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Review Article

**ASSESSMENT OF KNOWLEDGE REGARDING
TEMPOROMANDIBULAR JOINT DISORDERS AMONG
DENTAL STUDENTS IN QASSIM UNIVERSITY**¹Ibrahim Abdullah Almuarik , ²Musa Obaidallah Alharbi , ³Abdulmalik Saleh Alsaqabi
¹Qassim University**Abstract:**

Context: Temporomandibular joint disorders (TMDs) have been recognized as one of the most common causes of non-dental orofacial pain. Various studies have been reported in literature regarding the relationship between prevalence of signs and symptoms of TMDs and gender; however, none of the studies have yet been reported to suggest the relationship between year of student and knowledge about temporomandibular joint (TMJ) and TMDs

Aim: Assessment of knowledge-based about temporomandibular joint disorders among undergraduate dental students.

Settings and Design: This study was designed as an institutional survey. The study samples comprised 111 undergraduate students, consisting of 77 males and 34 females with age ranging between 19 and 25 years.

Subjects and Methods: one questionnaire was distributed among the students.

Statistical Analysis Used: Statistical analysis was performed with the use of SPSS 19.0 V, Frequencies were generated., Chi-square test and knowledge index.

Results: It was observed that there was a gradual increase in the level of knowledge about TMJ and TMDs from the 1st year to 5th students.

Conclusions: There is increase in the level of knowledge about TMJ and TMD with the increase of student's level

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INTRODUCTION:

Temporomandibular Joint (TMJ) is a complex synovial joint that is formed by the articulation of the mandibular fossa of the temporal bone and the condyle of the mandible. [1] Temporomandibular disorders (TMDs) have been the subject of extensive interest since long time. Even today, temporomandibular joint (TMJ) dysfunction is an

between level of student and level of knowledge about TMJ and TMD, the best possible way for this was to do a survey of our undergraduate (UG) students with the objective of Assessment of knowledge of TMJ disorders among undergraduate dental students at college of dentistry at Qassim University in Saudi Arabia.

1. TemporoMandibular Joint (TMJ) is a
 - a. Diarthrodial joint
 - b. Compound synovial joint
 - c. Hinge joint
 - d. Fibrous joint
 - e. I don't know
2. Frequent dislocation of TMJ is due to
 - a. Spasm of muscles of mastication
 - b. Smaller size of articular eminence
 - c. Decreased free wayspace
 - d. Thin articular disc
 - e. I don't know
3. which one is not associated with TMJ dislocation
 - a. Anterior displacement of condyle
 - b. Deafness
 - c. Anterior open bite
 - d. Can be reduced by applying pressure on mandible
 - e. I don't know
4. Hydrocortisone acetate is injected into painful arthritic TMJ to
 - a. Increase blood supply
 - b. Lubricate synovial joint
 - c. Anaesthetize the nerve supply
 - d. Decrease the inflammatory response
 - e. I don't know
5. which one is normal features of TMJ
 - a. Joint sound
 - b. Pain while opening the mouth
 - c. Deviation of mouth to opposite side while opening Mouth in eccentric movements
 - d. Bilateral synchronous movement
 - e. I don't know
6. The most frequent direction in which articular disc get displaced is
 - a. Anterior and lateral
 - b. Posterior and lateral
 - c. Anterior and medial
 - d. Posterior and medial
 - e. I don't know
7. Most common Trismus is due to inflammation of
 - a. Facial nerve irritation
 - b. Medial pterygoid
 - c. Lateral pterygoid
 - d. Temporalis
 - e. I don't know
8. Common medication prescribed for TemporoMandibular Joint Disorders (TMD) is
 - a. NSAID
 - b. Opioid analgesics
 - c. Anti histaminics
 - d. Diazepam
 - e. I don't know
9. Dislocation is treated by forcing the mandible
 - a. Upwards and backwards
 - b. Upwards and forwards
 - c. Backwards and downwards
 - d. Backwards and Upwards
 - e. I don't know
10. Which of the following is best investigatory method for articular disc derangement ?
 - a. Arthroscopy
 - b. MRI
 - c. CT scan
 - d. Transpharyngeal radiograph
 - e. I don't know

enigmatic issue because of its multifactorial etiology [2]. We as investigators thought to find a relationship

Figure 1: Questionnaire for knowledge assessment

METHODS AND MATERIALS:

This cross-sectional study was designed as an institutional survey after discussing and receiving the permission from the Ethical Committee of College of Dentistry in Qassim University (Code #: EA/48/2016). The study sample consisted of 111 students (77 males and 34 females) with their age ranging between 19 and 25 years. The sample comprised of undergraduate students: 1st year: 6; 2nd year: 7; 3rd year: 22; 4th year: 42; and 5th year: 34 . convenient sampling technique was used, the questionnaire was distributed among the students,

which was prepared by consulting the staff of all the departments to validate it [Figure 1].

Students enrolled in BDS program. Statistical analysis was performed with the help of SPSS 19.0. Frequencies were generated. X² test was used for analysis.

RESULTS:

The mean age of the respondents from the 1st year (mean \pm SD) was 19.83 \pm 0.408 with the range of 19-20 and median age was 20.0 years. The mean age of the respondents from the 2nd year (mean \pm SD) was 20.29 \pm 0.756 with the range of 20-22 and median age

was 20.0 years. The mean age of the respondents from the 3rd year (mean ± SD) was 21.73±0.703 with the range of 21-23 and median age was 22.0 years. The mean age of the respondents from the 4th year (mean ± SD) was 23.24±0.726 with the range of 22-24 and median age was 23.0 years. The mean age of

the respondents from the 5th year (mean ± SD) was 23.79±0.770 with the range of 23-25 and median age was 24.0 years.

[table 1 , Figure 2]

Gender of the students

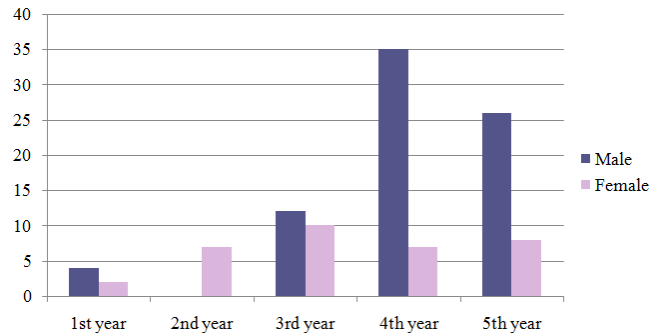


Table 1

Age of student and gender of student Cross-tabulation

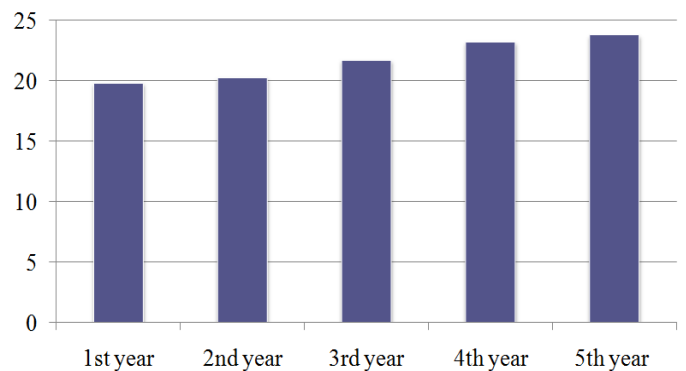
Age f student	Gender of student		Total
	Male	Female	
19	1	0	1
20	3	8	11
21	3	6	19
22	11	7	18
23	22	13	35
24	30	0	30
25	7	0	7
Total	77	34	111

Figure 2

Age of the students

Age of student	Year of Student					Total
	1st year	2nd year	3rd year	4th year	5th year	
19	1	0	0	0	0	1
20	5	6	0	0	0	11
21	0	0	9	0	0	9
22	0	1	10	7	0	18
23	0	0	3	18	14	35
24	0	0	0	17	13	30
25	0	0	0	0	7	7
Total	6	7	22	42	34	111

Age distribution of the students



Q No.1 year of student Cross-tabulation

Q1	Year of student					Total
	1st year	2nd year	3rd year	4th year	5th year	
Correct	4	5	13	35	18	75
Incorrect	2	2	9	7	16	36
Total	6	7	22	42	34	11

Q No.2 year of student Cross tabulation

Q2	Year of student					Total
	1st year	2nd year	3rd year	4th year	5th year	
Correct	0	1	2	9	12	24
Incorrect	6	6	20	33	22	87
Total	6	7	22	42	34	111

Q No.3 year of student Cross-tabulation

Q3	Year of student					Total
	1st year	2nd year	3rd year	4th year	5th year	
Correct	2	1	10	18	22	53
Incorrect	4	6	12	24	12	58
Total	6	7	22	42	34	111

Q No.4 year of student Cross-tabulation

Q4	Year of student					Total
	1st year	2nd year	3rd year	4th year	5th year	
Correct	0	5	7	11	8	31
Incorrect	6	22	15	31	26	80
Total	6	7	22	42	34	111

Q No.5 year of student Cross tabulation

Q5	Year of student					Total
	1st year	2nd year	3rd year	4th year	5th year	
Correct	0	4	17	22	17	60
Incorrect	6	3	5	20	17	51
Total	6	7	22	42	34	111

Q No.6 year of student Cross-tabulation

Q6	Year of student					Total
	1st year	2nd year	3rd year	4th year	5th year	
Correct	0	1	2	6	10	19
Incorrect	6	6	20	36	24	92
Total	6	7	22	42	34	111

Q No.7 year of student Cross tabulation

Q7	Year of student					Total
	1st year	2nd year	3rd year	4th year	5th year	
Correct	1	4	3	6	12	26
Incorrect	5	3	19	36	22	85
Total	6	7	22	42	34	111

Q No.8 year of student Cross tabulation

Q8	Year of student					Total
	1st year	2nd year	3rd year	4th year	5th year	
Correct	0	3	5	14	18	40
Incorrect	6	4	17	28	16	71
Total	6	7	22	42	34	111

Q No.9 year of student Cross tabulation

Q9	Year of student					Total
	1st year	2nd year	3rd year	4th year	5th year	
Correct	1	0	5	17	20	43
Incorrect	5	7	17	25	14	68
Total	6	7	22	42	34	111

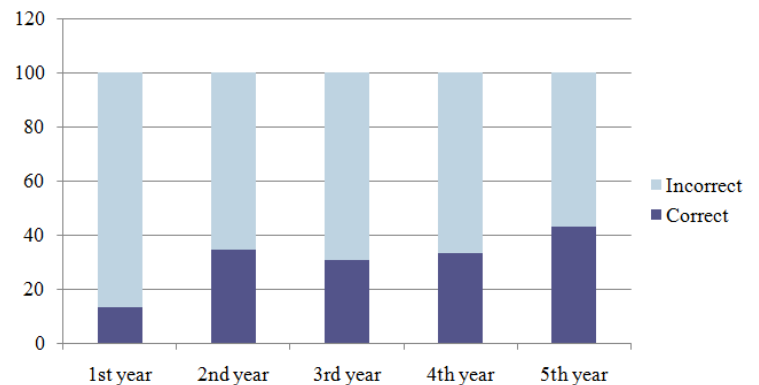
Q No.10 year of student Cross-tabulation

Q10	Year of student					Total
	1st year	2nd year	3rd year	4th year	5th year	
Correct	0	0	3	2	9	14
Incorrect	6	7	19	40	25	97
Total	6	7	22	42	34	111

Correct answers by year

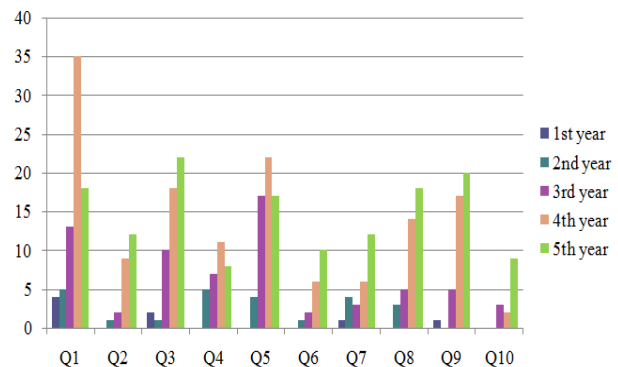
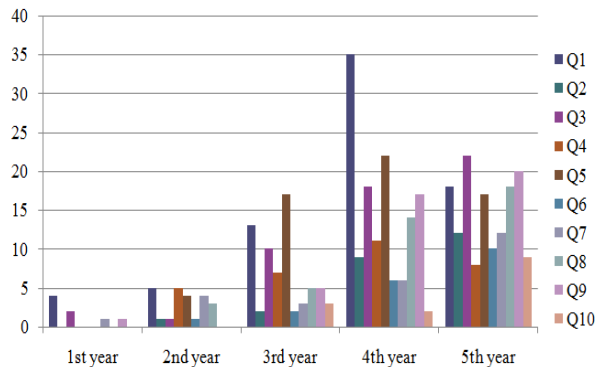
Answer for knowledge based assessment

Q	1st year (n=6)	2nd year (n=7)	3rd year (n=22)	4th year (n=42)	5th year (n=34)
1	4	5	13	35	18
2	0	1	2	9	12
3	2	1	10	18	22
4	0	5	7	11	8
5	0	4	17	22	17
6	0	1	2	6	10
7	1	4	3	6	12
8	0	3	5	14	18
9	1	0	5	17	20
10	0	0	3	2	9



Knowledge index for knowledge based assessment

Question	1st year (n=6)	2nd year (n=7)	3rd year (n=22)	4th year (n=42)	5th year (n=34)
Mean	0.8	2.4	6.7	14	14.6



DISCUSSION:

The term “TMDs” involves changes in masticatory muscles, TMJ, and its associated structures. These changes affect a large portion of the population which can be related to the presence of signs and symptoms such as masticatory muscle pain, TMJ pain, joint noises, restricted mouth opening, inadequate occlusion, auditory disorders, and headache.[3] TMD can affect patients of any age or gender. with the presence of various signs and symptoms. However, the diagnosis of this clinical entity may be difficult due to the variation in the presence of symptoms among different patients and in the same patient at different times.[4] The etiology of TMD is multifactorial which may be related to various medical and dental conditions such as emotional tension, occlusal interferences, teeth loss, postural deviation, masticatory muscular dysfunction, internal and external changes in TMJ structure, and various associations of these factors.[5] It was observed that there was gradual increase in the level of knowledge about TMJ and TMDs from the 1st year to 5th year students.

CONCLUSION:

There is increase in the level of knowledge about TMJ and TMD with the increase of students level. However, further studies should be conducted to explore more about this entity. Further, various measures should be integrated and motivated in our

dental practice to increase the knowledge about TMJ and TMDs among dental student.

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