

ASSESSMENT OF KNOWLEDGE, ATTITUDES, AND PRACTICES REGARDING ORAL HYGIENE AMONG YOUNG ADULTS IN BARMER CITY, RAJASTHAN

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ABSTRACT

Introduction: Oral hygiene is a critical aspect of overall health, significantly influencing both physical and psychological well-being. This study aims to assess the knowledge, attitudes, and practices (KAP) regarding oral hygiene among young adults in Barmer city, Rajasthan. Understanding these factors is essential for designing effective public health interventions to improve oral health outcomes. **Method:** A cross-sectional population-based survey was conducted among 355 young adults aged 18 to 30 years visiting a dental hospital in Barmer, Rajasthan. Convenience sampling was used to select participants. Data were collected using a structured questionnaire divided into four sections: demographic information, knowledge, attitudes, and practices regarding oral hygiene. Descriptive and inferential statistics, including the Pearson correlation coefficient, were used to analyze the data. **Results:** The study revealed that 64.23% of participants had moderately adequate knowledge about oral hygiene, while 25.35% had inadequate knowledge, and 10.42% had adequate knowledge. Attitudes towards oral hygiene were generally moderate, with 58.87% of participants showing moderate attitudes, 22.54% high attitudes, and 18.59% low attitudes. Regarding practices, 68.17% of participants engaged in moderate oral hygiene practices, 16.90% in good practices, and 14.93% in poor practices. Pearson correlation analysis showed moderate positive correlations between knowledge and attitude ($r = 0.350$), knowledge and practice ($r = 0.414$), and a strong positive correlation between attitude and practice ($r = 0.663$). **Conclusion:** The findings indicate that while the majority of young adults possess moderately adequate knowledge and attitudes towards oral hygiene, there is a significant need for improvement in both areas to enhance oral hygiene practices. Public health initiatives should focus on comprehensive education and attitude enhancement to foster better oral hygiene behaviours.

KEYWORDS: Oral hygiene, knowledge, attitudes, practices, young adults, cross-sectional survey, Barmer, public health, dental health education.

INTRODUCTION

Oral hygiene is a fundamental aspect of overall health, influencing both physical and psychological well-being. Despite its importance, oral health is often neglected, particularly among young adults, who may not fully grasp the long-term consequences of poor oral hygiene practices. According to the WHO Global Oral Health Status Report (2022), approximately 3.5 billion people around the world are affected by oral diseases, with three-quarters of these individuals residing in middle-income countries. The report highlights that around 2 billion people experience caries in their permanent teeth, while 514 million children are affected by caries in their primary teeth.^[1]

Oral hygiene refers to the practice of keeping the mouth clean and free from disease by regular brushing, flossing, and professional cleaning. Good oral hygiene is essential for preventing dental problems and maintaining overall health.^[2] Brushing is the cornerstone of oral hygiene. Brushing should last for at least two minutes to ensure thorough cleaning.^[3] Flossing is an essential component of oral hygiene that involves cleaning between the teeth where a toothbrush cannot reach. Flossing helps remove plaque and food particles from between the teeth and under the gumline, which can prevent gum disease and cavities.^[4] Regular dental check-ups are a critical component of maintaining oral health. Dental professionals can detect early signs of dental problems, provide professional cleaning to remove tartar and

plaque build-up, and offer advice on improving oral hygiene practices.^[5]

Poor oral hygiene has significant economic implications at both the individual and societal levels. Neglecting oral health can lead to expensive dental treatments, such as fillings, root canals, extractions, and periodontal surgeries. Preventive oral health programs and public health initiatives aimed at improving oral hygiene can reduce healthcare costs by preventing dental and systemic health issues.^[6]

Education and awareness about oral hygiene are crucial for improving oral health in rural areas. Generally, knowledge about proper oral hygiene practices is lower in these regions compared to urban areas. Many rural residents are unaware of the importance of regular brushing, flossing, and dental check-ups, contributing to poor oral hygiene and a higher prevalence of dental problems such as cavities and gum disease. While traditional practices can be beneficial, they may not always address modern dental issues, highlighting the need for enhanced educational efforts to promote better oral health practices.^[7]

Schools and community programs play a vital role in educating rural populations about oral hygiene. School-based oral health education programs can teach children the importance of brushing, flossing, and regular dental visits. These programs can also distribute dental care products such as toothbrushes and toothpaste, promoting good oral hygiene habits from a young age.^[8]

The city of Barmer in Rajasthan is a region where traditional oral hygiene practices, such as using neem sticks, are still prevalent, particularly in rural areas. However, urbanization has introduced modern dental products, leading to a gradual practice shift. Despite these changes, disparities in oral health remain significant, with urban residents generally having better

access to dental care and information than their rural counterparts.^[9]

Given the crucial role of oral hygiene in preventing dental and systemic diseases, understanding the knowledge, attitudes, and practices (KAP) related to oral health among young adults is essential. Young adults, particularly those aged 18 to 30, represent a critical demographic. They are in a transitional phase of life, often adopting habits that will influence their health for years to come. This study aims to assess the knowledge, attitudes, and practices regarding oral hygiene among young adults in Barmer City, Rajasthan.

METHODOLOGY

Research Design: This study utilized a cross-sectional survey to evaluate the knowledge, attitudes, and practices (KAP) regarding oral hygiene among young adults.

Sample and Sampling Technique: The sample consisted of 355 young adults, aged 18 to 30 years, from a dental hospital in Barmer, Rajasthan. Participants were selected using convenience sampling.

Data Collection Tool: Data were collected through a structured questionnaire that covered demographics, knowledge, attitude scale, and a practice checklist related to oral hygiene. The tool was validated for content and reliability to ensure accurate and consistent measurement.

Data Analysis: The data were analyzed using descriptive statistics and Pearson correlation. These methods were chosen for their effectiveness in summarizing the data and exploring relationships between knowledge, attitudes, and practices.

Ethical Considerations: Ethical guidelines were strictly followed, including obtaining informed consent from participants, maintaining confidentiality, and securing approval from the institutional review board.

Table 1: Summary of Results on Knowledge, Attitudes, and Practices Regarding Oral Hygiene among Young Adults (N=355)

Variable	Category	Frequency (N)	Percentage (%)
Gender	Male	237	66.76
	Female	118	33.24
Education Level	Bachelor's Degree	151	42.54
	High School	124	34.93
	Master's Degree	43	12.11
	No Formal Education	37	10.42
Occupation	Unemployed	105	29.58
	Student	95	26.76
	Self-employed	83	23.38
	Employed	72	20.28
Income Level	Low	172	48.45
	Medium	114	32.11
	High	69	19.44
Residency	Rural	183	51.55

	Urban	172	48.45
Marital Status	Single	196	55.21
	Married	159	44.79

Table 2: Summary of Knowledge, Attitudes, and Practices Regarding Oral Hygiene among Young Adults (N=355)

KAP Variable	Category	Frequency (n)	Percentage (%)
Knowledge Level	Adequate	37	10.42
	Moderately Adequate	228	64.23
	Inadequate	90	25.35
Attitude Level	Positive Attitude	80	22.54
	Neutral Attitude	209	58.87
	Negative Attitude	66	18.59
Practice Level	Good Practice	60	16.90
	Moderate Practice	242	68.17
	Poor Practice	53	14.93

This table provides a clear and concise overview of the distribution of knowledge, attitudes, and practices related to oral hygiene among the participants in your study.

Table 3: Statistical Summary of Knowledge, Attitudes, and Practices Scores (N=355).

KAP Variable	Mean	Median	Mode
Knowledge Score	5.88	6.00	6.00
Attitude Score	14.32	15.00	16.00
Practice Score	3.85	4.00	3.00

Distribution of Positive, Neutral, and Negative Attitudes Regarding Oral Hygiene

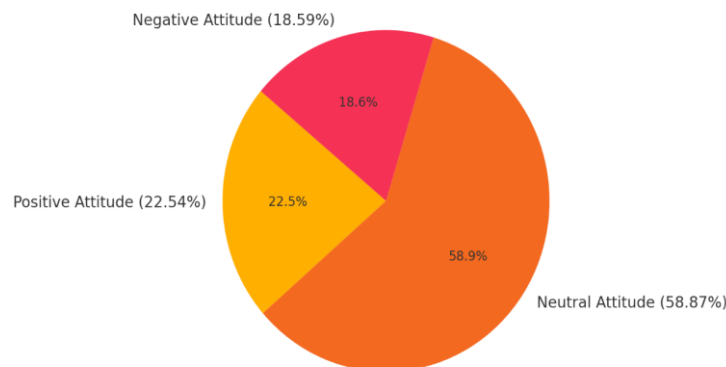


Figure 1: Pie Chart showing Distribution of Attitudes regarding Oral Hygiene.

Practice Levels Regarding Oral Hygiene

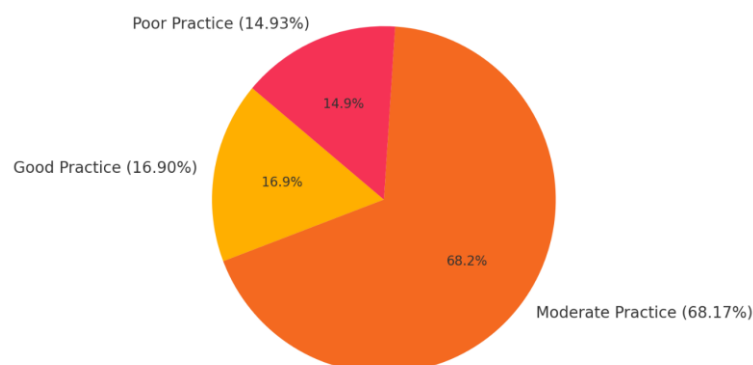


Figure 2: Pie Chart showing Practice Levels regarding Oral Hygiene.

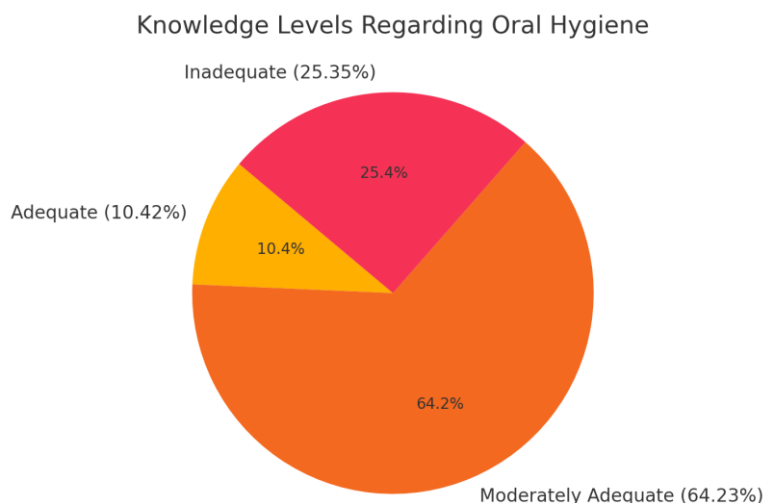


Figure 3: Pie Chart showing Knowledge Levels regarding Oral Hygiene.

Table 4: Showing Karl Pearson's coefficient of correlation between Knowledge, Attitude, and Practice Scores among Young Adults regarding Oral Hygiene. N=(355)

	Knowledge Score	Attitude Score	Practice Score
Knowledge Score	1.000	0.350	0.414
Attitude Score	0.350	1.000	0.663
Practice Score	0.414	0.663	1.000

This table displays the correlation matrix for knowledge, attitude, and practice scores regarding oral hygiene among young adults. The knowledge score has a correlation of 0.350 with the attitude score and 0.414 with the practice score, indicating moderate positive relationships. The attitude score has a correlation of 0.663 with the practice score, reflecting a strong positive relationship. These correlations suggest that improvements in knowledge and attitude

DISCUSSION

This study aimed to evaluate the knowledge, attitudes, and practices (KAP) concerning oral hygiene among young adults in Barmer City, Rajasthan. The results carry significant implications for public health initiatives targeting improved oral hygiene behaviours in this demographic.

The majority of participants demonstrated a moderately adequate understanding of oral hygiene practices. These findings are consistent with a study by Singh et al. (2019)^[10], which highlighted that university students often have limited knowledge of oral hygiene beyond basic practices like brushing and flossing. Similarly, Al-Omiri et al. (2020)^[11] observed gaps in dental students' knowledge regarding the use of interdental aids and the importance of regular dental check-ups. In contrast, Petersen et al. (2015)^[12] reported higher levels of comprehensive oral hygiene knowledge among their study participants, likely due to more extensive public health campaigns and better access to dental education.

In terms of attitudes towards oral hygiene, most participants exhibited neutral attitudes, a finding that aligns with the theory of planned behaviour, which emphasizes the influence of attitudes on health-related behaviours (Ajzen, 1991).^[13] The moderate attitude levels observed suggest a need for targeted interventions to increase the perceived importance of oral hygiene. This is consistent with Wyne et al.'s (2014) study, which also reported moderate attitudes among young adults in Saudi Arabia, reflecting similar cultural and socio-economic contexts.^[14] However, Neamatollahi et al. (2013) found predominantly positive attitudes towards oral hygiene among Iranian students, attributed to effective school-based oral health programs.^[15] Conversely, Tada and Hanada (2004) observed more negative attitudes among Japanese adolescents, highlighting cultural differences in the perception of oral hygiene importance.^[16]

Regarding oral hygiene practices, 68.17% of participants reported engaging in moderate oral hygiene routines, indicating fair adherence but also highlighting areas for improvement. Similar trends have been observed in other studies, where young adults often exhibit suboptimal oral hygiene practices despite having moderate knowledge and attitudes. For instance, Nobile et al. (2012) reported that Italian university students demonstrated moderate oral hygiene practices, with many neglecting the use of interdental cleaning tools.^[17] Jiang et al. (2021) found that Chinese young adults also showed moderate adherence to recommended oral hygiene practices, often skipping regular dental visits.^[18] On the other hand, Anagnostopoulos et al. (2013) observed better oral

hygiene practices among Greek adolescents, possibly due to more rigorous school-based oral health education programs.^[19]

The findings of this study suggest several key strategies for public health interventions aimed at improving oral hygiene among young adults. First, educational programs should focus on enhancing comprehensive knowledge about oral hygiene, including the importance of regular dental visits and the use of interdental aids. Second, efforts should be made to shift attitudes towards recognizing the critical role of oral hygiene in overall health. Campaigns highlighting the consequences of poor oral health and the benefits of good practices could be particularly effective.

The study's use of convenience sampling and reliance on self-reported data are notable limitations. Convenience sampling may introduce selection bias, limiting the generalizability of the findings to the broader population. Self-reported data may be influenced by social desirability bias, where participants over-report good practices and attitudes. Future research should aim to use random sampling methods and objective measures of oral hygiene practices to enhance the validity and reliability of the findings.

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