

The Studying of Anxiety due to Dental Treatment Procedures among the Client of Dental Teaching Clinic

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Running Title: The Studying of anxiety due to dental treatment procedures among the Client of Dental Teaching Clinic

Abstract: ***Introduction:** Anxiety due to dental treatment procedures is one of the most common symptoms in patients while they visit dentist. Anxiety is described as the sensory and emotionally stimuli which arise in pain and danger conditions. Toothache is one of the major factors that makes patient to visit dentist; but on the other hand, anxiety due to treatment procedures preclude them from visiting a dentist. **Aim:** Studying anxiety due to dental treatment procedures among the client of Dental Teaching Clinic. **Methods:** This is a cross-sectional study which is done among 201 children and elders between 6-70 ages at Dental Teaching Clinic of Kabul University of Medical Science "Abu-Ali Sena" during 3 months (July, August, September) of 2019. **Results:** In this study, 97 of patients (48.3%) were children and 104 of patients (51.7%) were elders. According to DAS (Dental Anxiety Scal), the score of majority of patients with no anxiety (48.3%) was between 6-10 years old. Patients with no anxiety were determined (57%) in men and (37%) in women; patients with severe anxiety were (2.2%) in men and (5.6%) in women. This statistic shows that anxiety is increase in female than men. According to age, children with no anxiety were (45.4%) while elders with no anxiety were (50%). That shows increase of anxiety in children than elders. **Conclusion:** We determined through this research that: women had more anxiety due to treatment procedures rather than men. As well, children had more anxiety because of dental treatment procedures than elders.*

Keywords: Children, Elders, Anxiety, Age, Sex

1. Introduction

Anxiety due to dental treatment procedures is one of the most common symptoms in patients while they visit dentist. Anxiety is described as the sensory and emotionally stimuli that arise in pain and danger conditions. Toothache is one of the major factors that make patient to visit dentist; but on the other hand, anxiety due to treatment procedures preclude them from visiting a dentist. Pain and anxiety are considered as a negative sensation which may emerge because unawareness of anesthetic pain-resolver effect, needle phobia and use of drill.³

Results of a research by Dr. Saghaireen and his colleagues in 2013 in Saudi Arabia about anxiety show that: female had more anxiety rather than male due to dental treatment procedures ($p < 0.05$).⁹

A research by Dr. Qassimpour and his colleagues at Babul dintestry University about dental treatment stress and its effective factors among 105 children between ages of 6-12, shows that: 53 children (50.5%) had no fear of treatment, 23 children (21.9%) were afraid of being hurt in dental treatment procedures and 14 other children (13.3%) had fear of dental treatment ambience. As a result they found that anxiety either during dental examination or during dental treatment is the most significant and initial factors of dental treatment procedures failure⁴.

There is another research which is done by Kiruthika P. and his colleague concerning sex difference in response to dental anxiety and pain at Saveetha hospital in Chennai in 2016 among 50 people, which was comprised 25 men and 25 women, showed that: the most severe anxiety within dental treatment procedures was (28%) in men and (40%) in women. As well, moderate anxiety was determined (60%) in female while in male was (52%).⁸

Other research by Dr. Farhadinasab and his colleagues in 2005 about assessment of anxiety frequency and its trigger factors among patients in General Hamadan Dentistry Hospital determines that: anxiety which is caused by dental office environment was (31.1%) among patients. (44.5%) of patients had anxiety due to blood stains in dentist working area, (44.5%) had anxiety caused from syringe needle, (44.5%) were afraid of tooth extraction and (44.3%) had fear of tooth drilling.²

Results of a research by Shahrzad Javadinejad in 2013 in Islamic Azad university of Isfahan (Khawarsgan), about the relationship between 6 to 8 year old children's dental fear and their parent's fear, show: parent's fear can affect their children's dental fear and also the extent of child's collaboration with the dentist.⁵

It has been reported by results of a descriptive cross sectional research by Ali Shekofteh Rad and his colleagues in 2005 about Assessment of anxiety frequency and its

Volume 9 Issue 2, February 2020

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trigger factor of Hamedan university of medical sciences in more than 9 years old, that: factors related to dental office environment with (31.1%), those related to personal imagination with (19.4%) and factor concerning office management and dental treatment each (19.1%) frequency showed to be most related to anxiety in patient. Improper rest-rooms (46.3%), blood stain in the environment (44.5%) and dirty dentist's gowns (43.8%) were reported to be the most prominent environmental factors. Among the factors originated from personal imaginations, the risk of disease transmission was accounted for the most justifiable source of anxiety (67.3%). Regarding factors concerning office management, dentist's nervous behavior (47.8%) and his carelessness to the patient (46.8%) were considered as the most significant anxiety sources. Extraction, injection and root canal therapy (48.3%, 44.5%, 44.3%) were the treatment related factors of higher importance respectively. Pervious painful treatment experience (47.3%) and poor oral hygiene of the dentist (34.5%) were reported to be among the other justifiable anxiety sources. In all mentioned situation, variations in anxiety factors were significantly higher in women.¹⁰

It is determined through research Rahul Bhola and his colleagues in 2014 about anxiety due to dental treatment procedures in Delhi University among 100 people between 17-20 years old that: (60.75%) of all children between ages of 12-14 had moderate anxiety and fear due to all treatment procedures. Normally, (4.16%) of patients had no fear in check-up but (78.3%) of patients were afraid of all treatment procedures including: check-up, injection and tooth extraction. As a result they found that the majority of patients had request of postponing treatment procedure. And its major reason was dentists' insufficient awareness of patients' psychology.¹

Results of a cross sectional study by Imran Farooq and Saqib Ali in 2014 about Dental Anxiety Prevailing in the students of Pakistani Dental College among 167 students, 108 females, 59 male show: female dental students presented with higher DAS than male students and the difference was also statistically significant (P value < 0.05). Pre-clinical students (1st- 2nd year) were found to be more anxious than clinical students (3rd-4th year).³

In a research by Mayank Kakkar and his colleagues in 2016 about Prevalence of Dental Anxiety in 10-14 years old children and its implication, among 250 (both sexes), participants were given questionnaire before treatment. For questionnaire assessment (CSSS-DS) system was used. Regarding to result of questionnaire, they determined that: there were (42%) of children with dental fear. Anxiety was highest on "injection" followed by "dentist drill". The data revealed dental fear might get lower the much age gets older. As well, girls had more fear than boys.⁶

Results of a research by Lisa J. Heaton about Predicting anxiety during dental treatment using patients' self-reports in 2007 explain that: Higher Dental Fear Survey Scores, younger age, more invasive treatment type and previous avoidance of dental care because of a bad experience all were predictive of greater observed anxiety. Neither self -

reported nor observed anxiety was affected by previous experience with a particular practitioner or treatment.⁷

2. Purpose

Studying anxiety due to dental treatment procedures among the visitors of Dental Teaching Clinic.

3. Materials and Methodology

This is a cross-sectional study which is done among 201 children and elders between 6 - 70 ages at Dental Teaching Clinic of Kabul University of Medical Science "Abu-Ali Sena" during 3 months (July, August, September) of 2019. The participants were give pre-piloted questionnaire to respond (Chart 1). The measurement of Anxiety was done by Dental Anxiety Scale (DAS) (Chart 2). After data gathering, data were inserted in SPSS program. In addition, for data testing Chi-Squire Test program was used.

Table 1: Dental Anxiety Scale (DAS) questionnaire

- 1) If you went to your Dentist for TREATMENT TOMORROW, how would you feel?
Not Anxious Slightly Anxious Fairly Anxious
Very Anxious Extremely Anxious
- 2) If you were sitting in the WAITING ROOM (waiting for treatment), how would you feel?
Not Anxious Slightly Anxious Fairly Anxious
Very Anxious Extremely Anxious
- 3) If you were about to have your teeth SCALED & POLISHED, how would you feel?
Not Anxious Slightly Anxious Fairly Anxious
Very Anxious Extremely Anxious
- 4) If you were about to have a LOCAL ANAESTHETIC INJECTION in your gum, above an upper tooth, how would you feel?
Not Anxious Slightly Anxious Fairly Anxious
Very Anxious Extremely Anxious
- 5) If you were about to have a TOOTH DRILLED, how would you feel?
Not Anxious Slightly Anxious Fairly Anxious
Very Anxious Extremely Anxious
- 6) How does the NOISE from dental instruments make you feel?
Not Anxious Slightly Anxious Fairly Anxious
Very Anxious Extremely Anxious

Table 2: Instructions for scoring our Dental Anxiety Scale:
Each item is scored as follows:

Not anxious	1
Slightly anxious	2
Fairly anxious	3
Very anxious	4
Extremely anxious	5

Total score is the sum of all six items, range from 5 to 30: A score of 23 or above indicates a highly dentally anxious patient, possibly dentally phobic

4. Results

This research is done among 201 client of dental teaching clinic of Kabul University Medical Science “Abu-Ali Sena”. The participants of this research was comprised of 93 men (46.3%) and 108 women (53.7%). Among participants, 97 of them (48.3%) were children and 104 of them (51.7%) were elders; which is shown in Tables and Charts.

Table 1: Distribution of Participants according to Sex

Sex	No	Percentage
Male	93	46.3%
Female	108	53.7%
Total	201	100%

Table 2: Distribution of Participants according to Age

Age	No	Percentage
Child	97	48.3%
Elder	104	51.7%
Total	201	100%

Table 3: Distribution of Scoring according to DAS

Anxiety Type	Anxiety Score	NO	Percentage
No Anxiety	6-10	97	48.1%
Mild Anxiety	11-15	64	31.9%
Moderate Anxiety	16-19	20	10%
Severe Anxiety	20-22	8	4%
Extremely Severe Anxiety	23-30	12	6%
Total	-----	201	100%

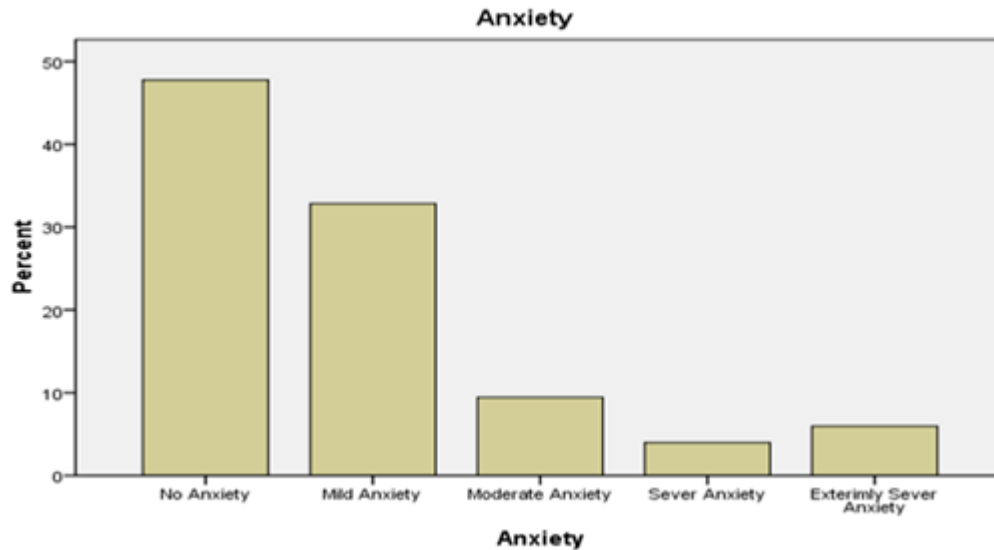


Chart 1: Distribution of Anxiety according to DAS

Table 4: Distribution of Anxiety Due to Dental Treatment Procedures according to Sex

Sex	No Anxiety		Mild Anxiety		Moderate Anxiety		Severe Anxiety		Extremely Severe Anxiety		Total	P. Value
	No	%	No	%	No	%	No	%	No	%		
Male	53	57%	26	28%	6	6.6%	2	2.2%	6	6.5%	93	
Female	43	39.8%	40	37%	12	13%	6	5.6%	6	5.6%	108	
Total	96	47.8%	66	32%	19	9.5%	8	4%	12	6%	201	0.95

Table 5: Distribution of Anxiety Due to Dental Treatment Procedures according to Ages

Age	No Anxiety		Mild Anxiety		Moderate Anxiety		Severe Anxiety		Extremely Severe Anxiety		Total		P. Value
	No	%	No	%	No	%	No	%	No	%	No	%	
Child	44	45.4%	32	33%	12	12.4%	1	1%	8	8.2%	97	100%	0.65
Elder	52	50%	34	32%	7	6.7%	7	6.7%	4	3.8%	104	100%	
Total	96	47.8%	66	66%	19	9.5%	8	4%	12	6%	201	100%	

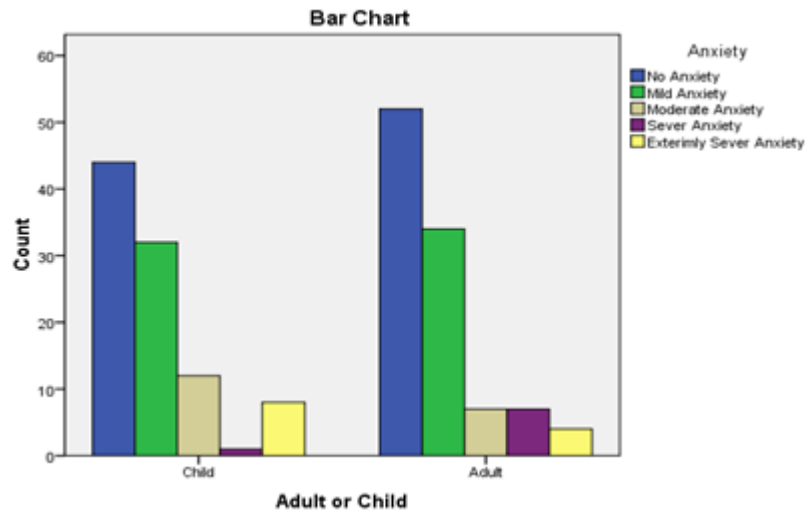


Chart 2: Distribution of Anxiety among Children and Elders

5. Discussion

This study is done among client of Dental Teaching Clinic of Kabul University of Medical Science “Abu-Ali Sena” during 3 months (July, August, September) of 2019. Through this research we found that:

- 53 (57%) of male and 43(39.8%) of female had no anxiety of dental treatment procedures. And also 26 (28%) of male and 40 (37%) of female had mild anxiety. As well, 6 (6.6%) of male and 13 (12%) of female had moderate anxiety. 2 (2.2%) of male had severe anxiety while this was 6 (5.6%) in male. This statistic shows this fact that women had more anxiety rather than men.

It has been defined by a research by Imran Farooq and Saqib Ali in 2016 in Peshawar of Pakistan that (90%) of female with score of 13.1 and (80%) of male with score of 11.9 were anxious of dental treatment procedures. As it can be observed, female had more anxiety than male in both studies.

Based on a research by Mohammad Saghareen and his colleagues in 2013 in Saudi Arabia about prevalence of anxiety among university students; female had more anxiety than male. As well, in a research by Kiruthika Pathuraja in 2016 in India; it's mentioned that (40%) of female had anxiety while it was (28%) in male. The results of both mentioned research are compatible to ours.

According to Anxiety measurement of children and elders in our research, children had more anxiety due to dental treatment procedures rather as compared to elders. In the research, 97 children (48.3%) and 104 elders (4.51%) were studied. In children extremely severe anxiety was (8.2%) while this number was (8.3%) in elders; which match literature. Results of a research by Rahul Bahula in 2014 in India about Anxiety due to Dental Treatment Procedures showed that 10-14 years old children (60.75%) had anxiety due to dental treatment procedures. Moreover, in the same field another study was conducted in India by Mayank Kakkar and his colleagues in 2016. They had mentioned in the conclusion that the much age gets older, anxiety

declines. Both researches' results correspond or study's result.

In addition, it is determined by a research by Imran Farooq about anxiety prevailing in the students of a Pakistani college that: pre-clinic students were found more anxious as compared to clinical students. As well, they found that successive visit with dentist can help in anxiety reduction.

6. Conclusion

We determined through this research that: women had more anxiety due to treatment procedures rather than men. As well, children had more anxiety due to dental treatment procedures than elders.

7. Suggestions

- 1) The first visit with dentist must be done in low ages even it can be started in 2; thus we will have cooperative adults and children. As well, Children must never been scared from dental treatment by their parents.
- 2) The anxious elders and children must not be treated compulsory in their first visit with dentist.
- 3) Parents must not previously promise their children about dental treatment procedures. Because this way, treatment procedures will be challenging for dentist.
- 4) The anxious patients should be recognized and be treated with special and painless methods. Thus, they will be cooperative and with no anxiety in upcoming visits.
- 5) Dentists must try extremely to carry out painless treatment procedures in all ages.

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