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

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ABSTRACT 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 part one of this article 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.

INTRODUCTION

Professional assessment for the need of orthodontic treatment largely depends on whether the malocclusion has or will have adverse effects on the oral health and/or the social or psychological well being of an individual[1]. 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. Individual's level of satisfaction with their facial appearance may have important implications for their self esteem. Although there are substantial reports on social or psychosocial aspects of malocclusion among the population of the industrialized parts of the globe, there are few systematic studies in the literature or vice a versa, on the area to shed light on the actual effects of malocclusion on the individual's perception of self[5].

In an attempt to understand patients' response to dental health advice, it is suggested that the development of dental health attitudes, perceptions and behaviors should be included to health education programs. Being aware of the psycho-social determinants of a patient's health behaviors does provides a basis for an understanding of the difficulties patients may experience when complying with dental health care which ultimately effects the treatment outcome[6].

This paper examines the role of psycho-social factors as determinants of health behaviors. It analyses the development of orthodontic treatment attitudes and behaviors from the patient, and social perspectives. The aim of this article is to present the practitioner with a structure to understand patient's attitude while undergoing orthodontic treatment to comply with orthodontic treatment.

PREDICTING PATIENTS COMPLIANCE

The patient's desire for orthodontic treatment should be evaluated as this is the most important factor among the predictors for patient compliance. Frequencies of broken appliances and oral hygiene maintenance were the most popular clinical predictors of compliance.[7] The unpopular methods of predicting patient compliance were sex, socio-economic status and demographic background of the patient's family. Patients psyche is difficult to measure at the beginning of orthodontic treatment, and further research should aimed to construct an instrument or method that will evaluate patient's desire for orthodontic treatment before starting the treatment.

IMPROVING PATIENT COMPLIANCE

The orthodontist believed that verbally praising patient for compliant behavior is the best method to improve compliance. Educating the patient about the consequences of poor compliance and as effecting treatment goals is also found to be popular, negative methods such as ridiculing the child for poor compliance and scolding, were found to be worst methods for improving patient compliance. Other negative reinforcement's items like parental pressure & scolding were also found unpopular.[8]

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.

A 14-item questionnaire to access psychosocial or emotional effects of malocclusion in orthodontic patients was given to 302 patients. The subjects consisted of 128 (42.4%) males and 174 (57.6%) females with age range of 6-40 years and mean age of 13.82 ± 8.01 (SD) years, respectively. Questionnaires To eliminate biased responses from the subjects, the replies were kept anonymous. Samples were selected between august and December 2008 seeking orthodontic or who were already undergoing the treatment. All of these were willing to participate in the study.

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. For 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

AGE GROUP (YEARS)	GENDER				TOTAL	
	MALE		FEMALE			
	n	%	n	%	n	%
6—10	34	56.6	26	43.3	60	19.8
11-15	39	40.6	57	59.4	96	31.7
16-20	16	27.5	42	72.5	58	19.2
21-25	21	40.3	31	59.7	52	17.2
26-30	17	54.3	14	45.7	31	10.2
31-35	1	25.0	03	75.0	4	1.3
36-40	-	-	01	100.0	1	0.3
Total	128	42.4	174	57.6	302	100.0

Table 1: age and distribution of subjects

TIME TAKEN	GENDER				TOTAL	
	MALE		FEMALE			
	n	%	n	%	n	%
IMMEDIATELY	36	25.9	45	27.6	81	26.8
WITHIN 6 MONTHS	9	6.5	14	8.6	23	7.6
WITHIN A YEAR	12	8.6	9	5.5	21	7.0
OVER A YEAR	17	12.2	25	15.3	42	13.9
STILL NOT ACCEPTED	58	41.7	61	37.4	119	39.4
UNCERTAIN	7	5.1	9	5.6	16	5.3
Total	128	46.02	163	53.98	302	100

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

MOTIVATIONAL FACTOR	GENDER				TOTAL	
	MALE		FEMALE			
	n	%	n	%	n	%
AESTHETICS	73	61.9	75	40.8	148	49.0
FUNCTION	12	10.2	24	13.0	36	11.9
PSYCHOLOGICAL FACTORS	10	8.5	16	8.7	26	8.6
STABLE OCCLUSION	9	7.6	19	10.3	28	9.3
OTHER REASONS	4	3.3	2	1.1	6	2.0
NO RESPONSE	10	8.5	28	15.1	58	19.2
TOTAL	118	39.1	184	60.9	302	100.0

Table 3: Motivational factor seeking orthodontic care by gender

ACTIVITY	EFFECT				TOTAL	
	MALE		FEMALE			
	n	%	n	%	n	%
MORE CONFIDENT	4	2.9	5	3.0	9	3.0
UNAFFECTED	52	38.0	61	37	113	37.4
LESS CONFIDENT	57	41.6	69	41.8	126	41.7
UNCERTAIN	24	17.5	30	18.2	54	17.9
TOTAL	137	45.4	165	54.6	302	100.0

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

ACTIVITY	EFFECT					
	NO RESPONSE		NOT RESTRICTED		RESTRICTED	
	n	%	n	%	n	%
CHOICE OF FOOD	34	11.2	210	69.5	61	20.1
EATING IN PUBLIC	40	13.2	198	65.5	64	21.1
GOING OUT IN PUBLIC	25	8.2	251	83.1	26	8.7
LAUGHING IN PUBLIC	12	3.9	151	50	139	46.02
FORMING CLOSE RELATIONSHIP	49	16.2	201	66.55	52	18.2
ENJOYING FOOD AS MUCH	23	7.6	240	79.4	39	12.9

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 & then 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 looks 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.

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