

# Awareness of TMJ Pain Among Dental Students

**R.Prabhu\* K.Valarmathi\*\*S.Vengaiarasi\*\***

Dr. MGR Educational and Research Institute

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## ABSTRACT:

This study aimed to investigate the awareness of temporomandibular disorder among dental students in private college. Other studies show only the signs, symptoms, incidence, prevalence and severity of temporomandibular disorders. This study clearly demonstrated the awareness of temporomandibular joint pain and its preventive measures among young age group. The young individuals were more aware of their health and their wellness. Eventually, this study clearly depicted the TMJ pain awareness among young individuals.

**INTRODUCTION:** TMJ is the name of your jaw joint, not a condition. When a TMJ is painful or not functioning properly the condition is known as temporomandibular disorder or temporomandibular joint dysfunction.

**METHODS:** Information about the awareness of temporomandibular disorder and signs and symptoms & prevention of TMJ were collected using self-questionnaires and statistical analysis has been made using SPSS version 21.0

**RESULTS:** We have evaluated 200 students from a private dental college with age of 17-21 years, 22-26years and gender of 41 males and 159 females. Among the total population, 83% of peoples are aware of TMJ pain. In comparison with the age, students of 22-26 years have better knowledge about the TMJ pain than 17-21 years student but statistically not significant. On comparison with age, students of 17-21 years had experienced pain than 22-26 years students but statically not significant.8

**KEYWORDS:** TMJ pain, disorders, awareness, management,dental students.

## INTRODUCTION

The temporomandibular joint is a part of the musculoskeletal system responsible for a mandibular function which includes phonation, mastication, and deglutition. TMJ is a hinge joint between the temporal bone and the lower jaw. TMJ disorder is a collective term that depicts a variety of disorders involving the temporomandibular joint and masticatory muscles with symptoms including, pain, muscle tenderness, restricted and in-coordinated movements of the jaw and irregular joint sounds. 1) The clicking sound is due to disc displacement with reduction or because of hypermobility or remodeling of the jaw.2) The absence of clicking sound doesn't imply the healthy TMJ.

The causes behind this disorder are multi-factorial associated with stress, gender, age, personality, occlusal interferences, postural changes, mispositioning or loss of teeth, extrinsic and intrinsic changes in TMJ systemic problems (rheumatoid arthritis, ankylosing spondylitis). Furthermore factors such as behavioral (grinding, clenching, abnormal head posture) and emotional (anxiety, fear, frustration, anger)

Prevalence of TMJ disorder differs in different population according to their ethnicity, culture and socio-economic status.

For the assessment, a survey has been conducted regarding TMJ awareness among the dental students and statistical analysis has been made using SPSS version 21.0

## **MATERIALS AND METHODS:**

The study sample comprised of 200 UG students studying at Dr.MGR educational and research institute - Chennai. The samples has been grouped based on the age group and gender. Their age ranges from 17 to 26 years and of 41 males and 159 females in this study.

### **Questionnaire:**

The questionnaire was prepared and was manually distributed among UG students. The data was collected and statistically analyzed.

The questionnaire comprises of

1. Are you aware of TMJ pain?

A: Yes      B: No

2. TMJ disorder is most common at the age of?

A: 40 – 60    B: 18-40    C: Below18

3. Which gender is most commonly affected by TMJ pain?

A: men    B: Women

4. Do you think TMJ examination is necessary for all OP patients?

A: Yes    B: No

5. Have you ever experienced TMJ pain?

A: Yes    B: No

IF YES

Is your pain always present?

A: Yes    B: No    C: Sometimes

Does your pain wake you up at night?

A: Yes    B: No    C: Sometimes

6. Do you think whether TMJ pain is radiating or not?

A: yes      B: No

7. Are you aware of clenching or grinding your teeth while sleeping?

A: Yes      B: No      C: Sometimes

8. Do you hear any clicking sound while opening or closing mouth?

A: Yes    B: No    C: Sometimes

IF YES

A: Mild    B: Moderate    C: Severe

9. Which of the following presenting sign of TMJ disorder is true?

A: Joint Clicking B: Restricted mouth opening

10. Which radiograph is better for diagnosing TMJ disorder?

A: TMJ tomography B: OPG C: CT/MRI

11. What is the most common cause for TMJ ANKYLOSIS?

A: Trauma, infections and systemic diseases

B: Impaction of third molar

C: Drugs

12. Which of the following can be termed as direct contributing factor for TMJ pain?

A: Behavioral factor B: Emotional factor

13. Do you think TMJ is alone responsible for pain (or) muscle is also affected?

A: Yes B: No

14. Which muscle palpation tell us the TMJ disorder?

A: Muscle of mastication B: Digastrics C: Buccinators

15. Have you ever thought of removal of impacted 3rd molar would relieve pain?

A: Yes B: No C: May be

16. Common medication prescribed for TMJ pain?

A: NSAID drug B: Anti- bacterial

C: Muscle relaxants

17. Do you think only drugs can be a solution for TMJ disorder?

A: Yes B: No

18. Which methods are used in Management of TMJ disorder?

A: Reassurance and Counseling

B: NSAID drug therapy

C: Splint therapy

D: All the above

#### RESULT:

We have evaluated 200 students in a private dental college in the age of 17 – 21years, 22 -26 years and of 41 males and 159 females. Among the total population, 83% of peoples are aware of the TMJ pain. In the study of 17-21 years 43 % were aware of the TMJ pain and 9% were not aware about the TMJ pain and in the study of 22-26 years 40% were aware of the TMJ pain and 8% were not aware of

it. In comparison with the age, students of 22-26 years have better knowledge about the TMJ pain than 17-21 years students but statistically not significant.

On a relative study of 17-21 years 17.5% had experienced TMJ pain and 34.5% have not experienced the pain. In 22-26 years 14.5% have experienced pain and 33.5% have not experienced the pain. In comparison with the age, students of 17-21 years had experienced pain than 22-26 years students but statistically not significant.

**GENDER:**

| QUESTIONS | OPTION       | MALE | FEMALE | P – VALUE |
|-----------|--------------|------|--------|-----------|
| Q-1       | A.YES        | 39   | 137    | .020      |
|           | B.NO         | 2    | 32     |           |
| Q-2       | A. 40-60     | 8    | 19     | 0.449     |
|           | B. 18-40     | 31   | 132    |           |
|           | C. BELOW 18  | 2    | 8      |           |
| Q-3       | A. MEN       | 25   | 60     | .007      |
|           | B. WOMEN     | 16   | 99     |           |
| Q-4       | A. YES       | 36   | 127    | .244      |
|           | B. NO        | 5    | 32     |           |
| Q-5       | A. YES       | 13   | 51     | .964      |
|           | B.NO         | 28   | 108    |           |
| Q-5A      | A.YES        | 0    | 8      | 046       |
|           | B.NO         | 9    | 13     |           |
|           | C.SOMETIMES  | 8    | 32     |           |
| Q-5B      | A.YES        | 1    | 8      | .057      |
|           | B.NO         | 16   | 34     |           |
|           | C.SOMETIMES  | 0    | 10     |           |
| Q-6       | A. YES       | 29   | 115    | .839      |
|           | B. NO        | 12   | 44     |           |
| Q-7       | A. YES       | 16   | 51     | .622      |
|           | B. NO        | 19   | 87     |           |
|           | C. SOMETIMES | 6    | 21     |           |
| Q-8       | A. YES       | 18   | 51     | .325      |
|           | B. NO        | 18   | 79     |           |
|           | C. SOMETIMES | 5    | 29     |           |
| Q-8A      | A.MLD        | 15   | 54     | .468      |
|           | B.MODERATE   | 8    | 20     |           |
|           | C.SEVERE     | 0    | 4      |           |

|      |  |    |     |      |
|------|--|----|-----|------|
| Q-9  | A. JOINT CLICKING                      | 27 | 100 | .726 |
|      | B. RESTRICTED MOUTH OPENING            | 14 | 59  |      |
| Q-10 | A. TMJ TOMOGRAPHY                      | 27 | 103 | .992 |
|      | B. OPG                                 | 9  | 36  |      |
|      | C. CT/MRI                              | 5  | 20  |      |
| Q-11 | A. TRAUMA, INFECTION, SYSTEMIC DISEASE | 24 | 90  | .678 |
|      | B. IMPACTION OF THIRD MOLAR            | 15 | 65  |      |
|      | C. DRUGS                               | 2  | 4   |      |
| Q-12 | A. BEHAVIOURAL FACTOR                  | 34 | 122 | .393 |
|      | B. EMOTIONAL FACTOR                    | 7  | 37  |      |
| Q-13 | A. YES                                 | 28 | 110 | .913 |
|      | B. NO                                  | 13 | 49  |      |
| Q-14 | A. MUSCLES OF MASTICATION              | 35 | 135 | .495 |
|      | B. DIGASTIC                            | 3  | 18  |      |
|      | C. BUCCINATORS                         | 3  | 6   |      |
| Q-15 | A. YES                                 | 20 | 63  | .558 |
|      | B. NO                                  | 8  | 39  |      |
|      | C. MAY BE                              | 13 | 57  |      |
| Q-16 | A. NSAIDS                              | 24 | 76  | .210 |
|      | B. ANTI-BACTERIAL                      | 3  | 6   |      |
|      | C. MUSCLE RELAXANTS                    | 14 | 77  |      |
| Q-17 | A. YES                                 | 8  | 23  | .648 |
|      | B. NO                                  | 33 | 135 |      |
| Q-18 | A. REASSURANCE AND COUNSELLING         | 4  | 26  | .303 |
|      | B. NSAID DRUG THERAPY                  | 9  | 42  |      |
|      | C. SPLINT THERAPY                      | 8  | 16  |      |
|      | D. ALL THE ABOVE                       | 20 | 75  |      |

AGE

| QUESTIONS | OPTIONS    | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | P.VALUE |
|-----------|------------|----|----|----|----|----|----|----|----|----|----|---------|
| Q-1       | A.YES      | 1  | 7  | 4  | 29 | 45 | 46 | 25 | 5  | 3  | 1  | .659    |
|           | B.NO       | 1  | 4  | 1  | 7  | 5  | 9  | 5  | 1  | 0  | 0  |         |
| Q-2       | A.40-60    | 0  | 4  | 1  | 5  | 5  | 5  | 4  | 2  | 1  | 0  | 831     |
|           | B.18-40    | 2  | 6  | 4  | 29 | 41 | 48 | 25 | 4  | 3  | 1  |         |
|           | C.BELOW    | 0  | 1  | 0  | 2  | 4  | 2  | 1  | 0  | 0  | 0  |         |
| Q-3       | A.MEN      | 0  | 2  | 2  | 14 | 29 | 23 | 13 | 1  | 1  | 0  | .205    |
|           | B.WOMEN    | 2  | 9  | 3  | 22 | 21 | 3  | 17 | 5  | 3  | 1  |         |
| Q-4       | A.YES      | 0  | 4  | 3  | 29 | 46 | 49 | 25 | 4  | 2  | 1  | .000    |
|           | B.NO       | 2  | 7  | 2  | 7  | 4  | 6  | 5  | 2  | 2  | 0  |         |
| Q-5       | A.YES      | 0  | 1  | 0  | 15 | 19 | 15 | 11 | 2  | 1  | 0  | .371    |
|           | B.NO       | 2  | 10 | 5  | 21 | 31 | 40 | 19 | 4  | 3  | 1  |         |
| Q-5A      | A.YES      | 0  | 0  | 0  | 2  | 1  | 2  | 1  | 2  | 0  | 0  | .098    |
|           | B.NO       | 0  | 0  | 0  | 5  | 11 | 3  | 3  | 0  | 0  | 0  |         |
|           | C.SOMETMES | 0  | 1  | 0  | 10 | 10 | 8  | 8  | 2  | 1  | 0  |         |
| Q-5B      | A.YES      | 0  | 0  | 0  | 2  | 3  | 1  | 1  | 1  | 1  | 0  | .535    |
|           | B.NO       | 0  | 1  | 0  | 12 | 17 | 9  | 9  | 2  | 0  | 0  |         |
|           | C.SOMETMES | 0  | 0  | 0  | 2  | 2  | 3  | 2  | 1  | 0  | 0  |         |
| Q-6       | A.YES      | 1  | 6  | 5  | 25 | 40 | 39 | 21 | 4  | 2  | 1  | .604    |

|      |   |   |   |   |    |    |    |    |   |   |   |      |
|------|---|---|---|---|----|----|----|----|---|---|---|------|
|      | B.NO                                    | 1 | 5 | 0 | 11 | 10 | 16 | 9  | 2 | 2 | 0 |      |
| Q-7  | A.YES                                   | 0 | 2 | 1 | 9  | 15 | 29 | 7  | 2 | 2 | 0 | .090 |
|      | B.NO                                    | 2 | 7 | 4 | 20 | 27 | 22 | 19 | 4 | 1 | 0 |      |
|      | C.SOMETIMES                             | 0 | 2 | 0 | 7  | 8  | 4  | 4  | 0 | 1 | 1 |      |
| Q-8  | A.YES                                   | 1 | 5 | 2 | 16 | 18 | 18 | 6  | 1 | 1 | 1 | .180 |
|      | B.NO                                    | 0 | 3 | 2 | 19 | 25 | 28 | 15 | 2 | 3 | 0 |      |
|      | C.SOMETIMES                             | 1 | 2 | 1 | 1  | 7  | 9  | 9  | 3 | 0 | 0 |      |
| Q-8A | A.MLD                                   | 2 | 8 | 2 | 14 | 17 | 16 | 6  | 3 | 0 | 1 | .053 |
|      | B.MODERATE                              | 0 | 0 | 0 | 7  | 5  | 7  | 7  | 2 | 0 | 0 |      |
|      | C.SEVERE                                | 0 | 0 | 0 | 1  | 1  | 0  | 1  | 0 | 1 | 0 |      |
| Q-9  | A.JOINT CLICKING                        | 0 | 7 | 5 | 23 | 31 | 36 | 21 | 3 | 1 | 0 | .224 |
|      | B.RESTRICTED MOUTH OPENING              | 2 | 4 | 0 | 13 | 19 | 19 | 9  | 3 | 3 | 1 |      |
| Q-10 | A.TMJ TOMOGRAPHY                        | 1 | 6 | 3 | 20 | 36 | 38 | 18 | 5 | 2 | 1 | .110 |
|      | B.OPG                                   | 0 | 3 | 1 | 14 | 13 | 8  | 4  | 1 | 1 | 0 |      |
|      | C.CT/MRI                                | 1 | 2 | 1 | 2  | 1  | 9  | 8  | 0 | 1 | 0 |      |
| Q-11 | A.TRAUMA,INFECTIONS<br>SYSTEMIC DISEASE | 2 | 5 | 2 | 18 | 34 | 33 | 19 | 1 | 0 | 0 | .000 |
|      | B.IMPACTION OF<br>THIRD MOLAR           | 0 | 4 | 3 | 18 | 14 | 22 | 11 | 3 | 4 | 1 |      |
|      | C.DRUGS                                 | 0 | 2 | 0 | 0  | 2  | 0  | 0  | 2 | 0 | 0 |      |
| Q-12 | A.BEHAVIOUR<br>FACTOR                   | 1 | 7 | 4 | 24 | 42 | 46 | 23 | 6 | 2 | 1 | .287 |
|      | B.EMOTIONAL<br>FACTOR                   | 1 | 4 | 1 | 12 | 8  | 9  | 7  | 0 | 2 | 0 |      |

|      |                                      |        |        |        |         |         |         |         |        |        |        |      |
|------|--------------------------------------|--------|--------|--------|---------|---------|---------|---------|--------|--------|--------|------|
| Q-13 | A.YES                                | 1      | 9      | 3      | 29      | 35      | 35      | 18      | 5      | 2      | 1      | .614 |
|      | B.NO                                 | 1      | 2      | 2      | 7       | 15      | 20      | 12      | 1      | 2      | 0      |      |
| Q-14 | A.MUSCLE OF MASTICATION              | 1      | 3      | 4      | 28      | 46      | 54      | 25      | 4      | 4      | 1      | .000 |
|      | B.DIGASTRIC                          | 1      | 7      | 1      | 5       | 2       | 0       | 3       | 2      | 0      | 0      |      |
|      | C.BUCCINATORS                        | 0      | 1      | 0      | 3       | 2       | 1       | 2       | 0      | 0      | 0      |      |
| Q-15 | A.YES                                | 0      | 3      | 1      | 15      | 25      | 25      | 9       | 4      | 1      | 0      | .261 |
|      | B.NO                                 | 1      | 5      | 3      | 10      | 11      | 9       | 5       | 1      | 2      | 0      |      |
|      | C.MAY BE                             | 1      | 3      | 1      | 11      | 14      | 21      | 16      | 1      | 1      | 1      |      |
| Q-16 | A.NSAIDS                             | 0      | 2      | 3      | 15      | 28      | 33      | 15      | 3      | 1      | 0      | .057 |
|      | B.ANTI -BACTERIAL                    | 0      | 3      | 0      | 1       | 1       | 1       | 2       | 1      | 0      | 0      |      |
|      | C.MUSCLE RALXANTS                    | 2      | 6      | 2      | 20      | 21      | 21      | 13      | 2      | 3      | 1      |      |
| Q-17 | A.YES                                | 0      | 2      | 0      | 10      | 8       | 6       | 4       | 1      | 0      | 0      | .131 |
|      | B.NO                                 | 2      | 9      | 5      | 26      | 42      | 49      | 26      | 5      | 4      | 1      |      |
| Q-18 | A.REASSURANCE AND COUNCELLING        | 1      | 1      | 0      | 4       | 3       | 11      | 6       | 1      | 3      | 0      | .001 |
|      | B.NSAID DRUG THERAPHY                | 0      | 7      | 3      | 13      | 16      | 6       | 5       | 1      | 0      | 0      |      |
|      | C.SPLINT THERAPHY<br>D.ALL THE ABOVE | 1<br>0 | 0<br>3 | 0<br>2 | 9<br>10 | 3<br>28 | 5<br>33 | 5<br>14 | 1<br>3 | 0<br>1 | 0<br>1 |      |

**DISCUSSION:**



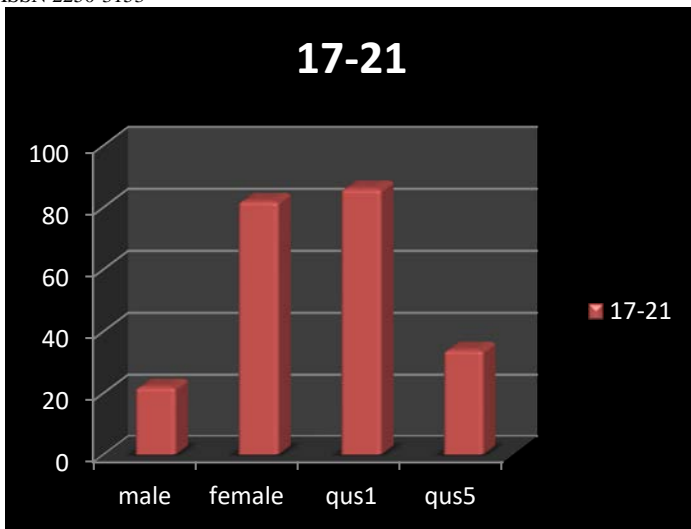


Chart 1: Dental student's age between 17 - 21

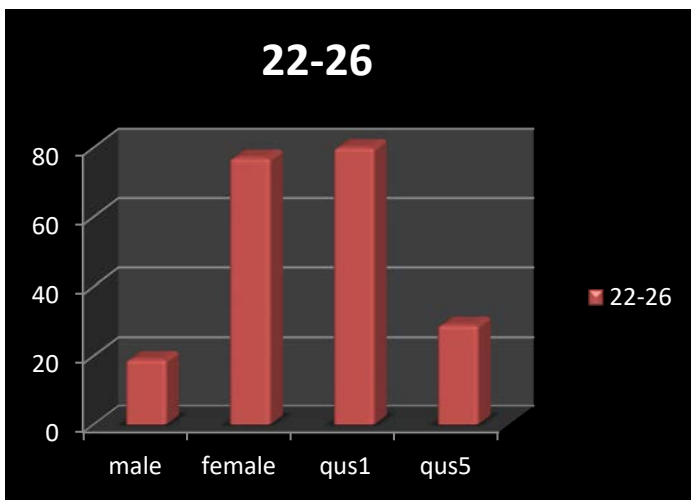


Chart 2: Dental students age between 22 - 26

The present study is to assess the TMJ pain awareness among dental students by using the self-report questionnaire-based survey. The questionnaire has a collection of good information in a relative period of time with minimal cost and better understanding. Henceforth the aim is to evaluate the TMJ pain awareness and their characteristic features among dental students. There was a good response rate for the questionnaire which was satisfactory in comparison with the other studies. Among the total population, 83% of peoples were aware of the TMJ pain. In the study of 17-21 years, 43 % were aware of the TMJ pain and 9% were not aware of the TMJ pain and in the study of 22-26 years 40% were aware of the TMJ pain and 8% were not aware of it. In comparison with the age, students of 22-26 years have better knowledge about the TMJ pain than 17-21 years students but statistically not significant.

On the relative study of 17-21 years, 17.5% had experienced TMJ pain and 34.5% have not experienced the pain. In 22-26 years 14.5% have experienced pain and 33.5% have not experienced the pain. In comparison with the age, students of 17-21 years had experienced pain than 22-26 years students but statistically not significant.

## CONCLUSION:

The result of this study within the limitations as follows. Then the findings are made that most of the dental students were aware of TMJ pain and some of them had experienced about it. This study shows that most of the people were highly affected by TMJ pain during the developmental stage. More studies are required to evaluate the risk factors associated with TMJ pain and their management.

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## AUTHORS:

**First Author** –PROF - Dr.R. Prabhu, MDS, at Dr.MGR Educational and Research Institute , drprabhu77@gmail.com.

**Second Author** - K.Valarmathi, CRI-BDS, at Dr.MGR Educational and Research Institute, Kvalarmathi95@gmail.com.

**Third Author** - S.Vengaiarasi, CRI-BDS, at Dr.MGR Educational and Research Institute .