Knowledge of Emergency Dental Trauma Management among Physicians and Dentists in a Nigerian Tertiary Health Care Center

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ABSTRACT

Objective: To assess the knowledge of emergency dental trauma management among physicians and dentists in Obafemi Awolowo University Teaching Hospital Complex (OAUTHC), Ile-Ife, Nigeria.

Methods: A cross-sectional survey was carried out using a three-part online questionnaire including demographic data, knowledge and self-assessment. A pilot study was carried out among three dentists and three physicians. The questionnaire was forwarded to the various online professional association platforms of physicians and dentists at OAUTHC to fill in. The surveyed data were statistically analyzed using descriptive analysis and the Chi-Square test for bivariate analysis.

Results: One hundred completed questionnaires (75 dentists and 25 physicians) were recorded within the study period. Only 8 (11.6%) of the physicians acknowledged the urgency to replant an avulsed tooth as soon as possible in contrast with 61 (88.4%) of the dentists. This finding was statistically significant $p < 0.01$. Out of the 48% of the study participants who were satisfied with their current level of knowledge about emergency traumatic dental injuries (TDI) management, 42.0% were dentists while 6% were physicians. This finding was statistically significant $p < 0.01$. Physicians (92%) and dentists (56%) acknowledged the need for further professional training in emergency TDI management.

Conclusion: This study showed that physicians' knowledge of emergency TDI management was inadequate. TDI management should be included in the medical education curriculum to improve the skill of the physicians for the emergency management of TDI and more favourable outcomes for dental trauma patients.

Keywords: emergency, management, dental injuries, dentists, physicians

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INTRODUCTION

Traumatic dental injuries (TDI) are impact injuries to the teeth and/or other hard or soft tissue within or around the vicinity of the oral cavity. They are usually sudden, circumstantial, unexpected, accidental, and often require emergency attention.[1] Reported prevalence ranges from about 6% to as high as 58.6% across different age groups and geographical locations.[2-9]

In Nigeria, the prevalence of traumatized anterior teeth among children aged between 6 and 16 years has been reported to be between 6.5% and 19.5%. Recent reported Nigerian studies[11,16] on TDI among children and adolescents showed a prevalence between 5.2% and 20.2%, indicating a slight increase in the prevalence of TDI. A recent national survey on dental trauma was carried out to understand the complexities of dental trauma epidemiology among adult and elderly Nigerians; a prevalence of 15.9% and 22% were reported.[17]

The observed pattern of dental trauma among adults and elderly Nigerians could reflect the diverse dietary and socio-cultural practices.[17] TDI are a cause of great concern among children, adolescents and adults because of their health risks and social problems on affected individuals. The potential for psychological and social impacts of dental trauma has become a common finding with consequences that may impair the social functioning, emotional balance, and wellbeing of affected individuals.[18,19] Early diagnosis and appropriate timely management remain the bedrock for a good long-term prognosis of restored aesthetics and function.[20] While there are standard treatment protocols for varying types of TDI [21,22] there have been many reports on perceived deficiency in knowledge of TDI management among physicians and dentists, who in majority of the cases, are responsible for the management of these injuries.[23-27] In a cross-sectional study by Enabulele et al, [28] on knowledge among hospital emergency unit staff in a Nigerian hospital comprising medical doctors, nurses, and emergency medical technicians, authors reported that a significant number of the respondents (67.8%) were not aware of any protocol for management of traumatic tooth avulsion. Furthermore, about 69.5% of the respondents had no prior training on management of traumatic tooth avulsion injuries. Also, Jackson et al, [29] in a study among general dental practitioners in the United Kingdom reported that general dental practitioners were not confident to manage complex trauma cases. Reports on the demonstration of higher proficiency in knowledge by dentists who attended postgraduate trauma courses or continuing dental education have also been reported.[30,31]

There was paucity of data assessing the knowledge of TDI management among physicians and dentists in Nigeria. Therefore, this study aimed to assess the knowledge of physicians and dentists on TDI management in a Nigerian tertiary health care center.

METHODS

A cross-sectional study was designed to assess the level of knowledge of dental trauma management among physicians and dentists in OAUTHC, Ile-Ife, Nigeria. Ethical clearance for the study was obtained from the Health Research Ethic Committee (HREC) of the Institute of Public Health Obafemi Awolowo University, Ile-Ife, Nigeria. Data collection was done using a modified online questionnaire used for a similar reported study[27] (Appendix 1).

The questionnaire had three sections. Section one was on the collation of demographic information i.e. age, sex, occupation and professional cadre; section two was on assessment of knowledge of management of emergency dental trauma based on clinical scenarios of dental trauma; section three was designed to assess the level of satisfaction of the participants about their knowledge of dental trauma and their perceived need for further professional training on dental trauma management.

A pilot study was carried out among three dentists and three physicians by giving them questionnaires to fill in. The aim was to enable the researchers to find out their level of understanding of the questionnaire. These six participants were not included in the study. The questionnaire was forwarded to the various online professional association platforms of physicians and dentists at OAUTHC to fill for five consecutive months in 2021. The data from the survey were analysed using SPSS-IBM version 23 for descriptive analysis and the Chi-Square test for bivariate analysis. The statistical significance level was inferred at $p < 0.05$.

RESULT

One hundred completed questionnaires from (75dentists and 25 physicians) were recorded within the study period. Male to female ratio of participants was 2.5:1 with a mean age of 39.7 years (SD $\pm$ 9.29 years).

Consultants and senior registrars constituted 32% and 31% of participants respectively in the study participants. (Table 1)

On basic dental knowledge, using age as a guide to differentiating an anterior fractured tooth in a 9-year-old as a permanent or primary tooth after sustaining injury showed that only 13 (52.0%) of the physicians responded correctly that the fractured tooth was a permanent tooth in contrast with 75 (100%) of the dentists' response. The difference was statistically significant $p < 0.01$. The decision to bother on the management of an avulsed primary tooth divided the participants into somewhat equal halves: 33 (44%) dentists and 11 (44%) physicians responded correctly that they would not bother. Majority of the participants, 93.3% of dentists and 92% of physicians agreed that they would consider giving an anti-tetanus vaccine cover as prophylaxis for tetanus infection following a traumatic dental injury. However, the differences were not statistically significant $p > 0.05$. (Table 2)

Regarding the care of a fallen tooth into dirty ground, while none of the dentists responded, 20% of physicians responded that the fallen tooth would be cleaned with toothbrush under running tap water and put back into sockets. This finding was statistically significant $p < 0.01$. Seven (28%) of the physicians responded that the tooth would be discarded, but this was not statistically significant. Concerning the proper handling of an avulsed tooth before replantation, majority of the respondents (100% dentists and 92% physicians) indicated that an avulsed tooth should be handled by the crown. None of the respondents indicated that an avulsed tooth would be handled by the root. This finding was statistically significant $p < 0.02$. (Table 3)

Regarding their response to the emergency management of a fractured tooth, the majority of the dentists 72 (96%) and 18 (72%) physicians responded correctly that they would advise patients to keep the tooth fragments and refer to a dentist. This finding was statistically significant $p < 0.01$. Eight respondents: 3(4%) dentists and 5(20%) physicians responded that they would refer the patient to a dentist without advice to keep the fractured segment. Two (8%) of the physicians opted to suggest extraction of the tooth to the patient. In their opinion of the emergency management of a 12-year-old boy who was punched in the face and had a tooth knocked out with some blood in his mouth with the patient otherwise healthy, unhurt, and conscious, 10(40%) of the physicians and 14 (18.7%) of the dentist responded that they would stop bleeding, and then search for the avulsed tooth.

This finding was statistically significant < 0.01. Eight (32%) physicians opined to placing the tooth in a handkerchief and referring the child to a dentist in contrast with 14 (18.7%) dentists. Majority of the dentists 44 (58.7%) answered correctly that they would look for the tooth and put it back into the socket while the physician's 1 (4.0%) demonstrated extremely low knowledge about this. (Table 4)

The perceived urgency of replanting an avulsed tooth varied among the respondents, and 61 (81.3%) dentists responded that tooth replantation following avulsion should be done immediately (within thirty minutes); 8 (32%) of the physicians responded likewise. Ten (40%) of the physicians considered within few hours after an avulsion as the appropriate time for replantation as against 13 (17.3%) of the dentists. This finding was statistically significant $p < 0.01$. Seven (28%) physicians responded that the timing of replantation was not a crucial factor for tooth replantation. (Table 5)

Milk, as an appropriate storage medium for an avulsed tooth, has 61% response rate followed by patient's saliva (60%). Salt water had 20% response rate, ice had 8%. The least choice of storage medium for transportation of an avulsed tooth was hot water having just 1% response rate. (Figure 1)

Regarding the level of satisfaction of respondents on their knowledge of the management of TDI, 42 dentists (56%) and 6 physicians (24%) were satisfied. This was statistically significant $p<0.01$. None of the physicians were very satisfied and 17 dentists (22.6%) were very satisfied. (Table 6)

Forty-two (56%) dentists reported that they perceived the need for further professional training in emergency dental trauma management whereas 23 (92%) of the physicians expressed this need. Eighteen (24%) dentists did not perceive the need for further professional training and 15 (20%) dentists were uncertain whether or not they needed it. (Figure 2)

Table 1: Socio-demographic characteristics of respondents by occupation

Variables	Occupation Dentists n (%)	 Physicians n (%)	 Total N (%)
Gender			
Male	55 (55.0)	16 (16.0)	71 (71.0)
Female	20 (20.0)	9 (9.0)	29 (29.0)
Age group (years)			
≤35	26 (26.0)	10 (10.0)	36 (36.0)
36 – 45	34 (34.0)	7 (7.0)	41 (41.0)
> 45	15 (15.0)	8 (7.0)	23 (23.0)
Professional cadre			
House officer	10 (10.0)	3 (3.0)	13 (13.0)
Junior Registrar	19 (19.0)	5 (5.0)	24 (24.0)
Senior Registrar	22 (27.0)	9 (9.0)	31 (31.0)
Consultant	24 (24.0)	8 (8.0)	32 (32.0)

Table 2: Dental knowledge of respondents

Variables	Occupation Dentists n (%)	 Physicians n (%)	p-value
Type of traumatized Tooth			
Primary	0 (0.0)	6 (24.0)	
Permanent	75(100.0)	13 (52.0)	< 0.01*
Do not know	0 (0.0)	6 (25.0)	
Likelihood ratio $\chi 2 = 40.91$			
Bother on knocked out primary tooth			
Yes	32 (42.7)	9 (36.0)	
No	33 (44.0)	11(44.0)	0.69
May be	10 (13.3)	5 (20.0)	
Pearson $\chi 2 = 0.73$			
Consideration for tetanus vaccine			
Yes	70 (93.3)	23 (92.0)	
No	3 (4.0)	1 (4.0)	0.99
May be	2 (2.7)	1 (4.0)	
Likelihood ratio $\chi 2 = 0.11$			

Table 3: Respondents' knowledge of management of tooth avulsion

Variables	Occupation		p-value
	Dentists n (%)	Physicians n (%)	
Care for a fallen tooth into dirty Ground			
Rub away the dirt using tissue paper then, put it back into socket	1 (1.3)	0 (0.0)	
Clean with toothbrush under tap water and put it back into its socket	0 (0.0)	5 (20.0)	< 0.01*
Rinse gently under tap water and put it back into its socket	74 (98.7)	13 (52.0)	
Discard the tooth	0 (0.0)	7 (28.0)	
Likelihood ratio $\chi 2 = 39.09$			
Handling of an avulsed tooth			
By the crown	75 (100.0)	23 (92.0)	
By the root	0 (0.0)	0 (0.0)	0.02*
Neither is important (crown nor root)	0 (0.0)	2 (9.0)	
Likelihood ratio $\chi 2 = 5.67$			

Table 4: Management skills of respondents by occupation

Variables	Occupation		p-value
	Dentists n (%)	Physicians n (%)	
Immediate management of traumatized tooth			
Referral of patient to dentist without an advice to keep the tooth	3 (4.0)	5 (20.0)	
Advising patient to keep the tooth fragments and then refer to dentist	72 (96.0)	18 (76.0)	< 0.01*
Suggesting to patient to have tooth Extraction	0 (0.0)	2 (8.0)	
Likelihood ratio $\chi 2 = 11.81$			
Immediate emergency action on traumatized tooth			
Stop bleeding and advise patient to rest	2 (2.6)	5 (20.0)	
Stop bleeding then, search for the avulsed tooth	14 (18.7)	10 (40.0)	< 0.01*
Look for the tooth and put back into the Socket	44 (58.6)	1 (4.0)	
Place the tooth in a handkerchief and refer the child to a dentist	14 (18.7)	8 (32.0)	
Because of the hopelessness of the tooth, do not replant the tooth	1 (1.3)	1 (4.0)	
Likelihood ratio $\chi 2 = 30.29$			

Table 5: Awareness of respondents on replantation of an avulsed tooth

Variable	Occupation		P value
	Dentist	Physicians	
Urgency to replant an avulsed tooth			
Immediately (within 30 minutes	61 (81.3)	8 (32.0)	
Within few hours	13(17.3)	10(40.0)	< 0.01*
Within the same day	1(1.3)	0(0.0)	
This is not a crucial factor	0(0.0)	7(28.0)	
Likelihood ratio $\chi 2 = 31.47$			

Table 6: Level of satisfaction of management skills of dental trauma by respondents

Variables	Occupation		p-value
	Dentists n (%)	Physicians n (%)	
Very satisfied	17 (22.6)	0 (0.0)	
Satisfied	42 (56.0)	6 (24.0)	< 0.01*
Moderately satisfied	15 (20.0)	3 (12.0)	
Not satisfied	2 (2.6)	15 (60.0)	
Likelihood ratio $\chi 2 = 52.47$			

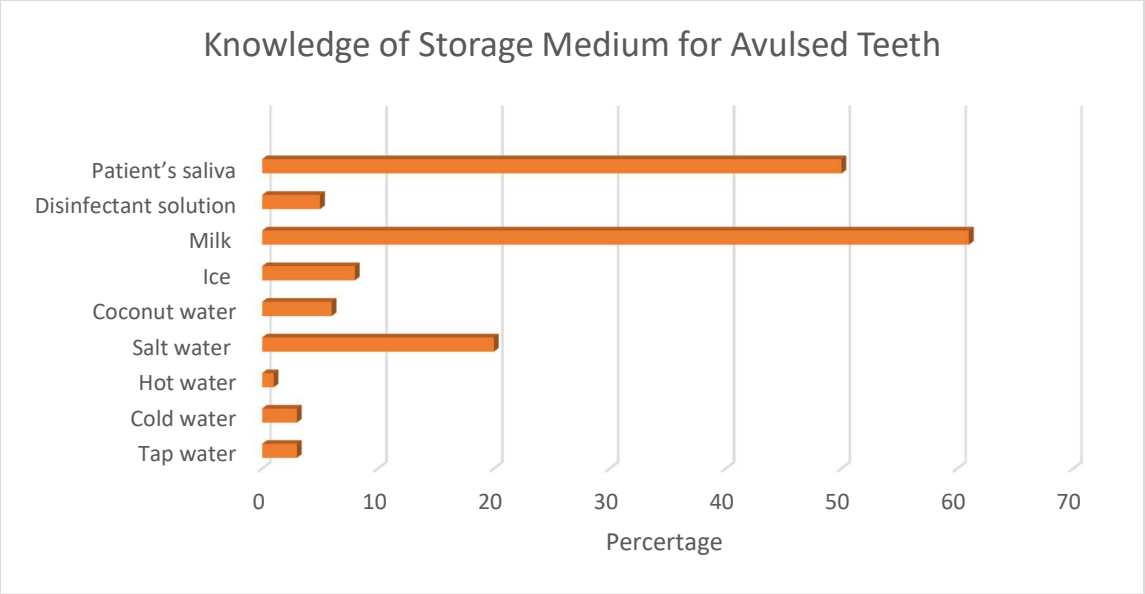

Figure 1: Knowledge of storage medium for avulsed teeth by respondents
Showing the different choices of participants on an appropriate storage medium for an avulsed tooth.

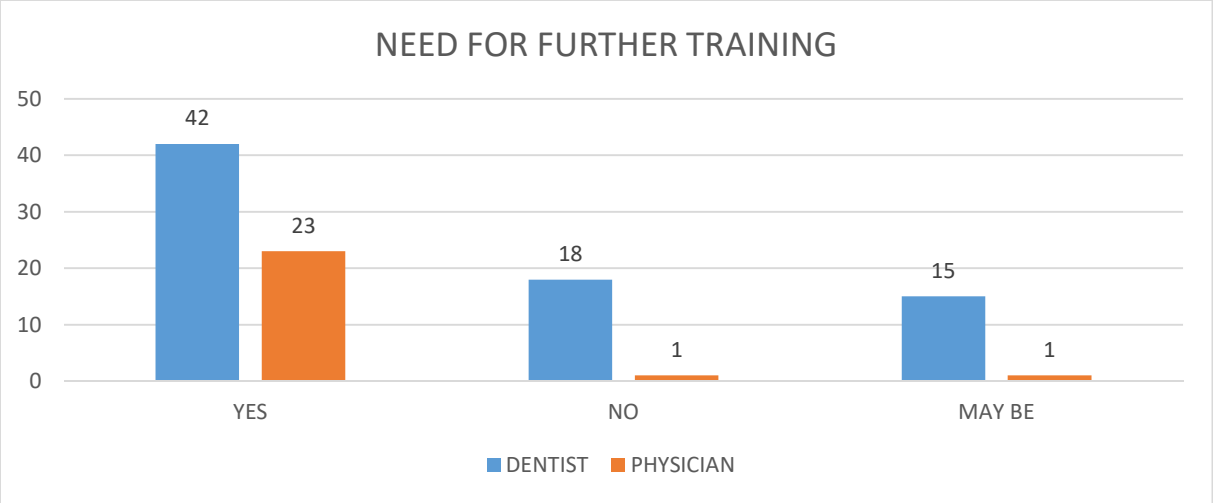

Figure 2: Perception of the need for further training by respondents.
A bar chart showing the perceived need of participants for further training on emergency dental trauma management

DISCUSSION

Education in dental trauma is extremely important to promote knowledge on the assessment and management of a traumatized tooth. Medical doctors are normally only required to manage the emergency phase of traumatic dental injury treatment before referring to a dentist, endodontist, or an oral maxillofacial surgeon for continuing care. Medical doctors who possess sufficient theoretical knowledge and are competent enough clinically to handle TDI can provide a high standard of treatment care and ultimately achieve a better patient outcome.[32] Early diagnosis and appropriate management are essential for a good long-term prognosis of restored dental esthetics and function.[32] The knowledge of emergency dental trauma management among dentists and physicians is very crucial to achieving the best prognosis for victims of TDI. Flores et al,[33] reported that the prognosis of a traumatized tooth depends on the quality of the measures taken by the practitioners and the time elapsed between the accident and treatment. Findings from this study showed that dentists demonstrated a better knowledge of emergency dental trauma management when compared with the physicians.

This finding is in agreement with the results of studies conducted in Iran, Kuwait, Pakistan, the United Kingdom, America, and Germany.[27, 31-34, 35-38] This finding reinforces the need for an effective approach to increase the knowledge base of physicians on traumatic dental emergency management.

The importance of correctly identifying whether a tooth is a primary tooth or a permanent tooth is very crucial in the treatment plan for TDI. In this study, 88% of the respondents (dentists 100 %, physicians 52%) could rightly state that a central incisor in a 9-year-old child was most likely to be a permanent tooth. This was statistically significant $p < 0.01$. The lower percentage in the physicians' responses (52%) showed the importance of dental education/curriculum inclusion in the training of medical students and postgraduate rotation in dental specialities i.e. paediatric dentistry, community dentistry, restorative dentistry.

This study is in agreement with Raoof et al's study in which more than half of the dentists and nearly all the physicians were dissatisfied with their level of knowledge on TDI and suggested that further education on the topic should be offered.[27]

It is commendable that majority of the respondents (93%) know the importance of anti-tetanus vaccine as prophylaxis against tetanus infection following TDI. Prevention of tetanus infection is the best strategy by following immunization guidelines with a booster dose every 10 years.[38]

Regarding the care of an avulsed tooth on dirty ground, none of the dentists responded that the avulsed tooth would be cleaned with a toothbrush under running tap water and put back into sockets in contrast with physicians 5 (20%). This finding was statistically significant $p< 0.01$. This further showed inadequate knowledge by physicians because cleaning with a toothbrush will further damage the

fibroblasts of the periodontal fibers leading to poor healing of the replanted tooth.

The reattachment of a tooth fragment may be performed for treatment of traumatized anterior teeth, both in cases of simple coronal fracture (enamel and superficial dentine) and in those with complicated coronal fracture (deep dentine with pulp exposure).[39] It is commendable that majority of the respondents (dentists 96%, physicians 72%) chose to advise the patient to keep the tooth fragment and then refer to the dentist. This finding was statistically significant p<0.01. A practitioner needs to know that a fractured fragment of a tooth can be reattached. Reattachment of fractured tooth fragments can provide good and long-lasting esthetics because the tooth's original anatomic form, colour and surface texture are maintained.[40] This knowledge will spur the practitioners to ask the patients for the fractured tooth segment when presenting for treatment.

Of interest was the response from 7 (28%) of the physicians that the tooth would be discarded, but this was not statistically significant. However, not all avulsed teeth are discarded; this is only applicable to primary teeth. Not all avulsed teeth are replanted. Primary teeth are not replanted. Reasons for this have been clearly stated in the recent publication of the International Association of Dental Traumatology Guidelines 2022 which include a significant treatment burden, replantation, splint placement and removal, root canal treatment for a young child as well as the potential of causing further damage to the permanent tooth or its eruption.[41]

Avulsion injuries represent the extreme of the spectrum of injuries that could affect the dental hard tissues and have the poorest prognosis. This is due to the fact that pulpal necrosis always occurs after an avulsion injury and favourable healing after an avulsion injury requires quick emergency intervention followed by evaluation as well as possible treatment at decisive times during the healing phase.[42]

Unfortunately, only 4 % of the Physicians in our study reported that they would look for the traumatized tooth and replant it into the socket following tooth avulsion. This showed a lack of knowledge by most of the physicians on the importance of immediate replantation of permanent avulsed teeth. This finding is similar to reports by Enabulele et al.[28]

Regarding the immediate action on traumatized tooth, 14 (18.7%) of the dentists and 10 (40%) of the physicians stated that they would stop the bleeding and then search for the avulsed tooth. Nearly half of the Physicians' population was concerned with stopping the bleeding. This finding was statistically significant p < 0.01 This may be because of the basic emergency life support training provided during their medical education which provides instruction and practice in dealing with life-threatening bleeding in trauma patients.[18]

Similar results were observed in other studies.[27,43] Controlling the bleeding in this scenario will lead to delay in replantation and would jeopardize the prognosis of the traumatized tooth. However, it is important to note that this can only be done if the patient does not have other associated life-threatening bleeding injuries and any haematological disorders.

Part of the protocol in management of an avulsed tooth is that it should be held by the crown and not by the root. This is done to preserve the vitality of the periodontal ligaments cells which is necessary for successful replantation. Majority of the participants know this practice. None of the respondents indicated that an avulsed tooth should be handled by the root. This finding was statistically significant p <0.02.

The timing of replantation, too, is crucial to the prognosis of an avulsed tooth. The golden hour for replantation appears to be within the first thirty minutes following avulsion, and the longer the extra-alveolar time the poorer the prognosis [33,44] In this study, majority of the dentists responded that replantation should be done immediately. However, a large percentage of the physicians lack this knowledge as only 8 (32%) responded that it was necessary to replant an avulsed tooth immediately. Also, very few of the physicians 7(28%) considered the urgency of tooth replantation following avulsion as nothing crucial.

This finding is similar to a reported Nigerian study[28] where majority of the physicians who participated in the study were not willing to undertake replantation of an avulsed tooth. This further reflects the poor knowledge of physicians on TDI management. An attempt should be made to provide training regarding this vital point.

Replantation is being widely accepted as an effective treatment option for an avulsed tooth. However, the long-term prognosis of replanted teeth is unpredictable because it is dependent on various factors such as the time interval between the time of avulsion and replantation; extra alveolar storage period; vitality status of pulp or periodontal tissues; the type and period of splinting.[45]

In cases where an immediate replantation of an avulsed tooth is not feasible, the use of a storage medium is very important to enhance and preserve the vitality of fibroblast in the periodontal ligaments of the tooth.[45] Some media that are proposed to preserve avulsed teeth include milk, sterile saline, saliva, cell-culture media, chicken egg white, contact lens solution, salt water, coconut water, propolis and plastic foil.[42] Hank's balanced salt solution and pasteurized milk are considered to be the most appropriate and clinically recommended storage media for avulsed teeth.[45]

A positive finding from this study is that milk as an appropriate storage medium receives a 61% response rate from respondents. Pasteurized fresh milk is recommended as a storage medium for tooth avulsion. In Nigeria, fresh milk is not readily available but liquid milk, which is usually labelled as evaporated and dried powdered milk (skimmed milk, instant-filled and full-cream milk), are readily available and can come in cans, tetra packs or sachets. Nigerians need to be well informed on the type of milk to be used for storage medium for the avulsed tooth.

The dentists (56%) were satisfied with their current level of knowledge of the management of TDI when compared to the physicians (24%). This was statistically significant $p < 0.01$. This further showed that the physicians are not confident to manage traumatic dental injuries. The majority of the physicians (60%) expressed dissatisfaction about their level of knowledge of TDI and about 92% of them perceived the need for further professional training on TDI management. This is similar to findings from other studies.[25,28]

The findings of this study showed that the knowledge of physicians regarding the emergency management of TDI is inadequate and supports the findings of other authors.[23-28] Data indicated that this important topic is neglected in the education of physicians as primary caregivers during their undergraduate and post-graduate training in medical schools in Nigeria. Special emphasis must be given to practitioners regarding the treatment of an emergency involving a traumatized tooth.

An effective approach may be incorporating an educational course about dental trauma emergency management in the medical curriculum. Medical students during their undergraduate training could engage in interdisciplinary seminars and case discussions within dental departments. Rotation of medical students through dental hospitals should be included in their postings. This has already started in some Nigerian Teaching Hospitals. More universities should include this in the curriculum of their medical students. This will enable them to acquire basic knowledge of TDI management.

There should also be continued education and regular short professional courses for both medical and dental practitioners to keep themselves abreast of different treatment protocols for various types of TDI. Undertaking professional courses on TDI management has been reported to have a significant positive effect on the knowledge level of dental trauma management among health practitioners.[30]

The average physician should have a reasonable degree of exposure to crucial dental topics like TDI management. This would aid a more holistic approach to patient management and ease of professional communication between dentists and physicians. Furthermore, providing leaflets, stickers, posters, and informational brochures about basic emergency dental traumatic management to professional care providers and emergency rooms can broaden their knowledge on emergency management of a traumatized tooth, and may help both the dentists and physicians to better deal with such traumatic events.

The low response rate for filling out online questionnaires by the physicians despite posting them to various platforms for five consecutive months calls for concern. The reason for this is not clear but it might be because the physicians are too busy with work, not just willing to expend their data on filling out the online questionnaire or lack interest in oral health. This is a preliminary study. Further study is recommended using a larger sample size to obtain a good representation of the physicians. Based on the findings from this study, educational campaigns must be undertaken to improve the attitude of physicians in filling out the online questionnaire and their knowledge regarding the emergency management of TDI.

This study showed that the physicians demonstrated lesser knowledge of emergency management of traumatized teeth than the dentists. The findings highlighted the urgent need to develop effective strategies to improve the physicians' knowledge level of traumatic dental injury management and further improvements on the part of dentists for better treatment. TDI management should be included in the medical education curriculum to improve physicians' skills for emergencies and

facilitate a more favourable outcome for patients with traumatic dental injuries.

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None declared

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Appendix 1
QUESTIONNAIRE

SESSION 1: Demographic information

1. Age (as at last birthday) _____
2. Gender _____
3. Occupation Physician ☐ Dentist ☐
4. Professional cadre
   - Consultant ☐
   - Senior Registrar
   - Junior Registrar ☐
   - House Officer

SESSION 2: Knowledge questions on the survey

Case I: A 9-year-old student fell down while walking, and as her face hit the pavement, she broke off the maxillary central tooth at the horizontal middle line of the crown. Otherwise, she is healthy, unhurt, and conscious.

Q1. The broken tooth is likely to be:
a) Primary tooth
b) Permanent tooth
c) Do not know

Q2. Your immediate management of the case is:
a) Refer the patient to a dentist without advising her to keep the tooth fragment.
b) Advise the patient to save the tooth pieces or fragments and refer her to a dentist.
c) Suggest the patient to have the tooth extracted.

Case II: A 12-year-old boy was punched in the face and had a tooth knocked out. There is some blood in his mouth. Otherwise, he is healthy, unhurt, and conscious.

Q3. The immediate emergency action you would take is:
a) Stop the bleeding by applying gentle pressure with a cloth over the injury and advise the patient to rest.
b) Stop the bleeding and then search for the tooth.
c) Look for the tooth and put it back in its socket.
d) Place the tooth in a handkerchief and refer the child to a dentist
f) Because of the hopeless prognosis, there is no need to replant the tooth.

Q4. Would you investigate if the child had a tetanus vaccine? a) Yes b) No

Q5. How urgent do you think it is to replant an avulsed tooth?
a) Immediately
b) Within a few hours

c) Within the same day
d) This is not a crucial factor
Q6. Would you care if a primary tooth is knocked out? a) Yes b) No

Q7. If the tooth has fallen on the dirty ground, what would you do?
a) Rub away the dirt by a paper tissue and put it back into its socket
b) Clean the tooth with a toothbrush under tap water and put it back into its socket.
c) Rinse the tooth gently under tap water and put it back into its socket.
d) Discard the tooth.

Q8. How would you hold the tooth?
a) By the crown
b) By the root
c) Not important (crown or root)

Q9. Which storage medium is appropriate for storing an avulsed tooth?

a) Tap water yes no
b) Cold water yes no
c) Hot water yes no
d) Salt water yes no
e) Coconut water yes no
f) Ice yes no
g) Milk yes no
h) Disinfectant solution yes no
i) Patient saliva yes no

SESSION 3: Self-assessment questions

1. Rate your level of satisfaction about your current level of knowledge about the management of dental trauma.

Very satisfied
Satisfied
Moderately satisfied
Not satisfied

2. Do you think you need further training on the management of dental trauma?

Yes no