



Original Article

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## ***Role of Parents in Motivating Children for Orthodontic Treatment; A Cross-Sectional Study Done in Riyadh***

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### **ABSTRACT**

*This cross-sectional study aimed to assess the role of parents in motivating children for orthodontic treatment. The study subjects comprised parents and children who volunteered from different socio-economic classes and had different education levels. The role of parents in motivating children for orthodontic treatment was measured using a 15 items questionnaire. After ensuring the reliability of the questionnaire, differences across gender, education, and family income were seen using a statistical measure Chi-square through SPSS to determine the statistically significant differences ( $p < 0.05$ ). Findings revealed Forty-four percent were male participants, and fifty-five percent were female. Most parents completed their university (82%), and least just ended at the primary level (1.9%). Family income of greater sample falls between 20,000 Or more with stats of 40.3%. Female participants were in higher numbers and mostly parents wanted their child to wear braces for having a beautiful smile. In gender differences both gender wants the treatment for aesthetic purpose. University graduates were self-referred.*

**Key words:** *Parents, Motivation, Orthodontics, Early age, Cross-sectional, Riyadh*

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### **INTRODUCTION**

The most pressing task in modern orthodontics is to improve treatment efficacy, and finding new ways to influence this process is a never-ending pursuit. Orthodontic therapy is sought for a variety of reasons by both children and their parents. Determining and keeping this drive is critical to a positive outcome throughout therapy. If a patient's motivation wanes, his or her compliance may suffer, which might lead to an early treatment termination or a poor treatment outcome. To predict and increase compliance in new patients, several techniques have been presented. However, it has repeatedly been proven to be difficult. Demand for orthodontic treatment continues to rise, according to both orthodontists and dentists. Adults are increasingly seeking orthodontic treatment, which indicates a shift in the typical patient population [1].

An individual's beauty, aesthetics, and quality of life can be negatively impacted by dental and jaw irregularities. It is common knowledge that attractive individuals are perceived as friendlier, smarter, more fascinating, and more positive dispositions. When it comes to treating a variety of malocclusions and therefore improving quality of life, orthodontic treatment is a proven and successful method. However, little research has been done on the motivation to undertake treatment [2]. Taking into account the patient's somatic-psychological status and psycho-emotional condition during orthodontic treatment allows the best treatment option to be

selected and its efficacy to be predicted. When treating a kid for occlusal alterations, an orthodontist will exploit the parent's dominating role to their advantage. Because the family is the child's most important social group and decides how other variables will affect his or her development, the doctor's collaboration with the parents is an absolute need throughout orthodontic treatment. This is due in part to the belief that orthodontics would not only enhance their oral appearances but will also have positive effects on their overall health and well-being [3]. Appliance design innovations aiming at minimizing the appearance of orthodontic equipment or enhancing their efficiency, along with the use of current marketing and promotional tactics by orthodontic companies, may also have contributed to the transformation [4]. According to Rolland *et al.* (2016), Orthodontic treatment for children has risen in demand and availability over the last 30 years despite the NHS providing somewhat less care in 2016–2017 than in 2015–2016 (Health and Social Care Information Centre, 2017) [5].

The process of moving from need to motive goes like this: first, a person feels the need for something, then becomes conscious of the need (motivation), and last, a rational decision arises, i.e., a motive is created. However, motivation is more than just a desire to do something. For the same reason that cognition and action are intertwined, determining the process of cognition is also crucial. Despite this, only the child's parents complain to the doctor about their child's true morphological, functional, and cosmetic problems. Orthodontic therapy is often reserved for adolescents and young adults, and it might take a long time compared to other types of dental care. It was shown that thorough orthodontic treatment takes, on average, 2 years to complete, based on prospective research carried out in academic settings [6].

Orthodontic patients must follow the treatment orthodontist's advice to the letter during treatment. After it is completed, it is possible to describe treatment motivation as a hypothesis describing the conscious or unconscious stimulus for activity in the direction of the desired goal. Children and their parents pick braces for a variety of reasons. One of the less obvious responsibilities of a professional orthodontist is to discover the types of motivation involved (if any) and maintain them during treatment. This is critical if the intended results are to be obtained. Clinical practitioners are all too aware that as a patient's desire wanes, so does compliance. This can result in early treatment discontinuation, a worse outcome, or even harm the patient's dentition [7].

#### *Literature review*

A study was conducted in Russia to examine the role of parents in motivating Orthodontic treatment for their children. In a study, the total sample of 532 children from the age group of 6-12 was included. From the total sample, 26.8% showed poor self-discipline during treatment and did not regularly attend to the doctor. Almost 13.4% discontinued the treatment. The findings show that children with dent facial anomalies between the ages of 6 and 12 who receive informative and illustrative knowledge from their parents about the importance and complexity of orthodontic treatment at all stages are more likely to be motivated to undergo this time-consuming procedure [8].

Research of 227 patients and their parents in the United States compared participants' motivation for treatment with their subsequent participation. 3 The authors observed that 93.4 percent of the youngsters ranked aesthetic concerns as the most significant reason for seeking orthodontic treatment. They also highlighted that the higher the patient's motivation before treatment, the better their cooperation looked during treatment. Another research of 207 teenage patients found that parents played an essential role in orthodontic treatment decisions. According to the findings, parents accounted for 41% of the original motivation for treatment, and the general dentist recommended orthodontic treatment [9].

Another study reported in the Journal of Orthodontics that over 80% of respondents were disturbed by how their teeth looked and wanted a brace to fix that problem. In that order of significance, potential patients had the most prevalent concerns about their teeth' crookedness, jutting out, bite, gaps, and color. 13 percent of those surveyed had been subjected to dental taunts, whereas 67 percent were eager to acquire braces, while 81% had acquaintances with braces and 60 percent had relatives with braces. Seventy-seven percent of the time, the referral was made by the patient's dentist. Over 67% of those polled said they were unconcerned about having braces, and a comparable number of those polled said they knew someone with braces or had a family member who did. While most patients knew that having braces meant changing their diet (98 percent) and cleaning their teeth more frequently (94 percent), 24 percent of patients had no idea how often they should do so while in treatment. Seventy-seven percent of parents' visits were the result of a referral from the dentist. The majority of parents (77%) agreed that orthodontic treatment was essential for their children's oral health. In comparison, the majority (57%) said it would improve their child's smile, 64% said that it would make tooth brushing easier, 63% said that it would improve their child's bite, and 70% said that it would boost their child's self-esteem and

confidence. One-fifth thought therapy would take between one and two years, with the remaining one-fifth stating that it would take less than one year [10].

## MATERIALS AND METHODS

This is cross-sectional research carried out among the patients and their families in Riyadh by an online survey. Hospitals and clinics in Riyadh were contacted and participants were requested to fill up the survey. The online questionnaire was formed including questions about personal and demographic data followed by questions linked to their opinion and preference regarding orthodontic treatment among their children. The gathered data was analyzed using SPSS version 22, where descriptive as well as inferential statistics were performed. Comparisons between groups will be made with the value of significance kept under 0.05 using the Chi-square test.

## RESULTS AND DISCUSSION

In results, **Table 1** tells about the frequency of this study. Forty-four percent were male participants, and fifty-five percent were female. Most parents completed their university (82%), and least just ended at the primary level (1.9%). Family income of greater sample falls between 20,000 Or more with stats of 40.3%. 51.9% of the parent has worn braces in their past, and the same percentage was suggested getting this treatment for their child, and firstly parents suggested braces to their child (37.6%), 66.2% think that it is important for their child to have straight teeth, while 75.2% says it would improve their child's smile. 51.9% consider it a lengthy process that takes approximately one to two years, 26.5% think they should wear it for one to two years. 47.6% said they would not allow their kid to miss school to undergo treatment. 51.9% were excited to see their kid after treatment, while 53.3% think the cost is a discouraging factor for treatment, and 38.65 think the length of treatment (**Table 1**).

Table 2 tells about gender differences and reports that male participants wore braces in their past 44.5%, while only 38% of females wore them ever in their life. 87% of females were suggested to get this treatment for their child from someone else, but the first decision was their own. 53% of males consider it quite important to have straight teeth, while 50% of females thought it was very important for their child. Both male and female parents think it would improve their kid's smiles. Male participants thought that this process would approximately take 2 years, while females believed it would take less than a year. Fathers said a big no in concern of missing school for treatment, but mothers said yes. Both parents did not agree if treatment costs health teeth for braces insertion. Mothers said that their children never got a piece of advice from dentists on how to clean their teeth (**Table 2**).

**Table 3** tells about differences across education and reports that Most of the participants were university students or graduates, and family income was 20,000 or more. Most University graduates did not wear braces while high school wore them in their life. University graduates got suggestions from others for braces while high school approaches on their own. In university graduates, a referral was from their child, while high schools were self-referred. University graduates think it very important for their kid to have straight teeth and thought it would make their kid's speech better; past research reported that 54% of parents wanted good appearance for their kid while 75% were those having dissatisfaction with teeth and least thought it would make their speech better. **Table 4** tells about differences across family income.

**Table 1.** Frequencies of survey responses

Variable	Frequency Percentage
<b>Gender</b>	
Male	94(44.5%)
Female	116(55.5%)
<b>Education</b>	
Primary or less	4(1.9%)
Secondary	10(4.7%)
High school	23(10.9%)
University	173(82%)
<b>Family Income</b>	
10,000 or less	46(21.8%)
10,000-20,000	79(37.4%)

20,000 or more	85(40.3%)
<b>Have you ever worn braces in the past?</b>	
Yes	109(51.9)
No	101(48.1%)
<b>Has anyone suggested orthodontic treatment for your child?</b>	
Yes	109(51.9%)
No	101(48.1%)
<b>If Yes, who first suggested your child needs a brace?</b>	
I did	79(37.6%)
My child	16(7.6%)
The dentist	66(31.4%)
Friend/Family	49(23.3%)
<b>How important do you think it is for your child to have straight teeth?</b>	
Very important	139(66.2%)
Quite important	45(21.4%)
Not important	26(12.4%)
<b>What benefits do you think having straight teeth will give your child?</b>	
Improve their smile	158(75.2%)
Make it easier for them to keep their teeth clean	14(6.7%)
Make their bite better	27(12.9%)
Make their speech better	11(5.2%)
None	00
<b>How long do you think a course of braces takes on average?</b>	
Less than 6 months	10(4.8%)
Under a year	24(11.4%)
Between one and two years	109(51.9%)
Over two years	25(11.8%)
Do not know	42(20%)
<b>Following treatment, patients are asked to wear retainers, which are removable braces designed to keep the teeth straight. How long on average do you think patients have to wear retainers following treatment?</b>	
Less than 6 months	27(12.9%)
Under a year	41(19.5%)
Between one and two years	55(26.2%)
Over two years	39(18.6%)
Do not know	47(22.4%)
<b>Do you mind your child missing school to undergo treatment?</b>	
Yes	67(31.9%)
No	100(47.6%)
It depends on how much	43(20.5%)
<b>Would it stop you from letting your child have a treatment if they needed to have healthy teeth out before the brace could be fitted?</b>	
Yes	128(61%)
No	82(39%)
<b>Has your child ever been advised about how to clean their teeth by the dentist or hygienist?</b>	
Yes	48(22.9%)
No	128(61%)
I cannot remember	34(16.2%)

<b>I was really excited when thinking about the way my child would look after orthodontic treatment:</b>	
Strongly disagree	23(11%)
Agree	9(4.3%)
Neutral	46(21.9%)
Agree	23(11%)
Strongly agree	109(51.9%)
<b>I often thought about how easier it would be for my child to chew after orthodontic treatment.</b>	
Strongly disagree	9(4.3%)
Agree	26(12.4%)
Neutral	53(25.1%)
Agree	27(12.9%)
Strongly agree	95(45.2%)
<b>I often thought how easier it would be for my child to speak after orthodontic treatment:</b>	
Strongly disagree	15(7.1%)
Agree	15(7.1%)
Neutral	39(18.6%)
Agree	28(13.3%)
Strongly agree	113(53.8%)
<b>Is cost a discouraging factor in choosing orthodontic treatment?</b>	
Yes	112(53.3%)
Little bit	39(18.6%)
No	59(28.1%)
<b>Is long treatment time a discouraging factor in choosing orthodontic treatment?</b>	
Yes	81(38.6%)
Little bit	38(18%)
No	91(43.3%)

**Table 2.** Comparison across Gender

Variable	Male	Female	p-value
<b>Have you ever worn braces in the past?</b>			
Yes	44.5%	38%	.897
No	55.5%	52%	
<b>Has anyone suggested orthodontic treatment for your child?</b>			
Yes	37%	87%	.135
No	53%	13%	
<b>If Yes, who first suggested your child needs a brace?</b>			
I did	22%	35%	.345
My child	33%	20%	
The dentist	35%	30%	
Friend/Family	10%	15%	
<b>How important do you think it is for your child to have straight teeth?</b>			
Very important	17%	50%	.887
Quite important	53%	35%	
Not important	30%	15%	
<b>What benefits do you think having straight teeth will give your child?</b>			
Improve their smile	35%	45%	.135
Make it easier for them to keep their teeth clean	25%	15%	
Make their bite better	30%	25%	
Make their speech better	10%	25%	
None	00	00	

<b>How long do you think a course of braces takes on average?</b>			
Less than 6 months	15%	25%	
Under a year	25%	35%	
Between one and two years	35%	25%	
Over two years	20%	15%	.253
Do not know	5%	10%	
<b>Following treatment, patients are asked to wear retainers, which are removable braces designed to keep the teeth straight. How long on average do you think patients have to wear retainers following treatment?</b>			
Less than 6 months	24%	15%	
Under a year	16%	35%	
Between one and two years	15%	25%	
Over two years	25%	25%	
Do not know	20%	00	.543
<b>Do you mind your child missing school to undergo treatment?</b>			
Yes	35%	45%	
No	55%	15%	
It depends on how much	30%	40%	.231
<b>Would it stop you from letting your child have a treatment if they needed to have healthy teeth out before the brace could be fitted?</b>			
Yes	55%	67%	
No	45%	33%	.324
<b>Has your child ever been advised about how to clean their teeth by the dentist or hygienist?</b>			
Yes	48%	56%	
No	41%	59%	
I cannot remember	59%	41%	.086
<b>I was really excited when thinking about the way my child would look after orthodontic treatment:</b>			
Strongly disagree	23%	73%	
Agree	67%	33%	
Neutral	56%	44%	
Agree	61%	39%	.093
Strongly agree	39%	61%	
<b>I often thought about how easier it would be for my child to chew after orthodontic treatment.</b>			
Strongly disagree	22%	78%	
Agree	50%	50%	
Neutral	47%	53%	
Agree	63%	37%	.138
Strongly agree	39%	61%	
<b>I often thought how easier it would be for my child to speak after orthodontic treatment:</b>			
Strongly disagree	27%	73%	
Agree	27%	73%	
Neutral	59%	41%	
Agree	61%	39%	.543
Strongly agree	41%	59%	
<b>Is cost a discouraging factor in choosing orthodontic treatment?</b>			
Yes	42%	58%	
Little bit	44%	56%	
No	51%	49%	.186
<b>Is long treatment time a discouraging factor in choosing orthodontic treatment?</b>			
Yes	47%	53%	
Little bit	44%	56%	

No	47%	53%	.456
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**Table 3.** Comparison across Education

Variable	Primary or less	Secondary	High school	University	p-value
<b>Gender</b>					
Male	3%	4%	7%	85%	.065
Female	0.8%	5.2%	13%	81%	
<b>Family Income</b>					
10,000 or less	2%	13%	24%	61%	.564
10,000-20,000	2%	2%	6%	80%	
20,000 or more	1%	2%	8%	89%	
<b>Have you ever worn braces in the past?</b>					
Yes	1%	6%	12%	78%	.342
No	2.5%	2.5%	10%	85%	
<b>Has anyone suggested orthodontic treatment for your child?</b>					
Yes	1%	6%	10%	83%	.243
No	2%	3%	12%	83%	
<b>If Yes, who first suggested your child needs a brace?</b>					
I did	2%	10%	38%	50%	.123
My child	00%	00%	25%	75%	
The dentist	00%	3%	35%	62%	
Friend/Family	4%	6%	20%	70%	
<b>How important do you think it is for your child to have straight teeth?</b>					
Very important	10%	20%	25%	55%	.324
Quite important	15%	35%	20%	30%	
Not important	12%	28%	15%	45%	
<b>What benefits do you think having straight teeth will give your child?</b>					
Improve their smile	2%	7%	10%	83%	.135
Make it easier for them to keep their teeth clean	00%	00%	27%	77%	
Make their bite better	4%	4%	11%	81%	
Make their speech better	00%	00%	9%	91%	
None	00%	00%	00%	00%	
<b>How long do you think a course of braces takes on average?</b>					
Less than 6 months	1%	00%	2%	70%	.253
Under a year	00%	4%	20%	66%	
Between one and two years	1%	5%	8%	86%	
Over two years	00%	4%	16%	80%	
Do not know	5%	2%	7%	86%	
<b>Following treatment, patients are asked to wear retainers, which are removable braces designed to keep the teeth straight. How long on average do you think patients have to wear retainers following treatment?</b>					
Less than 6 months	4%	7%	7%	82%	.543
Under a year	2%	10%	17%	71%	
Between one and two years	2%	4%	11%	83%	
Over two years	3%	00%	5%	92%	
Do not know	00%	4%	13%	83%	
<b>Do you mind your child missing school to undergo treatment?</b>					
Yes	00%	3%	9%	88%	.231
No	2%	8%	10%	80%	
It depends on how much	7%	5%	16%	72%	

<b>Would it stop you from letting your child have a treatment if they needed to have healthy teeth out before the brace could be fitted?</b>					
Yes	4%	2%	16%	78%	
No	0%	7%	8%	85%	.324
<b>Has your child ever been advised about how to clean their teeth by the dentist or hygienist?</b>					
Yes					
No	00%	5%	9%	86%	
I cannot remember	2%	2%	10%	86%	.086
	6%	8%	18%	68%	
<b>I was really excited when thinking about the way my child would look after orthodontic treatment:</b>					
Strongly Agree	00%	4%	13%	83%	
Agree	11%	11%	22%	56%	
Neutral	2%	9%	11%	78%	
Disagree	4%	4%	14%	78%	
Strongly disagree	00%	4%	9%	87%	.093
<b>I often thought about how easier it would be for my child to chew after orthodontic treatment.</b>					
Strongly agree	00%	00%	11%	89%	
Agree	00%	4%	15%	81%	
Neutral	00%	8%	9%	83%	
Disagree	7%	4%	4%	85%	
Strongly disagree	2%	4%	13%	81%	.138
<b>I often thought how easier it would be for my child to speak after orthodontic treatment:</b>					
Strongly disagree	00%	00%	13%	87%	
Agree	00%	7%	26%	67%	
Neutral	5%	8%	13%	74%	
Agree	4%	7%	7%	82%	.543
Strongly agree	00%	4%	9%	87%	
<b>Is cost a discouraging factor in choosing orthodontic treatment?</b>					
Yes	00%	4%	11%	85%	
Little bit	8%	8%	13%	72%	
No	2%	3%	10%	85%	.186
<b>Is long treatment time a discouraging factor in choosing orthodontic treatment?</b>					
Yes	1%	4%	11%	84%	
Little bit	3%	8%	18%	71%	
No	2%	4%	8%	86%	.456

**Table 4.** Comparison across Family Income

Variable	10,000 or less	10,000-20,000	20,000 or more	p-value
<b>Gender</b>				
Male	16%	34%	50%	.231
Female	27%	40%	33%	
<b>Have you ever worn braces in the past?</b>				
Yes	24%	44%	32%	.251
No	20%	32%	48%	
<b>Has anyone suggested orthodontic treatment for your child?</b>				
Yes	19%	50%	31%	.231
No	24%	27%	49%	



<b>If Yes, who first suggested your child needs a brace?</b>				
I did				
My child	23%	35%	42%	
The dentist	19%	31%	50%	.231
Friend/Family	22%	45%	33%	
	22%	33%	45%	
<b>How important do you think it is for your child to have straight teeth?</b>				
Very important	20%	42%	38%	
Quite important	24%	36%	40%	.435
Not important	31%	15%	54%	
<b>What benefits do you think having straight teeth will give your child?</b>				
Improve their smile	21%	38%	41%	
Make it easier for them to keep their teeth clean	43%	21%	36%	
Make their bite better	15%	48%	37%	.432
Make their speech better	27%	27%	46%	
None	00%	00%	00%	
<b>How long do you think a course of braces takes on average?</b>				
Less than 6 months	20%	20%	60%	
Under a year	42%	13%	45%	
Between one and two years	18%	52%	30%	
Over two years	32%	36%	32%	.176
Do not know	14%	19%	67%	
<b>Following treatment, patients are asked to wear retainers, which are removable braces designed to keep the teeth straight. How long on average do you think patients have to wear retainers following treatment?</b>				
Less than 6 months	26%	33%	41%	
Under a year	20%	39%	41%	
Between one and two years	24%	56%	20%	
Over two years	18%	33%	49%	.235
Do not know	23%	19%	57%	
<b>Do you mind your child missing school to undergo treatment?</b>				
Yes	18%	44%	38%	
No	28%	37%	34%	.543
It depends on how much	21%	23%	56%	
<b>Would it stop you from letting your child have a treatment if they needed to have healthy teeth out before the brace could be fitted?</b>				
Yes	28%	40%	32%	
No	18%	36%	46%	.176
<b>Has your child ever been advised about how to clean their teeth by the dentist or hygienist?</b>				
Yes	21%	40%	39%	
No	23%	48%	29%	
I cannot remember	24%	15%	61%	.122
<b>I was really excited when thinking about the way my child would look after orthodontic treatment:</b>				
Strongly Agree	17%	57%	26%	
Agree	22%	44%	34%	
Neutral	28%	35%	37%	
Disagree	13%	26%	61%	.162
Strongly disagree	22%	37%	41%	
<b>I often thought about how easier it would be for my child to chew after orthodontic treatment.</b>				
Strongly agree	33%	22%	45%	

Agree	16%	46%	38%	
Neutral	23%	30%	47%	
Disagree	15%	44%	41%	.138
Strongly disagree	24%	39%	37%	
<b>I often thought how easier it would be for my child to speak after orthodontic treatment:</b>				
Strongly disagree	13%	27%	60%	
Agree	33%	40%	27%	
Neutral	18%	44%	38%	
Agree	25%	32%	43%	.251
Strongly agree	22%	38%	40%	
<b>Is cost a discouraging factor in choosing orthodontic treatment?</b>				
Yes	21%	41%	38%	
Little bit	23%	23%	54%	.234
No	24%	40%	36%	
<b>Is long treatment time a discouraging factor in choosing orthodontic treatment?</b>				
Yes	22%	36%	42%	
Little bit	18%	29%	53%	
No	23%	43%	34%	.342

The present study was aimed to examine the role of parents in motivation for orthodontic treatment for children. After ensuring the reliability of the questionnaire, differences across gender, education, and family income were seen using a statistical measure Chi-square through SPSS. In the first part of the descriptive analysis frequency of the sample was obtained and reported following findings. In the whole sample, forty-four percent were male participants, and fifty-five percent were female. Most parents completed their university (82%), and least just ended at the primary level (1.9%). Family income of greater sample falls between 20,000 Or more with stats of 40.3%. 51.9% of the parent has worn braces in their past, and the same percentage was suggested getting this treatment for their child, and firstly parents suggested braces to their child (37.6%), but studies report referral from dentists Geoghegan, F. *et al.*, (2019). 66.2% think that it is important for their child to have straight teeth, while 75.2% say it would improve their child's smile. 51.9% consider it a lengthy process that takes approximately one to two years, 26.5% think they should wear it for one to two years. 47.6% said they would not allow their kid to miss school to undergo treatment. 51.9% were excited to see their kid after treatment, while 53.3% think the cost is a discouraging factor for treatment, and 38.65 think the length of treatment.

In the main analysis, gender differences were studied. Male participants wore braces in their past 44.5%, while only 38% of females wore them ever in their life. 87% of females were suggested to get this treatment for their child from someone else, but the first decision was their own. 53% of males consider it quite important to have straight teeth, while 50% of females thought it was very important for their child. Both male and female parents think it would improve their kid's smiles. It is also evident from previous research that 90% of parents and patients take this treatment for esthetic purposes, and parents agreed that it would improve their kid's smile [10, 11]. Male participants thought that this process would approximately take 2 years, while females believed it would take less than a year. Fathers said a big no in concern of missing school for treatment, but mothers said yes. Both parents did not agree if treatment costs health teeth for braces insertion. Mothers said that their children never got a piece of advice from dentists on how to clean their teeth, but studies reported opposite to it and said they knew how to clean teeth properly Geoghegan, F. *et al.*, (2019). Male thought lengthy procedure a discouraging factor for treatment while females thought cost a discouraging factor.

In subsequent analysis, differences across education were examined. Most of the participants were university students or graduates, and family income was 20,000 or more. Most University graduates did not wear braces while high school wore them in their life. University graduates got suggestions from others for braces while high school approaches on their own. In university graduates, a referral was from their child, while high schools were self-referred. University graduates think it very important for their kid to have straight teeth and thought it would make their kid's speech better; past research reported that 54% of parents wanted good appearance for their kid while 75% were those having dissatisfaction with teeth and least thought it would make their speech better Geoghegan, F. *et al.*, (2019). Response on cost a discouraging factor equal no participants having higher

education agreed and disagreed but on time mostly agreed, while other 3 groups thought it a little bit discouraging.

Next, differences based on income were examined. The study reported that male participants have an income of 20,000 or more while females have 10,000-20,000. Participants from the 2<sup>nd</sup> group of income have mostly worn braces in their past life and got suggestions from someone else. Mostly got a referral for this treatment from their dentists in the 2<sup>nd</sup> income group and their child in the 3<sup>rd</sup> group. The study also reports most referrals from dentists; for 77%, the visit had been initiated by the dentist Geoghegan, F. *et al.*, (2019). Middle-income families consider it very important for their child to have straight teeth, while higher-income think it quite important. Mostly again agreed on improving a smile as a clear motive for treatment as previous research reports earlier in the discussion. Participants from the middle-income class said yes to missing school, while the higher income group said it depends on how much time it requires. All groups agreed that they were not properly advised on cleaning the teeth. The middle-income class considers costing a discouraging factor while the higher class considers the long process a discouraging factor. This study also adds many other new stats in the existing literature about the motivation factors for orthodontics treatment.

## CONCLUSION

In the present study based on the role of parents in motivating children for orthodontic treatment, we analyzed the data through SPSS using non-parametric test chi-square to compare the findings. Female participants were in higher numbers and mostly parents wanted their child to wear braces for having a beautiful smile. In gender differences both gender wants the treatment for aesthetic purpose. University graduates were self-referred. This study is a worthy addition to the existing body of knowledge.

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