



# Knowledge and Awareness of Emergency Medical Physicians on the Management of Traumatic Dental Avulsion at Sultan Qaboos University Hospital

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## AIM AND SPECIFIC OBJECTIVES

The study aims to assess the emergency physicians' knowledge and awareness of managing traumatic dental avulsion at Sultan Qaboos University Hospital (SQUH) in Muscat Governorate.

- To examine whether the emergency medical physician feels confident in replanting the avulsed permanent tooth .
- To assess the physician's awareness of different factors that determine knowledge of TDA management.
- To determine if previous undergraduate or post-graduate dental health courses have improved physicians' knowledge of TDA management.
- To determine if different characteristics are associated with the level of knowledge of the emergency physicians.

## JUSTIFICATION

To the best of our knowledge, the level of knowledge on TDA management has not previously been available for emergency physicians in the Sultanate of Oman. Therefore, this study yields important information that helps in improving the knowledge of emergency physicians and the outcome of TDA management.

## BACKGROUND

- Traumatic dental avulsion (TDA) is the total dislodgement of the whole tooth out of its bony socket. It's a complex condition requiring immediate management to achieve the best prognosis (Çalışkan et al., 2021).
- TDA is the most common traumatic dental injury in Emergency Departments (ED). However, the level of knowledge on the appropriate management is highly variable between emergency physicians in different countries (Needleman *et al.*, 2013).

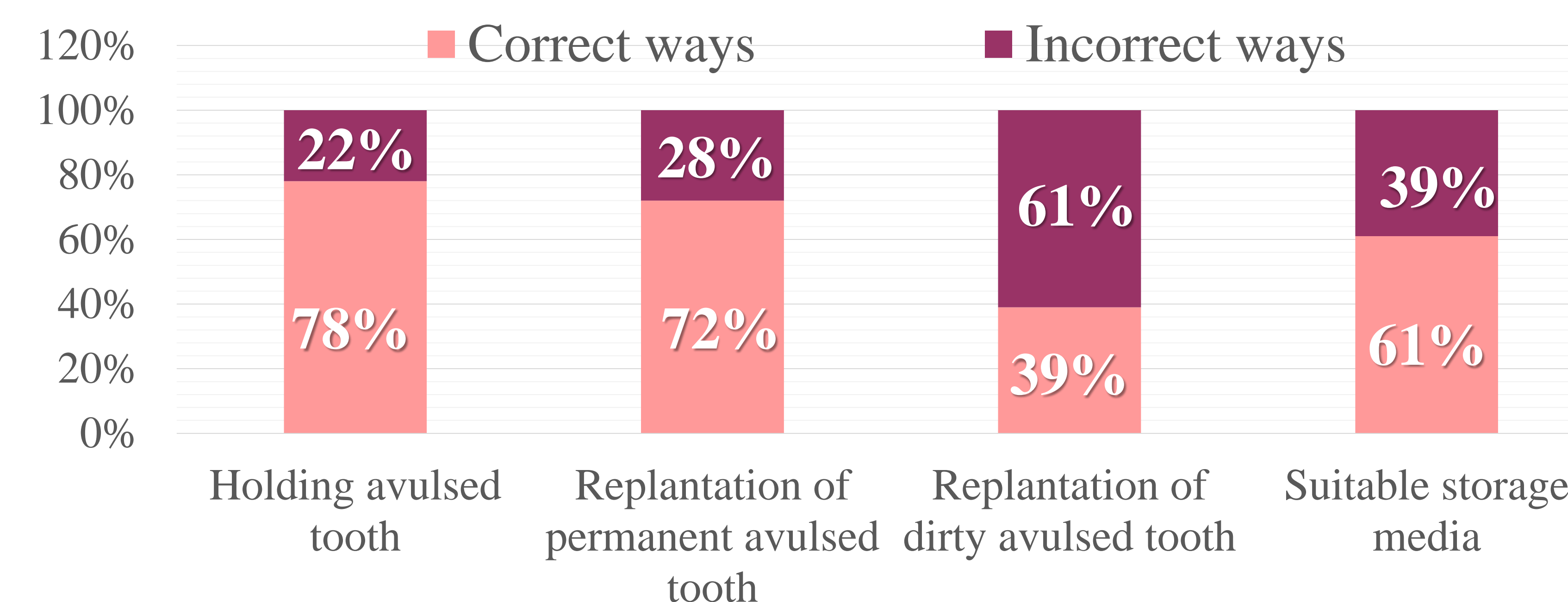
## METHODOLOGY

- A cross-sectional survey-based observational study was conducted among emergency physicians at SQUH from August to October 2021. The data was collected through a standardized and validated questionnaire consisting of 21 close-ended questions.
- The questionnaire were self-administered and sent as google forms. SPSS software used for the data analysis. Fisher's exact test was used to determine the association between categorize variables. For comparing the means of continuous variables, the Mann-Whitney U test was used.  $P$ -value<0.05 was considered to be statically significant.

## RESULTS

- Out of 25 emergency physicians in SQUH, 18 (72%) had completed the questionnaire form.
- Around 66.7% of the participants had prior knowledge of TDA management, and half were educated about dental trauma.
- Eighty-three percent of participants would not replant the avulsed tooth themselves.
- Although more than 60% of all participants had determined the correct way of managing the avulsed tooth, only 39% determined the suitable way of reimplanting dirty avulsed teeth (Figure 1).

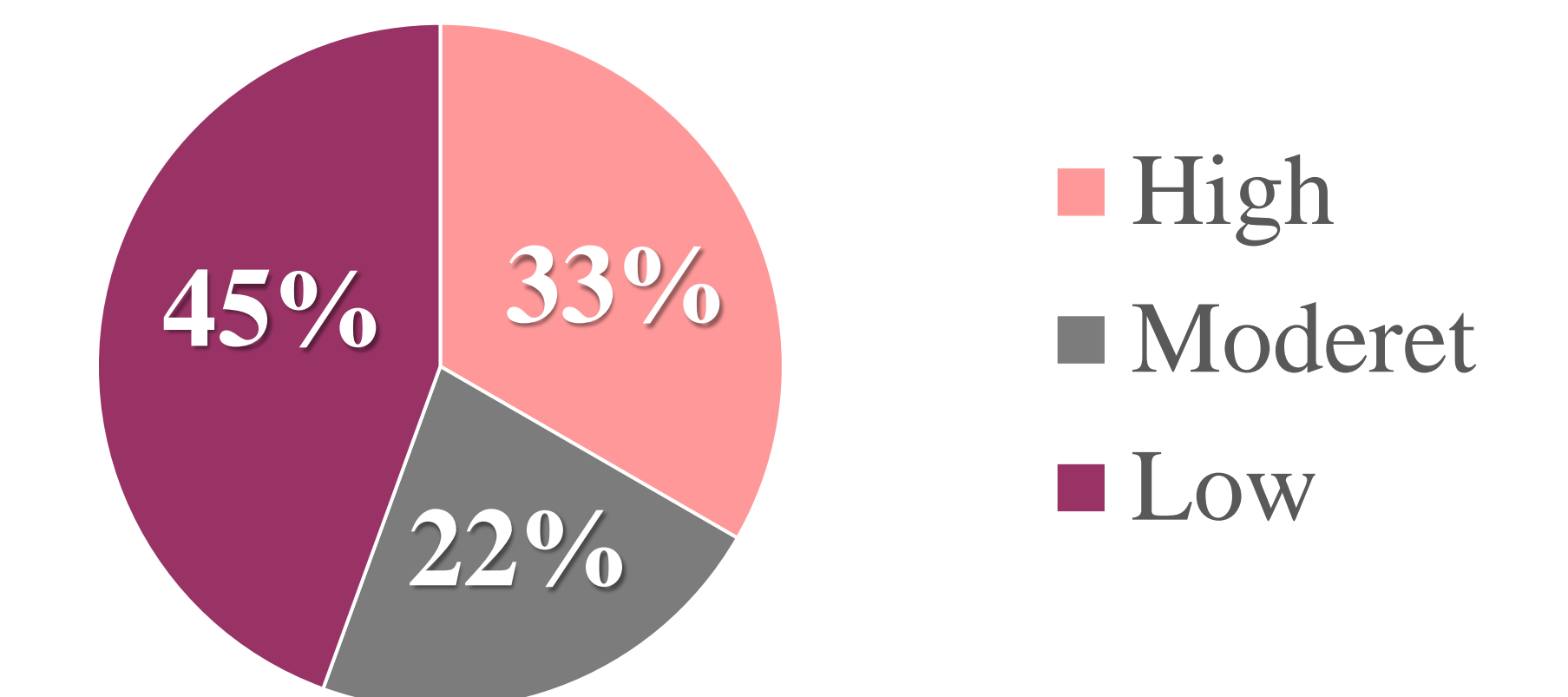
Figure 1: Awareness of factors determining correct ways of management of TDA as per participating physicians



## RESULTS

- Only 33% of participants showed a high level of TDA management knowledge (figure 2).
- Our study found that the level of knowledge is significantly associated with receiving dental education and having a higher clinical-grade ( $P$ -value < 0.05).
- Older physicians have higher knowledge level ( $P$ -value<0.05).
- Most of the physicians (94%) were interested in improving their knowledge on TDA management.

Figure 2: Level of measured knowledge of TDA management among emergency physicians



## SUMMARY

- Only one-third of the emergency physicians have the high level of knowledge needed to manage TDA cases.
- A higher level of knowledge was found in physicians with older age, higher clinical-grade, and receiving dental education ( $P$ -value < 0.05).
- The results confirmed the importance of improving the needed knowledge for managing TDA cases to end with better outcomes.

## MAIN REFERENCES

- Çalışkan, S., Delikan, E., Kızılaslan, S., & Özbek, Ö. (2021). Knowledge of Dental Avulsion Among Emergency Physicians: A Survey Study. *The Journal of Pediatric Research*, 8(1), 62–68. <https://doi.org/10.4274/jpr.galenos.2020.98705>
- Needleman, H. L., Stucenski, K., Forbes, P. W., Chen, Q., & Stack, A. M. (2013). Massachusetts emergency departments' resources and physicians' knowledge of management of traumatic dental injuries. *Dental Traumatology*, 29(4), 272–279. <https://doi.org/10.1111/j.1600-9657.2012.01170.x>