

Dental Psychological Stress or Phobia among Orthodontic Patients of Mardan

NAZISH FALAK¹, SADIA NISAR AHMED², SYED SHAH FAISAL JAN³, HARIS⁴, ALINA IQBAL⁵, SAIMA GUL⁶

¹Demonstrator, ²Assistant Professor & HOD, ^{4,5,6}House Officers, Department of Orthodontics, Bacha Khan Medical & Dental College Mardan

³Postgraduate Resident, Department of Oral Pathology, Gandhara University, Peshawar

Correspondence TO: Dr. Sadia Nisar Ahmed, Cell: 0331-9410964, E-mail: dr.sadianisar@gmail.com

ABSTRACT

Objective: To assess the psychological stress or phobia due to dental procedure among patients.

Study Design: Descriptive cross-sectional study

Place and Duration of Study: Department of Orthodontic, Bacha Khan College of Dentistry/Medical Teaching Institute, Mardan from 1st January 2020 to 31st August 2021.

Methodology: One hundred and twenty patients coming for orthodontal treatment with age between 12-31 years were enrolled. The demographic and psychological stress information was recorded.

Results: There were more females (65%) than males (35%). The mean age was 15.5±3.2 years. About 82.5% patients reported high level of psychological stress or phobias towards dental treatments while 19.1% were those who had moderate psychological stress or phobias. Majority of the patient's fear of pain was between 12-17 years. Patients having highest anxiety also belonged to the same group

Conclusion: Dental phobias and fears are widespread among patients seeking dental treatments. Orthodontists should recognize the dental phobias and fears so they efficiently interconnect with the patients.

Key words: Orthodontic treatment, Pain, Dental phobia

INTRODUCTION

Dental anxiety and fear (DAF) is a common condition characterized by unrelenting fear and inevitable emotions in response to dental procedures and treatment.¹ Dental phobias and fears are communal issue faced by patients, health care providers and dentists.² Dental anxiety and fear varies due to different dental approach and services and also influenced by the behaviour and attitude of dentists. It can also differ according to gender, age group and education.^{2,3} Dental services and procedures usually involve interventional treatment, subsequently cause delay in dental treatment consequently deteriorate oral health condition of the patient.^{3,4}

Dental anxiety and fear management is crucial both for patients and clinicians. It influences the treatment protocol that might affect the disease treatment and cause delay in schedule appointment.^{4,5} Psychological influence of DFA not only cause postponement in dental procedures but also laid impact on quality and efficacy of treatment.⁵ Poor oral health condition and delay in disease management and treatment further lead to worsening of prevailing condition.⁵⁻⁷ Despite advancement in dental treatments, incidence of DAF is still high.

Due to higher incidence of dental anxiety and fear and its impact on disease treatment and management, a significant contribution is required by health care providers and dentists to identify the presence of dental fears and anxieties in patients and should address all these aspects and features before starting the protocol. There is comparatively less knowledge and awareness regarding dental treatment in Pakistan as related to developed countries. Purpose of the present study is to identify and assess dental phobias and fears among different age groups and also to highlight the importance of this problem by creating awareness so the patient's problems can be identified and solved accordingly.

MATERIALS AND METHODS

This descriptive cross-sectional study was carried out in Bacha Khan College of Dentistry, Mardan from 1st January 2020 to 31st August 2021. The enrolled patients were from the Mardan city as well as nearby peripheral areas visiting the outdoor department. The age of the patients was 12-31 years. Inclusion criteria included those patients having an experience of dental treatment in resent or past. Patients suffering from cranio-facial anomalies or psychotic disorders were taken in exclusion. The study was initiated after the approval from ethical board and taking written informed permission from each enrolled patient or their parent/guardian. Each patient was interviewed at 3 phases (Phase

1: OPD chair, Phase 2: pre-procedure and Phase 3: Post procedure). Psychological stress (PS) or phobia was scored between 1 to 4 grades for no PS, 5-12 for moderate PS where as 13-20 for high PS.⁸ Demographic information, treatment duration, PS staging, self confidence in questioning the procedure were documented on a structured proforma. Data was then entered on SPSS software for analysis using version 24. Chi square, mean±standard deviations were applied for data statistical calculation. A value of p as 0.05 was taken significant.

RESULTS

There were more females (65%) than males (35%) and mean age of the patients was 15.5±3.2 years with 69% those who were attending school (Table 1). Within the total patients interviewed there were 18 cases with no education while school level education was most commonly observed in 62.5% of patients (Fig. 1)

About 82.5% patients reported high level of PS or phobias towards dental treatments while 19.1% were those who had moderate PS. Braces initial discomfort was noticeable in both genders at initial placement but long time problem was only noticed in females. Those procedures which were more time taking escalated the PS level in patients than short time procedures (Table 2).

Table 1: Demographic information of the patients (n=120)

Variable	No.	%
Gender		
Male	42	35
Female	78	65
Age in years		
12-16	75	62.5
17-21	26	21.6
22-26	11	9.1
27-31	8	6.6

Table 2: Psychological stress (PS) scoring among patients (n=120)

Psychological stress/Phobia	No.	%
No PS	20	16.6
Moderate PS	23	19.1
High PS	99	82.5

Table 3: Gender based psychological stress patterns (n=100)

Type of psychological stress	Male		Female	
	No.	%	No.	%
Psycho social stress	8	8.0	25	25.0
PS of Braces discomfort	7	7.0	18	18.0
Lengthy procedure phobia	8	8.0	10	10.0
Anesthetic phobia	7	7.0	17	17.0

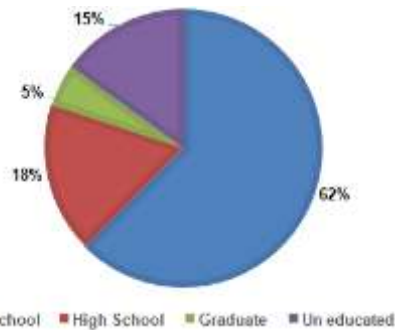


Fig 1: Distribution of education level among patients

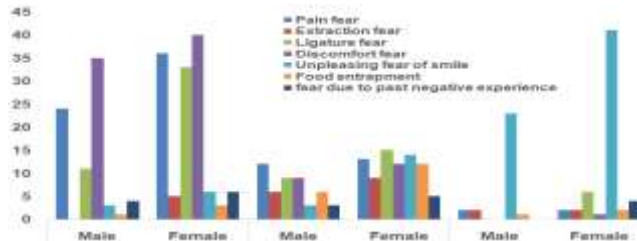


Fig. 2: Psychological stress among various age groups

In present study majority of the patients fear of pain was between 12-17 years. Patients having highest anxiety also belonged to the same group. Those patients stressed due to fear of smile belonged mostly to an age group above 21 years of age ($p < 0.05$) [Fig. 2]. 100 cases suffering from psychological stress/phobia and 20 cases have no phobia. It was seen that psychological stress was more common among females with highest psycho social stress and braces discomfort feeling in comparison to males. There was no significant variance among PS of different kinds in males (Table 3).

DISCUSSION

Dental anxieties and phobias is prevalent in orthodontic treatment and it's the major hindrance in disease management. Present study highlights that almost 65% of the patients had dental phobia. This high incidence of anxiety in patients might be due to lack of awareness, young age and education.⁵ Findings of study conducted in US also reveals that, 75% of the adult patients experienced dentistry phobia.⁸

The most common reason of orthodontic anxieties was braces discomfort and displeased smile in both genders. Social embarrassment and fear due to braces was more frequent among youngsters.^{5,9,10} Similar incidence rate is reported elsewhere.^{10,11} Anxiety level was similar to Saudi Arabian study¹² but less prevalence of DAF was observed by other research available.⁵ The main reason of orthodontic phobia in this specific age group is may be due to social, physical and emotional changes that negatively impact on their psychological wellbeing.¹³⁻¹⁵ Another common factor of social phobia in their public life is teasing due to braces and displeased smile.^{16,17}

In present work, significant association was observed with someone else negative reviews and bad experiences and put great impact on patient psychological condition. Almost half of the study participants experienced DAF due to negative feedback and experience. Findings of the other study also suggested the similar results.¹⁸⁻²⁰ Moreover, males showed less confidence as compared to females in cross questioning the dentists

CONCLUSION

Dental phobias and fears are widespread among patients seeking dental treatments. Orthodontists should recognize the dental phobias and fears so they efficiently interconnect with the patients. Dentist should consult with psychologist to reduce patient's anxieties. To minimize the communication breach, questions must be encouraged by the dentists to create a comfortable environment for the patient.

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