.4%) from north zone and 38 (38.8%) from west zone.

Groups	Number	Percentages
Central	41	41.8
North	19	19.4
West	38	38.8
East	0	0
Total	98	100

FUTURE PLANS AFTER GRADUATION IN ORTHODONTIC RESIDENT

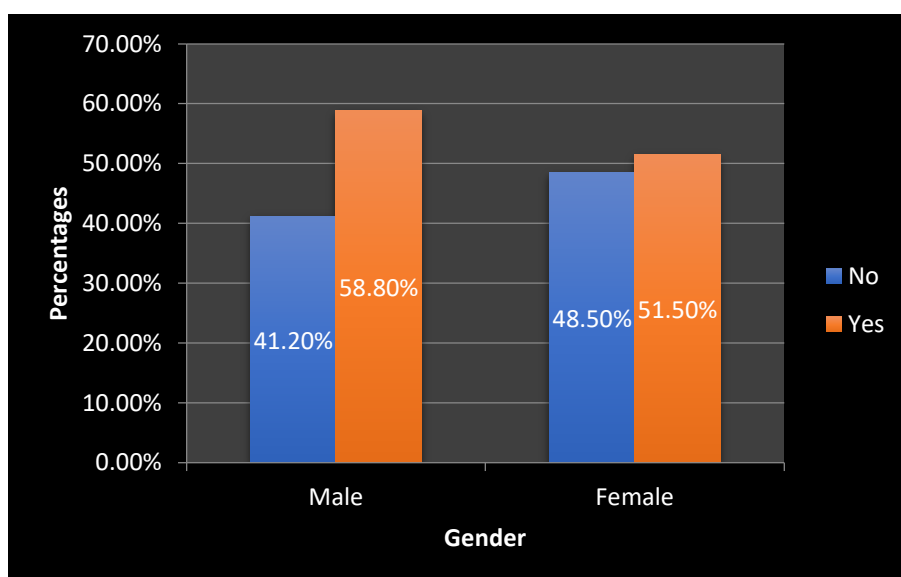
<u>Future plans</u>	<u>Percentage of participants who said yes</u>	<u>No of Participants who answered</u>
Working on salary basis in a dental set-up	57.2%	98
Want to purchase an existing dental set-up	56.1%	98

Open their own clinic after post-graduation	71.4%	98
Work solely as a consulting orthodontist	52%	98
Working in a corporate set-up	36.7%	98
Joining academic after post-graduation	46.9%	98
Pursue P.H.D after post-graduation	31.6%	98
To give competitive exams to join government hospitals	39.8%	98
Willing to join military	19.4%	98
Planning to move abroad	23.5%	98
Other career options after post-graduation	10%	98
Exclusive orthodontic practice after post-graduation	71.4%	98
Incorporate artificial intelligence	87.8%	98
Incorporate equipment's like intraoral scanner	88.8%	98
Opening a multi-specialty dental clinic	73.5%	98
Planning to do research	52%	98
Willing to marry someone from the field of orthodontics	59%	98

COMPARISON OF ORTHODONTIC RESIDENT'S FUTURE PLAN BY GENDER

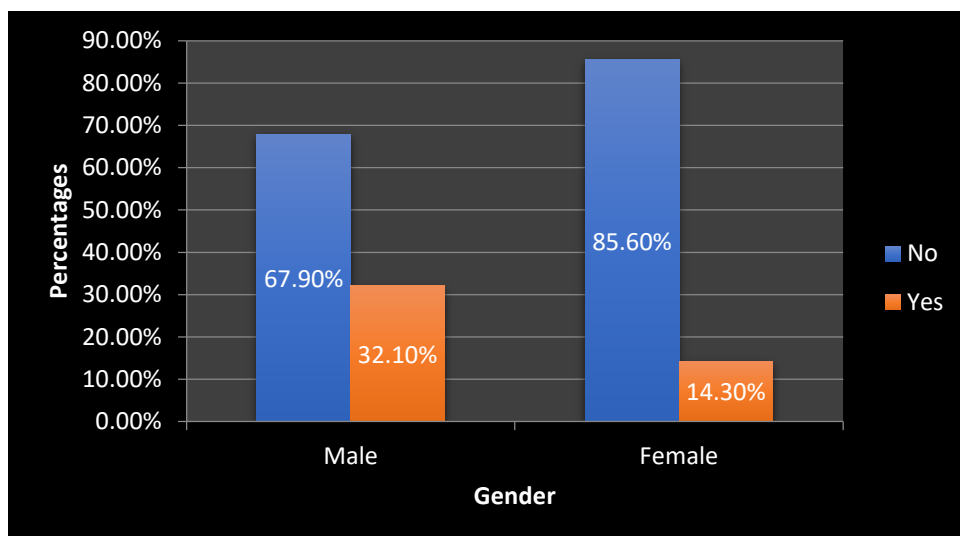
When future plans were compared between male and female, most of the questions concluded that the comparison was statistically insignificant. However, few questions did show a statistically significant results ($P < 0.05$):

About 67.9% male students and 45.7% female students would like to work solely as a consulting orthodontist. Statistically, significant difference was present between male and female students (Graph 1).



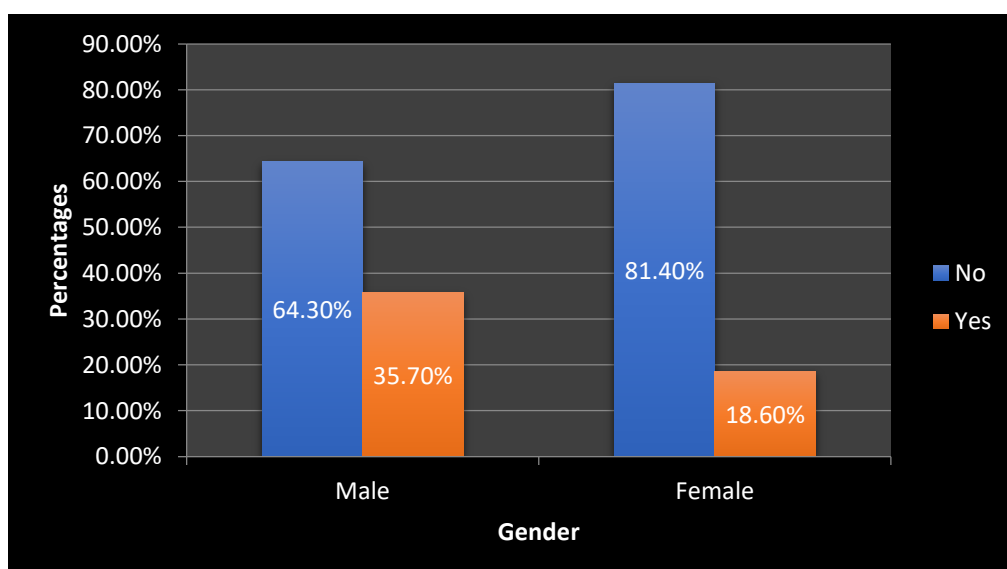
Graph 1: Comparison between male and female if they will be working solely as an Orthodontist

About 32.1% male students and 14.3% female students would like to join military service. Statistically, significant difference was present between male and female students. (Graph 2)



Graph 2: Comparison between male and female if they are willing to join military

About 35.7% male students and 18.6% female students would like to move abroad after post-graduation. Statistically, significant difference was present between male and female students (Graph 3)

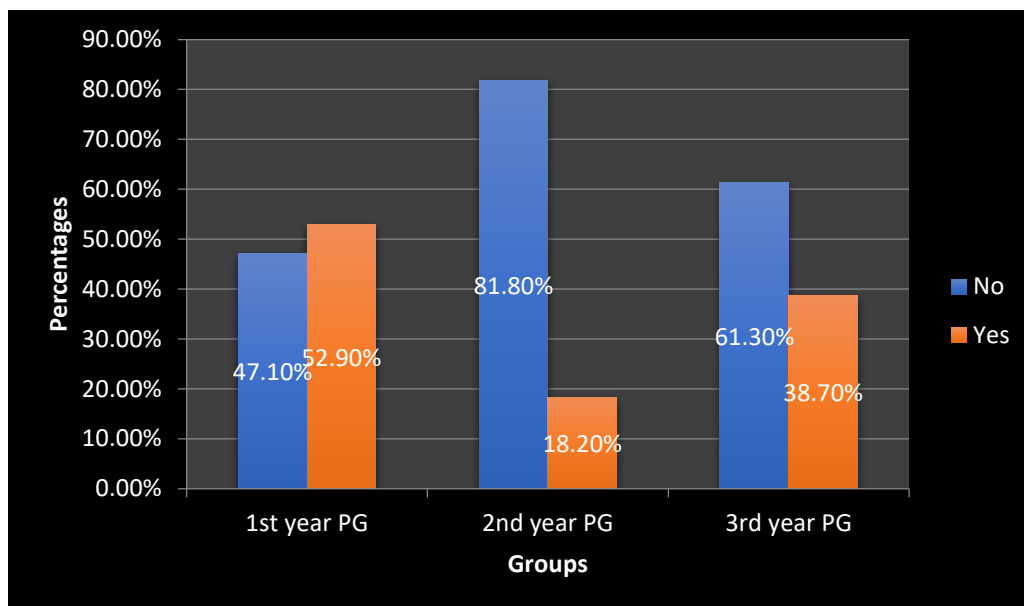


Graph 3: Comparison between male and female if they are willing to move abroad after post-graduation

COMPARISON OF ORTHODONTIC RESIDENT'S FUTURE PLAN BY YEAR OF STUDY

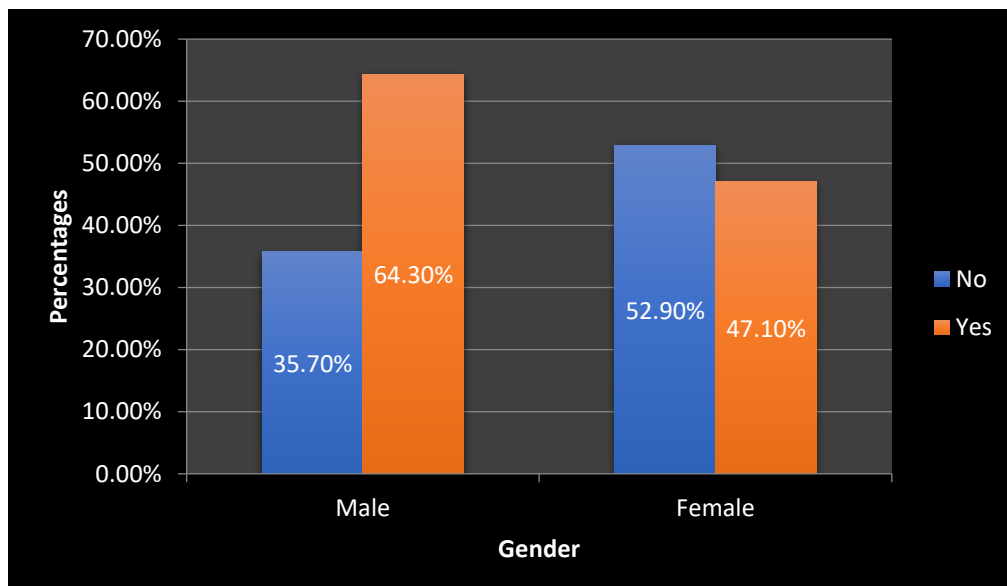
Future plans were compared between 1st year, 2nd year and 3rd year postgraduate, as seen with gender, only two questions were found to be statistically significant. It can be attributed that there are very less chances of postgraduates changing they're over the course of 3 years of post-graduation

Majority of the 1st year PG students (52.9%) would consider working in a corporate set up followed by 3rd year PG (38.7%) and 2nd year PG (18.2%) respectively. Statistically, significant difference was present among all the groups. (Graph 4)



Graph 4: Comparison between 1st, 2nd, and 3rd year post graduate if they are willing to work in a corporate set-up

Majority of the 1st year PG students (64%) would consider working in a corporate set up followed by 3rd year PG (51%) and 2nd year PG (33%) respectively. Statistically, significant difference was present among all the groups. (Graph 5)



Graph 5: Comparison between 1st, 2nd, and 3rd year post graduate if they are planning to do research after post-graduation.

DISCUSSION

Over the past 20 years, several studies have attempted to identify trends and evaluate new developments in orthodontic education.¹⁰ However, most studies surveyed graduate program directors rather than residents.¹¹

Most of the studies conducted earlier were from the United States, UK and Canada.¹² A study in the United States of America conducted a survey on current information on orthodontic residents' opinions, plans, and demographics. Moreover, Comparisons with previous surveys showed increases in female respondents, tuition costs, and decreases in stipends.¹³ (main article). When the study was carried out in Canadian orthodontic residents, they concluded that they would use modern techniques after graduation. Canadian orthodontic programs might find an exacerbation of the shortage of clinically based orthodontic researchers and full-time academics in the future and should consider measures to prevent this. Most orthodontic residents intend to enter urban or suburban private practices after graduation, and rural areas are at an increasing risk of being underserved (Canada residents).¹⁴ Another study carried out in Saudi Arabian orthodontic residents about 39% of residents chose orthodontic specialty after graduation, nearly 33% selected the career during the undergraduate education while the rest chose the specialty at other stages. Approximately, 67% of the residents chose orthodontic specialty because it is intellectually challenging. Around 25% of residents choose orthodontic to improve their earning and 39% join orthodontic for job. (Saudi Arabia).¹⁵

However, no such study was carried out in India and there is a vast difference in the culture and mindset of people when different countries are taken into consideration. Moreover, taking into the population of India there is a huge difference in the mindset between the states as well and hence to begin with orthodontic residents in Gujarat were taken into consideration.

Results from Orthodontic residents in Gujarat showed that they are most likely to open their own clinic (71.4%) or a multi-specialty dental clinic after their postgraduation is completed. Along with this, a high percentage of residents are willing to incorporate artificial intelligence and digital equipment into their routine orthodontic practice (88.8% and 87.8% respectively). There was a strong disagreement on joining military services (19.4%), moving abroad after residency (23.5%) and considering other carrier options (10%) other than orthodontics. Thus, most residents do not consider joining military or going abroad a lucrative option and very less percentage want to change the profession which is a much higher percentage when compared to the undergraduates.¹⁶ Similarly, when question was asked if they would pursue Doctor of philosophy (P.H.D) only 31.4% agreed with it, thus academics are not on the priority list of the residents. However, there has been a divided opinion on various other parameters. 57.2% were willing to work on a salaried basis in a dental setup which could be directly related to the low pay scale for dentists in India. Similarly, only 46.9% wanted to join academics which can again be attributed to the salary offered by various private institutions in India. Purchasing an existing dental set-up is another option in India due to the multiple dental clinics, 56.1% of orthodontist considered it to be a feasible option. Research is another area which has showed an upward trend in the recent years and so when residents were asked about it, 52% of the orthodontist are willing to do research. More than half of the residents (52%) want to exclusively practice as a consulting orthodontist. And lastly, opinions were taken if they are willing to marry someone from the field of orthodontics and 59% of them had a positive reply for the same.

When orthodontic resident from 1st, 2nd and 3rd year were compared very few parameters showed statistical significance. About 81% of the 1st year post graduate are willing to work in a corporate-set up which is statistically significant when compared to the 2nd and 3rd year residents. Similarly, 1st year orthodontic residents (73.5%) were more interested in the field of research as compared to the 2nd year (42.4%) and 3rd year postgraduate (38.7%). This could imply a changing trend towards the future. Hence, one can say that interest for research significantly decreased over period of three years. Other parameters were statistically insignificant and future plans and opinions will rarely change over the course of three years.

Comparison on Opinions, plans were also done between male and females, most of the males are willing to work solely as a consulting orthodontist compared to the females. When males and female's opinion were taken about joining military services, 32% males agreed to join the services which was more than twice that of females (14.3%).

Future studies should repeat similar surveys to gather current information and permit the analysis of trends among orthodontic residents. An attempt should be made to get a higher response rate of the total enrolled orthodontic residents by including orthodontic residents in India. Moreover, further investigation of potential differences in practice patterns between men and women is indicated because the percentage of female orthodontists continues to increase.¹⁷

CONCLUSIONS

The articles provide current information on orthodontic residents' opinions, plans, and demographics of Orthodontic residents in Gujarat. Most of the residents are willing to open their own dental clinic or a multi-speciality clinic after their post-graduations. Moreover, majority of residents are willing to keep up with the technological advancement and artificial intelligence. Interest for conducting research significantly lowers over the period of residency which could be looked into. And lastly, there are areas where male and female have their differences regarding their career options.

The data will help the Indian orthodontic society to use the data as baseline data to conduct the same study at a national level. Changes in the curriculum keeping in mind the resident's interest with necessary skill and training can be incorporated.

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