

# Knowledge and Awareness of Preclinical Dental Student about Impacted Tooth

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**Abstract:** ***Objective:** The present study was carried out to assess the awareness and knowledge of impacted tooth among preclinical dental student. **Material and method:** An 11 multiple choice questionnaires were given to preclinical 1st year and 2nd year dental student to answer. A total of 200 student participated in this survey. **Result:** Among 100 students in 1st year, about 73% students have visited dentist before and 27% student have not visited dentist before. While among 100 students in 2nd year, about 67% student have visited dentist before and 33% student have not visited dentist before. Out of 73 students in 1st year who had visited dentist, 23% have visited dentist only once, 15% have visited dentist six months once, 62% yearly once. While, among 67 students in 2nd year who had visited dentist, 15% have visited dentist only once, 10% have visited dentist six months once, 75% yearly once. Among 100 students in 1st year, about 43% aware of the term impacted tooth and 57% not aware of the term impacted tooth. While among 2nd year student 84% aware of the term impacted tooth and 16% are not aware of the term impacted tooth. Out of 43 student in 1st year who aware of impacted tooth about 55.81% got to know about impacted tooth through friends, 9.30% through family, 11.63% through dentist, 10.71% through internet. While about 84 student in 2nd year that aware about impacted tooth, about 73.81% got to know about impacted tooth through friends, 3.57% through family, 11.90% through dentist, and 10.71% through internet. Among 1st year 53% is more familiar with third molar impaction, 23% canine impaction and 24 % incisor impaction. Among 2nd year, 74% is more familiar with third molar impaction, 14% canine impaction and 12 % incisor impaction. Out of 43 students in 1st year who aware of impacted tooth about 21% know about the sign and symptom of impacted tooth while 79% have no idea about sign and symptoms of impacted tooth. While among 84 student in 2nd year who aware of impacted tooth about 32% know about the sign and symptom of impacted tooth while 68% have no idea about sign and symptoms of impacted tooth. About 24% of 1st year student felt that radiograph is necessary for impacted tooth while 76% felt that that radiograph is not necessary for impacted tooth. About 74% of 2nd year student felt that radiograph is necessary for impacted tooth while 26% felt that that radiograph is not necessary for impacted tooth. About 36% of 1st year student felt that impacted tooth seen in everybody while 64% felt that impacted tooth not seen in everybody. About 30% of 2nd year student felt that that impacted tooth seen in everybody while 70% felt that that impacted tooth not seen in everybody. About 21% of 1st year is aware of complication of not removing impacted tooth while 79% not aware of complication of not removing impacted tooth. About 25% of 2nd year is aware of complication of not removing impacted tooth while 75% is not aware of complication of not removing impacted tooth. About 52% of 1st year student felt that it's necessary to remove impacted tooth while 48% felt that it's not necessary to remove impacted tooth. About 72% of 2nd year student felt that that it's necessary to remove impacted tooth while 28% felt that it's not necessary to remove impacted tooth. About 17% of 1st year student knows the type of impaction while 83% do not know the types of impaction. About 15% of 2nd year student knows the type of impaction while 85% do not know the types of impaction. **Conclusion:** The present study shows lack of awareness and knowledge of impacted tooth among preclinical 1st year dental student and better awareness among preclinical 2nd year dental student and this study suggests that more knowledge should be gained on this impacted tooth for better understanding for future practice in clinical site.*

**Keywords:** questionnaire, impacted tooth

## 1. Introduction

A tooth was defined as impacted when the tooth was obstructed on its path of eruption by an adjacent tooth, bone, or soft tissue. Long-term retention of impacted teeth has little risk of pathological change in the tooth itself, or of adverse effects on adjacent structures. Pathologies associated with impacted teeth included caries of the impacted or adjacent teeth, periodontal bone loss of the adjacent tooth of more than 5 mm below the cemento-enamel junction, root resorption of the adjacent tooth, and an increase in the pericoronal space of the dental follicle of more than 4 mm around the impacted tooth. Impacted wisdom teeth are classified by the direction and depth of impaction, the and the amount soft tissue or bone that covers them. It become impacted when there is not enough room in the jaws to allow for all of the teeth to erupt into the mouth. There is a genetic predisposition to tooth impaction. Genetics plays an important, albeit unpredictable role in dictating jaw and tooth size and tooth eruption potential of the teeth. The diagnosis of impaction can be made clinically if enough of the tooth is visible to determine its angulation, depth, and

if the patient is old enough that further eruption or up righting is unlikely. The teeth continue to move into adulthood (20–30 years old) due to eruption and then continue some later movement owing to periodontal disease. If the tooth cannot be assessed with clinical exam alone, the diagnosis is made using either a panoramic radiograph or cone-beam CT. Impacted tooth removal (extraction) is the most common treatment for impacted teeth. The absolute indications for removal are either the presence of disease or symptoms around the tooth. Most patients will experience pain and swelling (worst on the first post-operative day) then return to work after 2 to 3 days with the rate of discomfort decreased to about 25% by post-operative day 7 unless affected by dry socket. The prognosis for impacted teeth depends on the depth of the impaction.

## 2. Material and Method

A questionnaire of 11 multiple choice questions were given to general dental practitioners. A total of 200 preclinical dental student participated in the study of

which are females and are males. The questions were about knowledge of impacted tooth.

### Questions:

#### 1. Have you visited dentist before?

- A. Yes
- B. No

#### 2. If you have visited dentist before, how often?

- A. Only Once
- B. Six Month
- C. Yearly

#### 3. Are you aware of the term impacted tooth?

- A. Yes
- B. No

#### 4. If you aware how did you know about impacted tooth?

- A. Friends
- B. Family
- C. Dentist
- D. Internet
- E. Others

#### 5. Among these, which impaction you more familiar with?

- A. Third Molar
- B. Canine
- C. Incisor

#### 6. If you aware of impacted tooth, did you know the sign and symptom of impacted tooth?

- A. Yes
- B. No

#### 7. Is radiograph necessary for impacted tooth?

- A. Yes
- B. No

#### 8. Does impacted tooth is seen in everybody?

- A. Yes
- B. No

#### 9. Do you aware of complication of not removing the impacted tooth?

- A. Yes
- B. No

#### 10. Is it necessary to remove the impacted tooth?

- A. Yes
- B. No

#### 11. Do you know the types of impaction?

- A. Yes
- B. No

### 3. Results

The results are summarizing responses to each 11 questions in the survey.

#### Have you visited dentist before?

Among 100 students in 1<sup>st</sup> year, about 73% students have visited dentist before and 27% student have not visited dentist before. (Figure 1) While among 100 students in 2<sup>nd</sup> year, about 67% student have visited dentist before and 33% student have not visited dentist before. (Figure 2)

#### If you have visited dentist before, how often?

Out of 73 students in 1<sup>st</sup> year who had visited dentist, 23% have visited dentist only once, 15% have visited dentist six months once, 62% yearly once. While, among 67 student in 2<sup>nd</sup> year who had visited dentist, 15% have visited dentist only once, 10% have visited dentist six months once, 75% yearly once. (Figure 3)

#### Are you aware of the term impacted tooth?

Among 100 student in 1<sup>st</sup> year, about 43% aware of the term impacted tooth and 57% not aware of the term impacted tooth. (Figure 1) While among 2<sup>nd</sup> year student 84% aware of the term impacted tooth and 16% not aware of the term impacted tooth. (Figure 2)

#### How did you know about impacted tooth?

Out of 43 student in 1<sup>st</sup> year who aware of impacted tooth about 55.81% got to know about impacted tooth through friends, 9.30% through family, 11.63% through dentist, 10.71% through internet. While about 84 student in 2<sup>nd</sup> year that aware about impacted tooth about 73.81% got to know about impacted tooth through friends, 3.57% through family, 11.90% through dentist, 10.71% through internet. (Figure 4)

#### Among these, which impaction you more familiar with?

Among 100 students in 1<sup>st</sup> year, 53% is more familiar with third molar impaction, 23% canine impaction and 24% incisor impaction. Among 100 students in 2<sup>nd</sup> year, 74% is more familiar with third molar impaction, 14% canine impaction and 12% incisor impaction. (Figure 5)

#### If you aware of impacted tooth, did you know the sign and symptom of impacted tooth?

Out of 43 students in 1<sup>st</sup> year who aware of impacted tooth about 21% know about the sign and symptom of impacted tooth while 79% have no idea about sign and symptoms of impacted tooth. (Figure 1) While among 84 student in 2<sup>nd</sup> year who aware of impacted tooth about 32% know about the sign and symptom of impacted tooth while 68% have no idea about sign and symptoms of impacted tooth. (Figure 2)

#### Is radiograph necessary for impacted tooth?

About 24% of 1<sup>st</sup> year student felt that radiograph is necessary for impacted tooth while 76% felt that that radiograph is not necessary for impacted tooth. (Figure 1) About 74% of 2<sup>nd</sup> year student felt that radiograph is

necessary for impacted tooth while 26% felt that that radiograph is not necessary for impacted tooth. (Figure 2)

**Does impacted tooth is seen in everybody?**

About 36% of 1<sup>st</sup> year student felt that impacted tooth seen in everybody while 64% felt that impacted tooth not seen in everybody. (Figure 1) About 30% of 2<sup>nd</sup> year student felt that that impacted tooth seen in everybody while 70% felt that that impacted tooth not seen in everybody. (Figure 2)

**Do you aware of complication of not removing the impacted tooth?**

About 21% of 1<sup>st</sup> year is aware of complication of not removing impacted tooth while 79% not aware of complication of not removing impacted tooth. (Figure 1) About 25% of 2<sup>nd</sup> year is aware of complication of not removing impacted tooth while 75% is not aware of complication of not removing impacted tooth. (Figure 2)

**Is it necessary to remove the impacted tooth?**

About 52% of 1<sup>st</sup> year student felt that its necessary to remove impacted tooth while 48% felt that it's not necessary to remove impacted tooth. (Figure 1) About 72% of 2<sup>nd</sup> year student felt that that it's necessary to remove impacted tooth while 28% felt that it's not necessary to remove impacted tooth. (Figure 2)

**Do you know the types of impaction?**

About 17% of 1<sup>st</sup> year student knows the type of impaction while 83% do not know the types of impaction. (Figure 1) About 15% of 2<sup>nd</sup> year student knows the type of impaction while 85% do not know the types of impaction. (Figure 2)

**1st year student's answers**

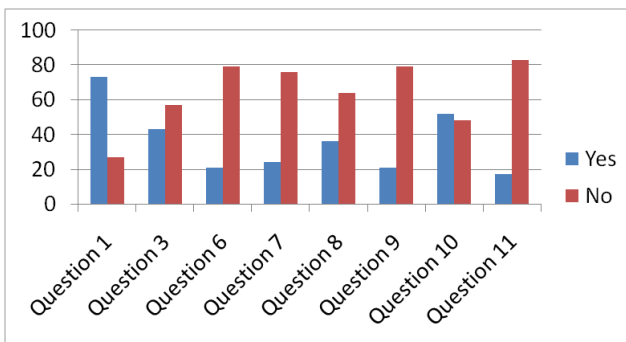


Figure 1

**2nd year student's answers**

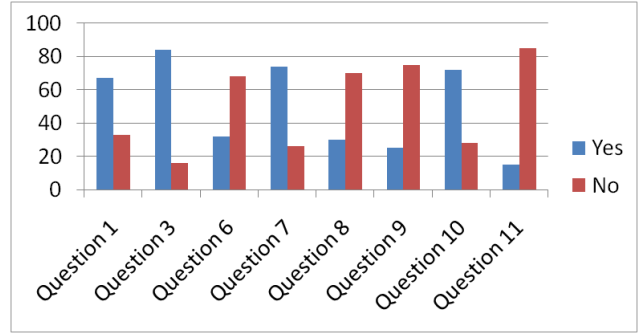


Figure 2

Question 2: If you have visited dentist before, how often

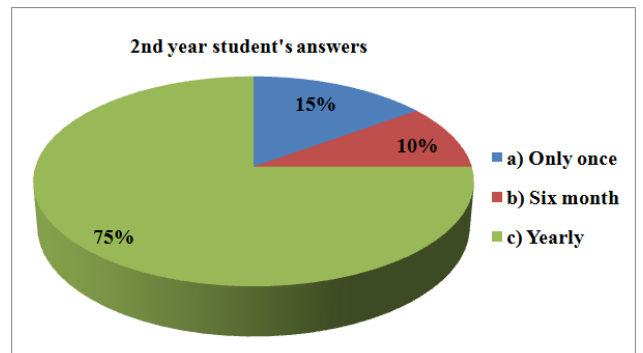
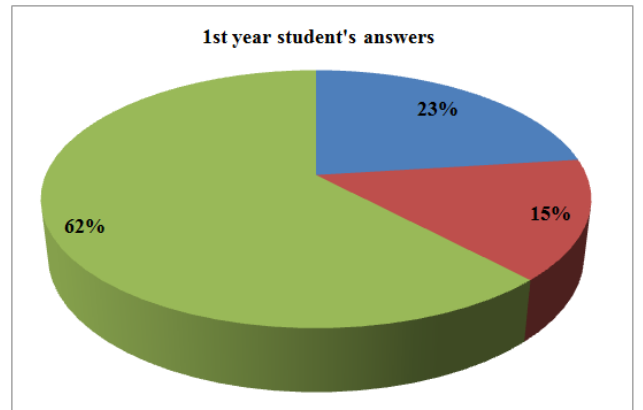
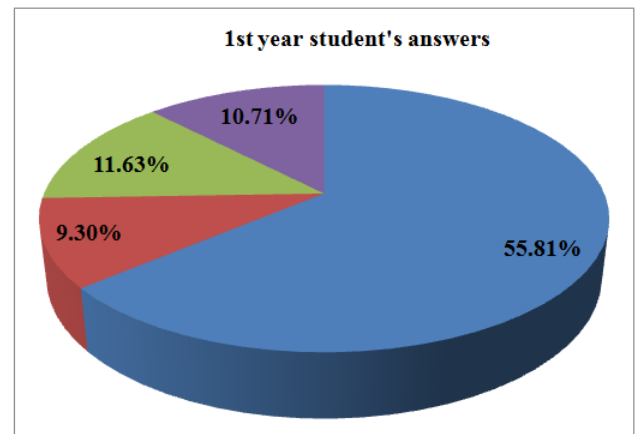


Figure 3

Question 4: How did you know about impacted tooth?



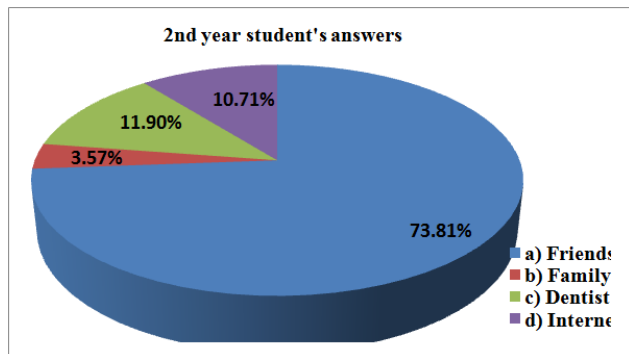


Figure 4

Question 5: Among these, which impaction you more familiar with

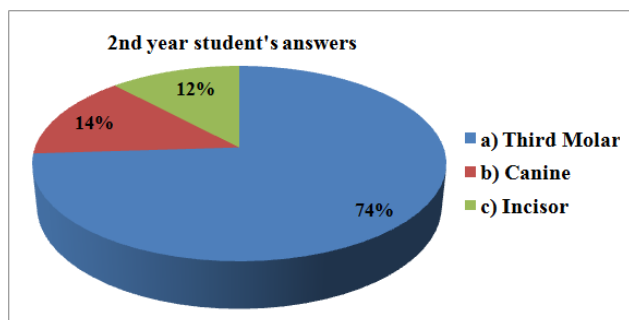
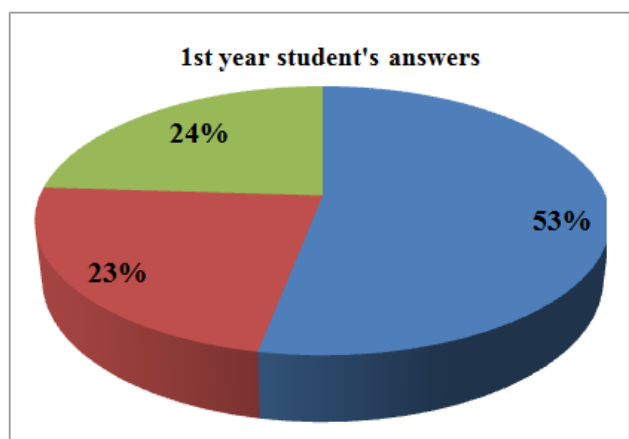


Figure 5

#### 4. Discussion

The present study used a questionnaire to gauge the level of knowledge regarding impacted tooth among preclinical dental student. Among 100 students in 1<sup>st</sup> year, about 73% students have visited dentist before and 27% student have not visited dentist before. While among 100 students in 2<sup>nd</sup> year, about 67% student have visited dentist before and 33% student have not visited dentist before. Out of 73 students in 1<sup>st</sup> year who had visited dentist, 23% have visited dentist only once, 15% have visited dentist six months once, 62% yearly once. While, among 67 students in 2<sup>nd</sup> year who had visited dentist, 15% have visited dentist only once, 10% have visited dentist six months once, 75% yearly once. Out of 43 student in 1<sup>st</sup> year who aware of impacted tooth about 55.81% got to know about impacted tooth through friends, 9.30% through family, 11.63% through dentist, 10.71% through internet. While about 84 student in 2<sup>nd</sup> year that aware about impacted

tooth about 73.81% got to know about impacted tooth through friends, 3.57% through family, 11.90% through dentist, 10.71% through internet.

Among 100 students in 1<sup>st</sup> year, about 43% aware of the term impacted tooth and 57% not aware of the term impacted tooth. While among 2<sup>nd</sup> year student 84% aware of the term impacted tooth and 16% not aware of the term impacted tooth. According to Peterson an impacted tooth is one which fails to erupt in the dental arch within the expected time. In other word, a tooth is said to be impacted when its path of eruption into the occlusal plane is obstructed by the presences of another tooth, bone, or soft tissue (1)

Among 100 students in 1<sup>st</sup> year, 53% is more familiar with third molar impaction, 23% canine impaction and 24 % incisor impaction. Among 100 students in 2<sup>nd</sup> year, 74% is more familiar with third molar impaction, 14% canine impaction and 12 % incisor impaction. The incidence of impacted teeth occurs in following order, maxillary third molar, mandibular third molar, maxillary canine, mandibular canine, maxillary central incisor and maxillary lateral incisor. (2)

Out of 43 students in 1<sup>st</sup> year who aware of impacted tooth about 21% know about the sign and symptom of impacted tooth while 79% have no idea about sign and symptoms of impacted tooth. While among 84 student in 2<sup>nd</sup> year who aware of impacted tooth about 32% know about the sign and symptom of impacted tooth while 68% have no idea about sign and symptoms of impacted tooth. It was noted that approximately 30% of patients with impacted teeth were symptomatic, whereas Stanley et al (3) found only 8.4% of their patients had symptoms. Three quarters of patients had problems on one side only, and the two most common complaints were pain and swelling, which were related to pericoronitis. (4) Other symptoms are bad breath, pain or tenderness of the gum and jaw bone, prolonged headache or jaw ache, difficulty in mouth opening, swelling of gums around the tooth.

About 24% of 1<sup>st</sup> year student felt that radiograph is necessary for impacted tooth while 76% felt that that radiograph is not necessary for impacted tooth. About 74% of 2<sup>nd</sup> year student felt that radiograph is necessary for impacted tooth while 26% felt that that radiograph is not necessary for impacted tooth. If the tooth cannot be assessed with clinical exam alone, the diagnosis is made using either a panoramic radiograph or cone-beam CT. Radiographs can be avoided if the majority of the tooth is visible in the mouth (5)

About 36% of 1<sup>st</sup> year student felt that impacted tooth seen in everybody while 64% felt that impacted tooth not seen in everybody. About 30% of 2<sup>nd</sup> year student felt that that impacted tooth seen in everybody while 70% felt that that impacted tooth not seen in everybody. Impacted tooth affects up to 72% of the population (6).

About 21% of 1<sup>st</sup> year is aware of complication of not removing impacted tooth while 79% not aware of complication of not removing impacted tooth. About 25%

of 2<sup>nd</sup> year is aware of complication of not removing impacted tooth while 75% is not aware of complication of not removing impacted tooth. There may be development of dentigerous cyst, pre-eruptive caries, periodontal problems, or infection from the impacted tooth. (7)

About 52% of 1<sup>st</sup> year student felt that it's necessary to remove impacted tooth while 48% felt that it's not necessary to remove impacted tooth. About 72% of 2<sup>nd</sup> year student felt that that it's necessary to remove impacted tooth while 28% felt that it's not necessary to remove impacted tooth. As a general rule all impacted teeth should be removed unless removal is contraindicated, as advancing age makes the removal of teeth more complicated. The indication for removal of these teeth are pericoronitis (58.5%), dental caries (14.62%), facilitation of orthodontic treatment (1.11%), periodontal disease (3.02%), obscure facial pain(2.51%), root resorption and odontogenic cyst and tumour (0.6%) and pain of unexplained origin. (1)

About 17% of 1<sup>st</sup> year student knows the type of impaction while 83% do not know the types of impaction. About 15% of 2<sup>nd</sup> year student knows the type of impaction while 85% do not know the types of impaction. Winters classification consists of vertical, horizontal, mesio-angular, disto-angular. Other classification includes Pell and Gregory classification. Impacted teeth are classified by the direction and depth\_of\_impaction, the amount of available space for tooth eruption and the amount soft tissue or bone that covers them.

## 5. Conclusion

This study shows the awareness and attitude of preclinical dental student towards knowledge of impacted tooth. The preclinical dental student should be provided with appropriate impacted tooth education supported by practical experience. More detailed information regarding impacted should be included into curriculum for better understanding.

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