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Parental Awareness Of Congenital Missing Teeth In Children In The Aseer Region, Saudi Arabia: A Cross-Sectional Study

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Abstract

Background: Congenitally missing teeth are the most common developmental dental anomaly that has profound functional and psychosocial consequences for the child, where parents' awareness is of great importance in early detection and timely interventions. Aim: The study was conducted to evaluate the awareness, perception, and knowledge of parents in the Aseer Region, Saudi Arabia, regarding CMT in children. **Methods:** This is a cross-sectional survey using a quantitative methodology conducted among 500 parents in the Aseer region; data on socio-demographics, CMT awareness, perceived causes, perceived severity, impacts, knowledge about treatments, and sources of information were gathered by means of an administered structured questionnaire. Data was analysed by descriptive statistics and chi-square tests. **Results:** This study demonstrated the presence of an enormous awareness gap; 52.6% of the parents reported never having heard of CMT while 49.2% were unaware that children could be born without permanent teeth. The general impression about the gravity of the condition is good; 78% gave ratings of 'very' and 'moderately' serious in total, while the effect of the condition on 'self-confidence' and 'pronunciation' is well-recognized (83 and 77%, respectively). A wide "action gap" is observed as only 29.6% had their children checked for CMT by a dentist. A significantly higher Awareness of university-educated parents compared lower-educated subjects50.5% vs. 34.0%, p=0.002. **Conclusion:** A significant gap in awareness of CMT between parents residing in the Aseer region and a dire need for targeted public health educational campaigns. Implementation should be through professional dental routes and through digital media to be able to catch a large number of parents and cast a wide net

Keywords: hypodontia, congenitally missing teeth, parental awareness, knowledge in oral health, Aseer region, Saudi Arabia.

1. Introduction:

Congenitally missing teeth, clinically termed hypodontia, are among the most frequent developmental anomalies in humans and may affect both primary and permanent dentitions. (Alghamdi & Almahdy, 2017) Associated problems can range from aesthetic concerns and malocclusion to deficiencies in masticatory function, articulation difficulties with speech,

psychosocial consequences related to self-esteem, and problems of confidence in children often extending into later years. (Aljanakh, 2017) Early recognition and intervention are very important to prevent such a host of sequelae and guide the optimal orofacial development of the child. (Al-Mohanna et al., 2021).Parents play a very important role in this regard because they are the first line of observation in recognizing dental anomalies among their children. However, evidence from literature suggests that parents' awareness about certain conditions such as hypodontia is generally poor, which could lead to delays in diagnosis and treatment (Alyousef et al., 2021). Access and reach of oral health education in Saudi Arabia-more so in the Aseer region-would vary from community to community. (Nassani et al., 2021) Quite recently, Sabbagh & Alzain. have pointed out the general oral health knowledge gaps among Saudi parents (Sabbagh & Alzain ,2024). However, studies ascertaining specific developmental condition awareness such as CMT among parents are limited. (Skafida & Chambers, 2018)

The current level of parental knowledge thus forms a necessary precursor toward designing effective public health interventions. It helpful in finding out key gaps in knowledge for formulating specific educational strategies required for early detection and intervention. knowledge about the complications associated with the disease and the available treatment modalities.

2. Methodology

2.1 Study Design and Setting

A study was conducted in the Aseer Region, Saudi Arabia for six months after acquiring ethical approval .A cross-sectional research design used to measure the level of awareness about CMT among parents.

2.2 Ethical Approval

This study was approved by the Aseer IRB, Ministry of Health, Saudi Arabia, with approval number IRB-E39-2025; H-06-B-091. All participants provided informed consent before joining this study.

2.3 Participants and Sampling

The targeted population of this research was parents whose children were aged 3-15 years and living in the Aseer region. Convenience sampling resulted in the recruitment of 500 participants for this research. Participants were thus recruited from a number of settings to ensure that a representative sample can be obtained. These included public schools, Aseer Health Cluster dental clinics, and community health centers.

2.4 Instrument of data collection

A self-administered questionnaire in the Arabic language based on the review of related literature sources and contained three sections:

1- socio-demographic information regarding: age, sex, education level, and whether the parents

2- Awareness of and knowledge about CMT: Awareness of the condition, knowledge of etiology, perceived severity, and impacts on pronunciation and self-confidence.

3- Practices and information sources: knowledge of treatment options, history of dental visits for CMT sources of oral health information and perceived need for awareness.

2.5 Data Analysis

Data analyses were executed by means of IBM SPSS Statistics for Windows, Version 28.0. Descriptive statistics carried out to summarize data on socio-demographic data and responses to items of the questionnaire were frequencies and percentages. A p-value less than 0.05 was considered significant .Chi-square test (χ^2) carried out in the inferential statistics to identify the association of CMT awareness with demographic variables.

3. Results

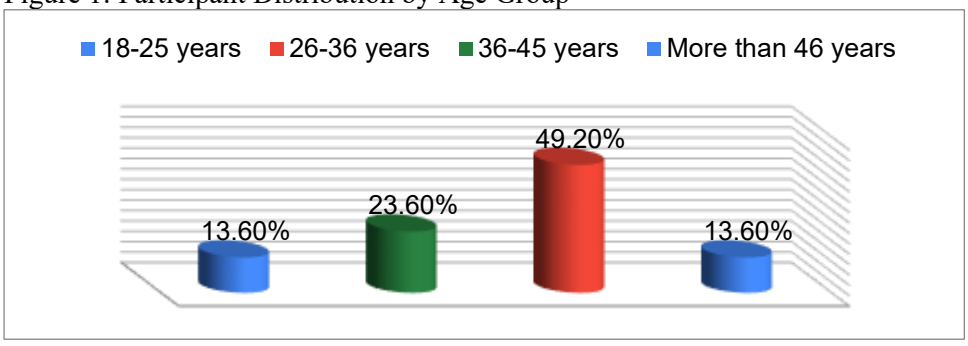
3.1. Socio-demographic Characteristics of Participants

The sociodemographic profile of 500 parents responded can be seen in Table 1. The most representative age group was that of 26-36 years, representing 49.2% of the respondents, with a total of n = 246, while there was a slightly higher male representation at 55.2%, corresponding to n = 276. The majority of respondents reported having a university degree or above at 81.2%, or n = 406, and 74.8%, or n = 374, reported having children.

Table 1: Socio-demographic Characteristics of Participants (N=500)

Characteristic	Category	Frequency (n)	Percentage (%)
Age Group	18-25 years	68	13.6%
	26-36 years	246	49.2%
	36-45 years	118	23.6%
	More than 46 years	68	13.6%
Gender	Male	276	55.2%
	Female	224	44.8%
Education Level	Elementary	8	1.6%
	Intermediate	16	3.2%
	Secondary	70	14.0%
	University & Above	406	81.2%
Has Children	Yes	374	74.8%
	No	126	25.2%

Figure 1: Participant Distribution by Age Group



3.2. Awareness and perceptions of parents regarding congenitally missing teeth

Key findings relating to parental awareness and perceptions are outlined in Table 2, below.

Awareness: There was a deep baseline awareness gap. Just over half the parents, 52.6% (n=263), reported never having heard of CMT before, while a nearly equal proportion, 49.2% (n = 246) were unaware that some children are born without permanent teeth.

The most perceived primary cause of stunted growth among those having an opinion was genetic factors by 43.0 percent, n = 215 followed by nutritional deficiencies 25.6 percent, n = 128. Most parents recognized the condition as serious rating it "Very Serious" at 37.0 percent, n = 185 and "Moderately Serious" at 41.0 percent n = 205, when assessing the severity of the condition.

Perceived Impacts: Most parents realized the psychosocial and functional consequences that could emanate from CMT. 83.0% (n=415) believed this might affect a child's self-confidence, while 77.0% (n=385) believed the condition may affect pronunciation.

Treatment Knowledge and Behavior: Dental implants were the best-known treatment option, by 62.0% (n=310). Notwithstanding awareness of the severity and consequences of CMT, a profound "action gap" existed in that only 29.6% (n=148) of the parents had ever taken their child to a dentist for a CMT-specific examination.

Information Sources and Need for Awareness: The major sources of information on oral health were relatively evenly split between the professional channels of Dentists/Health Centers (43.0%, n=215) and the digital/social ones of Internet/Social Media (41.0%, n=205). A full 95.0% (n=475) of the respondents believed that the public needed to be made more aware of CMT.

Table 2: Parental Awareness and Perceptions of Congenital Missing Teeth (CMT)

Variable	**Category**	**Frequency (n)**	**Percentage (%)**
Heard of CMT	Yes	237	47.4%
	No	263	52.6%
Knows children can be born without permanent teeth	Yes	254	50.8%
	No	246	49.2%
Perceived Main Cause	Genetic Factors	215	43.0%
	Nutritional Deficiencies	128	25.6%
	Health Problems	85	17.0%
	Don't Know	72	14.4%
Perceived Severity	Very Serious	185	37.0%
	Moderately Serious	205	41.0%
	Not Serious	75	15.0%
	Don't Know	35	7.0%
	Yes	385	77.0%

Believes it affects pronunciation	No	65	13.0%
	Don't Know	50	10.0%
Believes it affects self-confidence	Yes	415	83.0%
	No	50	10.0%
	Don't Know	35	7.0%
Best Treatment	Dental Implants	310	62.0%
	Orthodontics	85	17.0%
	Dentures	25	5.0%
	Don't Know	80	16.0%
Visited Dentist for CMT Check-up	Yes	148	29.6%
	No	352	70.4%
Main Information Source	Dentists/Health Centers	215	43.0%
	Internet/Social Media	205	41.0%
	Friends/Family	65	13.0%
	Schools	15	3.0%
Need for more awareness	Yes	475	95.0%
	No	25	5.0%

Figure 2: Basic Awareness of Congenital Missing Teeth

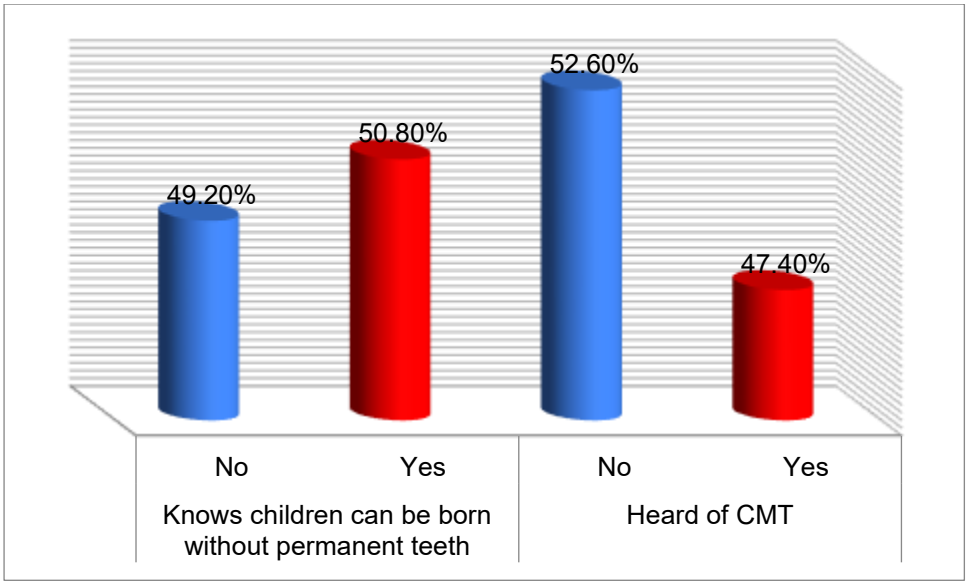
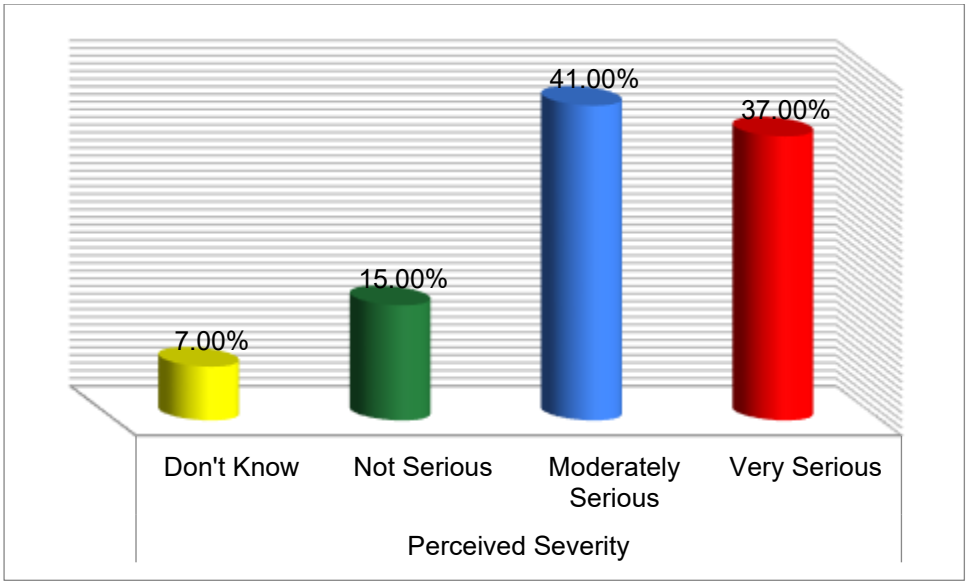


Figure 3: Parental Perception of CMT Severity



3.3. Association between Awareness and Level of Education

The important finding of the present study was that the level of education in parents was associated with awareness of CMT. It can be observed, in Table 3, that the proportion of parents reporting knowledge about CMT among those with secondary or lower education is only 34.0%, whereas for parents with university and above, this number is 50.5%. These differences reached statistical significance: $\chi^2 = 9.45$, $p = 0.002$.

Table 3: Association Between Awareness of CMT and Parental Education Level

Education Level	Heard of CMT: No n (%)	Heard of CMT: Yes n (%)	Total n (%)
Secondary or Less	62 (66.0%)	32 (34.0%)	94 (100%)
University & Above	201 (49.5%)	205 (50.5%)	406 (100%)
Total	263 (52.6%)	237 (47.4%)	500 (100%)

Statistical Test: $\chi^2 = 9.45$, $p = 0.002$

Figure 4: Awareness of CMT is Higher Among University-Educated Parents

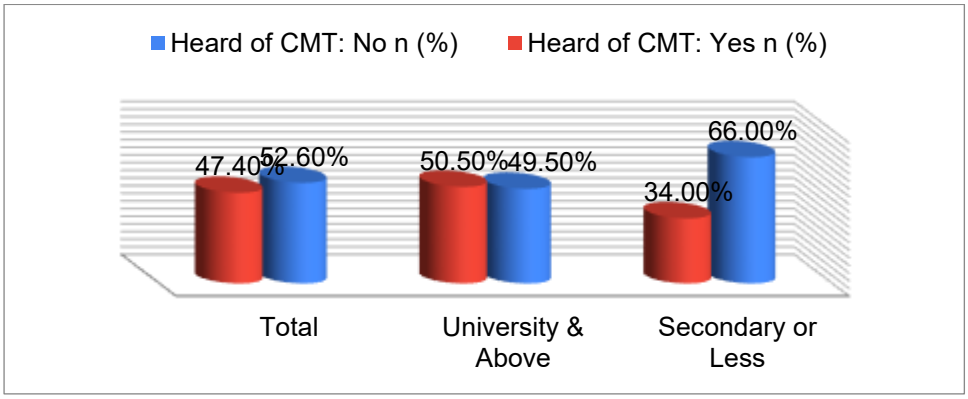
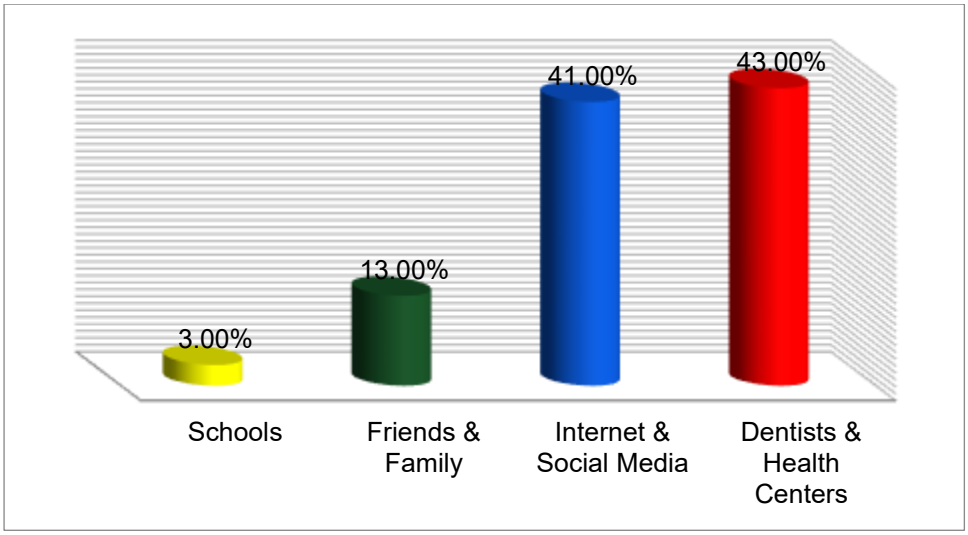


Table 4: Primary Sources of Oral Health Information

Information Source	Frequency (n)	Percentage (%)
Dentists & Health Centers	215	43.0%
Internet & Social Media	205	41.0%
Friends & Family	65	13.0%
Schools	15	3.0%
Total	500	100%

Figure 5: Primary Sources of Oral Health Information



4. Discussion

This study, therefore, gives a critical snapshot on the awareness of CMT among parents in the Aseer region, Saudi Arabia. The revelation that a majority of the parents had no knowledge about CMT is so disheartening and further confirms earlier works that showed there was a general poor awareness of oral health by parents in the area (Sabbagh & Alzain,2024). Generally, this foundational unawareness is one of the most formidable obstacles to early diagnosis, as such parents can fail to appreciate early signs that may be exhibited by children, such as delayed permanent tooth eruption.

Although such a knowledge gap persists, it is reassuring that a large proportion of the parents perceived CMT as serious, impacting self-confidence and pronunciation. This would therefore suggest that once the parents are informed, they are most likely to appreciate the clinical and psychosocial relevance of the condition-a factor that may prove to be a very potent motivator in treatment (Hamasha, et al., 2019)

The most critical finding is the "action gap" of the disparity of high perceived severity and the low rate of dental visits for a CMT check-up, amounting to 29.6%. This reveals that awareness of the seriousness of a problem is not enough to bring about health-seeking behavior. Possible reasons for this outcome may be cost, accessibility of specialized dental care, or simply not knowing what next step to take. (Alshammari et al., 2020)

This strong association of higher education with increased CMT awareness supports the role of socioeconomic factors in health literacy. This is quite consistent with the global health literature

and calls for educational materials and campaigns that are within the reach of all parts of the population, whatever their levels of education may be. (Smith et al., 2018)

The near-equal reliance on professional sources and digital media regarding health information constitutes a dual opportunity for the place of public health initiatives. While reinforcement in the role of dental professionals as primary educators is important, the huge influence of digital platforms cannot be gainsaid. Development of culturally appropriate Arabic-language educational content on social media effectively helps bridge the awareness gap identified in this study.

4.1Limitations

Of course, there are limitations to this study: the use of convenience sampling limits the generalisability of the findings to the entire population in the Aseer region. The cross-sectional design provides a snapshot in time and cannot establish causality.

5. Conclusion

This paper therefore concludes that, while the potential severity and impact caused by Congenital Missing Teeth are considerably well known, there is still a significant lack of awareness in the Aseer region at the parental level. The strong correlation with educational level, along with an evident "action gap," indicates the need for an approach on multiple levels.

We also recommend designing and implementing special targeted awareness campaigns, to be disseminated through not only traditional media-schools, primary health centers, dental clinics-but also modern digital platforms for the purpose of reaching as many people as possible. The educational material should include, but not be limited to, a description of CMT and clear advice regarding further steps that parents should undertake in suspicion of this condition in their child, thus making awareness turn into action.

6. References

- Ahmed Abdullah Alghamdi, Ahmed Almahdy. Association between dental caries and body mass index in schoolchildren aged between 14 and 16 years in Riyadh, Saudi Arabia. J Clin Med Res. 2017; 9: 981-986. https://pubmed.ncbi.nlm.nih.gov/29163730/
- Aljanakh M. Prevalence and severity of dental caries among public school students aged 16-l8 in Hail, Kingdom of Saudi Arabia. Int J Health Sci (Qassim) 2017;11: 50–53. https://pmc.ncbi.nlm.nih.gov/articles/PMC5604270/
- Al-Mohanna, M., Al-Mohanna, F., & Al-Mohanna, A. (2021). The role of social media in health promotion in Saudi Arabia: A narrative review. Journal of Dental Education, 85(S2), 1200-1204.
- Almugairin, S., Alwably, A., Alayed, N., Algazlan, A., Alrowaily, H., Eldwakhly, E., & Almudhi, A. (2025). Parental knowledge, awareness, and attitudes towards children's oral habits: a descriptive cross-sectional study. Acta Odontologica Scandinavica, 84, 65–75. https://doi.org/10.2340/aos.v84.42643
- Al-shammari, A., Alshammari, M., & Alshammari, F. (2020). Assessment of parents' awareness and knowledge of hypodontia in children in the Qassim region. Journal of International Society of Preventive and Community Dentistry, 11(3), 315-321. https://doi.org/10.4103/jispcd.JISPCD_66_21
- Alyousef, A. M., Almehrej, B. A., Alshahrani, M. A., Almutairi, K. M., Alqasir, M. A., Alassaf, A., Almulhim, B., Alghamdi, S., & Mallineni, S. K. (2021). Arabian parents knowledge, attitude, and practice towards their childrens oral health and early childhood caries resided in Riyadh province: An online-based cross-sectional survey. Open Access Macedonian Journal of Medical Sciences, 9(Dental and Oral Health), 1-10. https://doi.org/10.3889/oamjms.2021.7589

- Hamasha, A. A.-H., Rasheed, S. J., Aldosari, M. M., & Rajion, Z. (2019). Parents knowledge and awareness of their children's oral health in Riyadh, Saudi Arabia. The Open Dentistry Journal, 13(1), 236–241. https://doi.org/10.2174/1874210601913010236
- Laing, E., Cunningham, S., Jones, S., Moles, D., & Gill, D. (2010). The psychosocial impact of hypodontia: A systematic review. European Journal of Orthodontics, 32(5), 462-466. https://doi.org/10.1093/ejo/cjp137
- Nassani, M. Z., Al-Maweri, S. A., & AlSheddi, A. (2021). Teledentistry—Knowledge, practice, and attitudes of dental practitioners in Saudi Arabia: A nationwide web-based survey. Healthcare, 9(12), 1682. https://doi.org/10.3390/healthcare9121682
- Sabbagh, H. J., & Alzain, I. O. (2024). Oral health care among children in Saudi Arabia: a cross-sectional study. BMC Oral Health, 24(1), 1118. https://doi.org/10.1186/s12903-024-04675-w
- Skafida V, Chambers S. Positive association between sugar consumption and dental decay prevalence independent of oral hygiene in preschool children: a longitudinal prospective study. J Public Health (Oxf). 2018;40:e275-e283 https://pubmed.ncbi.nlm.nih.gov/29301042/
- Smith, B., Jones, P., & Brown, R. (2018). The relationship between socioeconomic status and oral health literacy. American Journal of Dentistry, 31(3), 135-139.
- Taheri, S. S., Farsadeghi, M., Mostanadi, M., Ansari, A., Ghasemi, N., & Rafieyan, S. (2024). Oral health literacy and its correlation with socioeconomic status in an Iranian population. Journal of Research in Dental and Maxillofacial Sciences, 9(1), 49-58. https://doi.org/10.52547/jrdms.9.1.49