RESEARCH
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KNOWLEDGE AND AWARENESS OF ORAL HYGIENE AMONG PARENTS OF SPECIAL SCHOOL CHILDREN

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INTRODUCTION

In recent years, there has been a growing awareness of the importance of oral hygiene in maintaining overall health and well-being. While this awareness has permeated mainstream discussions, there remains a significant gap in understanding how parents of children with special needs approach and comprehend oral hygiene practices. The oral health of special school children is a critical aspect of their overall healthcare, yet it is an area that has received limited attention in academic research.

Children with special needs often face unique challenges that may impact their oral health. These challenges can range from physical limitations affecting their ability to perform oral hygiene tasks independently to sensory sensitivities that may make oral care routines particularly challenging. Additionally, some medical conditions prevalent in special school children may predispose them to oral health issues, highlighting the need for specialized attention in this domain.

Understanding the knowledge and awareness levels of parents in relation to the oral hygiene of their special school children is essential for developing targeted interventions and improving overall oral health outcomes. This research aims to explore and analyze the current state of knowledge and awareness among parents of special school children regarding oral hygiene practices. By delving into this uncharted territory, we hope to contribute valuable insights that can inform policy, guide healthcare professionals, and enhance the well-being of these children.

The significance of oral health in children with special needs cannot be overstated. Poor oral health not only affects their physical health but can also impact their quality of life, social interactions, and self-esteem. Recognizing these interconnected factors, our research seeks to bridge the existing gap in literature by investigating the following key components: The first facet of our study involves an in-depth examination of the existing knowledge and awareness levels among parents of special school children regarding oral hygiene practices. This includes an exploration of their understanding of basic oral care routines, preventive measures, and the potential oral health issues specific to their children's conditions. Understanding the challenges faced by parents in implementing effective oral hygiene practices for their special school children is crucial. This may encompass physical, cognitive, and emotional barriers that can hinder the establishment of regular and appropriate oral care routines. Beyond the immediate health implications, our research will delve into the broader impact of oral health on the overall quality of life for special school children. This includes examining the potential influence on their daily activities, social interactions, and psychological well-being. Identifying the support systems currently available to parents in managing the oral health of their special school children is essential for evaluating the efficacy of existing resources. This includes assessing the role of healthcare professionals, educational institutions, and community services in providing assistance and guidance.

Through this comprehensive exploration, our research endeavors to provide a nuanced understanding of the landscape surrounding oral hygiene in special school children. By shedding light on the existing gaps and challenges, we aspire to contribute to the development of targeted interventions, educational resources, and policy recommendations that can empower parents and caregivers to enhance the oral health outcomes of their special school children. Ultimately, this research seeks to advocate for a holistic approach to healthcare that recognizes the intricate relationship between oral health and the overall well-being of children with special needs.

MATERIALS AND METHODS

Study design

A cross sectional questionnaire approach as outlined in Annexure 7 of the World Health Organization (WHO).A cross-sectional design allows researchers to capture a moment in time, offering a snapshot that can be instrumental in understanding the prevailing oral health scenario among the study population.

Study area

In this research endeavor, the focal point was the geographic area of Chennai city, Tamilnadu, India.

Study population

The population covered in this study comprises of individuals with disabilities and their caretakers in special schools within

city limit in the dynamic urban landscape of Chennai, Tamil Nadu, India. The study population, encompassing individuals with physical and mental disabilities and their caretakers, is carefully delineated to residents of Chennai.

Inclusion criteria

1. Special school children who are cooperative and their respective caretakers/parents were included in this study
2. Children and their parents who were present during the time of data scheduling were included in this study.
3. Individuals with physical disabilities attending special schools adds a specific dimension to the study, recognizing the nuanced needs of this subgroup.

Exclusion criteria

1. Special children who are uncooperative during the session were excluded from this study
2. Children and parents who weren't willing to participate in the study were excluded
3. Individuals with mental disabilities and those who weren't available at the time of survey were excluded, to maintain the integrity of this study.

Ethical clearance

1. Ethical clearance was obtained from the Institutional ethics committee of Saveetha dental college prior to the start of the study.
2. Informed written consents were obtained from the study participants (i.e parents or legal guardians of the special needs children participating in this study) thereby acknowledging the importance of respecting autonomy and ensuring voluntary participation.
3. The participants' anonymity was maintained throughout the study period.

Scheduling

Data collection spanned a 3-month period, emphasizing both the rigor and timeliness of the study. While the study boasted validated data, its limitation stemmed from its geographic confinement to Chennai, thereby potentially limiting the generalizability of findings. The integration of demographic information collection with clinical examination adds depth to the dataset. The utilization of a randomized sampling method aimed to eliminate bias, ensuring a more accurate representation of the population. Internal validity was addressed through pre-tested questionnaires, and external validity was ensured by considering potential result replication across diverse timeframes.

Sample size collection

The research cohort consisted of special needs children and their respective care givers who claim to have knowledge over proper brushing methodologies. It was also segregated within a population control that includes only those children with physical disabilities and their gaurdians, located within the schools that are in the city limits of Chennai. A comprehensive sample of 200 participants, encompassing both genders, were selected for the study.

Survey instrument

The chosen survey instruments, including WHO Oral Health Assessment Forms for Children and Adults, along with a self-prepared questionnaire, provide a comprehensive approach to capturing both clinical and knowledge aspects of oral health. The armamentarium, comprising various tools and protective gear, ensures a standardized and safe environment for oral health assessments. The trained single examiner's role in conducting oral examinations, following a structured methodology aligned with WHO criteria, further enhances the study's credibility.

Statistical analysis

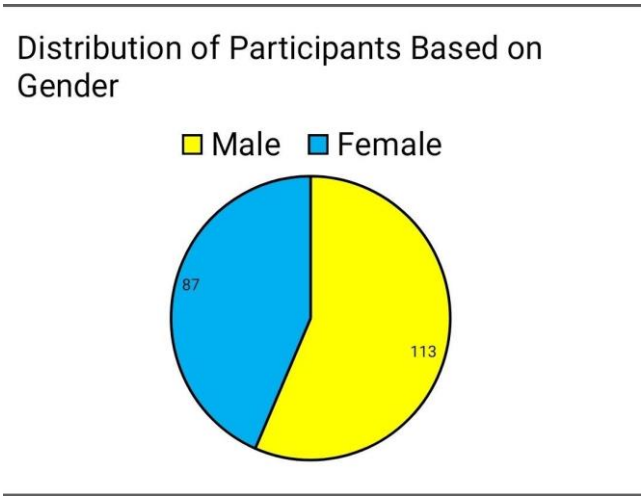
Post data collection, the statistical analysis, executed using SPSS Software version 17.0, involves the computation of frequency tables and the application of the Chi-square test. The chosen significance level of $p < 0.05$ underscores the commitment to rigorous statistical evaluation, aiming to identify meaningful differences in various parameters.

RESULTS:

The study revealed key insights into the surveyed population:

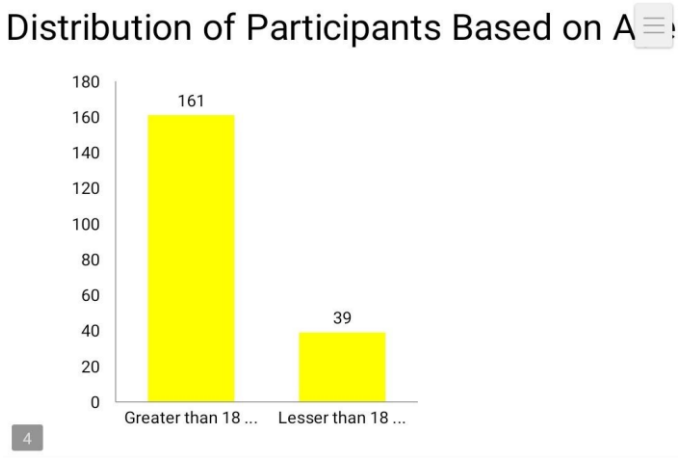
1. Demographics:

- A majority of participants were women (113), while men constituted a minority (87), highlighting a gender imbalance within the sample.



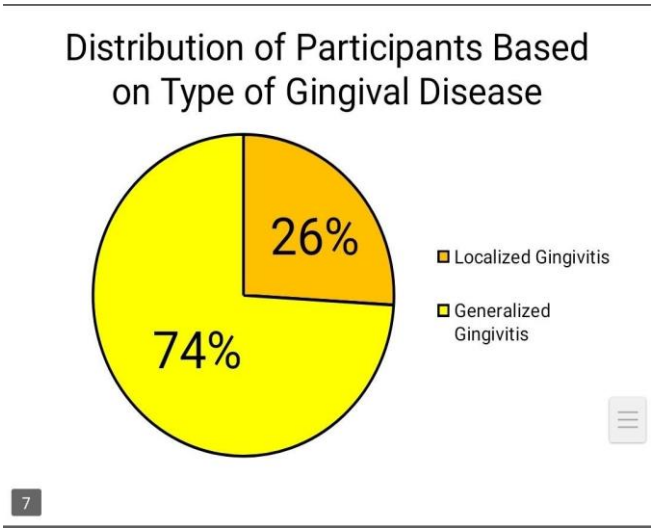
2. Age Distribution:

- The age distribution indicated that 161 participants were above 18 years old, and 39 were below 18. This segmentation emphasized age-related nuances in oral health, recognizing distinct dental care needs and practices among adults and minors.



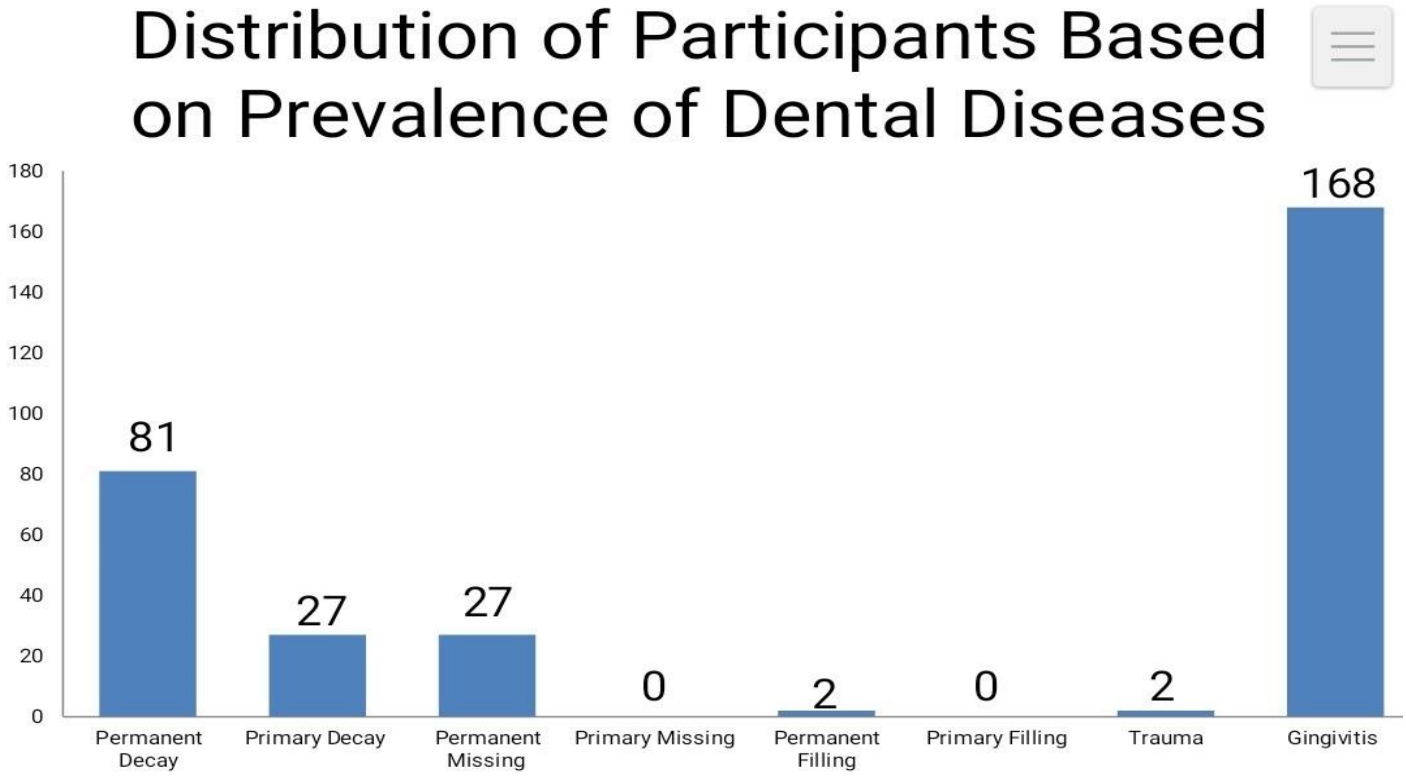
3. Gingivitis Prevalence:

- Gingivitis was prevalent within the surveyed population, with 74% exhibiting generalized gingivitis and an additional 26% presenting with localized gingivitis. This underscored the widespread nature of this common oral health issue, necessitating targeted preventive measures and treatments.



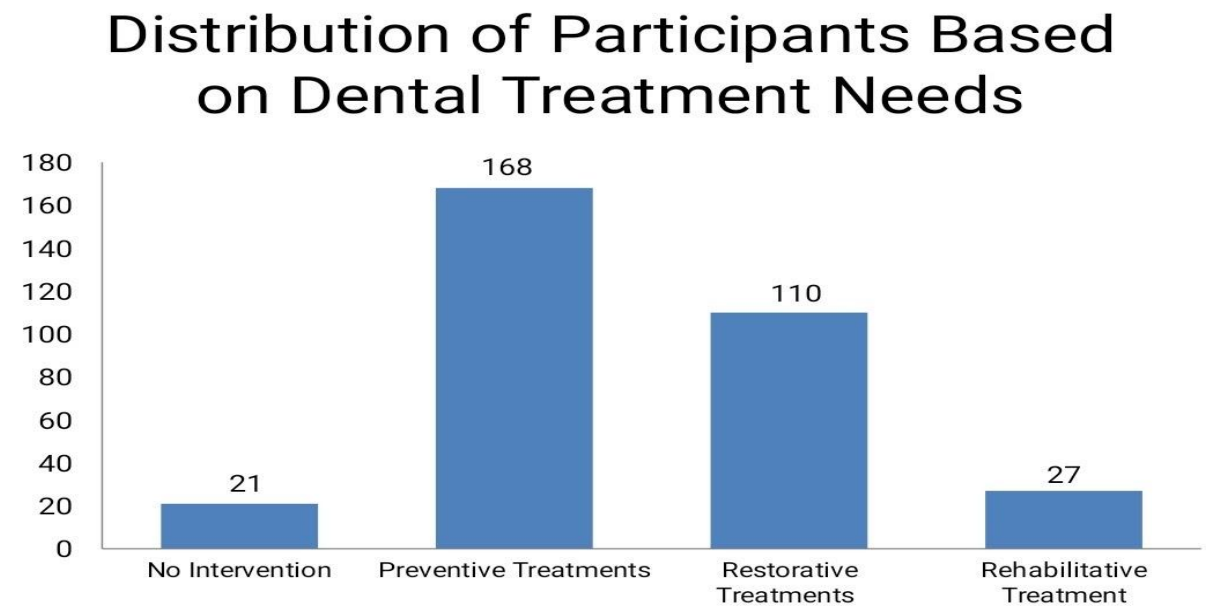
4. Oral Health Conditions:

- Specific oral health conditions were detailed in Figure 4, revealing the distribution of permanent decay (81 individuals), primary decay (27 individuals), and 2 individuals with permanent missing teeth. Gingivitis emerged as a prevalent clinical condition, evident in the majority (168 participants).



5. Treatment Needs:

- Treatment needs, as outlined in Figure 5, varied within the population. A significant portion (168 individuals) required preventative treatment, emphasizing the importance of proactive measures. Additionally, 110 participants needed restorative treatment, 27 required rehabilitation, and a minority of 21 individuals needed no intervention, indicating a diverse spectrum of oral health needs.



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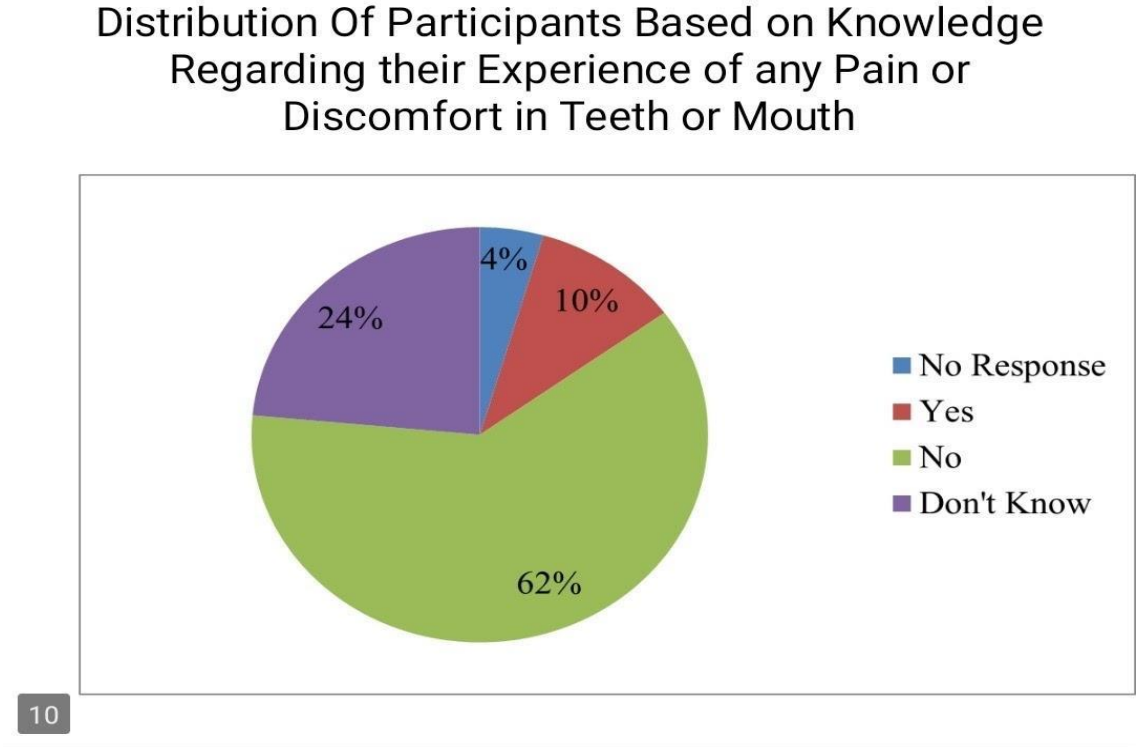
6. Tooth Count Distribution:

- The tooth count distribution, depicted in Figure 6, showcased varying dental statuses within the population. Approximately 42% had 20 or more teeth, 35% had 10 to 19 teeth, 19% exhibited 1 to 9 teeth, and a minority of 4% had no natural teeth. This detailed breakdown shed light on the overall dental health and potential challenges faced by individuals in the community.



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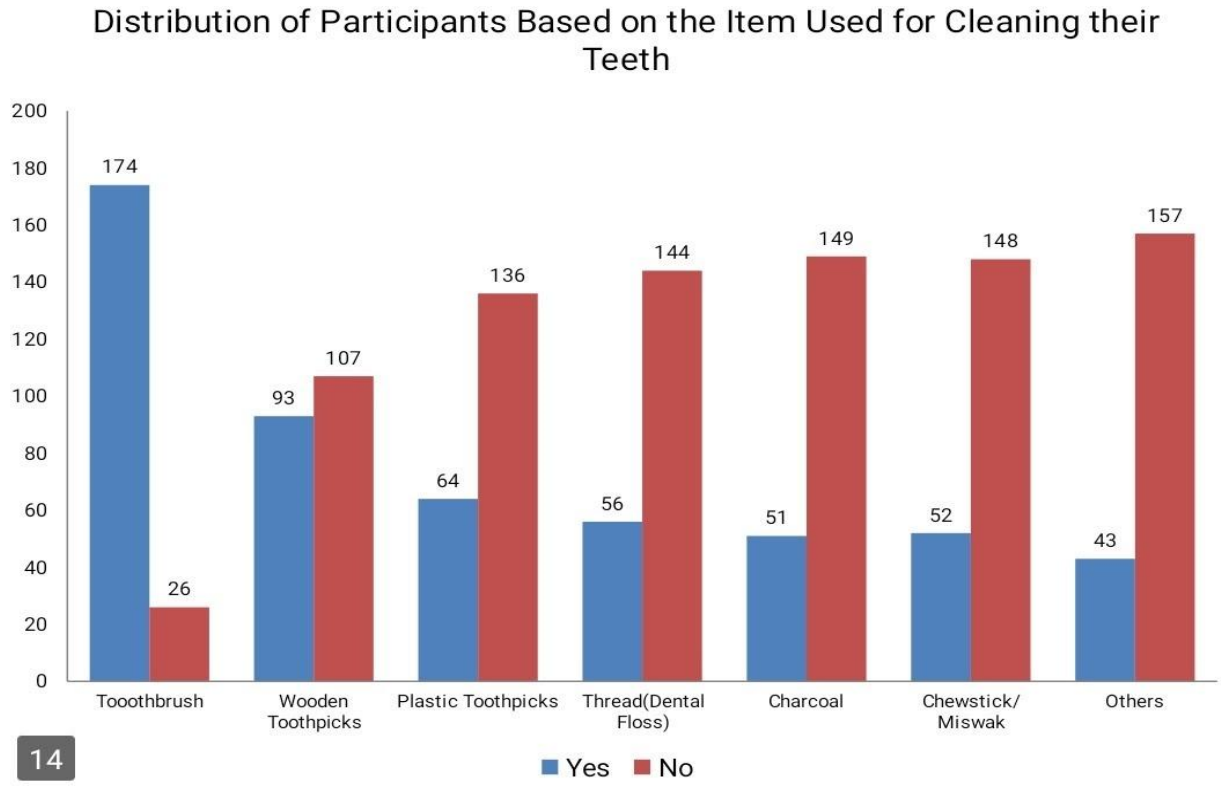
7. Oral Hygiene Practices:

- Figure 7 unveiled diverse oral hygiene practices, with 47 individuals using articles other than toothbrushes for dental cleansing. This finding highlighted variations in oral care habits, suggesting potential areas for tailored oral health education and intervention programs.



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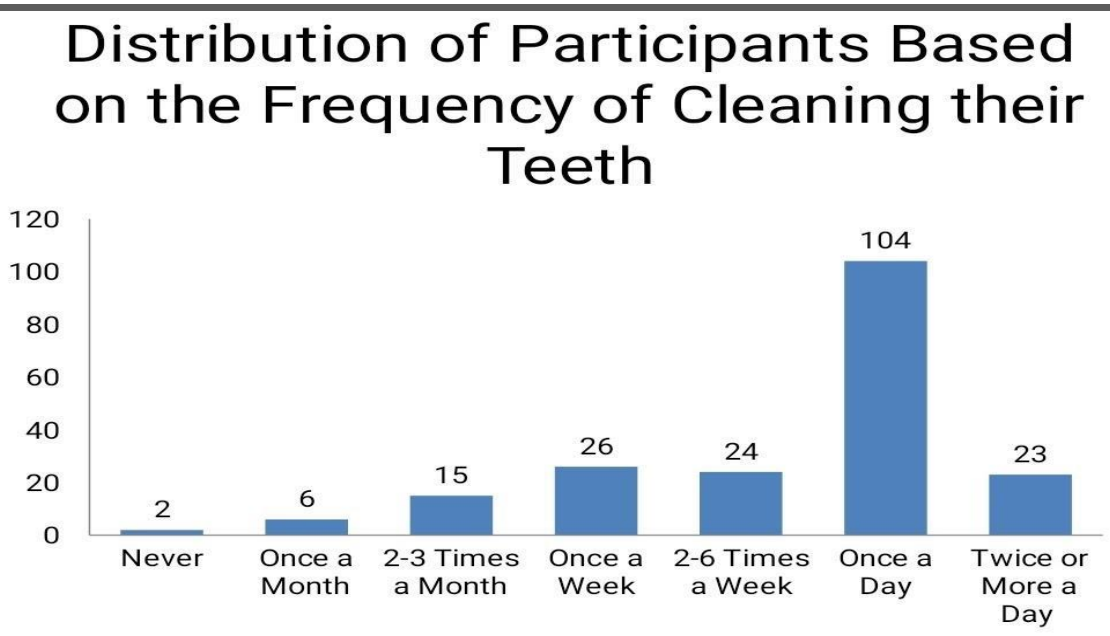

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DISCUSSION

The insightful details revealed by this research concerning the demographic characteristics and oral health conditions of the surveyed population offer a rich foundation for a comprehensive discussion. The gender-based analysis, as illustrated in Figure 1, not only highlights a majority of women participants (113) but also emphasizes the minority representation of men (87). This gender distribution unveils a significant aspect of the oral health landscape, suggesting potential variations in oral health patterns and needs among different demographic groups.

Examining the age distribution, as depicted in Figure 2, further enriches our understanding by revealing that 161 participants are above 18 years old, while 39 individuals are below 18 years. This segmentation facilitates a nuanced exploration of oral health issues across age groups, acknowledging potential variations in dental care needs and practices between adults and

minors. It lays the groundwork for targeted interventions that consider the specific requirements of different age demographics.

The prevalence of gingivitis, a central aspect of the study, emerges as a key finding highlighted in Figure 3. The data showcases that a substantial 74% of the participants exhibit generalized gingivitis, underscoring the widespread nature of this oral health condition within the surveyed population. Furthermore, 26% presenting with localized gingivitis suggests a diverse range in the severity and distribution of this common dental issue, prompting considerations for tailored preventive measures and treatments.

Figure 4 delves into specific oral health conditions, revealing a detailed distribution of permanent decay, primary decay, permanent missing teeth, permanent filling, and trauma. Notably, the prevalence of permanent decay, primary decay, and the presence of permanent missing teeth among participants provide crucial insights into the clinical landscape. Gingivitis, as a prevalent clinical condition evident in the majority (168 participants), further underscores the importance of targeted oral health interventions.

The treatment needs outlined in Figure 5 offer valuable insights into the diverse oral health intervention requirements of the surveyed population. The substantial portion of individuals (168) requiring preventative treatment highlights the importance of proactive measures to address existing oral health issues and prevent future complications. Additionally, the varying needs for restorative treatment, rehabilitation, and a minority requiring no intervention (21 individuals) showcase the heterogeneous nature of oral health needs within the community.

Figure 6 provides a comprehensive overview of the tooth count distribution, shedding light on the dental status of the surveyed population. The breakdown reveals that 42% have 20 or more teeth, 35% have 10 to 19 teeth, 19% exhibit 1 to 9 teeth, and a minority of 4% has no natural teeth. This detailed analysis illuminates the overall dental health and potential challenges faced by individuals in the community, guiding the development of targeted oral health strategies.

Finally, Figure 7 exposes the diverse oral hygiene practices within the surveyed population, indicating that 47 individuals use articles other than toothbrushes for dental cleansing. This finding unveils variations in oral care habits, suggesting potential areas for tailored oral health education and intervention programs to improve overall dental hygiene practices. The amalgamation of these research findings contributes invaluable insights into the complex oral health landscape of the surveyed population. The observed variations in demographic characteristics, oral health conditions, treatment needs, and oral hygiene practices emphasize the necessity for tailored interventions and preventive measures. These insights lay the groundwork for developing targeted public health strategies, ensuring that interventions consider the diverse demographic and clinical characteristics identified within the surveyed community. The research outcomes significantly contribute to our understanding of the intricate relationship between demographic characteristics and oral health conditions within the surveyed community. The observed variations in factors such as gender distribution, age demographics, and prevalent oral health conditions underscore the complexity of the oral health landscape.

The gender-based and age-specific analyses revealed distinct patterns, highlighting the importance of tailoring interventions to address the unique needs and challenges faced by different segments of the population. For instance, the prevalence of gingivitis and specific oral health conditions varies across demographic groups, necessitating targeted strategies that account for these differences.

The identified oral health needs, ranging from preventative measures to restorative interventions, emphasize the necessity for tailored approaches. The diverse spectrum of treatment requirements suggests that a one-size-fits-all approach may not be effective. Instead, interventions should be customized to address the specific needs of individuals within the community, ensuring a more inclusive and impactful strategy.

These insights, derived from a thorough analysis of demographic and oral health data, provide a robust foundation for the development of public health strategies. By acknowledging and addressing demographic nuances and diverse oral health needs, targeted interventions can be crafted to effectively enhance overall oral health and well-being. The research findings, therefore, serve as a valuable resource for policymakers, healthcare professionals, and public health practitioners, guiding the design and implementation of interventions that are not only evidence-based but also responsive to the unique characteristics of the surveyed community. Ultimately, the aim is to ensure that public health initiatives are both effective and inclusive, promoting sustained improvements in the oral health outcomes of the community at large.

CONCLUSION

In conclusion, these research findings provide valuable insights into the complex interplay of demographic characteristics and oral health conditions within the surveyed community. The observed variations underscore the need for tailored interventions that consider demographic nuances and address the diverse oral health needs identified. These insights offer a robust foundation for the development of targeted public health strategies, ensuring effective and inclusive approaches to enhance overall oral health and well-being.

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