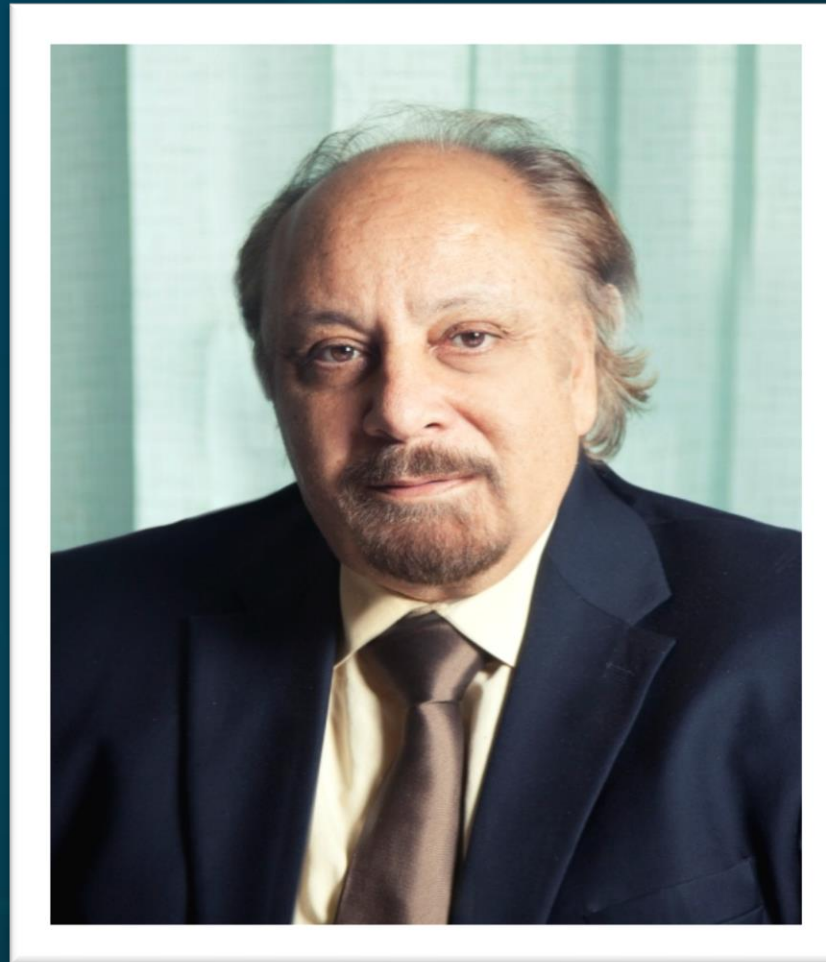


بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالَ رَبِّ اجْعَلْ لِي صِدْرًا، وَبَشِّرْ لِي بِأَمْرِي،
وَاجْعَلْ لِي حَقْدَةً مِنْ لِسَانِي، يَفْقَهُوا قَوْلِي

صدق الله العظيم



**SPECIAL THANKS TO OUR DEAN
Prof. Dr. Ahmed Yehia Ashour**

SPECIAL THANKS TO VICE DEAN

*Prof. Dr. Fayza
ElDaly*





IMPLEMENTING "DENTAL TRAUMATIC INJURIES EDUCATIONAL PROGRAM "AMONG TEACHERS OF DIFFERENT GOVERNMENTAL ELEMENTARY SCHOOLS IN ALEXANDRIA , EGYPT



PRESENTED BY

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5215078

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5215064

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5215344





SUPERVISED BY

Dr / Nancy R. Bedwani



 INTRODUCTION 

 AIM OF THE STUDY 

 MATERIALS
AND METHODS 

 RESULTS 

 CONCLUSIONS 

 RECOMMENDATIONS 

 REFERENCES 



Traumatic dental injuries (TDIs) are a **serious dental public health problem** among children

(International Society of Preventive & Community Dentistry 2018)

Traumatic dental injuries refer to traumas (injuries) to the teeth or **periodontium** (gum -PDL-ALVEOLAR bone) and nearby soft tissue such as lips, tongue and cheeks

It can vary from a **minor enamel chip** to **extensive maxillofacial damage** involving the supporting structures

American association of endodontis





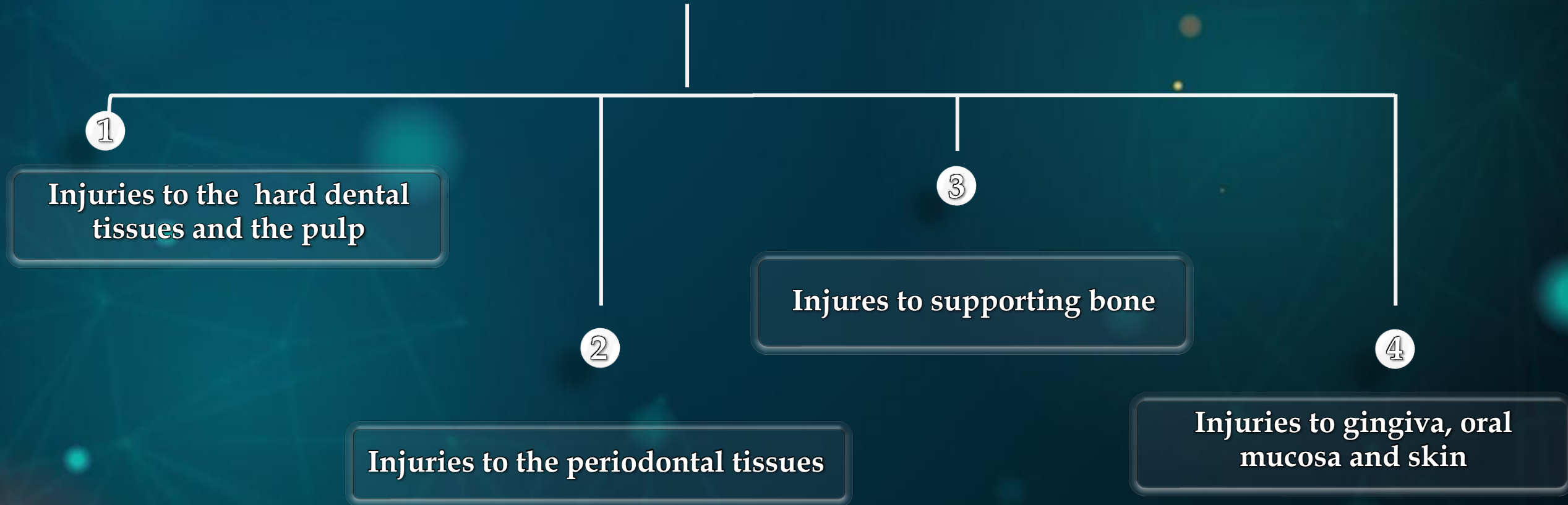
CLASSIFICATION

01

INTRODUCTION



DENTAL TRAUMAS (Who classification)





CLASSIFICATION

DENTAL TRAUMAS (Who classification)

Injures to hard dental tissues and the pulp

01

Infraction

02

Enamel fracture

03

Enamel-dentine fracture

04

Complicated crown fracture



DENTAL TRAUMAS

01

INTRODUCTION



Can be classified into: (Who classification)

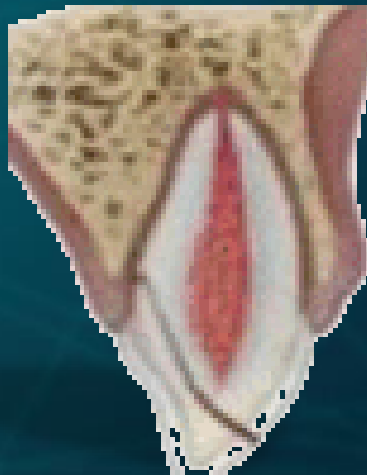
Injures to hard dental tissues and the pulp

05 Uncomplicated crown-root fracture

06 Complicated crown-root fracture

Complicated ROOT fracture

07



DENTAL TRAUMAS

Can be classified into: (Who classification)
Injures to supporting bone





DENTAL TRAUMAS

01

INTRODUCTION



Can be classified into: (Who classification)

Injuries to gingiva, oral mucosa and skin

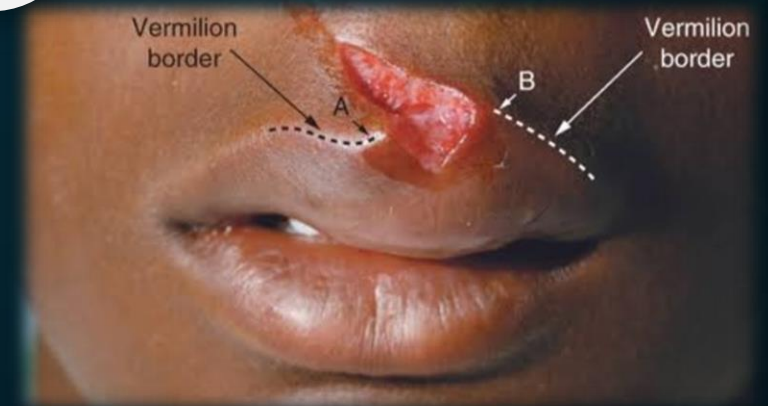
laceration



Contusion



Abrasion





Is defined as an injury to the tooth's supporting structures without abnormal loosening or displacement of the tooth. There may be bleeding around the gingiva as a result of injury to the tooth supporting structures



Concussion



**Periodontal
tissues injuries**



An injury to the tooth supporting structures resulting in increased mobility, but without displacement of the tooth. Bleeding from the gingival sulcus confirms the diagnosis



Subluxation

**Periodontal
tissues injuries**



Is defined as partial displacement of a tooth axially from the socket. The periodontal ligament usually is torn



Extrusion



**Periodontal
tissues injuries**



Is defined as complete displacement of a tooth out of its socket. The periodontal ligament is severed and fracture of the alveolus may occur.



Avulsion



**Periodontal
tissues injuries**



Is defined as apical displacement of the tooth into the alveolar bone. It is accompanied by compression of the periodontal ligament



Intrusion

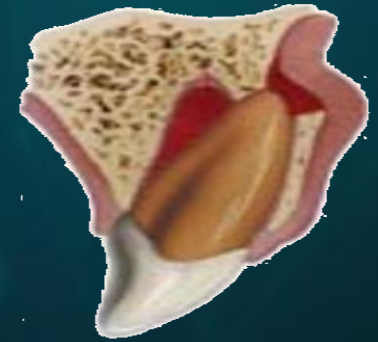
**Periodontal
tissues injuries**



Palatal /lingual or labial displacement of the tooth ,tooth is immobile



Lateral
luxation



Periodontal
tissues injuries



DENTAL TRAUMAS

(Dental traumatology (2002))

01

INTRODUCTION



Most common hard dental tissues injuries are:

Which means an
incomplete fracture
in enamel only (kcarc)
no loss of tooth structure

Infracture



Enamel fracture

Incomplete fracture
of enamel with no
visible dentine
exposure

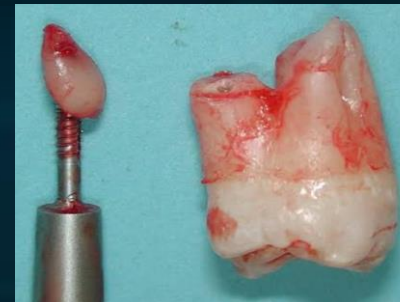
Fracture confines
enamel and
dentine with loss
of tooth structure

Enamel dentine fracture



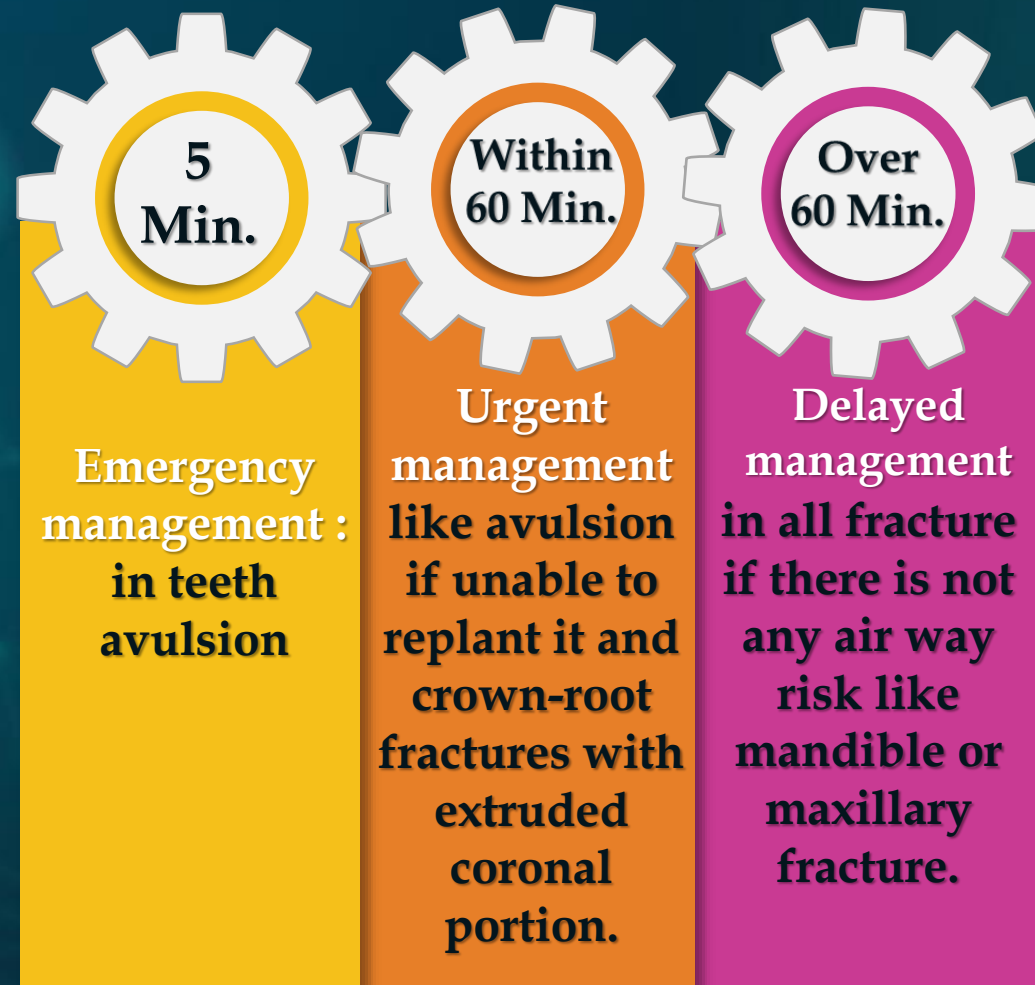
Root fracture

The coronal
segment of the
root may be
displaced or
mobile





TDI's managements are classified into three categories: (dental traumatol(2012))





MAGNITUDE OF THE PROBLEM

Oral injuries are **fourth most common area of bodily injuries** among 7–30 year-old individuals

(Kumar, 2011)

01

Epidemiological studies indicate that **dental trauma is a significant problem in young people**

(Kumar, 2011)

02

That in the near future, the **incidence of trauma will exceed that of dental caries and periodontal disease** in young population.

(Dent Traumatol. 2012)

03



MAGNITUDE OF THE PROBLEM

Traumatic injuries in permanent teeth have been reported to reach up to 60%.

(Norton et al, Dental Traumatol. ,2012)

Studies reveals that 40% of TDIs are because of violence.

(Norton et al, Dental Traumatol. ,2012)

Studies reveals that 60% of TDIs are because of sports.



MAGNITUDE of the Problem in Egypt

In Egypt, (in 2012) a study was conducted by “El Kelany M. et al,” (*Mansoura University*) resulted in:

- The most common areas of TDIs among children were at school (46.1%) & home (30.2%)
- The most common types of TDIs were Maxillary central incisors fracture (82%)
- Enamel fracture (80.1%)
- Single tooth fracture (75%)





Importance of age group

Mixed dentition occurs between age from 6 to 12 years .

These children are predisposed to fall during their school day

Having a fight with their friends

Having an accident

During playing soccer



Impact of TDIs

TDIs can cause many problems :

- **Functional**
- **Aesthetics**
- It's consequent **Psychological impact**
- Thus influencing the child's overall **Quality of life**





Why school teachers

Schools are the most available places to initiate dental trauma education programs to educate people spending time with children





Teachers are generally present at the **time dental trauma occurs**, as such accidents often take place during or after school activities

However, they have **limited knowledge** regarding the course of action of such cases

So, school teachers should have **knowledge of basic dental physiology** and the **treatment protocol** for such injuries

It is therefore of **fundamental importance** for teachers to be totally informed with the **correct first-aid measures**



 INTRODUCTION 

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THE AIM OF THIS STUDY

TO

Asses the level of knowledge of the **governmental elementary schools teachers** about TDIs & their managements, using **questionnaires**

TO

Aware about the TDIs emergency management through **implementing an oral health educational program** to the same target group



 INTRODUCTION 

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01
Study
design

Cross
Sectional



02
Sample
selection

03
Study
Setting





Approvals :-

03

MATERIALS
AND METHODS



This study was approved by:

Pharos University in
Alexandria





Approvals :-

The Approvals were obtained from the middle department of education in Alexandria, Egypt

The Approvals were obtained from west department of education in Alexandria, Egypt

The Approvals were obtained from Elagmy department of education Alexandria, Egypt

تصريح دخول مدارس ادارة غرب التعليمية

السيد مدير مدرسة / (الاسم) الطيب، الزنكلاسيك
المرحلة / (المرحلة)
بدر البرية،
.....

تحيية طيبة وبعد ..

نفيد سيادتكم علما بأنه لامتاع من وجهه نظر الإدارة في تسهيل مأمورية
السيد / الدكتور / صافي محمد صبر / ابنه / يسير محمد صبر / ابنه / المنزلة / منزل
والخاص بموضوع /
سيرة الإحصاء /
.....

وذلك بعد تأكد سيادتكم من شخصيته وما لا يتعارض مع سير العملية التعليمية
وتحت اشراف ومسئولية السيد / مدير المدرسة والسيد مسئول الامن بها

وتفضلوا بقبول وافر التحية الاحترام ..

مدير امن الادارة
اشرف فاروق عباس



محافظة الاسكندرية
مديرية التربية والتعليم
ادارة الأمن للمعلومات والاتصالات

السادة / مدير مدرسه الخلفاء الراشدين - احمد طه

تحية طيبة وبعد

لا مانع من وجهة نظر الأمن من تسهيل مأمورية الباحث بعد التأكد من الشخصية
وما لا يتعارض وسير العملية التعليمية وبحظر التحدث بالنواحي السياسية أو
الدينية وتحت إشراف ومسئولية السادة مديري المدارس شخصيا
الطالب ١- آية بسويح محمد - لهذا عمار - آية مكي قنديل
وتفضلوا بقبول فائق الاحترام

مسئول أمن الإدارة
للتصريح والمواقفات الأمنية
محمد مصطفى
٢٠١٩/١٢/١٢



CS Scanned with CamScanner

مدير الشؤون الصحية بالإسكندرية

السيد الأستاذ وكيل وزارة التربية والتعليم بالإسكندرية
تحية طيبة وبعد:

لا مانع لدينا من السماح للطلبة المرفق اسمائهم المقيدين بجامعة فاروس بالفرقة الخامسة بالتواجد في مدارس إدارة وسط وإدارة غرب وذلك بهدف قياس مدى معرفة المدرسين طرق التعامل مع إصابات الفم والاسنان بالمدرسة وتوعية كلا من المدرسين والطلبة طرق التعامل مع تلك الإصابات والوقاية منها علي ان تكون انقذه العمرية للأطفال من ٦ ل ١٢ سنة وذلك لعمل البحث العلمي الخاص بهم لمرحلة التخرج وعلي ان يكون المكلف بالإشراف ومتابعه البحث

استشاري الصحة العامة للفم والاسنان د/نانسي رامز بدواني المقيدة بالنقابة رقم ٢٠٢٨١

اسماء الطلبة الذين سبقوا مؤلف بالبحث

هنا عماد محمد کمال حمود ۲۱۵۳۴۴

اية بسيوني محمد ٥٢١٥٠٧٨

اميره المتولى قنديل ٥٢١٥.٦٤

وتفضلوا بقبول فائق الاحترام

مدير إدار طب الاسنان المركزي د/عبير الخضري

مشرف البحث

د/ناتسی رامز

مواضع منه المتأخذ في دارس العلوم ووسط
دادارة كسب وحب النواحي المتعاضدة
د. المصطفى
مديرم مكتب الدراسات

CS Scanned with CamScanner



محافظة الاسكندرية
مديرية التربية والتعليم
لجنة الأمن بالمعالم والاتصال

السيد الاستاذ / مدير عام ادارة وسط التعليم

السيدة الاستاذة / مدير عام ادارة غرب التعليم

تحية طيبة وبعد ،،،

بناءً على موافقة مديرية الشئون الصحية بالاسكندرية لا مانع من السماح لطلبة كلية الطب بجامعة فاروس (طب الاسنان) والاتى اسمانهم بعد باجراء توعية للطلبة عن اصابات الفم والاسنان بهدف التثقيف الصحى للطلبة ببعض المدارس التابعة لادارة سيادتكم على ان يتم ذلك تحت اشراف ومتابعة ادارة التربية البيئية والسكان بادارة سيادتكم .

والطلبة هم : ١- هنا عماد محمد ٢- ايه بسيونى محمد ٣- اميره المتولى قنديل .

علماً بأنه مكلف بالاشراف الدكتور / نانسى رامز

بعد التأكد من شخصية الطلبة القائمين على التوعية من واقع بطاقة الرقم القومى تحت اشراف ومسئولية السادة مديرى المدارس شخصياً وبما لا يتعارض وسير العملية التعليمية .

وتفضلوا سيادتكم بقبول فائق الاحترام،،،

تحريراً فى ٢٠١٩/١٢/١٢م

مسئول التصاريح بالمديرية

(محمداً عبد الحميد)

مدير ادارة الامن بالمديرية

(تامر العيسى)



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CamScanner

٢٠١٩/١٢/١٩

PHAROS UNIVERSITY
ALEXANDRIA
Faculty of Dentistry



جامعة فاروس
الإسكندرية
كلية طب الأسنان

السيد / مدير إدارة الامن بمديرية التربية والتعليم

بمحافظة الاسكندرية

تحية طيبة وبعد ،،،

برجاء الموافقة على تنفيذ برنامج صحة الفم والاسنان مدرسة الخلفاء الراشدين الابتدائية وذلك من منطلق خدمة المجتمع التى تقوم بها كنية طب الاسنان - جامعة فاروس لتكون نواة لخدمة طلاب المدارس ويشمل البرنامج تقديم توعية بصحة الفم والاسنان للطلبة ووقاية وعلاج الاسنان علماً بأن هذا البحث تحت اشراف د/ نانسى رامز .

اسماء الطلاب القائمين على البحث

- ١- أيه بسيونى محمد
- ٢- هنا عماد
- ٣- أميرة متولى قنديل

ونشكر لسيادتكم كريم تعاونكم معنا ...
ولكم منا فائق الشكر والتقدير



تحريراً فى ٢٠١٩/١٢/٩م

Dr. Mawla



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CamScanner

- Schools are suggested by the directorate of the ministry of education upon :-

Inaccessible area

The most in need for dental service

The most exposed to school violence
(hence the dental trauma)



- They were chosen randomly form the suggested list





The schools names:-



Sample size

- 650 teachers were taken at random from 10 different gov. elementary schools

- School districts (65 teachers * 10 elementary schools=650)

- 310 teachers participated



Sample size

(650→310)



Inclusion criteria

- Elementary school teachers of grades 1 to 6.
- Teachers who were interested to participate .
- Both males and females were included



Exclusion criteria

- Refused to participate .
- Were busy in other school work
- Were absent on the day of the visit
- Didn't have school schedule on that day
- Participants of grades other than elementary.





01
Study
design

Cross
Section

02

Sample
selection



03
Study
Setting



The study was conducted
on school teachers in
Alex belonging public



**Our program was
divided into 2 parts**

Questionnaires

First part

Second part

**Oral health education
program**



The questionnaires were divided into two sections:
(Al-Zaid,2017)

The first section

contained basic Information
such as socio-demographic
details including:

Name, gender, age...



The second section

Questionnaire concerned first
aid with particular focus on the
following areas:

- General knowledge of teeth and dental trauma.
- Special knowledge of tooth avulsion and replantation.
- Storage method and media for an avulsed tooth .



1

NAME:

Gender:

a. Male

b. Female

Age:

1-Is dental trauma a part of the health education curriculum in
your school? a. Yes b. No

2-Is there any class about dental trauma in your school?
a. Yes b. No

3-Did any kids fall in your class or school on his teeth?
a. Yes b. No

4-If yes, how many cases?

a. 1-2

b. 3-4

c. 5 or more

5-Do you think a tooth can be completely knocked out?
a. Yes b. No

2

6-If yes in question # 6, where did you find out?

a. Internet

b. School lectures

c. research

d. Your Dentist

e. dont know

7-Do you think primary teeth should be put back in, after they
were knocked out?

a. Yes

b. No

8-Do you think permanent teeth should be put back in, after
were knocked out?

a. Yes

b. No

9-If the tooth has fallen on the ground and is dirty, what would
you do?

a. You clean it

b. You don't clean it

10-If you decide to clean the tooth, how would you hold it?

- a. from crown
- b. from root
- c. from any part

11-If the tooth is knocked out accidentally, When should it be put back in?

- a. Immediately
- b. During the first hour
- c. During the first 6 hours

12-Your immediate emergency management of dental trauma is:

- a. contact parents and advise them to send child to the dentist immediately
- b. reassure the child and send him/her back to class
- c. not sure what to do

13-Do you think a tooth can be out of a person's mouth for a longer than an hour if stored in another way than dry storage?

a. Yes

b. No

14-What should you do if you cannot (or choose not to) put the tooth back in the mouth?

- a. Put in a container with water
- b. Put in a container with patient's saliva
- c. Put in a container with milk
- d. Put in a container with Hank's balance solution
- e. other

15- Have u ever seen an intrusion case? a. Yes. b. No

16- have you ever seen laceration case ? a. Yea b. No



ORAL HEALTH EDUCATIONAL PROGRAM



POWERPOINT
PRESENTATION



BROCHURES



VIDEOS / PICTURES /
MODELS





Oral health education program

01

Short introduction on
dental tissues

Different types of dental
traumas

02**03**

Management of dental traumatic injuries





PowerPoint content

Handling and cleaning of
the avulsed tooth

Emphasis on the importance of **the time factor** in replantation of the avulsed tooth

Milk is the most suitable storage medium
in trauma situations at school and home

Protective methods to prevent dental
trauma specially in violent games using
mouth guards



- The brochures were very specific, colorful and with Informative pictures.
- Brochures were Created in English and Arabic to facilitate the Understanding for all teachers

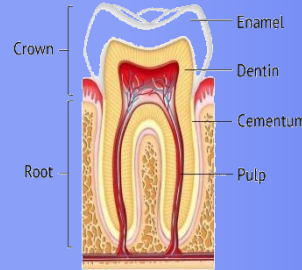


The brochure includes:

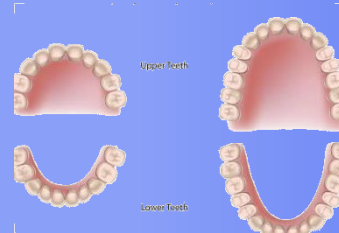
- General idea about tooth structure.
- The difference between permanent and primary teeth
- management of primary and permanent avulsed teeth
- Dealing with fractured tooth
- The protective methods which should be taken during violent sports

انقاذ اسنانك كيفية التعامل مع اصابات الاسنان عند الاطفال

اجزاء السنه



الفرق بين الاسنان اللبنيه و الدائمه



Baby Tooth avulsion (knocked-out)

((اقتلاع الاسنان اللبنيه))

اغسل الفم بالماء البارد وقم باضافه ضمادة نظيفه علي مكان الجرح اقضي معظم الوقت في الضغط علي الجرح افضل من البحث عن السن المقتلع لان الاسنان اللبنيه لا تغرس مره اخري حتي لا تؤذي الاسنان الدائمه زياره اقرب طبيب اسنان يسرعه كبيره

Permanent tooth avulsion

اقتلاع الاسنان الدائمه

حاول العثور علي السن المقلوع لا تقوم بحمل السن من منطقه الجذر احملها من جزء التاج اغسل السن بماء بارد قم باعاده السن الي مكانه مره اخري في تجويف الفم و اجعل الطفل يقوم بالعض علي قطعه من القماش النظيفه و اذهب الي اقرب طبيب اسنان اذا لم تستطع القيام بذلك ضع السن في كوب من اللبن و اذهب باقصى سرعه الي اقرب طبيب اسنان



Tooth is chipped or broken

كسر الاسنان

- تواصل مع اقرب طبيب اسنان
- اذا قمت بالتحرك سريعا يمكنك انقاذ السن المكسور و تقليل حدوث المضاعفات
- اغسل الفم بالماء البارد وقم باضافه ضمادة نظيفه علي مكان الجرح
- يحذر ايجاد الجزء المكسور اذا كانت السنه دائمه و اعطاه للطبيب



An activity includes risk of falls or collision

- انشطه تتضمن خطر الوقوع او التصادم
- ينبغي ارتداء واقي الاسنان عند ممارسه رياضه تتضمن خطر الوقوع او التصادم



REAL TRAUMA CASE





 INTRODUCTION 

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 MATERIALS
AND METHODS 

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RESULTS

The results of this study were tabulated & analyzed statistically using SPSS (version, 24)

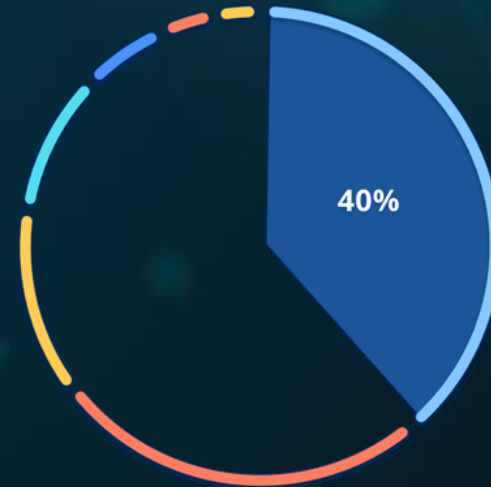




Figure 1 :showing the distribution of the school teachers according to gender (n=310)

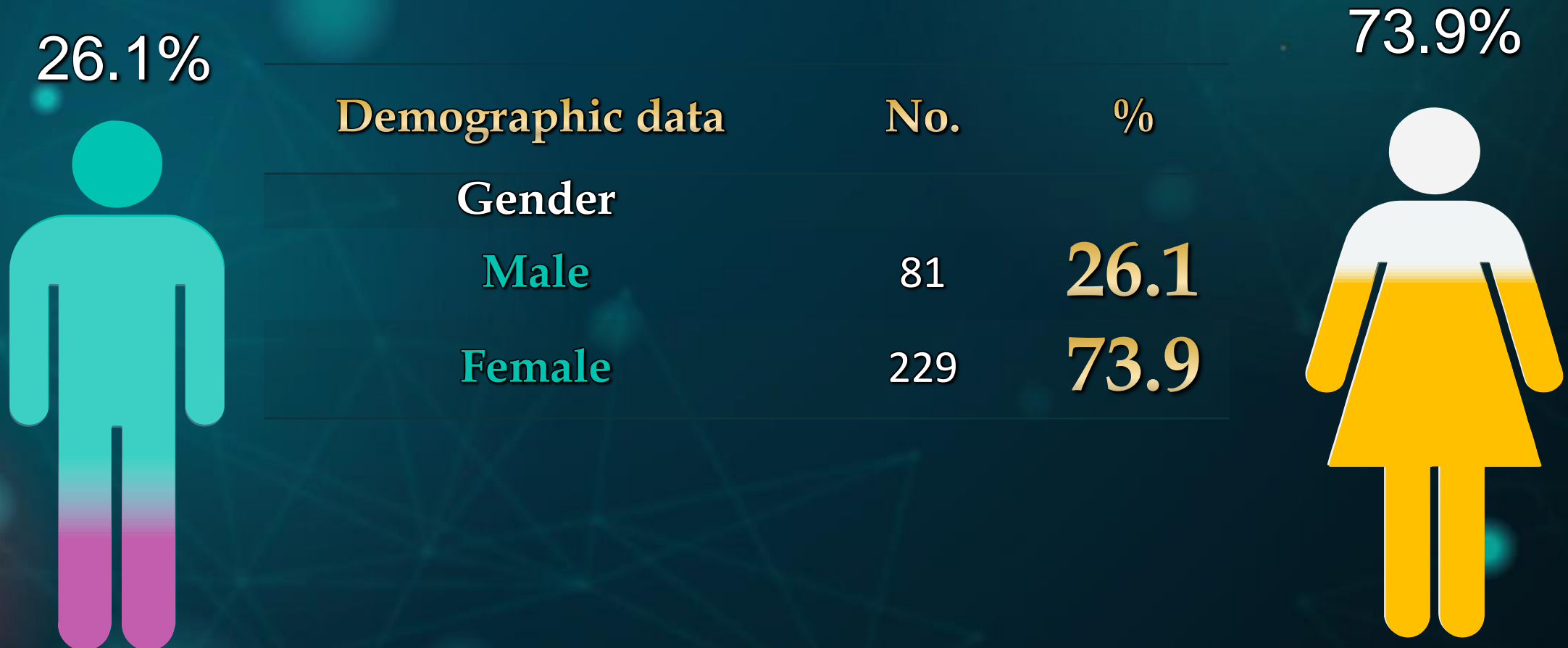




Figure 2 : Showing the inclusion of dental trauma in the school curricula

Inclusion of dental trauma as a part of the health education curriculum in the schools	No.	%
Included in the curriculum Yes	0	0.0
Not included in the curriculum No	310	100

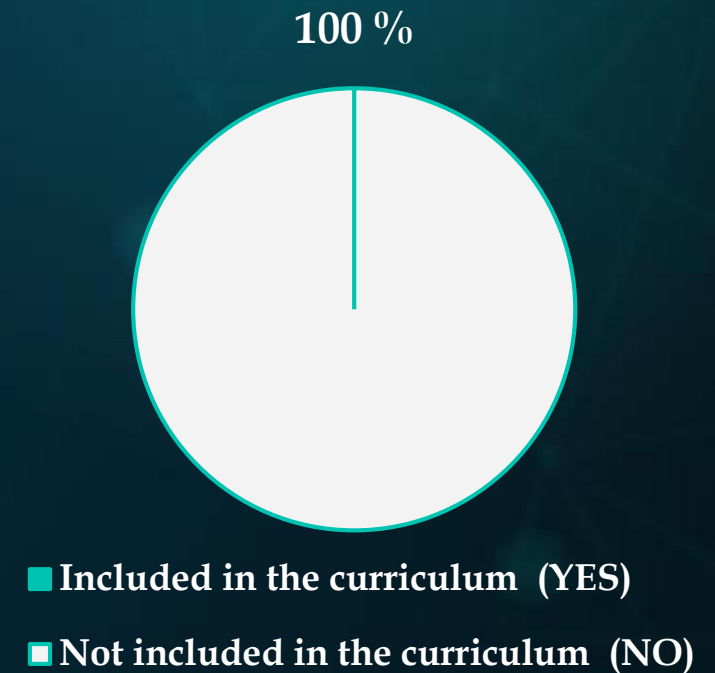


Figure 3 : Showing the occurrence of traumatic dental injury during school time (n=310)

kids fell during school time	No.	%
Yes	223	75.2
No	77	24.8

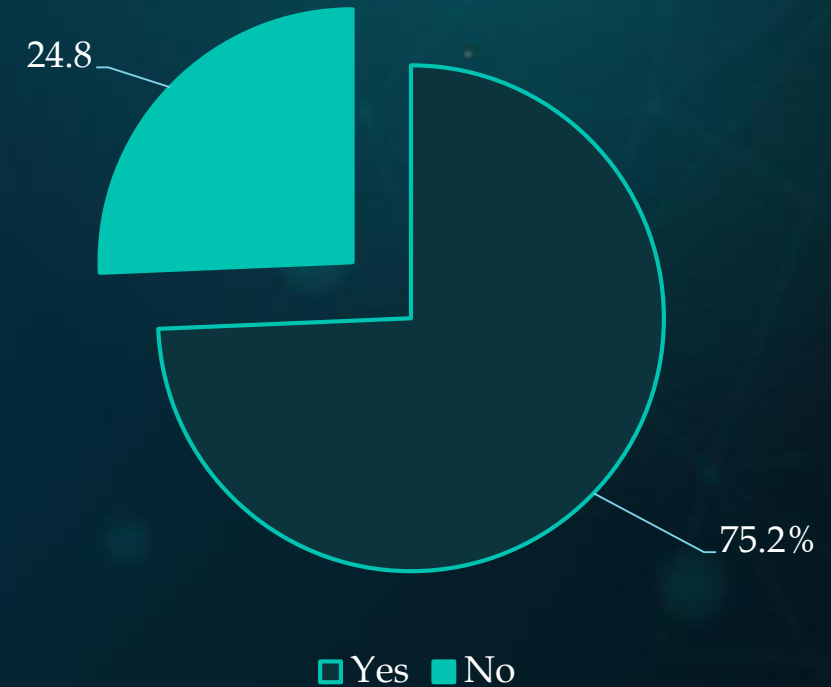




Figure 4: showing the knowledge of the school teachers about reimplantation of avulsed teeth

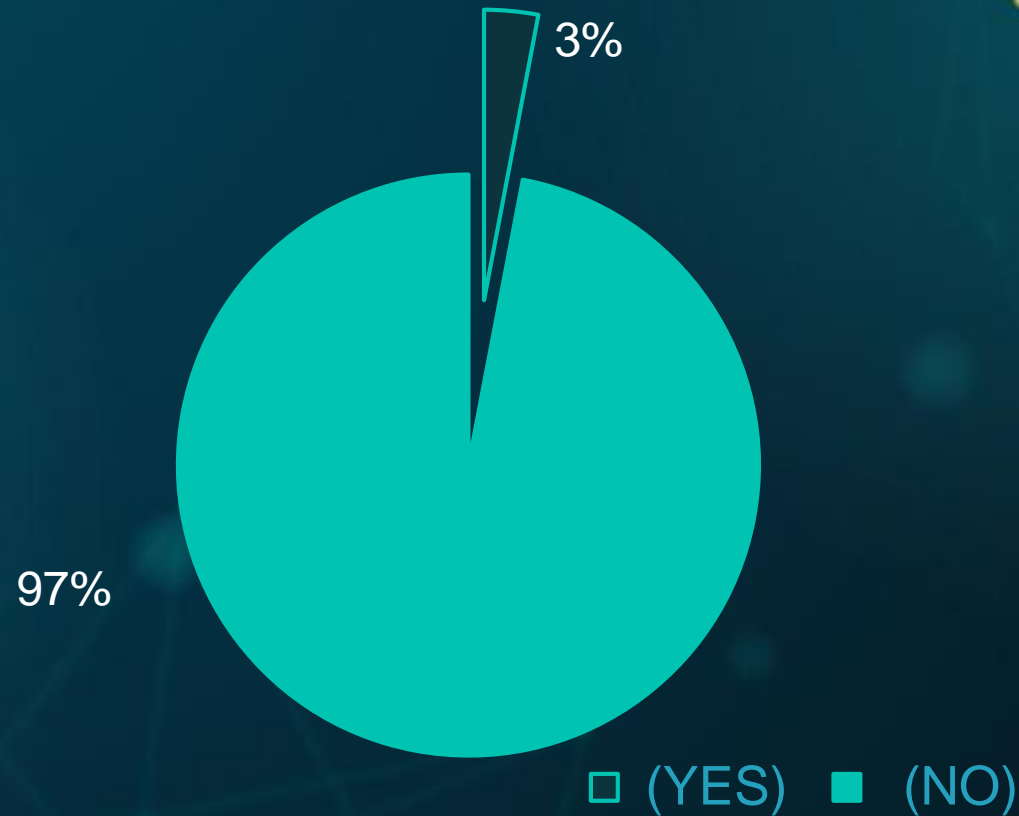
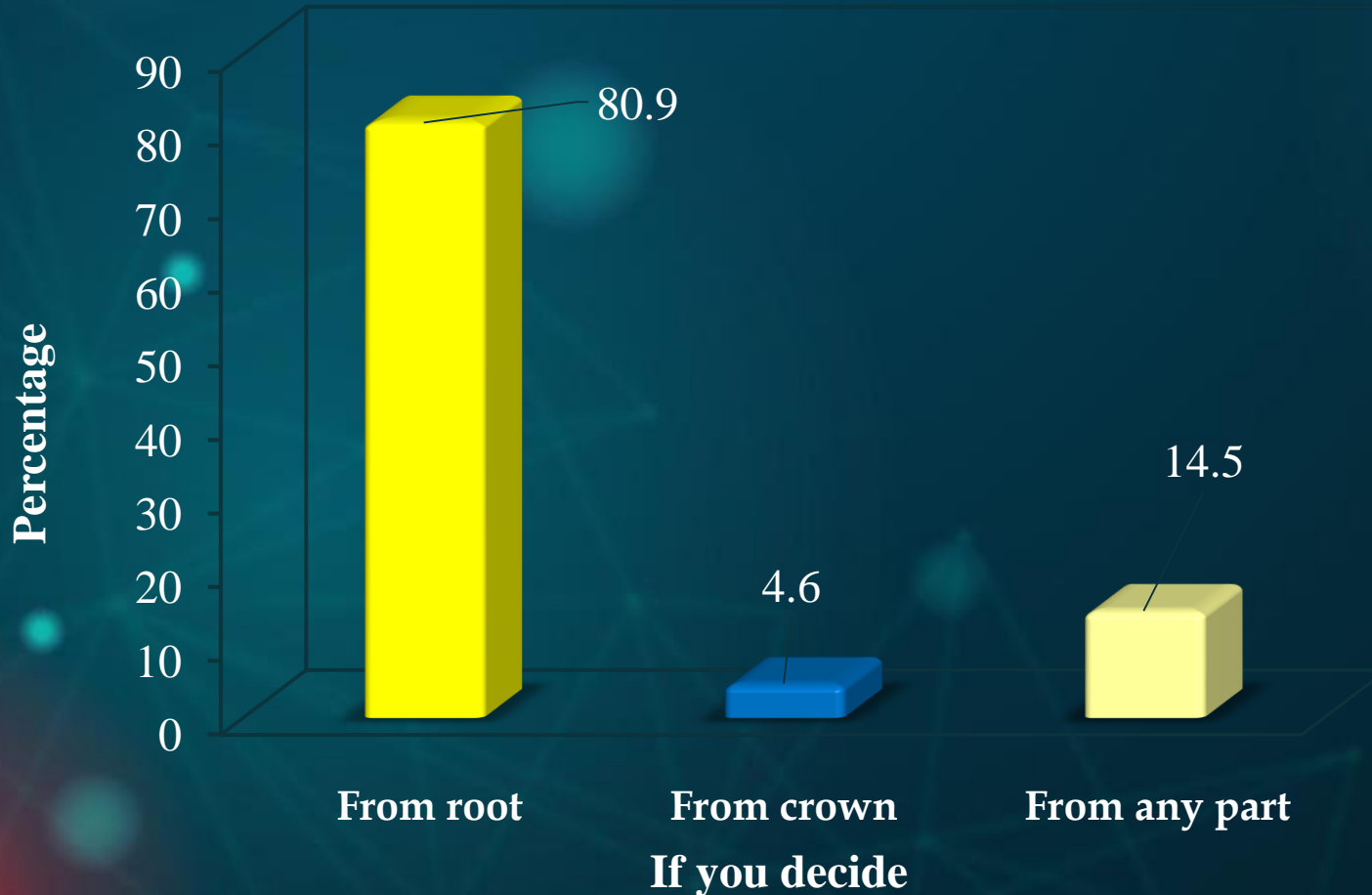




Figure 5: showing the distribution of the studied cases according to the way of holding the avulsed tooth (n=310)



Holding the avulsion tooth	No.	%
From root	140	80.9

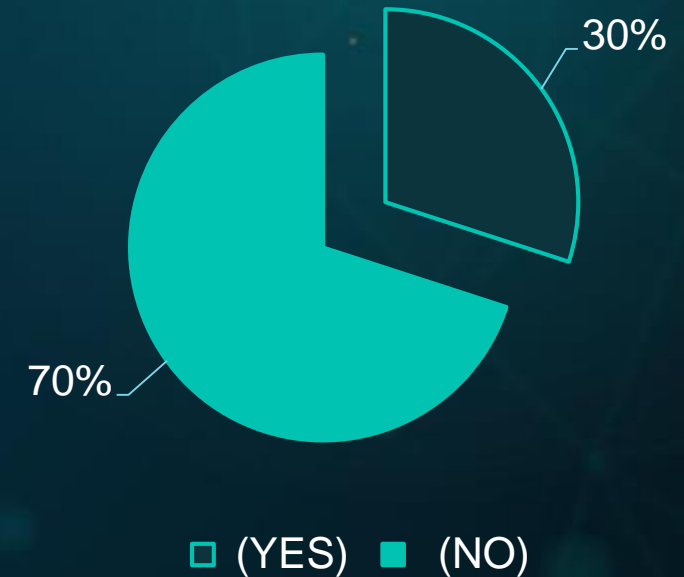


Figure 6: Showing whether teachers have ever faced a lacerated case during school time (n=310)

You have seen laceration case	No.	%
Yes	190	61.3
No	120	38.7

Figure 7: Showing the awareness about the storage media used for avulsed tooth (n=310)

You do if you cannot (or choose not to) put the tooth back in the mouth	No.	%
Put in a container with water, saline saliva or other solutions	217	70
Put in a container with milk	93	30





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From the above mentioned results we can conclude that:

1. The knowledge about TDI's is not included in the schools curricula

2. The most noticed type of oro-dental traumas was “Laceration” with a high percentage of **61.3%**

3. Lack of awareness about the management of permanent avulsed teeth



From the above mentioned results we can conclude that:

4. **Storage medium** is not available in schools and most of teachers **didn't know** that we may **use milk** as a storage medium

5- teachers have **low level of knowledge about the emergency management of TDIs** in school children





1. Outcomes of our study

Teachers were **very interested** about the problem

They **posted our visits on school website** and directors website



Gafar Prep added 9 new photos.

Yesterday at 18:14 • 🌐

#أحداث_اليوم..

#اليوم_الخميس..

#الموافق_17/10/2019...

#وضمن_التدريبات_الطارئة_والمشاركة_المجتمعية_التي_تجري

_بالمدرسة....#أختارفرق من الفرقة الخامسة من كلية طب

أسنان#جامعة_فاروس للعمل ندوة لنشر ثقافة الاهتمام

بالأسنان.وقد تم توعية مجموعة من المدرسين علي الوقاية من

بعض أمراض الأسنان وكيفية المحافظة عليها..ثم كان القاء مع

الطلبة وتم توعية الطلبة علي كيفية المحافظة علي الأسنان



6

3 comments



Ahmed Ezzat

Yesterday at 17:51 • 🌐

تحت رعاية السيدة الفاضلة / نادية فتحى مدير عام الإدارة وإشراف الاستاذ / احمد عزت مدير مجمع مدارس حمزة بن عبد المطلب أقيمت اليوم الخميس الموافق ١٧ / ١٠ / ٢٠١٩ ندوة صحية بهدف رفع الوعي الصحي للمعلمين والطلبة بالمرحلة الابتدائية وبحضور وكالة المرحلة الأستاذة فريدة عدلي وقام بالندوة الدكتورة أية بسيوني والدكتورة أميرة الفولي والدكتورة هنا عماد وذلك تحت إشراف كلية طب الأسنان بجامعة فاروس



Like



Comment



Share



CONCLUSIONS



Gafar Prep

7 hrs • 🌐

#أحداث_اليوم..

#اليوم_الخميس..

#الموافق_17/10/2019...

#أحلي_بنات_من_طب_أسنان...🩺❤️

#شرفتوا_المدرسة.💎

...#مصر_بخير_طول_مافيها_بنات_مثلكم.🌸

آيه بسيوني...ندا عماد...أميرة المتولي...❤️



2. Outcomes of our study

They asked for **further visits in their schools** and other school.

They asked to **refer cases to PUA clinics**





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RECOMMENDATIONS

RECOMMENDATIONS

A proposed program for management of dental traumas to the undergraduate dentists can include:

1

Problems and consequences of dental trauma

2

Specific storage media for avulsed teeth

3

Critical timing for replantation of permanent avulsed teeth for long term success

4

Current concepts of management of fractured teeth



RECOMMENDATIONS

RECOMMENDATIONS



Generalize our **program** in other schools in Alexandria Egypt

1

6

Awareness through establishment of **workshops/seminars/ website** about TDIs management free for all schools

5

Tooth saver kit (Hank's Solution) should be in all schools included storage medium to preserve avulsed tooth

2

Provide an emergency dental unit at PUA out patient clinic specialised in dental traumas(PUA **trauma centre**)

3

Establishment of trauma **(hot line)** should be useful to provide teachers with appropriate management in case of TDIs emergency

4

Emergency trauma **posters** in all schools to keep it as a reference to the school team





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مدرسة

تؤلف الأبتدائية

الأفندي

الكتاب الأول
الكتاب الثاني
الكتاب الثالث



Thank
you