

# Correlation of patient's mental attitude with age, sex, and educational level: A survey

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## ABSTRACT

**Objective:** The aim of this study was to determine any relationship, if exists, between the patient's mental attitude with age, sex, or educational qualification. **Methods:** A total of 200 patients who attended the outpatient department during a span of 1 year, for the fabrication of new complete dentures, were chosen for the study. After completing a routine case history and examination, a questionnaire was filled by the clinician as answered by the patient. Participants were evaluated and categorized based on the questionnaire and clinical experience during treatment according to a predefined classification of determining mental attitudes. Outcomes from the survey were correlated with participant gender, age, and educational status. **Results:** The male to female ratio was 83:117, out of the 200 enrolled participants. The results from the questionnaire showed that females were found to be more exacting ( $P = 0.007$ ) in nature, while males, on the other hand, revealed more indifferent attitude ( $P = 0.02$ ); both differences being statistically significant. Of the three age group categories: Participants in the age group of 45–54 years revealed a significant inclination toward an exacting attitude when compared with other age groups ( $P < 0.001$ ). In regards to educational status, an illiterate or minimally educated group significantly outnumbered the college graduates in the indifferent attitude group ( $P < 0.001$ ). **Conclusions:** Within the limitations of this study, it could be said that the mental attitudes of patients could vary according to gender, age, and educational status, which could affect patient cooperation and satisfaction with oral rehabilitation, eventually manipulating the overall success of the treatment rendered.

**Key words:** House classification, mental attitude, psychology

## INTRODUCTION

De van stated, "Meet the mind of the patient before meeting the mouth of the patient." Thus, understanding the mental attitude of the patient is very helpful for the clinician to anticipate the patient's response during the clinical procedures. Besides, it also influences the outcome of the treatment. Krochak<sup>[1]</sup> stated that many patients with favorable anatomy cannot tolerate a well-fabricated denture, and yet other patients with unfavorable anatomy willingly endure dentures that may be ill-fitting. He correlated such adaptive response of the patients to the patient's psychological state.

Patients seeking prosthodontic care arrive with an accumulation of experiences and resulting attitudes. In

1950, House<sup>[2,3]</sup> devised a classification system in which he classified the patient's psychological responses to becoming edentulous and adapting to dentures into following four types: Philosophical mind, Exacting mind, Hysterical mind, and Indifferent mind.

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### **Philosophical mind**

Philosophical patients anticipate the need for treatment with complete dentures and are willing to rely on the dentist's advice for diagnosis and treatment. These patients are rational, sensible, calm, and composed in different situations. These patients follow the dentist's advice when advised to replace their dentures. The best mental attitude for denture acceptance is the philosophical type.

### **Exacting mind**

Exacting mind patients usually have poor health and show resistance to accommodate suggestions given by the clinician. They also doubt the dentist's ability and even try to direct them regarding the treatment procedure. Often, the exacting mind patient demands extra-ordinary efforts and guarantees of treatment outcome at no additional cost.

### **Hysterical**

These patients are emotionally unstable, excitable, excessively apprehensive, and hypertensive. The prognosis is often unfavorable, and additional professional help (psychiatric) is required before and during treatment. The patient must be made aware that his/her problem is primarily systemic and that many of his symptoms are not the result of dentures.

### **Indifferent mind**

These patients show little concern. They are uninterested and lack motivation. They pay no attention to instructions, will not cooperate and are prone to blame the dentist for poor dental health.

Truly stated by Jamieson,<sup>[4]</sup> "fitting the personality of the aged patient is often more difficult than fitting the denture to the mouth." It has also been said that the patient's attitude is probably influenced by a series of social factors (the patient's sex, age, education, vocation, social factors, upbringing, home environment, etc.) and by the state of general health.<sup>[5]</sup> On the other hand, it has also been reported that little correlation exists between satisfaction with dentures and the patient's personality, social adaptation, and appreciation of the dentist. No correlation was seen between the patient's intelligence and his satisfaction with the dentures.<sup>[6]</sup>

Careful observation and listening in a structured interview<sup>[7]</sup> and questionnaire<sup>[8]</sup> provide ample information to the dentist regarding the patient's mental attitude. To supplement this, the additional aid of graphoanalysis has also been advised to identify the behavior of the patients.<sup>[9,10]</sup> Knowledge of patient's

mental attitude may provide insight into patient behavior, which may help in the overall improvement of the treatment rendered.

The aim of this study was, to find any relationship, if exists, between the patient's mental attitude with age, sex, or educational qualification.

## **MATERIALS AND METHODS**

A total of 200 patients who attended the outpatient department of Post Graduate Institute of Dental Sciences, University of Health Sciences, Rohtak, from September 2009 to October 2010, for fabrication of new complete dentures were selected. The eligibility criteria for the study included: Subjects above 45 years of age, ability to provide informed consent, and completely edentulous subjects with or without prior denture wearing experience. The selection of the patient was random without any preformed idea about them. Patients were given a verbal explanation of the study, and an informed consent was obtained. During the same appointment, a routine case history and examination were done. A questionnaire<sup>[8]</sup> formulated for the study was then filled by the clinician as answered by the patient [Table 1].

After completion of the questionnaire, the required prosthodontic treatment procedures were completed for all the participants as per routine. Selected subjects were evaluated and categorized based on questionnaire and clinical experience during treatment according to classification by House.<sup>[2,3]</sup> Participants were categorized for data processing as follows:

- On the basis of Sex:  
Group M: Male, Group F: Female;
- On the basis of Age:  
Group 1: 45–54 years, Group 2: 55–64 years, Group 3: 65 years and above;
- On the basis of educational status:  
Group A: Less than high school, Group B: High school and Group C: More than high school attended any college (Participants were asked about the highest qualification).

Chi-square statistical test was used to determine the association between categorical variables. Statistical significance was set at  $P < 0.05$ .

## **RESULTS**

A total of 200 participants were recruited for the study, of which 83 were male and 117 female. Most of

**Table 1: Questionnaire form (22 questions under four categories)**

Chief complaint		
Q1	What is your chief complaint? Related to	Function Esthetics
Q2	What do you think is wrong with your dentures?	
Ability to adapt		
Q3	How long have you been wearing your current dentures?	<6 months 6 months-4 years 4-10 years >10 years
Q4	How many sets of dentures you have had made?	1 >1
Q5	How long have you been wearing your present dentures?	<6 months 6 months-4 years 4-10 years >10 years
Q6	Have your present dentures been relined? When?	Yes/no
Q7	Did you have success when you first wore your present dentures? Please explain	Yes, immediately Yes, after long adjustment No
Q8	Has your overall experience in wearing dentures been	Satisfactory/unsatisfactory
Desires and opinions		
Q9	Do you feel that new dentures should be made or that your present dentures should be relined?	Relined Refabricated
Q10	If new dentures are made for you, what changes do you want?	More retention Change in tooth size or shape Better material Others
Q11	All people do not healthy or good ridges. Do you feel that your mouth and ridges are good or less than good for wearing dentures?	Good Less than good
Q12	Some people learn faster than others to wear eye glasses or to master the art of wearing dentures. Do you feel that you have these natural abilities?	Yes No
Personality traits		
Q13	How long you were without teeth before your first dentures were made?	
Q14	Are you self-conscious about the appearance of your teeth in the presence of your spouse or friends?	Yes/no
Q15	What comments does your spouse make about the teeth in your dentures?	
Q16	What do you think your dentures should do for you?	Remove wrinkles Improve comfort Improve speech Good fit Improve appearance Improve chewing
Q17	Do you know any persons who are happy with their complete dentures?	
Q18	What is your opinion about the quality of care given to you by previous dentists	Good Fair Poor Indifferent
Q19	Do you have stressful or relaxed job position?	
Q20	Do you consider yourself a rather nervous or tense person?	
Oral habits		
Q21	Do you sleep with dentures in your mouth?	Yes/no
Q22	How often do you squeeze or grind your teeth together during the day?	

these belonged to the philosophical group comprising 126 participants. The exacting and indifferent groups had 48 and 22 participants, respectively. Many participants found to have a hysterical mindset was the lowest, a group which comprised 4 participants only.

Based on the statistical analysis, no significant differences were found between males and females in philosophic and hysterical mind category. The numbers of females were significantly higher than males in the exacting group ( $P = 0.007$ ). Interestingly,

their number declined significantly in the indifferent category ( $P = 0.002$ ). Thus, on this basis, females were found to be more exacting and males more indifferent [Table 2 and Figure 1a].

Table 3 and Figure 1b shows the participants categorized according to age into three groups: 45–54 years, 55–64 years, and 65 years and above. The youngest age group (45–54 years) showed significantly more number of subjects with exacting mindset compared to the older ones ( $P < 0.001$ ). Besides, only four patients of more than 65 years old group were found in hysterical category. There was no significant correlation found in philosophic and indifferent attitude patients when correlated with age.

When these patients were enquired about highest education attained, it was found that out of

200 subjects, 54 were found in group A (never went to school or less than high school), 106 in Group B (high school level) and 40 in Group C (higher than high school) [Table 4 and Figure 1c]. When this data were correlated with the mental attitude of the patients, no significant values were found in philosophical and hysterical types. Group B subjects were found significantly higher with exacting attitude ( $P < 0.001$ ), and group A patients were found to be significantly inclined toward indifferent attitude ( $P < 0.001$ ).

## DISCUSSION

The aim of this study was to find the mental attitudes of patients presenting for prosthodontic treatment and to determine if any relationship existed between the patient's mental attitude with age, sex, or educational qualification. For this purpose, a standard questionnaire<sup>[8]</sup> was completed as answered by the patient. Chandershekhar *et al.*<sup>[11]</sup> stated that the House classification is based on extensive clinical experience, and it has stood up well to the test of time.

The results of this study show that females were found to be more exacting in nature and while males, on the other hand, revealed more indifferent attitude. Brunello and Mandikos<sup>[12]</sup> in a study found a higher dental anxiety scale scores among female subjects than males. This can also be correlated with Myers<sup>[13]</sup> opinion, who studied the relationship of the women irritable personality, that this related to psychosomatic pressures, and he believed that happiness associated

**Table 2: Distribution of mental attitude according to gender**

Groups	Male (n=83)	Female (n=117)	P
Philosophical (n=126)	54	72	$\chi^2=0.258$ ; df=1; $P=0.611$ not significant
Exacting (n=48)	12	36	$\chi^2=7.08$ ; df=1; $P=0.007$ significant
Indifferent (n=22)	14	8	$\chi^2=4.98$ ; df=1; $P=0.02$ significant
Hysterical (n=4)	3	1	$\chi^2=1.88$ ; df=1; $P=0.169$ not significant
Total (n=200)	83	117	

n: Number of subjects

**Table 3: Distribution of mental attitude according to age**

Groups	45-54 years (n=62)	55-64 years (n=66)	>65 years (n=72)	P
Philosophical (n=126)	32	44	50	$\chi^2=5.11$ ; df=2; $P=0.07$ not significant
Exacting (n=48)	26	16	6	$\chi^2=20.62$ ; df=2; $P<0.001$ highly significant
Indifferent (n=22)	4	6	12	$\chi^2=3.91$ ; df=2; $P=0.141$ not significant
Hysterical (n=4)	0	0	4	$\chi^2=7.25$ ; df=2; $P=0.02$ significant
Total (n=200)	62	66	72	$\chi^2=28.16$ ; df=6; $P<0.001$ highly significant

n: Number of subjects

**Table 4: Distribution of mental attitude according to educational status**

Groups	Less than high school (n=54)	High school (n=106)	Attended some college or higher (n=40)	P
Philosophical (n=126)	30	66	30	$\chi^2=3.77$ ; df=2; $P=0.151$ not significant
Exacting (n=48)	4	36	8	$\chi^2=14.26$ ; df=2; $P<0.001$ highly significant
Indifferent (n=22)	18	4	0	$\chi^2=38.1$ ; df=2; $P<0.001$ highly significant
Hysterical (n=4)	2	0	2	$\chi^2=4.80$ ; df=2; $P=0.09$ not significant
Total (n=200)	54	106	40	$\chi^2=50.9$ ; df=6; $P<0.001$ highly significant

n: Number of subjects

with social support, marriage, career, and religious faith, can play an effective role in general and mental health. Shah *et al.*<sup>[14]</sup> in a study stated women have a better health seeking behaviors and more conscious for their appearance, and this could be one of the main reasons that females visit dental clinic more than males. Polsani *et al.*<sup>[15]</sup> stated that the changes influencing one's appearance, such as loss of hair and face height, wrinkling of skin, changes in tooth appearance, and loss of natural teeth, seem to affect women more than men. Women frequently voice their concern while men may be more dramatic but concealed.

As far as the relationship of age with mental attitude is concerned, according to this study, the younger edentulous age groups in their late 40s and early 50s were more demanding and presented exacting behavior throughout the treatment procedure as compared to other age groups. Shrivastava *et al.*<sup>[16]</sup> in a study found no correlation between dental anxiety and denture satisfaction with age and period of edentulousness. Hägglin *et al.*<sup>[17]</sup> stated that persons in the age group of 55–64 years were mature and wise mentally than other ages. Women in this age

group may be in postmenopausal phase, particularly those who have been admired for their beauty, may be quite demanding about the cosmetic arrangement of their artificial teeth. Hysterical patients were found to be in more than 65 years of age group. The loss or decline of the senses of vision, hearing, and taste has psychological implications. It can cause personality changes, which may be resentful in nature. The elderly population has a high prevalence of psychiatric complications associated with medical illnesses. About 15–20% may present with depressive symptoms and 10–20% suffers from anxiety disorders, including phobias. This is very common in women over the age of 65 years.<sup>[18]</sup>

Seeing the effect of education status on mental attitude, with the decline in the education level, patients were more indifferent and needed motivation for wearing and maintaining dentures. Interestingly, a significantly high number of high school pass outs had an exacting mindset when compared to college graduates. This is proved and discussed also with a study by Celebic *et al.*<sup>[19]</sup> concluded that the level of education had relation with the satisfaction and acceptance of the

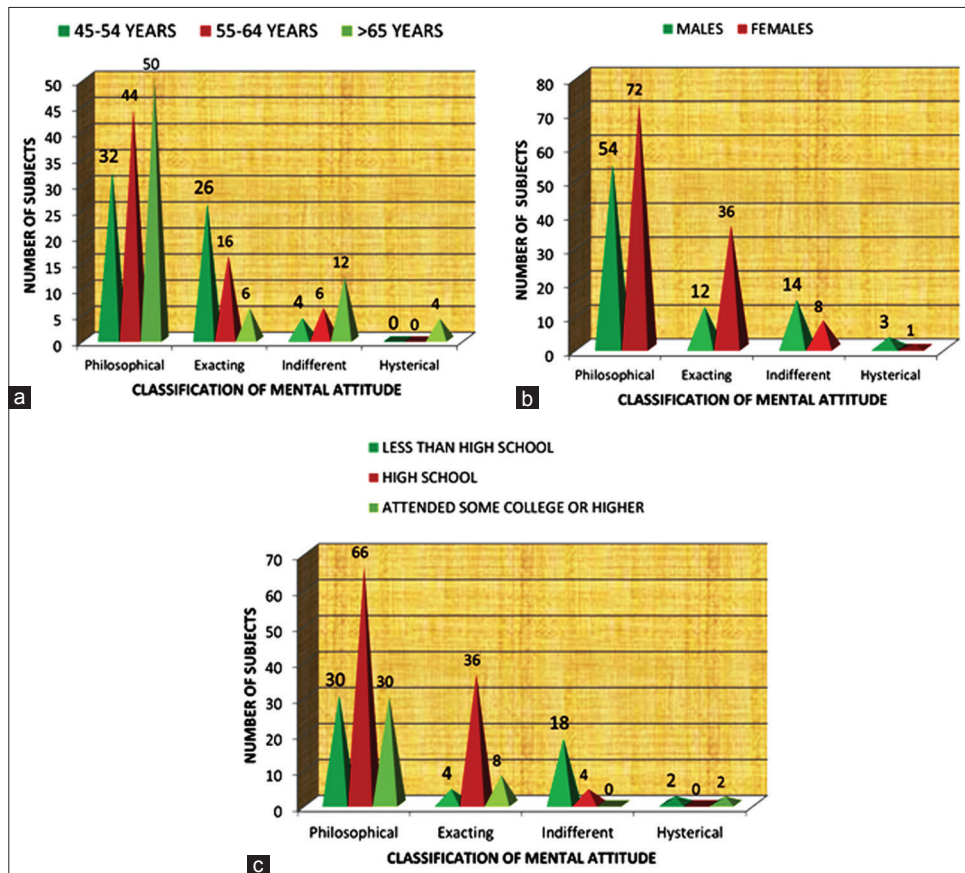


Figure 1: It shows graph (a) correlation of mental attitude with: Sex graph (b): Correlation of mental attitude with: Age graph (c): Correlation of mental attitude with: Educational status

complete denture, because the ignore person could not assess his condition in a suitable manner.

The clinical significance of this study lies in anticipating the mental attitude of the patient sitting in the dental office by correlating it with sex, age, and education level. Though, we found statistically significant results in indifferent and exacting categories, but this study has certain limitations. The study had a small sample size to generalize the facts in a huge population. The other limitation was that only one method was used to judge the mental attitude of the patient. Additional aid of graphoanalysis as suggested earlier may also be used.<sup>[9,10]</sup>

## CONCLUSION

To conclude, females were found to be more exacting in nature while males presented with indifferent attitude in context to the fabrication of complete denture procedure. Patients in the age groups of 45–54 years revealed exacting nature where  $\geq 65$  years showed hysterical attitude when compared with other age groups. An illiterate or minimally educated group outnumbered in the indifferent type and were in the exacting category. Within limitations, it could be said that the mental attitudes of patients could vary according to gender, age, and educational status, which could affect patient cooperation and satisfaction with oral rehabilitation, eventually manipulating the overall success of the treatment rendered. This study encourages further studies to evaluate such correlations in large sample size, in different regions and using different methodology.

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### Conflicts of interest

There are no conflicts of interest.

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