

To Assess the Awareness Amongst Parents Regarding the Effects of Exposure to Multimedia Screen-Time During Meals on Oral Cavity in Children Aged 7 to 12 Years- A Cross-Sectional Questionnaire- Based Study

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ABSTRACT

Background: The aim of this study is to evaluate the level of knowledge and awareness among parents regarding the food pouching habit in children aged 7 to 12 years while using multimedia devices.

Material and Method: A pre-validated Questionnaire was provided to the Parents for filling their responses. The questionnaire included Demographic details, knowledge-related and attitude-based questions related to the study. The total number of samples taken for the study was 300.

Results: Out of 300 participants, 12 of them were unable to fill up responses accurately. Among the rest, around 63% of children watch various types of screen while eating meals. 78% of them hold food in their mouth without swallowing. Conversely, it has also been reported that around 13% of children do not use screens during meal time and still happen to hold the food in their mouth during meal.

Conclusion: The study found that the parents have average understanding and awareness of the food-pouching habit of children that is related to increased risk of dental problems.

It is also seen that children with both parents working have more tendency to often develop the habit of watching screens during mealtime, which encourages food pouching behavior. Thus more parental awareness regarding the same is necessary.

INTRODUCTION

In today's fast-paced world, advancing technology has significantly reduced quality time spent with family and friends. Children who once played with toys now hold mobile phones and tablets. Feeding children has always been a challenging task, as they often become fussy and avoid eating. To make feeding easier, many parents and caregivers resort to giving children electronic devices during meals, often unaware of the long-term consequences. Due to their busy schedules, parents also use these devices to keep children occupied, allowing themselves to work without interruption and enjoy some quiet time.

When children are engrossed in screens while eating, they become distracted and fail to chew their food properly. This behavior often leads to a habit known as **Food pouching habit**, where food is held in the cheeks instead of being swallowed immediately. This prolonged contact between food and teeth increases the retention of food particles, reducing the natural cleansing process of the mouth and increasing the risk of dental issues such as tooth decay, gum irritation and inflammation, changes in oral muscle function, choking risks, bad breath, and issues with speech and bite alignment, among others.

Parental awareness and attitudes play a vital role in shaping children's behavior and health practices. Understanding how well parents recognize the potential risks associated with multimedia screen-time during meals is crucial for developing effective health education and intervention programs. Limited awareness may contribute to unhealthy practices, increasing the likelihood of oral health problems in children. Thus, assessing parental knowledge, perceptions, and behaviors regarding this issue is essential for promoting better oral health outcomes.

This study aims to evaluate the awareness among parents regarding the effects of multimedia screen exposure during meals on the oral health of children aged 7 to 12 years. The findings will help identify gaps in parental knowledge and guide future educational initiatives to mitigate the negative impacts of screen-time on children's oral health.

1. Materials and Method:

A total of 300 samples were collected for the study, comprising Parents of patients who visited the Department of Pediatric and Preventive Dentistry at Kusum Devi Sunderlal Dugar Jain Dental College and Hospital.

To gather relevant data, a pre-validated questionnaire was distributed to these parents, allowing them to record their responses. The questionnaire was carefully designed to gather comprehensive information and consisted of three key sections.

- The first section focused on gathering demographic details such as age, gender, educational background, and socio-economic status.
- The second section included knowledge-related questions aimed at assessing the parents' understanding of the specific subject under investigation.
- Lastly, the third section contained attitude-based questions to evaluate their perceptions, beliefs, and behavioral tendencies related to the study's focus.

Detailed inclusion and exclusion criteria were set to ensure that only eligible participants were selected. The inclusion criteria required that the participants be parents of children aged 7 to 12 years, be willing and interested in participating, and have children without any syndromic conditions or notable medical

issues. Participants who did not fulfill the established criteria were not included in the study.

To maintain ethical standards and prevent any misunderstandings or conflicts, a detailed consent form was provided to all parents before they completed the questionnaire. This step ensured that participants were fully informed about the study's purpose and their voluntary involvement. This systematic approach ensured the collection of detailed and reliable data for analysis, contributing to a better understanding of the research topic.

Result: Table 1 presents data from 300 participants whose children are aged between 7 and 12 years. Majority of them were in the age group of 7- 10years. Of all the children, 133 were male and 167 were female candidates.

Table 2 reveals that the most common habit among children is retaining food in their cheeks without swallowing, reported by 68.6% participants. Mobile phones were the most frequently used electronic devices by children (76%), followed by Television (28.6%). The highest occurrence of these habits was observed among children from the middle- income group (43.5%). The most frequently reported dental issues were multiple dental caries (37.5%) and toothaches (35%). A limited portion of children (24.6%) visited dental clinics every six months.

6	What factors influence your child's eating behaviour?	Availability of food Eating routine. Emotions Food Marketing All of the above
7	Which all multimedia devices your child uses?	Mobile TV Laptop Tablet
8	What efforts can you make as parents to stop the habit?	Restrict the use of TV and mobile phone Reading a story to child other than use of mobile phone while feeding him/her. Feeding the child by making him/her sit in the balcony or at window. Bribe the child by giving him/her (ice-cream, chocolate)
9	How can you educate your child about stopping the habit?	By explaining them the drawbacks of this habit. By explaining them through cartoon or animated video. By explaining them the importance of chewing properly. By conducting school plays
10	How can we make parents aware of this habit?	By conducting lectures in school and kindergarten. Pediatrician and dentists educating parents. By conducting dental camps in schools By advertisement.
11	Which all dental problems does your child suffer from?	Caries and decayed teeth Multiple caries (Cavity) Tooth ache Early exfoliation of teeth Stains in teeth
12	How often does your child visit the dentist?	Monthly Every 3 months. Every 6 months. Yearly Never
13	How did your child come across the habit of using mobile and watching TV while eating?	You followed the same habit Their friends followed the habit You yourself induced the habit due to busy schedule Don't know

Table 3 shows that 50% of children acknowledged the negative effects of food pouching habit. Also 52% recognized a link between the use of multimedia devices and this habit. Additionally, 49.3% of parents believed that dentists play a crucial role in identifying and addressing food pouching. More than half of the parents acknowledged a link between the habit of food pouching and dental health issues.

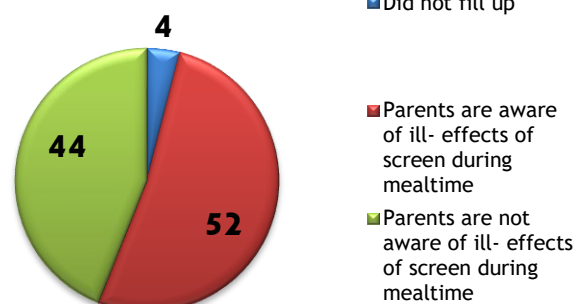
Table 3: Attitude based questions' responses of study participants (N= 300)

Sl. No.	Questions	Responses	Tick the correct
1	Do you think there are drawbacks related to food pouching habit?	Strongly Agree	
		Agree	
		Neutral	
		Disagree	
		Strongly Disagree	
2	Do you think there is a relationship between watching multimedia devices and food pouching habit	Strongly Agree	
		Agree	
		Neutral	
		Disagree	
		Strongly Disagree	
3	Do you think that dentists have an important role in detecting and stopping the food pouching habit (multimedia devices) amongst children?	Strongly Agree	
		Agree	
		Neutral	
		Disagree	
		Strongly Disagree	
4	Do you think that the parents play a role in influencing the habit of food pouching?	Strongly Agree	
		Agree	
		Neutral	
		Disagree	
		Strongly Disagree	
5	Do you think that the child of the working parent/s are most likely to come across this habit?	Strongly Agree	
		Agree	
		Neutral	
		Disagree	
		Strongly Disagree	
6	Do you think that there is a relationship between food pouching habit and dental problems in child?	Strongly Agree	
		Agree	
		Neutral	
		Disagree	
		Strongly Disagree	
7	Do you think that, as a parent it is necessary to stop the habit?	Strongly Agree	
		Agree	
		Neutral	
		Disagree	
		Strongly Disagree	

So, from total of 300 participants who took part in this study, 4% of them either did not complete the questionnaire or failed to provide accurate responses. As a result, their data was excluded from the final analysis.

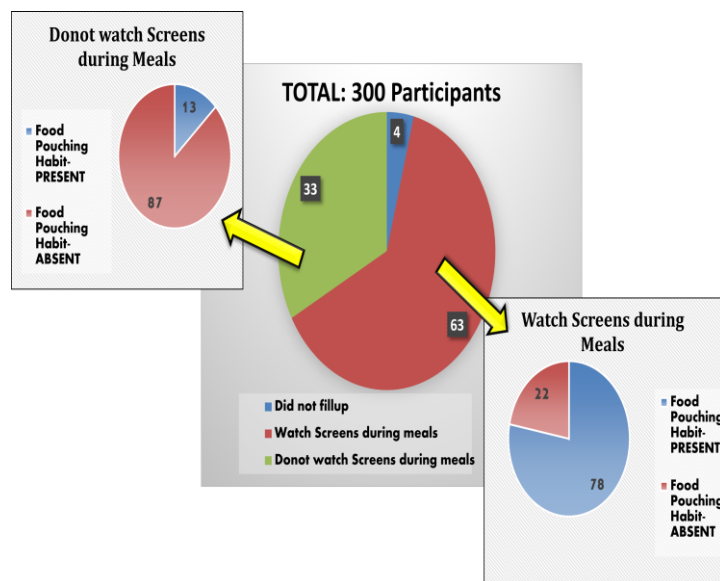
Overall in the final analysis, findings indicate that just over half (52%) of parents were aware of the potential negative effects of screen exposure during meals, whereas 44% lacked this awareness. This suggests a significant gap in parental knowledge regarding the influence of screen time on children's eating habits.

TOTAL: 300 participants



The study also revealed that 63% of children frequently engage with screens while eating. Among these children, a notable 78% exhibited the habit of holding food in their mouths for prolonged periods without swallowing, while 22% did not display this behavior.

Conversely, 33% of children consumed their meals without screen exposure. Interestingly, even within this group, 13% still demonstrated the habit of retaining food in their mouths while eating.



These findings highlight the widespread use of screens during meals and its potential impact on children's eating behaviors. The results underscore the need for greater parental awareness and possible interventions to encourage healthier mealtime habits.

DISCUSSION

Research indicates that food pouching is not always directly associated with screen time during meals. While screen exposure is a contributing factor, multiple other influences also play a role in the development of this habit.

Several factors, including emotional, cultural, familial, psychological, and environmental aspects, shape food pouching behavior, highlighting its complexity. Addressing this issue effectively requires a comprehensive understanding of these underlying influences to encourage healthier eating habits.

The study further highlights that **parents generally have a moderate level of awareness** regarding the connection between food pouching and its potential risks, particularly its contribution to dental issues in children. Moreover, findings suggest that children from households where both parents are employed tend to have a higher likelihood of engaging in screen time during meals. This increased exposure to digital devices while eating

may contribute to the development and reinforcement of food pouching habits over time. Given these insights, it becomes crucial to enhance parental awareness and education on this subject. By understanding the implications of food pouching and taking proactive measures, parents can help their children adopt healthier eating practices and minimize associated health risks.

Recommendations:

Healthcare professionals should take an active role in educating the public about the negative effects of food pouching. By spreading awareness through campaigns, workshops, and counseling sessions, they can help individuals understand the potential oral health issues, digestive problems, and nutritional deficiencies associated with this practice.

Additionally, parents play a crucial role in preventing and discouraging this habit in children. One effective approach is to reduce their exposure to distractions such as mobile phones and television during meals, ensuring they focus on proper eating habits. Parents should also take the time to explain the importance of thorough chewing and mindful eating, which aids digestion and overall health. Encouraging family mealtimes without electronic distractions and setting an example through mindful eating practices can further help in breaking this habit. Encouraging healthy eating habits in children can be challenging, especially when they develop the tendency of food-pouching habits. To help prevent this behavior and create a positive mealtime experience, the following strategies can be considered:

1. **Make Mealtime Engaging:** Repetitive meal routines can become monotonous for children, leading to disinterest in eating. To make mealtime more enjoyable, introduce creative dining experiences such as themed dinners or occasional picnics, which can keep children excited about their meals.
2. **Promote Family Mealtime:** Eating alone, especially while watching screens, can lead to distractions and poor eating habits. Instead, foster a warm and engaging family dining atmosphere where everyone shares meals together. This not only encourages better eating habits but also strengthens family bonds.
3. **Ease the Transition Away from Screens:** Abruptly turning off screens during meals can lead to resistance or tantrums in children. To avoid this, gradually establish a screen-free mealtime routine by keeping devices off from the beginning of the meal. This helps children focus on their food without feeling deprived of their screen time.

By implementing these approaches, parents and caregivers can encourage mindful eating and help children develop a healthier relationship with food.

CONCLUSION

The study found that parents of children aged 7 to 12 had a moderate level of knowledge and awareness regarding the habit of food pouching. However, the practice was highly prevalent among children, particularly while using multimedia devices. This highlights the need for more extensive awareness programs within the community.

Additionally, the research emphasized the negative impact of watching TV and using other multimedia devices during meals on both oral and overall health in children from the study area.

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