THE PSYCHOLOGY OF AN ORTHODONTIC PATIENT AND ITS EFFECT ON THE TREATMENT OUTCOME

INTRODUCTION
Professional assessment for the need of orthodontic treatment largely depends on whether malocclusion has or will have adverse effects on the oral health and/or the social or psychological well being of an individual. The motivation to seek orthodontic treatment appears to be strongly related to the individual’s perceptions of the extent to which their dental facial appearance deviates from sociocultural norms. Orthodontist-patient relationship may have a significant impact on treatment outcome and patient satisfaction, thus improving the overall quality of care. Effective communication is crucial and unfortunately, it is often underestimated in a busy clinical practice. Aim of the study is to review the psychological aspects that are relevant to a number of treatment variables in clinical orthodontics, including compliance with treatment, oral hygiene, management of orthodontic pain and discomfort, and oral habits. Due to the complex nature of the psychology of orthodontic treatment, it is difficult to determine the extent of the influence that the orthodontist-patient relationship may have on these variables, with effective communication and an awareness of the psychological issues plays important role in enhancing the orthodontist-patient relationship.

KEYWORDS: Compliance, Counseling, Orthodontics, Psychology, Questionnaire Survey.

MATERIALS AND METHOD
A Questionnaire survey was conducted in the Department of Orthodontics and Dent facial Orthopedics Sharad Pawar Dental College DMIMS (Deemed university) Wardha Maharashtra.

The motivation to seek orthodontic treatment appears to be strongly related to the individual’s perceptions of the extent to which their dental facial appearance deviates from sociocultural norms. Orthodontist-patient relationship may have a significant impact on treatment outcome and patient satisfaction, thus improving the overall quality of care. Effective communication is crucial and unfortunately, it is often underestimated in a busy clinical practice. Aim of the study is to review the psychological aspects that are relevant to a number of treatment variables in clinical orthodontics, including compliance with treatment, oral hygiene, management of orthodontic pain and discomfort, and oral habits. Due to the complex nature of the psychology of orthodontic treatment, it is difficult to determine the extent of the influence that the orthodontist-patient relationship may have on these variables, with effective communication and an awareness of the psychological issues plays important role in enhancing the orthodontist-patient relationship.

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STASTICAL ANALYSIS:
The data was analyzed using descriptive statistics (frequency distribution, percentage ratio for each of the variables, mean age, and standard deviation), while chi-square tests were used to test for gender differences with the variables. The Critical level of statistical significance was set at P<0.05.

Questionnaire for orthodontic patient

1. Age group:
a) 6-10 yrs
b) 11-15 yrs
c) 16-20 yrs
d) 21-25 yrs
e) 26-30 yrs
f) 31-35 yrs

2. Sex:
a) Male
b) Female

3. Occupation (if applicable)

4. What is the problem?

5. Why you need the treatment? (tick one or more)
a) Aesthetics  b) Function  c) Stable occlusion
d) Psychological reason  e) any other

6. How long have you noticed the problem?

7. Since the time you noticed the problem did you find it difficult to accept the condition?
a) Yes  b) No  c) Don’t know

8. How long was it before you felt that you had accepted the
condition? (tick one answer only)
a) I still haven’t accepted it 
b) Immediately 
c) Within 6 months 
d) Within a year 
e) It took over a year 
f) uncertain

9. How the condition has affected you? (tick one answer only)
a) Made me more confident 
b) Didn’t affect my confidence 
c) Made me less confident 
d) Don’t know

10. Why you are here for treatment?
a) I myself want my teeth to be corrected. 
b) My parents want the treatment to be done. 
c) I am undergoing treatment because 

11. How you got to know the problem?
a) I myself found out. 
b) My parents found out. 
c) My friends told me. 
d) Any other.

12. You know your treatment will take time, what you think about it?
a) Treatment time is too much 
b) Treatment time is adequate 
c) Treatment time is too less as compared to the problem 
d) Don’t know

13. Your doctor has informed you about the retention phase and the appliance you have to wear after your treatment is completed, will you follow the instructions?
a) Yes, I will wear the appliance religiously, I want to retain my end result of treatment 
b) May be if I will be comfortable with it 
c) I will wear it for some time 
d) I don’t want to wear but I have to because doctor has advocated for it. 
e) I don’t think it is necessary

14. Do you think your chief complaint will be solved with the treatment you are having/about to begin?
a) Yes 
b) No 
c) This the best I can do for my problem 
d) Any other

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### Table 1: age and distribution of subjects

<table>
<thead>
<tr>
<th>AGE GROUP (YEARS)</th>
<th>GENDER</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MALE</td>
<td>FEMALE</td>
</tr>
<tr>
<td>6-10</td>
<td>34</td>
<td>56.6</td>
</tr>
<tr>
<td>11-15</td>
<td>39</td>
<td>40.6</td>
</tr>
<tr>
<td>16-20</td>
<td>16</td>
<td>27.5</td>
</tr>
<tr>
<td>21-25</td>
<td>21</td>
<td>40.3</td>
</tr>
<tr>
<td>26-30</td>
<td>17</td>
<td>54.3</td>
</tr>
<tr>
<td>31-35</td>
<td>1</td>
<td>25.0</td>
</tr>
<tr>
<td>36-40</td>
<td>-</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>128</td>
<td>42.4</td>
</tr>
</tbody>
</table>

### Table 2: Distribution of time taken to accept the malocclusion by the subjects in relation to gender

<table>
<thead>
<tr>
<th>MOTIVATIONAL FACTOR</th>
<th>GENDER</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MALE</td>
<td>FEMALE</td>
</tr>
<tr>
<td>AESTHETICS</td>
<td>73</td>
<td>61.9</td>
</tr>
<tr>
<td>FUNCTION</td>
<td>12</td>
<td>10.2</td>
</tr>
<tr>
<td>PSYCHOLOGICAL FACTORS</td>
<td>10</td>
<td>8.5</td>
</tr>
<tr>
<td>STABLE OCCLUSION</td>
<td>9</td>
<td>7.6</td>
</tr>
<tr>
<td>OTHER REASONS</td>
<td>4</td>
<td>3.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>118</td>
<td>39.1</td>
</tr>
</tbody>
</table>

### Table 3: Distribution of motivational factor seeking orthodontic care by gender

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>EFFECT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MALE</td>
<td>FEMALE</td>
</tr>
<tr>
<td>MORE CONFIDENT</td>
<td>4</td>
<td>2.9</td>
</tr>
<tr>
<td>UNAFFECTED</td>
<td>52</td>
<td>38.0</td>
</tr>
<tr>
<td>LESS CONFIDENT</td>
<td>57</td>
<td>41.6</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>24</td>
<td>17.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>137</td>
<td>45.4</td>
</tr>
</tbody>
</table>

### Table 4: Distribution of the effects of malocclusion on self confidence

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>EFFECT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO RESPONSE</td>
<td>NOT RESTRICTED</td>
</tr>
<tr>
<td>CHOICE OF FOOD</td>
<td>34</td>
<td>11.2</td>
</tr>
<tr>
<td>EATING IN PUBLIC</td>
<td>40</td>
<td>13.2</td>
</tr>
<tr>
<td>GOING OUT IN PUBLIC</td>
<td>25</td>
<td>8.2</td>
</tr>
<tr>
<td>LAUGHING IN PUBLIC</td>
<td>12</td>
<td>3.9</td>
</tr>
<tr>
<td>FORMING CLOSE RELATIONSHIP</td>
<td>49</td>
<td>16.2</td>
</tr>
<tr>
<td>ENJOYING FOOD AS MUCH</td>
<td>23</td>
<td>7.6</td>
</tr>
</tbody>
</table>

### Table 5: Distribution of activities restricted due to malocclusion as reported by the subjects

RESULT AND DISCUSSION:
Concerning the people the subjects discussed their malocclusions with before coming for treatment; parents had the highest percentage of 64.7%, followed by dentists (35.3%). Most of the subjects (57.5%) presented for orthodontic care within 1-5 years after noticing the problem, followed by 23.5% who reported for treatment after 6-10 years of noticing the malocclusion. About 11% came for care between the ages of 11-15 years and 1.8% after 16 years. The remainder (5.9%) could not remember the time lapse.

Concerning the perceived effects of malocclusions on the general appearance of their faces, 54.8% felt their malocclusions affected their faces negatively, while 45.2% did not think their facial appearances were affected. Close to 40% of those whose facial appearances were negatively affected said they were displeased, while 6.8% were upset by such effects.

The age and gender distribution of the patients is shown in Table 1 with well over half of them belonging to age 15 years and below. More females sought orthodontic treatment than males. The majority of subjects needed orthodontic care for aesthetics (49.0%). Functional reasons accounted for 11.9%, while psychological reasons gave 8.6% as shown in Table 2. Table 3 shows the distribution of the time taken to accept the malocclusion by the subjects with the majority (39.4%) yet to accept their malocclusions. No statistically significant (p>0.05) gender differences were observed.
For level of confidence, over 40% of the participants reported feeling less confident as a result of malocclusion, while 3% claimed they felt more confident. Close to 38% claimed no difference in confidence as shown in Table 4. Thinking back on their initial feelings when they first noticed the malocclusions, 34.4% said they felt sad, 6.3% were angry, 26.7% had depression, and 35.3% were unconcerned.

Regarding confidence, 21.1% reported having less confidence eating in public, while 3.0% and 37.4% indicated feeling more confident and no difference in confidence, respectively. Over 8.7% felt less confident meeting people publically, and 83.1% said it did not make any difference. Laughing in the public was a problem for 46.1%, while 3.9% and 50% claimed feeling more confident and no difference in confidence, respectively. About 18.2% felt less confident to form close relationships, and 66.5% said they experienced no difference. Table 5 shows the distribution of activities restricted due to malocclusion as reported by the subjects. Laughing in public was mostly affected (46.02%).

Regarding wearing of retention plate in the post treatment phase 63.9% subjects were willing to wear the retention plate regularly, 13.2% did not think it is necessary to wear it.

CONCLUSION:
The need for orthodontic treatment differs from the orthodontic treatment differs from the orthodontist’s point of view and patients perception for an orthodontist, the goal is to achieve ideal occlusion which will help maintain the health of surrounding structures and TMJ & does not looks or esthetics. But from patients perceptive the importance of taking orthodontic treatment is more psychosocial.

The motivation for seeking orthodontic treatment is more due to the desire for having more attractive face. They are not concerned if the occlusion is not stable or TMJ health is good Today a person is judged on face value so indirectly how the person looks decides his self esteem. Three factors are necessary for developing a good or poor self esteem

1. What a person thinks he looks like.
2. What other thinks how he/she look.
3. What the person thinks, others think about his looks.

Self esteem matters in developing interpersonal relationship as today there is more orientation towards looking in developing personal relationships, therefore facial esthetics does matter a lot in designing orthodontic treatment. If patient gets a secured feeling that orthodontic treatment may help in improving his looks hence he/she will be more cooperative and will follow all instructions.

REFERENCES