



Dental Anxiety Stress and Depression: A Cross-Sectional Questionnaire-based Study to Assess the Various Trigger Factors Which May Lead to Dental Anxiety

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ABSTRACT

Background: This study investigated the experiences of different patients visiting a dental office. The study noted the different types of stimuli and triggering factors causing dental anxiety. The sample consists of individuals of different ages, sex, occupation, and anxiety levels were examined by the procedure undergone by the patients.

Methods: A total of 220 patients participated in the study (100 Females and 120 Males). The study constituted a series of questions in a questionnaire form which was filled out during Pre-treatment and Post-treatment.

The DASS 21 study was included in the questionnaire to examine the levels of Anxiety, Depression, etc. Questions were also asked about factors that may increase (sound of drill and suction) or decrease (counselling by the doctor) the level of dental phobia.

Results: Maximum patients experienced dental anxiety before treatment plans which include RCT, Tooth Extraction, Follow-ups, etc. 52.2% of the sample experienced mild anxiety Pre-treatment. The most common reason for the elevated level of anxiety include Fear of pain, Injections, the sound of drill and suction, etc. (Aggravating factor)

The relieving factors include counselling by the doctors. A maximum percentage of the sample claim to have commenced with dental anxiety due to unknown reasons.

The physical manifestations which were experienced by the patients include Headache, Palpitations, Sweating, etc.

Conclusion: Maximum percentage of the sample experienced mild to moderate levels of dental anxiety. Various reasons for dental anxiety were given by the patients which most commonly include, Fear of pain. The step which should be undertaken to relieve dental anxiety, as suggested by the patients includes counselling by the doctors.



From the study thus conducted, it is evident that dental anxiety is prevalent amongst maximum patients visiting a dental office for the first time or even regularly. Some of the factors which should be considered to reduce dental anxiety amongst patients and also build healthy dentist-patient relations include:

Dental office environment, Communication skills, Relaxation techniques, Distraction, Masking, sounds, Counselling by the doctors.

It is very necessary to reduce the level of dental anxiety so as to build a healthy dentist-patient relationship. All the necessary steps must be undertaken to prevent/minimize dental anxiety.

Keywords: Dental Anxiety; Dental Phobia; Dental Fear; DASS21; Dentist-Patient Relations; Fear of Pain in Dental Office; Fear of RCT; Stress and Depression.

Introduction

Dental anxiety is an emotion that is prevalent worldwide and cannot be limited to a particular country or population. It is a stress that is created in response to the thought of seeking dental treatment or can be due to various other factors in the dental office.

Objectives

The aims and objectives of the study involve:

- To estimate the prevalence of dental anxiety.
- To determine the various trigger factors which affect predominantly cause dental anxiety, stress, and depression.
- To estimate demographic factors and factors that may increase or decrease dental anxiety.
- To measure the negative emotional states of depression, anxiety, and stress.

Methodology

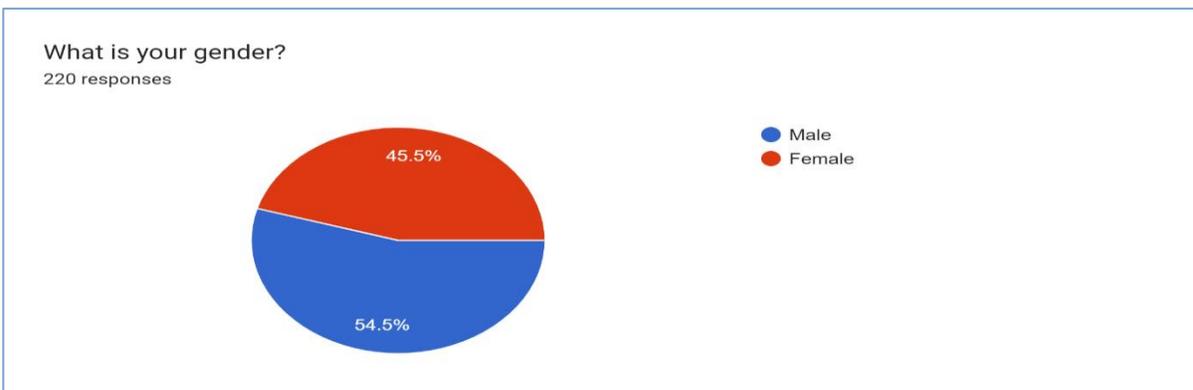
A number of dental patients, of various age groups, different occupational backgrounds, and both genders participated in the study.

Study Design: A cross-sectional questionnaire-based study. The questionnaire includes the **DASS21** form.

SECTION -B				
Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.				
The rating scale is as follows:				
0	Did not apply to me at all			
1	Applied to me to some degree, or some of the time			
2	Applied to me to a considerable degree or a good part of time			
3	Applied to me very much or most of the time			
1 (s)	I found it hard to wind down	0	1	2 3
2 (a)	I was aware of dryness of my mouth	0	1	2 3
3 (d)	I couldn't seem to experience any positive feeling at all	0	1	2 3
4 (a)	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2 3
5 (d)	I found it difficult to work up the initiative to do things	0	1	2 3
6 (s)	I tended to over-react to situations	0	1	2 3
7 (a)	I experienced trembling (e.g. in the hands)	0	1	2 3
8 (s)	I felt that I was using a lot of nervous energy	0	1	2 3
9 (a)	I was worried about situations in which I might panic and make a fool of myself	0	1	2 3
10 (d)	I felt that I had nothing to look forward to	0	1	2 3
11 (s)	I found myself getting agitated	0	1	2 3
12 (s)	I found it difficult to relax	0	1	2 3
13 (d)	I felt down-hearted and blue	0	1	2 3
14 (s)	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2 3
15 (a)	I felt I was close to panic	0	1	2 3
16 (d)	I was unable to become enthusiastic about anything	0	1	2 3
17 (d)	I felt I wasn't worth much as a person	0	1	2 3
18 (s)	I felt that I was rather touchy	0	1	2 3
19 (a)	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2 3
20 (a)	I felt scared without any good reason	0	1	2 3
21 (d)	I felt that life was meaningless	0	1	2 3

Study Site: The study sites include 3 dental clinics in Ahmednagar district and a group of individuals from a tribal area of Western Maharashtra visiting a Dental College in Ahmednagar district.

Study Population: Dental patients of both genders, different age groups, and various occupational backgrounds visiting a dental office for the first time to commence a new dental treatment. A total of 120 Males and 100 Females were part of the questionnaire.



Study Duration: 2 Months

Inclusion Criteria

- Dental patients who are visiting the dental clinic for a new treatment or check-up.
- Good general health.

Exclusion Criteria

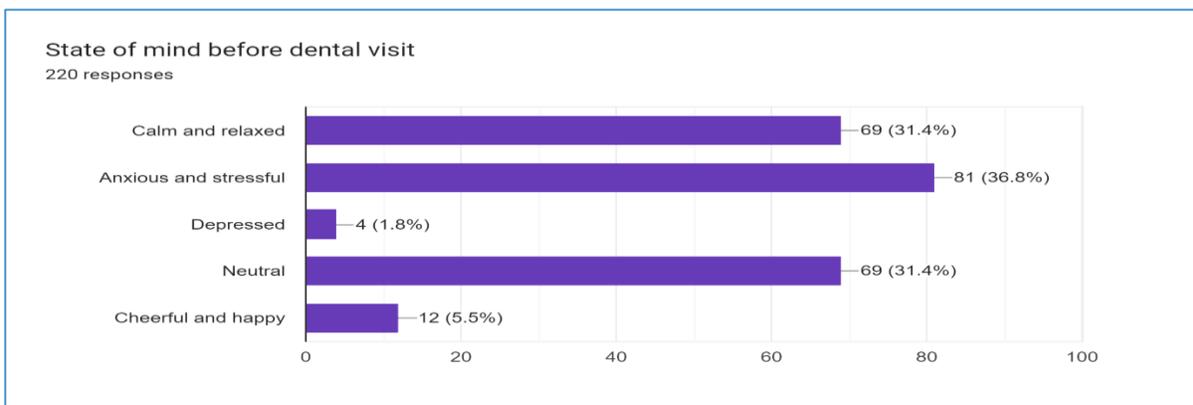
- Patients previously suffered from any mental illness.
- Patients who are having medications for anxiety and depression.
- General sickness.

Implication

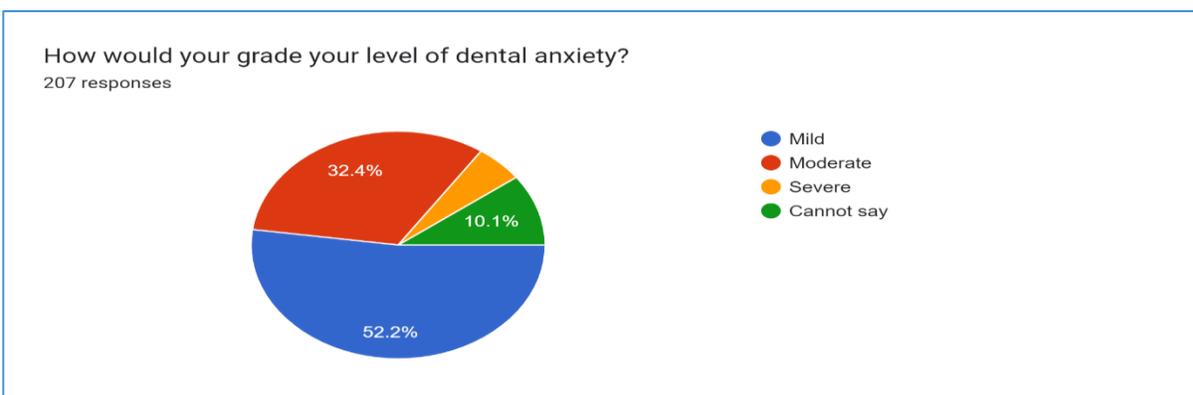
There is various individual in the population who suffer from Dental anxiety, stress, and depression. It is necessary to know the various causes which may trigger anxiety and stress levels in patients of various age groups and different occupational backgrounds. Patients who suffer from dental anxiety tend to avoid their dental treatment, which may develop or worsen the various types of diseases and disorders arising in the oral cavity. Once these factors are identified, there can be various measures taken to avoid or correct them so that people may face a decreased level of stress and anxiety. This will ultimately lead to an improvement in oral hygiene and thus, the overall health of the individuals.

Results

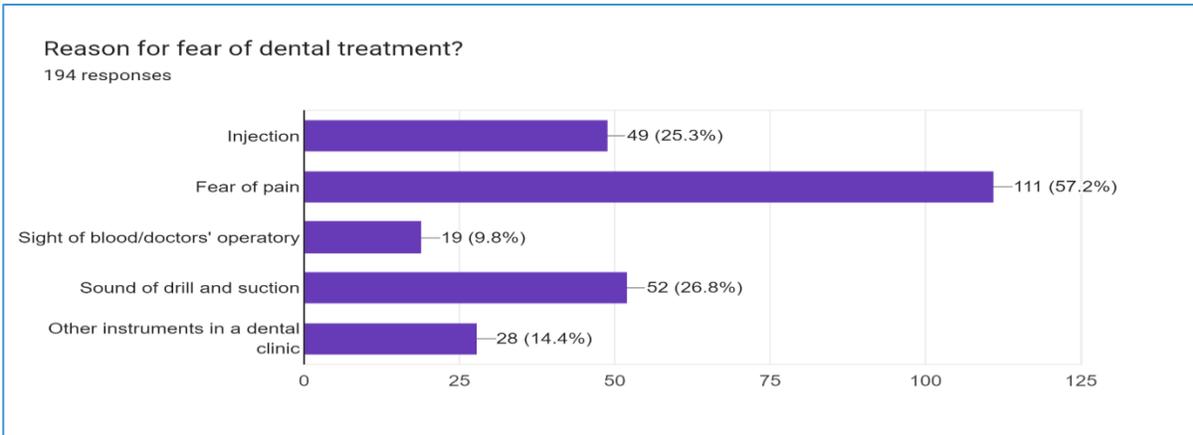
1: 81 individuals, which is 36.8% of the study population were anxious and stressed before the dental visit, which is the maximum.



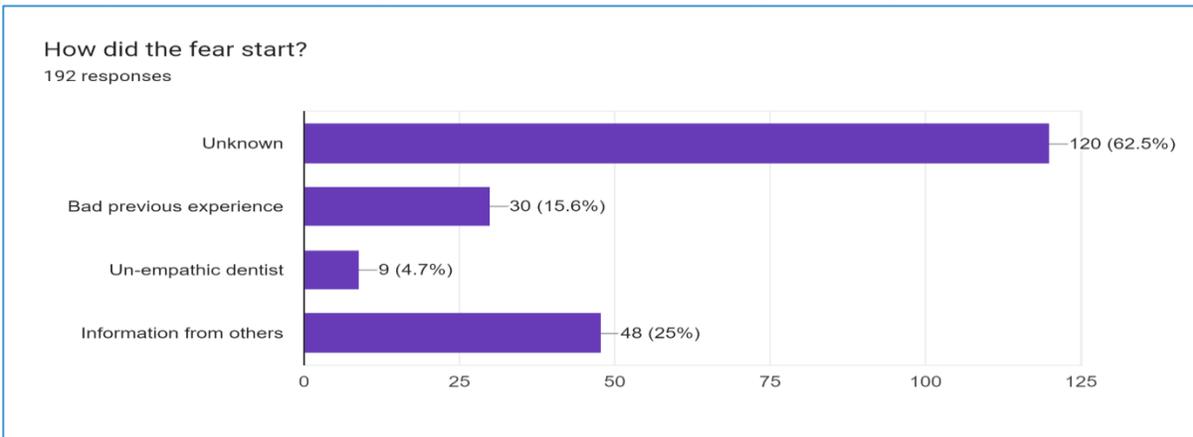
2: 52.2% of the population, i.e., 108 individuals claimed to have experienced a mild level of anxiety, whereas 67 individuals experienced moderate anxiety. Severe level of anxiety was experienced by 5.3% i.e., 11 individuals.



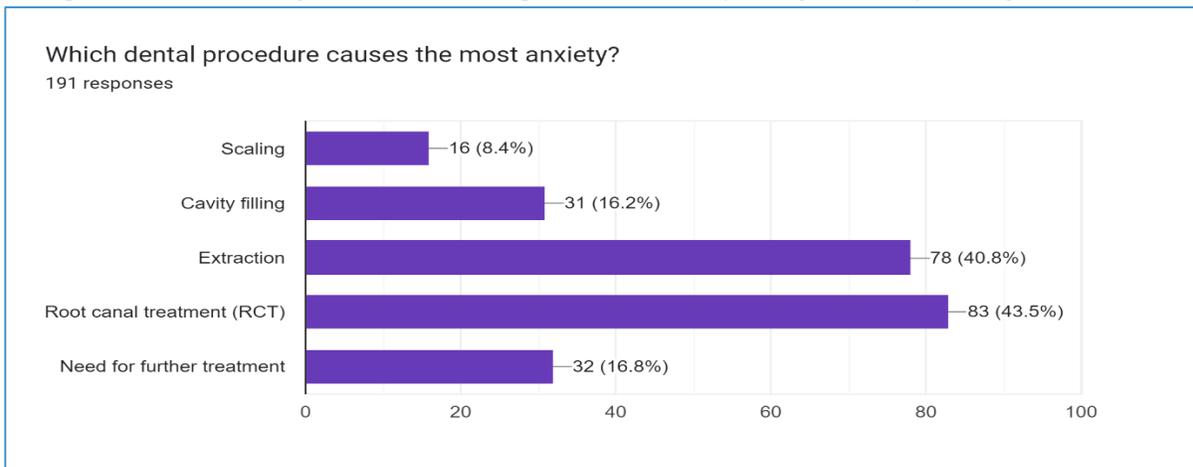
3: The most common reason for fear before the commencement of dental treatment was **FEAR OF PAIN**, followed by **the SOUND OF SUCTION AND DRILL** and **FEAR OF INJECTIONS** respectively. Another instrument in a dental clinic and the sight of blood was also one of the aspects leading to dental anxiety.



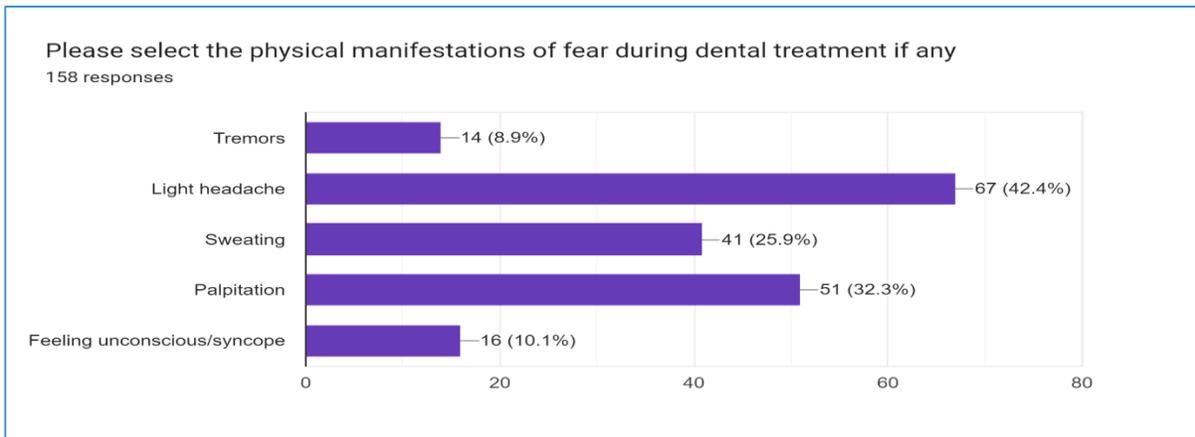
4: 120 individuals (62.5%) claim that the fear started due to an unknown reason. 25% of the population (48 individuals) think that anxiety started because of information about the treatment from others, which is followed by 30 individuals claiming that fear was caused due to bad previous experience.



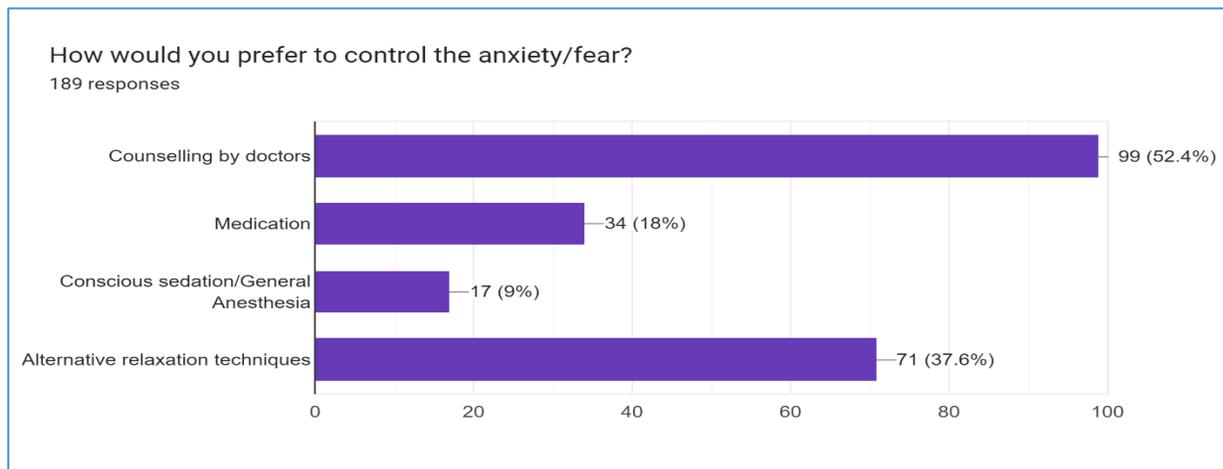
5: According to the survey, the maximum number of individuals were scared before the **Root-canal Procedure** i.e., 43.5%. 78 individuals said that undergoing a tooth Extraction was most fearful for them. The dental procedures following them are Follow-up treatment, Cavity filling, and lastly Scaling.



6: The physical manifestations experienced by patients were: Light Headache (42.2%), Palpitations (32.3%), Sweating (25.9%), Syncope (10.1%), and Tremors (8.9%).



7: Lastly, the patients were asked about the preferable methods to control dental anxiety. 52.4% i.e., 99 patients chose **COUNSELLING BY DOCTORS** as the most convenient method. This was followed by **ALTERNATIVE RELAXATION TECHNIQUES** i.e., 37.6% of patients.



Discussion: The fear of dental treatment determines the frequency of treatment availed with long-term implications in oral health maintenance. The patient tends to procrastinate or even cancel the dental appointment due to the fear of specific factors or even something vague in the dental office. Patients with dental anxiety often happen to exhibit signs and symptoms which, may include: sweating, tachycardia, syncope, signs of panic, and hypotension. Some of the factors which are seen to precipitate the stress in general are: needles, drills, the sound of the compressor, etc.

Dental anxiety has been found to play a central role in the avoidance of dental treatment. The patient tends to avoid the visit to a dental office until the experience of pain or unbearable symptoms drives the patient to seek treatment. This tendency to avoid dental visit may lead to poor oral hygiene. Such patients may exhibit compromised periodontal health, endodontic health, halitosis, etc.

Dental and oral health is an important part of your overall health. Poor oral hygiene can even be linked to heart disease, cancer, and diabetes. Thus, good oral health is an important factor, and maintaining good oral



health may prevent various disorders from developing in the mouth. The ignorance of oral health may thus lead to the development of various disorders which could be prevented.

It is important to identify the various reasons and factors which may trigger the dental anxiety in patients, so as to find alternatives or solutions to those. This may show a drastic improvement in the oral hygiene of population.

The purpose of this study is to assess the prevalence of dental anxiety and fear in patients, the various precipitating factors, and their relation to the age, gender, educational level, past traumatic experiences, and frequency of dental visits.

Conclusion

The fear of dental treatment i.e., Dental Anxiety may have an adverse effect on the patient's life, and hence it is imperative to identify and alleviate these obstacles, so as have better oral health and overall well-being. From the survey, conducted various etiological factors were noted that gave rise to dental anxiety and phobia. Efforts should be made to reduce etiological factors and ultimately, Dental Anxiety.

Some of the identified etiological factors are:

- 1: Fear of Pain.
- 2: Fear of Injections.
- 3: Fear of sound of Drill and Suction.
- 4: Sight of blood, etc.

Thus, some of the methods to reduce the level of dental phobia due to these reasons are as follows:

- The dental office environment: It plays a significant role in initiating dental anxiety. The office atmosphere can be made calm by the playing of soft music and the avoidance of bright lights. The waiting area can be adorned with pictures, magazines, posters, etc. The sight of blood should be avoided and a neat office should be maintained.
- Communication skills: A good patient-dentist relation is crucial for the management of anxiety. Proper information about the dental problems and treatment plan must be provided to the patient in a calm and unhurried way. Patients must be encouraged to ask questions about the treatment. The patient should face the patient, make eye contact, and observe them. Rapid movements should be avoided.
- Relaxation techniques: Multiple relaxation techniques have been proposed which help the patient relax mentally as well as physically. If a person is physically relaxed, it is impossible to be psychologically upset at the same time.
- Distraction: It is a useful technique of diverting a patient's attention from what might be perceived as an unpleasant procedure. Giving the patient a short break during a stressful procedure can be an effective use of distraction. Music distraction is a non-invasive technique in which the patient listens to music during a stressful procedure.
- Masking the sounds: The loud and harsh sounds of the dental compressors can be avoided by placing the compressor away from the dental office, where the sound may become unreachable. Other sounds in the dental office also can be masked by playing soft music in the background.
- Counselling by doctors: It is very necessary to explain each step to the patient of the dental procedure. Effective communication with the patient can reduce the amount of dental anxiety. Patients may experience dental anxiety due to bad previous experiences as well. Thus, counselling by the doctors about previous experiences and assuring the patients about complete procedures can tremendously decrease dental anxiety.



It is highly necessary for the patient to have a non-anxious state of mind for the patient as well as a dentist. A non-anxious patient leads to better development of patient-dentist relations. The dentist should communicate with the patient to effectively identify the source and reason for anxiety. Therapy should be customized to each individual following proper evaluation. All successful treatment will rest on dentist-patient cooperation, and thus a relaxed patient will result in a less stressful atmosphere for the dental team and better treatment outcomes.

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