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ASSESSMENT OF KNOWLEDGE, ATTITUDES, AND PRACTICES REGARDING ORAL HYGIENE AMONG YOUNG ADULTS IN SRI GANGANAGAR, RAJASTHAN

Dr. Shakti Singh Soni*[1] and Reena[2]

[1]Professor Cum H.O.D. Psychiatric (Mental Health) Nursing, S.N. College of Nursing, Sri Ganganagar.
[2]Nursing Tutor

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***Corresponding Author: Dr. Shakti Singh Soni**

Professor Cum H.O.D. Psychiatric (Mental Health) Nursing, S.N. College of Nursing, Sri Ganganagar.

ABSTRACT

Introduction: Oral hygiene is a vital component of overall health, 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 Sri Ganganagar, Rajasthan. Understanding these factors is essential for designing effective public health interventions to improve oral health outcomes in this region. **Method:** A cross-sectional population-based survey was conducted among 234 young adults aged 18 to 30 years visiting a dental hospital in Sri Ganganagar, 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 60.68% of participants had moderately adequate knowledge about oral hygiene, while 28.21% had inadequate knowledge, and 11.11% had adequate knowledge. Attitudes towards oral hygiene were generally moderate, with 55.56% of participants showing neutral attitudes, 24.79% positive attitudes, and 19.66% negative attitudes. Regarding practices, 65.38% of participants engaged in moderate oral hygiene practices, 18.38% in good practices, and 16.24% in poor practices. Pearson correlation analysis showed moderate positive correlations between knowledge and attitude ($r = 0.372$), knowledge and practice ($r = 0.398$), and a strong positive correlation between attitude and practice ($r = 0.674$). **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 behaviors.

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

INTRODUCTION

Oral hygiene is an essential component of overall health and well-being, with significant implications for both dental and systemic health. Poor oral hygiene can lead to a variety of oral diseases, the most common of which include dental caries (tooth decay), gingivitis (gum inflammation), and periodontitis (advanced gum disease). These conditions not only affect the health and function of the teeth and gums but are also linked to broader systemic health issues, such as cardiovascular disease, diabetes, and adverse pregnancy outcomes. The prevention of these diseases largely depends on the maintenance of good oral hygiene practices, including regular brushing, flossing, and dental check-ups.[1]

The significance of oral hygiene extends beyond the prevention of oral diseases; it also plays a crucial role in preventing systemic conditions that are influenced by oral health.[2] Poor oral hygiene has been linked to adverse pregnancy outcomes, such as preterm birth and low birth weight, further highlighting the importance of maintaining good oral health.

Despite the clear benefits of good oral hygiene, maintaining such practices can be challenging, particularly among certain demographic groups. Young adults, in particular, often struggle with maintaining consistent oral hygiene due to a variety of factors, including busy lifestyles, irregular eating habits, and varying levels of health literacy. This age group,

typically defined as individuals aged 18-35, is at a critical stage of life where health behaviors are established that can have long-term consequences.[3]

Globally, studies have highlighted the varying levels of oral hygiene awareness and practices among young adults. In some regions, cultural norms and socioeconomic factors play a significant role in shaping oral hygiene behaviors. For example, a study conducted in Saudi Arabia found that young adults had moderate knowledge of oral hygiene practices but often neglected key practices such as flossing and regular dental check-ups.[4] In contrast, research in more developed regions, such as Europe and North America, often shows higher levels of knowledge but still indicates gaps in practice adherence, particularly in the use of interdental cleaning tools and the frequency of dental visits.[5]

The Knowledge, Attitudes, and Practices (KAP) framework is a widely used model in public health research to assess the interplay between what people know, how they feel, and how they behave regarding health-related topics. This model is particularly useful in understanding health behaviors and designing interventions to improve them.

This study focuses on assessing the KAP related to oral hygiene among young adults in Sri Ganganagar, Rajasthan. By identifying gaps in knowledge, attitudes, and practices, this study aims to provide insights that could inform targeted public health interventions designed to improve oral hygiene behaviors in this demographic.

METHODOLOGY

1. Research Design

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

2. Sample and Sampling Technique

The sample consisted of 234 young adults aged 18 to 30 years from a dental hospital in Sri Ganganagar, Rajasthan. Participants were selected using convenience sampling.

3. 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.

4. 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.

5. Ethical Considerations

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

RESULTS

The study revealed that 60.68% of participants had moderately adequate knowledge about oral hygiene, while 28.21% had inadequate knowledge, and 11.11% had adequate knowledge. Attitudes towards oral hygiene were generally moderate, with 55.56% of participants showing moderate attitudes, 24.79% high attitudes, and 19.66% low attitudes. Regarding practices, 65.38% of participants engaged in moderate oral hygiene practices, 18.38% in good practices, and 16.24% in poor practices. Pearson correlation analysis showed moderate positive correlations between knowledge and attitude ($r = 0.372$), knowledge and practice ($r = 0.398$), and a strong positive correlation between attitude and practice ($r = 0.674$).

Table 1: Summary of Results on Knowledge, Attitudes, and Practices Regarding Oral Hygiene Among Young Adults (N=234).

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	155	66.24
	Female	79	33.76
Education Level	Bachelor's Degree	98	41.88
	High School	81	34.62
	Master's Degree	29	12.39
	No Formal Education	26	11.11
Occupation	Unemployed	75	32.05
	Student	63	26.92
	Self-employed	53	22.65
	Employed	43	18.38
Income Level	Low	114	48.72
	Medium	78	33.33
	High	42	17.95
Residency	Rural	122	52.14
	Urban	112	47.86

Marital Status	Single	128	54.70
	Married	106	45.30

Table 2: Summary of Knowledge, Attitudes, and Practices Regarding Oral Hygiene Among Young Adults (N=234).

KAP Variable	Category	Frequency (n)	Percentage (%)
Knowledge Level	Adequate	26	11.11
	Moderately Adequate	142	60.68
	Inadequate	66	28.21
Attitude Level	positive Attitude	58	24.79
	Neutral Attitude	130	55.56
	negative Attitude	46	19.66
Good Practice	Good Practice	43	18.38
	Moderate Practice	153	65.38
	Poor Practice	38	16.24

Table 3: Statistical Summary of Knowledge, Attitudes, and Practices Scores (N=234).

KAP Variable	Mean	Median	Mode
Knowledge Score	5.92	6.00	6.00
Attitude Score	14.28	15.00	15.00
Practice Score	3.87	4.00	4.00

Table 4: Karl Pearson's Coefficient of Correlation between Knowledge, Attitude, and Practice Scores Among Young Adults Regarding Oral Hygiene (N=234).

Domain	Knowledge Score	Attitude Score	Practice Score
Knowledge Score	1.000	0.372	0.398
Attitude Score	0.372	1.000	0.674
Practice Score	0.398	0.674	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 0.372 with the attitude score and 0.398 with the practice score, indicating moderate positive relationships. The attitude score has a correlation of 0.674 with the practice score, reflecting a strong positive relationship. These correlations suggest that improvements in knowledge and attitude are likely to lead to better oral hygiene practices.

DISCUSSION

The present study aimed to assess the knowledge, attitudes, and practices (KAP) regarding oral hygiene among young adults in Sri Ganganagar, Rajasthan. The findings have significant implications for public health initiatives focused on improving oral hygiene behaviors in this demographic.

Our study found that the knowledge levels among young adults in Sri Ganganagar regarding oral hygiene were moderate, which aligns with the findings from other studies in similar populations. For instance, Zhang et al. (2023) reported that young adults in the U.S. had a fair understanding of basic oral hygiene practices, such as the importance of brushing and flossing, yet lacked comprehensive knowledge about the use of interdental aids and the implications of irregular dental visits.[6] Similarly, Giyansyah et al. (2021) observed that while the participants in their study had a general awareness of oral hygiene, they were not fully informed about more nuanced aspects, such as the impact of diet on oral health and the importance of professional dental care.[5] Our study's findings further echo the results of Balasuppramaniem et al. (2017), who found that young adults in rural Tamil Nadu, India, exhibited moderate levels of knowledge about oral hygiene, particularly in understanding the importance of regular dental check-ups and the correct techniques for maintaining oral health.[7] This suggests that while basic knowledge about oral hygiene is present, there is a need for enhanced educational initiatives to cover more advanced topics in oral health.

The attitudes towards oral hygiene observed in our study were generally neutral, with a significant portion of the participants recognizing the importance of oral health but not necessarily translating this awareness into proactive behaviors. This finding is consistent with the attitudes reported by Alkalash et al. (2023), who noted that young adults in Saudi Arabia acknowledged the importance of oral hygiene but did not prioritize it in their daily routines. The moderate attitudes observed in our study suggest that while there is an understanding of the importance of oral hygiene, it is not strong enough to drive consistent behavioral change.

In terms of practice, our study found that the majority of young adults engaged in moderate oral hygiene practices, such as regular brushing, but often neglected other

important practices like flossing and regular dental visits. This is in line with the findings of Al-Maweri and Tarakji (2015), who reported that university students in Yemen practiced basic oral hygiene but rarely used interdental cleaning tools or visited the dentist regularly.[8] Similarly, Jiang et al. (2021) observed that while Chinese young adults were generally aware of good oral hygiene practices, their actual behaviors were inconsistent, particularly regarding the frequency of dental visits and the use of dental floss.[9]

The correlation matrix presented in this study shows that knowledge, attitudes, and practices are moderately correlated, with attitudes showing the strongest relationship with practices. This finding is consistent with the theory of planned behavior, which posits that attitudes are a key determinant of behavior (Ajzen, 1991).[10] In the context of oral hygiene, this suggests that efforts to improve practices should focus not only on increasing knowledge but also on positively influencing attitudes towards oral health. For instance, Alkalash et al. (2023) found that while young adults in Saudi Arabia had moderate knowledge of oral hygiene, their attitudes towards the importance of regular dental visits and flossing were not strong enough to encourage these practices.[4]

While this study provides valuable insights into the KAP related to oral hygiene among young adults in Sri Ganganagar, it is important to acknowledge its limitations. The use of convenience sampling may introduce selection bias, limiting the generalizability of the findings to the broader population. Additionally, the reliance on self-reported data is subject to social desirability bias, where participants may overreport good practices and attitudes. Future research should aim to address these limitations by using random sampling methods and incorporating objective measures of oral hygiene practices, such as clinical examinations and dental records. Longitudinal studies that track changes in KAP over time would also provide a deeper understanding of how these factors evolve and influence oral health behaviors in young adults.

In conclusion, this study highlights the importance of understanding the knowledge, attitudes, and practices related to oral hygiene among young adults in semi-urban and rural areas of India. While knowledge and attitudes are moderately correlated with practices, there is a clear need for targeted interventions that address both the cognitive and behavioral aspects of oral hygiene. By improving public health strategies and policies, it is possible to enhance oral health outcomes and reduce the burden of oral diseases in this critical demographic.

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