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Awareness, attitudes, and risk perception of do-it-yourself dental practices among adults in India: A cross-sectional study

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Abstract

Background: Do-it-yourself (DIY) dental practices are increasingly popular due to accessibility of online information and cost concerns. However, such practices may pose risks to oral health. Limited data exist on awareness, attitudes, and risk perception of DIY dentistry among Indian adults.
Objective: To assess awareness, attitudes, and risk perception regarding DIY dental practices among adults in India.
Methods: A cross-sectional survey was conducted among adults aged 18 years and above across selected regions in India. Participants were recruited using cluster random sampling. Data were collected using a structured questionnaire covering demographics, awareness of DIY dental methods, attitudes toward self-treatment, and perceived risks. Statistical analysis included descriptive statistics and chi-square tests, with significance set at $p<0.05$.
Results: A total of 120 participants completed the survey. Awareness of DIY dental practices was moderate, with social media and online platforms being the primary sources of information. While a significant proportion acknowledged DIY methods as cost-saving, most participants expressed concerns about safety and long-term complications. Risk perception was higher among educated respondents, who emphasized the importance of professional dental care. Gender and age differences were observed, with younger adults showing greater experimentation with DIY methods.
Conclusion: DIY dental practices are gaining visibility among Indian adults, largely driven by online influence and affordability concerns. Despite moderate awareness, attitudes remain cautious, with strong recognition of associated risks. Public health interventions should focus on strengthening oral health literacy, regulating online content, and promoting professional dental consultation to mitigate potential harm.

Keywords: Do-it-yourself dentistry; Self-medication; Oral health; Social media; Risk perception; Oral health literacy.

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1. Introduction

In these last years, self-directed health care has become important, as information is readily available at our fingertips.[1] This has not been the only shift in dentistry, however, as the do-it-yourself (DIY) trend in dentistry is gaining popularity.[2] These include simple methods, like home bleaching and more advanced methods like mail order orthodontics, temporary restorations, and self-made dental impressions with the help of Internet videos.[3-5] Even the traditional methods such as oil pulling, which are normally done without the professional guidance of a doctor, counts to this category.[6]

The rise of DIY dentistry has been connected to the explosion in social media, including YouTube, Instagram,

Facebook, TikTok, and others, that often share scientifically unvetted dental information.[3,7-9] More than 92% of online health-related content is not evidence based, while almost 60% of people in low resource settings decide to self-medicate or pursue their own solutions for dental health problems for economic and/or access reasons.[10,13] Although such practices might seem convenient and cheap, they come with potential risks such as enamel erosion, gingival trauma, malocclusion, infections and even tooth loss.[4,14] For example, attempts to make your own whiteners with baking soda or strawberries have been proven to be unhelpful and even cause damage.[4]

Public perception is key for the uptake of DIY dentistry. Inspection shows that many people are unaware of the risk involved and the value of professional care. The adoption of these practices is also promoted by cost, accessibility and the all-pervasive effects of digital media. Therefore, understanding the awareness, attitudes, and risk perception of DIY dentistry practices is crucial in India's context to formulate effective educational and promotional solutions and emphasize the importance of professional dental health care.

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2. Materials and Methods

A descriptive cross-sectional survey was carried out for a period of 10 months (August 2025 to May 2026) in an adult patient population visiting a Dental College. This study was approved by the scientific committee of the institution. Based on the maximum confidence level (p=0.5) and margin of error of 6%, the sample size was 267 persons at 95% confidence level. The number of the final sample was determined to be 294, considering 10% non-response rate in the study requiring convenience sampling.

2.1. Eligibility criteria

Age ≥18, mentally competent, and responsive in either English, Hindi or Marathi. Persons with psychiatric disease or cognitive dysfunction or from medical/dental professions were excluded. An electronic informed consent was incorporated in the questionnaire, and ensuring anonymity, there was no collecting of personal identifiers.

The collection of the data was made through a structured google form in three languages English, Kannada and Malayalam. The instrument contained 30 questions: 24 Likert scale items to measure awareness, attitudes and risk perception and one open-ended item on DIY practices attempted, as well as demographic items. The three subject experts validated the instrument and the result of the inter-rater reliability shows the highly correlation (consistency) of the instrument. The average completion time was 15-20 minutes.

Responses were coded (by using Microsoft Excel) and analyzed (IBM SPSS v27, Jamovi). Data was summarized using descriptive statistics (frequencies, percentages, means and standard deviations). The data was ordinal and not normally distributed so non-parametric tests were used. Gender differences were tested using Mann-Whitney U, educational differences were tested using Kruskal-Wallis and categorical associations were tested using Chi-square/Fisher's exact tests. A p value of <0.05 was considered to be statistically significant and Cramer's V was calculated to determine association strength.

3. Results

There were 294 total participants. The sex ratio of the sample was 1.6 males: 2.0 females, with the females being more likely to participate in health-related surveys (**Figure 1**). Educational distribution revealed that majority of the respondents were graduates (59.2%) followed by intermediate/pre-university (20.1%), post-graduates (13.6%), high school (4.8%) and no formal education (2.4%) (**Figure 2**). 39.1% performed any of these DIY dental practices; 60.9% did not perform any. This is an indicator of the increased trend of self-directed dental care.

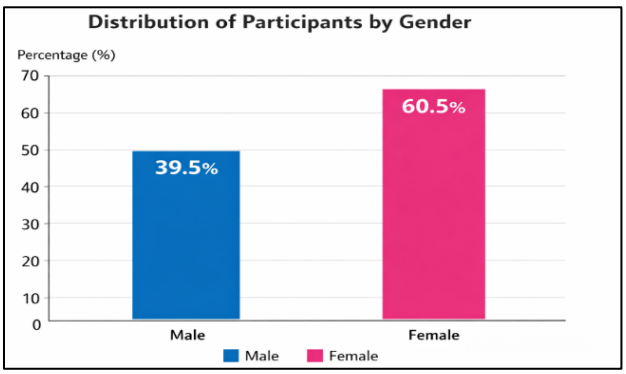

Figure 1: Illustrates the gender distribution, showing higher female participation, which may correlate with greater health-seeking behavior among women

3.1. Awareness and attitudes

One-third had agreed (27.2%) to understanding the term "DIY dental procedures" while 37.1% disagreed and 25.2% were neutral. The level of confidence in doing home remedies was added up to be moderate, where 45.6% were neutral and 21.1% agreed. Affordability was a motivator (29.3% agree strongly agree, 40.5% were neutral and 8.2% disagreed). 26.2% agreed that they would use DIY if clinics were not available and 28.2% agreed that they would use DIY if they could not afford professional care.

3.2. Risk perception

38.4% agreed and 11.6% strongly agreed DIY procedures can cause complications. 47.6% agreed that the whitening agents harm the enamel. 40.8% agreed self-treatment can lead to infection. 41.5% said that there was an increase in risk due to lack of professional guidance.

3.3. Social media impact

A full one-third (38.8%) were neutral about its involvement in unsafe practices.33% trusted influencer-promoted products. Reassuringly, 54.4% opted for professional care, 59.9% felt that DIY should not be used unless recommended by a dentist and 62.9% believed in regulating DIY products. Awareness campaigns (49.3%), discouraging unsafe practices (59.9%) and educational promotion (63.6%) were all highly supported preventive measures (**Figure 3**).

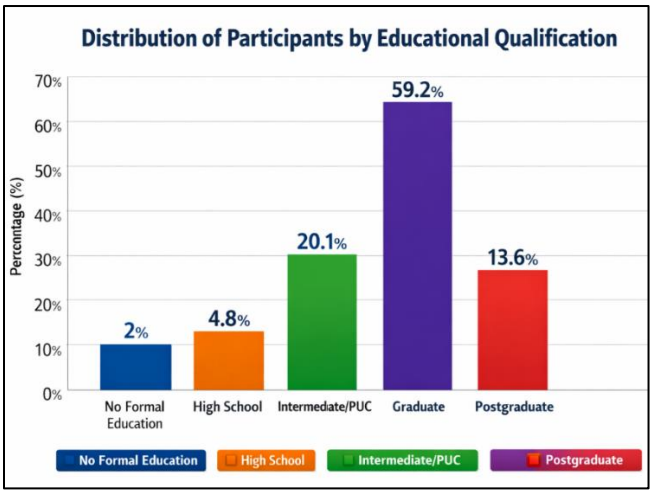

Figure 2: Depicts educational qualification, emphasizing that most respondents were graduates, a factor that likely contributed to moderate awareness levels

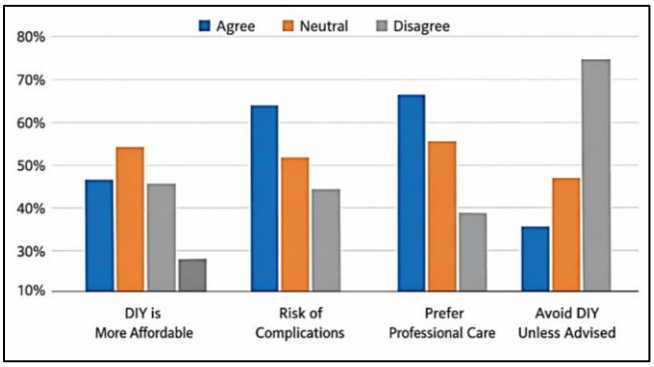

Figure 3: Distribution of responses for key perceptions regarding DIY dental practices

Figure 3 shows group responses to key perceptions-affordability, risk of complications, preference for professional care and avoidance of DIY unless advised. The chart clearly illustrates that affordability is a key motivator for adopting a dog or cat, but worries about problems and desire for professional care are still the biggest factors, indicating that the participants were cautious but also making an informed choice.

4. Discussion

This study brings into light the paradox between awareness and practice. Many participants were aware of the dangers of do-it-yourself dentistry, but the convenience and affordability of it remained the motivators to practice it. The same is true throughout the world, especially areas where professional care is scarce. One-third of the respondents said that they trusted products promoted by influencers on social media, which became a major influence on them. This is in line with studies conducted overseas, which have revealed that digital platforms tend to share false information on good oral health care. These concerns are further highlighted by comparisons with data from around the world. The American Dental Association warns against unsupervised orthodontics and whitening as it can cause tooth loss and periodontal disease. Cost and awareness gaps motivate DIY practices, as similar trends are found in Saudi Arabia and in Latin America. Ethical issues came up too, with mixed opinions about acceptability in the event of unavailability of professional care. The majority favored regulation and professional guidance though, which is an indication of recognition of evidence-based dentistry. There are three actions that are warranted from a public health standpoint: Educational campaigns to promote safe alternatives and raise awareness of the risks. Control of misinformation on the internet and products promoted by influencers. Better access to safe and acceptable professional care to minimize use of non-acceptable care practices.

5. Conclusion

With the influence of digital and affordability, DIY dentistry is becoming more and more popular among adults in India, though some are aware of the associated risks. Improving education and regulation as well as access to professional oral health care are key elements in protecting oral health.

List of Abbreviations

ADA: American Dental Association
DIY: Do-it-yourself
SD: Standard Deviation
SPSS: Statistical Package for the Social Sciences

Author Contributions

Pawar Saurabhachandra B: Conceptualization, study design, methodology, data collection, statistical analysis, and manuscript drafting.
Shashank Deshpande: Methodology, data interpretation, critical revision, and manuscript review.
Utkarsha Deshpande: Questionnaire development, data collection, literature review, and manuscript review.
Dipti Govind Pardeshi: Literature review, data interpretation, and critical revision of the manuscript.
Chaitanya Shridhar Buddhikot: Investigation, validation, and manuscript review.
Parikshit Agawane: Supervision, statistical interpretation, critical revision, and final approval of the manuscript. All authors reviewed and approved the final version of the manuscript.

Ethical Approval

Ethical approval was not required for this study, as it involved a questionnaire-based survey with no clinical intervention or invasive procedures.

Declaration of Patient Consent

The authors certify that electronic informed consent was obtained from all participants. Their identities have been kept anonymous.

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None.

Conflict of Interest

None.

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