



Reasons for emergency dental visit – A retrospective study

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ABSTRACT

The irregular dental care can result in acute clinical problems that may lead to various emergency visits. Emergency dental visits are the care of patients who present oral problems. The aim of the study was to identify the reason for patients seeking treatment for dental emergencies among the Chennai population. The Participants were randomly selected for the study, inclusion criteria for the participants were the patients who reported between June 2019 to March 2020 to a private Dental College, and Hospital Chennai, the purpose of the visit was observed from the patient information given during the time of visit. Results showed that the reason for emergency dental visit patients was for abscess drainage in males is 13.33% and females are 8.89% for emergency extraction in males is 28.89% and females are 44.44% for emergency pain management is 2.22% female patient only for emergency trauma management is 2.22% male patient only. From the present study, we can conclude that the common reason for emergency dental visit among Chennai population was for extraction and abscess drainage.



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INTRODUCTION

Emergency dental visits are the care of patients who present oral problems. The reasons for the visit are dental and orofacial pain. The treatment objective is to remove pain and uncomfortable stimulus (Cunha

et al., 2001). The recommendation that a child's first dental visit should occur during the child's first year of life has had a significant effect on dental disease prevention, with long-term benefits for the child (Fleming *et al.*, 1991).

Similar studies by Lygidakis *et al.* (1998) have shown that toothache due to dental caries was the most frequent complication and main source of patient complaints. A significant number of emergency visits were due to caries in primary posterior teeth (Andreasen, 1981). A large number of children were brought to the dentist with complaints that had started long before and had used over-the-counter medication (Majewski *et al.*, 1988). Ayah Qassem Shqair *et al.* stated that toothache due to dental caries was the most frequent complication and main source of patient complaint (Shqair *et al.*, 2012).

Despite the decline in dental caries prevalence and

the efforts to improve the quality of oral health, most of the population, mainly those who do not have guaranteed dental assistance, seek dental treatment for the relief of pain and discomfort (Somasundaram *et al.*, 2015). Various studies agree that the disease still accounts for the majority of dental emergencies in child patients (Sakai *et al.*, 2005). The fact that patients often look for urgent dental appointments instead of regularly-scheduled dental care indicates that the dental practitioner needs to develop a screening method to determine true dental emergencies (O’Neil *et al.*, 1989).

Similar studies stated that People who live in rural areas were disadvantaged in relation to accessing the emergency oral care from oral care facilities compared to those who live in urban areas (Jeevanandan and Govindaraju, 2018; Nair *et al.*, 2018; Panchal *et al.*, 2019). Respondents from rural areas were more likely than respondents from urban areas to give reasons such as distance from their home, lack of money for transportation to dental clinics; being treated by traditional healers and using medicines at home for not seeking emergency oral care from oral care facilities (Kikwilu *et al.*, 2008). A significant number of patients who come to the emergency clinic are children (Meadow *et al.*, 1984). Previously our team had conducted numerous studies which include in vitro studies (Packiri, 2017), survey (Gurunathan and Shanmugaavel, 2016; Ravikumar *et al.*, 2017; Govindaraju *et al.*, 2017a), clinical trials (Christabel, 2015; Govindaraju *et al.*, 2017b) and case reports (Jeevanan and G, 2017). Now we are focussing on the retrospective study. Hence the present aim of the study is to identify the reason for children seeking treatment for a dental emergency at Saveetha Dental College and Hospital, Chennai (Govindaraju *et al.*, 2017c; Govindaraju, 2017).

MATERIALS AND METHODS

The study setting was university setting, the pros were data retrieval, and ethnicity and the cons were that the study is regional and was not done under different geographic location, the approval of the study was by the institutional ethical board of Saveetha Dental College and Hospital and the study was reviewed by two examiners.

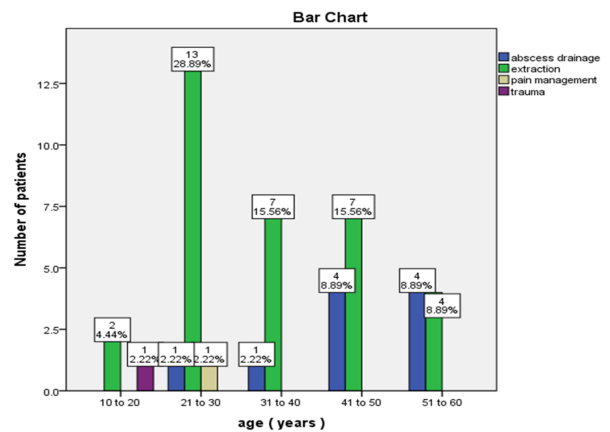
The sampling for the study was done from the time period of June 2019 to March 2020 and all cases reported in the time period were recorded and the purpose of the visit was observed from the patient information given during the time of visit. The data was cross-verified for errors measure taken to minimise sampling bias was by simple random tech-

nique followed the internal validity of the study was a random selection of patients who visited for an emergency dental visit, and the external validity was defining the eligibility criteria of the sample age group.

The data was collected by evaluating the case sheets of the patients who visited the private dental hospital data and was reviewed by one reviewer the data was entered in Microsoft ms excel sheet and the data was transferred to IBM spss version 20.0 and the variables were defined the independent variables were demographics such as age and dependent variables was reason for emergency dental visit incomplete data was managed by patient recall or by telephonic communication the data analysis was done by descriptive statistics (percentage, mean and standard deviation) & inferential test (chi square test)

RESULTS AND DISCUSSION

The irregular dental care is associated with acute clinical problems that may lead to various emergency visits (Blinkhorn *et al.*, 1991). There are many recent studies regarding emergency room visits by patients for dental causes. Visits to the emergency dental visit reflect both a lack of access to regular primary dental care and the underlying extent of both dental infection and trauma (Harrington *et al.*, 1988). Similar Despite differences in the overall health care system, the present study was to determine the time trends, demographics, and conditions of emergency dental visits and the various reasons for emergency dental visits by patients to Saveetha Dental College, Chennai was analysed in the present study.



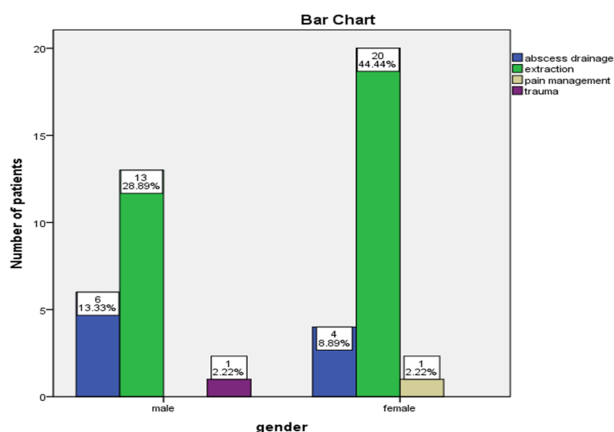
Graph 1: Shows association between age and reason for an emergency dental visit.

From Graph 1 we can infer that among patients visiting for an emergency dental visit, the common rea

Table 1: Shows association between gender distribution and reason for Emergency Dental Visit. Chi square test p value 0.338 (> 0.05) showed not a statistically significant association

		Reason for Emergency Dental Visit				Total	P Value
		Abscess	Extraction	Pain management	Trauma		
Gender	Male	6	13	0	1	20	0.338
	Female	4	20	1	0	25	
Total		10	33	1	1	45	

son was for extraction among all the age groups, maximum seen in the 21 to 30 years age group (28.89%), p value 0.022 (< 0.05), there is a statistically significant association between the reason for emergency dental visit and age. From Table 1 and Graph 2 we can infer that patients visiting for emergency abscess drainage in males is 13.33% and females are 8.89% for emergency extraction in males is 28.89% and females are 44.44% for emergency pain management is 2.22% female patient only for emergency trauma management is 2.22% male patient only. P-value 0.338(> 0.05), there is no statistically significant association between the reason for emergency dental visit and gender. Among the total patients visited for an emergency dental visit, 44.44% were males, and 55.56% were females.



Graph 2: Shows association between gender and reason for an emergency dental visit.

Milgrom and Bender (1995) in his similar study stated that the most common reason for the emergency visit was for trauma cases 19.9%, tooth extraction 19.0% Composite bandage 15.6%, suturing 15.3% and splinting teeth 10.8%. Huang et al. (2019) in his study stated that the higher prevalence of emergency dental visits was found in males than female group and pulpitis, cellulitis, acute periodontitis, and caries were the top 4 non-traumatic reasons for seeking emergency dental visits Meisel et al. (2011) in his study stated that there is an increased

overall trend of emergency dental visits for dental issues. Lee et al. (2001) in his study stated that this rise in emergency dental visits seems most pronounced among adults between the ages of 18 and 44 years

Graph 1, X-axis shows reasons for an emergency dental visit, the Y-axis shows number of patients, the blue color represents incision and drainage, green color represents extraction, brown color represents pain management and violet color represents trauma. Chi square test, p value 0.022 (< 0.05), there is a statistically significant association between reason for emergency dental visit and age, the common reason for the emergency dental visit was for extraction particularly in the 21 to 30 years age group.

Graph 2, X-axis shows gender distribution and the Y-axis shows number of patients. Blue color represents incision and drainage, green color represents extraction, brown color represents pain management and violet color represents trauma. Chi square test, p value 0.338(> 0.05), there is no statistically significant association between reason for emergency dental visit and gender, the common reason for the emergency dental visit was for extraction among both males and females.

The findings from the present study add to the consequence with the previous studies. The limitations of the present study were that it was performed for the available smaller sample size in a single dental hospital which may not provide results of the entire population so further studies must be done in a larger population, It is recognized that children from low-income families tend to receive episodic or emergency dental care. At the same time, those from higher-income households will visit the dentist more regularly for preventive checkups (Edelstein, 2002). However, one of the limitations of this study is that no information on socio-economic conditions was collected.

Further studies should assess the socio-economic profile of patients attending dental emergency services and differences in dental service use between

social classes. Similar studies can be performed in future under a larger population to identify the number and reason for an emergency dental visit to provide better clinical treatment (Subramanyam *et al.*, 2018).

CONCLUSION

From the present study, we can conclude that the common reason for emergency dental visits among patients in the Chennai population was for extraction and abscess drainage, so the dental practitioners must be aware and be prompt enough in providing the emergency treatment.

Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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REFERENCES

- Andreasen, J. O. 1981. Traumatic injuries of the teeth. Munksgaard; Philadelphia: Saunders, Copenhagen. Libraries Australia.
- Blinkhorn, A. S., Attwood, D., Kippen, A. M. 1991. A report on the feasibility of establishing a paediatric emergency dental service at Glasgow Dental Hospital. *Community dental health*, 8(3):257–262.
- Christabel, S. L. 2015. Prevalence of Type of Frenal Attachment and Morphology of Frenum in Children, Chennai, Tamil Nadu. *World Journal of Dentistry*, 6(4):203–207.
- Cunha, R. F., Pugliesi, D. M. C., Vieira, A. E. D. M. 2001. Oral trauma in Brazilian patients aged 0-3 years. *Dental Traumatology*, 17(5):206–208.
- Edelstein, B. L. 2002. Disparities in Oral Health and Access to Care: Findings of National Surveys. *Ambulatory Pediatrics*, 2(2):141–147.
- Fleming, P., Gregg, T. A., Saunders, I. D. F. 1991. Analysis of an emergency dental service provided at a children's hospital. *International Journal of Paediatric Dentistry*, 1(1):25–30.
- Govindaraju, L. 2017. Effectiveness of Chewable Tooth Brush in Children-A Prospective Clinical Study. *Journal of clinical and diagnostic research*, 11(3).
- Govindaraju, L., Jeevanandan, G., Subramanian, E. M. G. 2017a. Clinical evaluation of the quality of obturation and instrumentation time using two modified rotary file systems with manual instrumentation in primary teeth. *Journal of clinical and diagnostic research*, 11(9).
- Govindaraju, L., Jeevanandan, G., Subramanian, E. M. G. 2017b. Comparison of quality of obturation and instrumentation time using hand files and two rotary file systems in primary molars: A single-blinded randomized controlled trial. *European Journal of Dentistry*, 11(03):376–379.
- Govindaraju, L., Jeevanandan, G., Subramanian, E. M. G. 2017c. Knowledge and practice of rotary instrumentation in primary teeth among indian dentists: A questionnaire survey. *Journal of International Oral Health*, 9(2):45.
- Gurunathan, D., Shanmugaavel, A. K. 2016. Dental neglect among children in Chennai. *Journal of Indian Society of Pedodontics and Preventive Dentistry*, 34(4):364.
- Harrington, M. S., Eberhart, A. B., Knapp, J. F. 1988. Dentofacial trauma in children. *ASDC Journal of dentistry for children*, 55(5):334–338.
- Huang, S. M., Huang, J. Y., Yu, H. C., Su, N. Y., Chang, Y. C. 2019. Trends, demographics, and conditions of emergency dental visits in Taiwan 1997-2013: A nationwide population-based retrospective study. *Journal of the Formosan Medical Association*, 118(2):582–587.
- Jeevanan, D., G 2017. Kedo-S paediatric rotary files for root canal preparation in primary teeth-A case report. *Journal of Clinical and Diagnostic Research: Jcdr*, 11(3).
- Jeevanandan, G., Govindaraju, L. 2018. Clinical comparison of Kedo-S paediatric rotary files vs manual instrumentation for root canal preparation in primary molars: a double blinded randomised clinical trial. *European Archives of Paediatric Dentistry*, 19(4):273–278.
- Kikwilu, E. N., Masalu, J. R., Kahabuka, F. K., Senkoro, A. R. 2008. Prevalence of oral pain and barriers to use of emergency oral care facilities among adult Tanzanians. *BMC Oral Health*, 8(1).
- Lee, H. H., Lewis, C. W., Saltzman, B., Starks, H. 2001. Visiting the Emergency Department for Dental Problems: Trends in Utilization. *American Journal of Public Health*, 102(11):77–83.
- Lygidakis, Marinou, Katsaris 1998. Analysis of dental emergencies presenting to a community paediatric dentistry centre. *International Journal of Paediatric Dentistry*, 8(3):181–190.
- Majewski, R. F., Snyder, C. W., Bernat, J. E. 1988. Dental emergencies presenting to a children's hospital. *ASDC Journal of dentistry for children*, 55(5):339.
- Meadow, D., Lindner, G., Needleman, H. 1984. Oral trauma in children. *Pediatr Dent*, 6(4):248–51.

- Meisel, Z. F., Pines, J. M., Polsky, D., Metlay, J. P., Neuman, M. D., Branas, C. C. 2011. Variations in Ambulance Use in the United States: The Role of Health Insurance. *Academic Emergency Medicine*, 18(10):1036–1044.
- Milgrom, H., Bender, B. 1995. Behavioral Side Effects of Medications Used to Treat Asthma and Allergic Rhinitis. *Pediatrics in Review*, 16:333–335.
- Nair, M., Jeevanandan, G., Vignesh, R., Subramanian, E. M. G. 2018. Comparative evaluation of post-operative pain after pulpectomy with k-files, kedos files and mtwo files in deciduous molars - a randomized clinical trial. *Brazilian Dental Science*, 21(4):411.
- O’Neil, D. W., Clark, M. V., Lowe, J. W., Harrington, M. S. 1989. Oral trauma in children: A hospital survey. *Oral Surgery, Oral Medicine, Oral Pathology*, 68(6):691–696.
- Packiri, S. 2017. Management of Paediatric Oral Ranula: A Systematic Review. *Journal of clinical and diagnostic research*, 11(9).
- Panchal, V., Jeevanandan, G., Subramanian, E. G. 2019. Comparison of instrumentation time and obturation quality between hand K-file, H-files, and rotary Kedo-S in root canal treatment of primary teeth: A randomized controlled trial. *Journal of Indian Society of Pedodontics and Preventive Dentistry*, 37(1):75.
- Ravikumar, D., Jeevanandan, G., Subramanian, E. M. G. 2017. Evaluation of knowledge among general dentists in treatment of traumatic injuries in primary teeth: A cross-sectional questionnaire study. *European Journal of Dentistry*, 11(02):232–237.
- Sakai, V. T., Magalhães, A. C., Pessan, J. P., Silva, S. M. B. D., Machado, M. A. D. A. M. 2005. Urgency treatment profile of 0 to 15-year-old children assisted at urgency dental service from Bauru Dental School, University of São Paulo. *Journal of Applied Oral Science*, 13(4):340–344.
- Shqair, A. Q., Gomes, G. B., Oliveira, A., Goettems, M. L., Romano, A. R., Schardozim, L. R., Bonow, M. L. M., Torriani, D. D. 2012. Dental emergencies in a university pediatric dentistry clinic: a retrospective study. *Brazilian Oral Research*, 26(1):50–56.
- Somasundaram, S., Ravi, K., Rajapandian, K., Gurunathan, D. 2015. The fluoride content of bottled drinking water in Chennai, Tamilnadu. *Journal of Clinical and Diagnostic Research: JCDR*, 9(10):ZC32.
- Subramanyam, D., Gurunathan, D., Gaayathri, R., Priya, V. V. 2018. Comparative evaluation of salivary malondialdehyde levels as a marker of lipid peroxidation in early childhood caries. *European Journal of Dentistry*, 12(01):067–070.