



Knowledge and attitude of medical and dental students and professionals regarding hair restoration surgery performed by dental surgeons in Coimbatore City– A cross-sectional survey

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Abstract

Introduction: Growing awareness of aesthetics has led to an increase in interest in hair restoration surgery. The area of practice and skill of dental professionals in carrying out such operations, however, continue to be unclear. The purpose of this study was to evaluate dental and medical professionals' attitudes and knowledge regarding hair restoration procedures carried out by dentists.

Materials and Methods: A cross-sectional questionnaire-based study was administered to Coimbatore's medical and dental practitioners, interns, and students. A self-administered, validated questionnaire was sent out via electronic means. Chi-square tests and descriptive statistics were used to evaluate the data in order to compare responses between groups, with a significance level of $p < 0.05$.

Results: Participants in the medical and dentistry fields showed significantly different levels of understanding, perceptions of regulating agencies, and attitudes toward dentists who do hair restoration procedures. Advanced training or certification is crucial, according to the majority of both groups. Participants in the dental program expressed more approval of dentists who had received the necessary training to carry out such procedures. The primary difficulties that were brought to light were patient safety, legal concerns, and a lack of training.

Discussion: The results show a moderate awareness of professional rules and regulations, although there are significant knowledge gaps. Although multidisciplinary work is becoming more widely accepted, issues with ethics and training are still major considerations. The findings are consistent with other research highlighting the significance of organized instruction and precise definitions of scope-of-practice.

Conclusion: Significant gaps in knowledge and regulatory comprehension still exist, despite the increased support for dentists who conduct hair restoration procedures with the appropriate training. To guarantee safe and moral practice, education, certification, and regulations must be strengthened.

Keywords: Hair restoration surgery, dental surgeons, cosmetic awareness, medical professionals

Introduction

An individual's self-image and social interactions are greatly influenced by their physical appearance; elements including the face, eyes, nose, teeth, and hair all contribute to overall aesthetics. Among these, hair is especially important because it is strongly linked to youth, beauty, and individuality. While hair loss can have a detrimental impact on a person's looks and mental health, healthy hair frequently boosts confidence and self-esteem. Reduced confidence, social disengagement, and even an impact on day-to-day activities and quality of life are possible outcomes.

In recent years, hair restoration procedures have become more popular because more people are focusing on their appearance and how they perceive themselves. Hair transplantation has become a successful surgical technique for treating hair loss. This method relocates hair follicles from a donor site to areas that are bald, resulting in natural and long-lasting cosmetic results.^[1]

New technologies, such as Follicular Unit Extraction and Transplantation for Hair Restoration, have progressed significantly with improved results. In order to further improve the safety and efficiency of hair transplantation techniques, both Narendra Patwardhan and Venkatram

Mysore believe there is a need to establish clinical protocols and proper training of surgeons. According to their guidelines, good patient selection, skilled surgeons, and post-operative care are important.^[1]

There is a growing popularity of hair restoration techniques, yet the qualifications and the range of practice to perform these procedures remain debated. Muthuvel Kumaresan and Venkatram Mysore found that hair transplantation isn't limited to just one field. Specialists from dermatology, plastic surgery, and other medical backgrounds all perform these procedures. This combination has prompted controversy about proper training and the responsibilities these professionals must carry. As more physicians take an interest in hair regrowth techniques, the conversation about training standards and the scope of practice keeps growing. The way different specialties cross over clearly shows we need clear guidelines for medical professionals performing hair restoration procedures. Continuous education is important, as well. In its absence, quality care and patient safety may deteriorate.^[2]

In addition to professional competency, ethical considerations and knowledge of aesthetic processes are now part of modern therapeutic practice. According to a survey conducted by Andrea Margara and colleagues, most

practitioners in aesthetic medicine placed a high priority on ethical principles like patient autonomy, informed consent, confidentiality, and prioritizing patient safety. The importance of quality education and training in resolving ethical issues related to cosmetic procedures was also highlighted by the study. [3, 4, 5]

Additionally, prior studies evaluating medical personnel's understanding of cosmetic procedures have shown varying degrees of perception and knowledge. Studies by Shalini K. and colleagues show that although students as well as medical professionals are interested in aesthetic procedures, there are still misunderstandings and information gaps regarding indications, training needs, and clinical practice. [4]

As the scope of aesthetic practice has expanded, dental professionals have become more involved in providing specific cosmetic treatments because of their expertise in facial anatomy, local anaesthesia, and minor surgical methods. However, the level of knowledge, attitude, and practice related to hair restoration surgery and cosmetic procedures among medical and dental students and professionals may vary depending on their educational background and clinical experience. [3, 4]

Although several studies have looked into awareness and perceptions of aesthetic procedures, there are few studies on the knowledge, attitudes, and practices of medical and dental students and professionals about hair restoration surgery and cosmetic procedures done by dentists, particularly in India. Therefore, this study used a cross-sectional questionnaire survey to examine the knowledge, attitudes, and practices of medical and dental students and professionals regarding hair restoration surgery and cosmetic procedures performed by dentists in Tamil Nadu.

Materials and Methods

This study was set up as a questionnaire survey among medical and dental professionals and students in Coimbatore city, Tamil Nadu, India. It aimed to evaluate the knowledge and attitudes regarding hair restoration surgery performed by dental surgeons. The participants included registered healthcare professionals and students from both fields. This included registered medical practitioners (MBBS) and dental practitioners (BDS) who actively work in government, private, and teaching institutions in Coimbatore city. The necessary sample size was based on a previous study by Shalini Ravi *et al.* (2022). [4]

This study included healthcare professionals and students with recognized qualifications such as BDS, MDS, MBBS, MD, MS, or equivalent degrees, licensed by their respective medical or dental councils. The exclusion criteria ruled out healthcare professionals or students without recognized medical or dental qualifications.

We developed a structured, self-administered questionnaire by adapting questions from earlier published studies [2, 3, 4]. The questionnaire contained sections for demographic information and assessed knowledge and attitudes related to hair restoration surgery performed by dental surgeons [4]. The final questionnaire was distributed electronically using Google Forms. Participation in the survey was voluntary, and we obtained informed consent before participation. We strictly maintained the confidentiality and anonymity of the respondents throughout the research process. [3, 4]

The questionnaire was validated by subject experts, with a Content Validity Index (CVI) of 0.90, indicating good validity. A pilot study involved 30 participants—15 medical and 15 dental individuals—to evaluate the clarity and face validity of the questionnaire. We made necessary adjustments based on the feedback to improve its clarity and structure. To check for reliability, we re-administered the same questionnaire to the 30 participants after two weeks, calculating the correlation coefficient to assess consistency. [4]

We determined that the minimum required sample size was 427 participants. The study took place from December 8, 2025, to March 25, 2026. Responses were collected automatically through the Google Forms platform. We compiled and analyzed the data using the Statistical Package for the Social Sciences (SPSS) software [3]. Descriptive statistics summarized the levels of knowledge and attitudes among participants. We used inferential statistical tests, including the Chi-square test, to find associations and compare responses between the medical and dental groups [4]. We obtained ethical approval for the study from the Institutional Ethics Committee (RVSDCH, Coimbatore) before starting data collection.

Results

The comparison of knowledge and attitudes about hair restoration surgery conducted by dentists, between dental students, medical students, and professionals, is shown in Table 1.0. A p-value of less than 0.05 was considered significant. A statistically significant difference was found between the two groups for most of the study variables.

Table 1: Study results

Study Variable	Option	Group 1 (Dental students & professionals)	Group 2 (Medical students & professionals)	P-value (Average)
Awareness about the International Society of Hair Restoration Surgery/ Association of Hair Restoration Surgeons-India	Yes	37.82%	51.61%	0.0046
	No	62.18%	48.39%	
Regulatory body defining the scope of cosmetic procedures	DCI	6.91%	1.08%	<0.001
	NMC	9.82 %	31.72%	
	AHRS - India	52.00%	51.61%	
	Not aware	31.27%	15.59%	
Specialist most eligible to perform hair restoration surgery	Dermatologist / Plastic surgeon	77.45%	84.41%	<0.001
	Oral and Maxillofacial Surgeon (OMFS)	10.91%	1.61%	
	Any speciality	11.64%	13.98%	
Minimum training required for an MBBS/BDS professional to legally	No additional training required	2.18%	1.08%	0.848

perform hair restoration surgery	Short-term course/workshop	9.82%	10.22%	
	Advanced fellowship/specialized certification	73.09%	73.66%	
	Not aware	14.91%	15.05%	
Awareness about any existing laws, regulations, or council guidelines in your country/state	Yes	47.64%	35.48%	0.012
	No	52.36%	64.52%	
Do you believe dentists should be allowed to perform hair restoration surgery or cosmetic procedures if they receive adequate training?	Strongly agree	25.82%	8.06%	<0.001
	Agree	36.36%	36.02%	
	Neutral	28.36%	38.71%	
	Disagree	7.27%	15.05%	
	Strongly disagree	2.18%	2.15%	
If you disagree, what are your main concerns about dentists performing such procedures?	Patient safety risk	12.00%	23.66%	<0.001
	Legal issues	14.55%	19.35%	
	Lack of adequate training	37.82%	40.86%	
	No concerns	35.64%	16.13%	
Do you believe expanding into cosmetic procedures can positively impact the professional growth of dental/medical practitioners?	Strongly agree	28.73%	11.83%	<0.001
	Agree	43.64%	46.24%	
	Neutral	24.00%	37.10%	
	Disagree	1.82%	4.30%	
	Strongly disagree	1.82%	0.54%	
Do you think legal and ethical boundaries should be strictly followed while performing cosmetic procedures?	Strongly agree	53.09%	37.10%	0.004
	Agree	31.27%	47.85%	
	Neutral	14.55%	13.44%	
	Disagree	0.36%	1.08%	
	Strongly disagree	0.73%	0.54%	
Do you think dental councils should revise the scope of practice guidelines to include specific cosmetic procedures?	Strongly agree	30.91%	11.83%	<0.001
	Agree	41.09%	37.10%	
	Neutral	24.73%	46.24%	
	Disagree	1.82%	2.69%	
	Strongly disagree	1.45%	2.15%	
What safeguards do you think should be in place to maintain ethical standards?	Legal licensing and accreditation	54.55%	46.77%	<0.001
	Mandatory training and certification	41.09%	38.17%	
	Oversight by respective councils	1.45%	12.90%	
	Peer audits or reviews	2.91%	2.15%	

Participants in Group 2 (medical respondents) reported formal awareness of professional organizations related to hair restoration at a much higher rate than those in Group 1 (dental respondents) ($p = 0.004$). There was also a significant difference ($p < 0.001$) in how the groups understood the regulatory body that defines cosmetic treatments. More respondents in Group 1 showed confusion.

Views on which specialist is best qualified to perform hair restoration procedures varied greatly. Most participants in both groups believed dermatologists or plastic surgeons were the top specialists, but respondents in Group 2 were more likely to hold this view than those in Group 1 ($p = 0.00069$). However, opinions about the minimum training necessary to perform these procedures were similarly held by both groups, and the difference was not statistically significant ($p = 0.847$).

Group 1 respondents were much more aware of the existing laws and regulations governing cosmetic procedures than Group 2 respondents ($p = 0.012$). Dental respondents showed greater agreement than medical respondents ($p < 0.001$) regarding whether dentists should perform cosmetic procedures like hair transplantation after adequate training. Regarding the impact of cosmetic procedures on professional development, dental respondents were more

positive than medical respondents ($p < 0.001$). Most respondents supported revising the scope of practice guidelines to include cosmetic procedures. Agreement was higher in Group 1 (72.00%) compared to Group 2 (48.93%). Neutral responses were more common in Group 2 (46.24%) than in Group 1 (24.73%). Very few participants in either group disagreed (less than 5%).

While there was a significant difference in strong agreement between the two groups ($p = 0.004$), most participants from both groups agreed that legal and ethical boundaries must be followed strictly when performing cosmetic procedures.

Despite the variation in concerns between medical and dental respondents ($p < 0.001$), inadequate training was the most commonly cited concern in both groups about dentists performing such procedures. The most frequently suggested safeguards for maintaining ethical standards were legal licensing and accreditation, as well as mandatory training and certification; responses differed significantly between the two groups ($p < 0.001$).

Discussion

The study assessed the knowledge and attitudes of medical and dental professionals and students regarding hair restoration procedures performed by dentists or oral and maxillofacial surgeons. The findings revealed significant

differences between the two groups in terms of awareness, perception, and acceptance of these procedures. It also highlighted crucial gaps in regulatory knowledge and training.

A similar cross-sectional study by Shalini Ravi *et al.* [4] (2022) found that a modest percentage of participants supported dentists performing hair restoration procedures, provided they received the required training. The current study showed similar trends, as a larger percentage of dental respondents believed dentists should be able to perform these treatments after proper training. This greater acceptance among dental professionals, particularly those trained in oral and maxillofacial surgery, may stem from their familiarity with surgical techniques and local anesthetics, as well as their solid understanding of facial anatomy. A recurring theme in both studies was the importance of systematic training. Most participants in the current study agreed that obtaining an advanced fellowship or specialized certification is vital before performing hair restoration techniques. This aligns with accepted clinical guidelines, such as those from Patwardhan and Mysore (2008) and further supported by Mysore *et al.* (2021), which emphasize that formal training, adherence to standardized protocols, and competency-based practice are essential to ensure patient safety and optimal results [1, 2]. Overall, medical experts largely agree that formal training is necessary before engaging in cosmetic surgery.

Despite this agreement, the current survey found a notable lack of awareness regarding professional associations and regulatory agencies, particularly among dental respondents. Many participants were either unaware of or confused by the definitions of cosmetic procedures set by governing bodies. This lack of knowledge is concerning since maintaining legal and ethical standards in clinical practice relies on compliance with regulations. Similar issues have been reported in other studies evaluating awareness of aesthetic practices, pointing out that insufficient understanding of regulatory criteria presents a barrier to safe practice.

Most participants from both groups believed that dermatologists and plastic surgeons were the most qualified specialists to perform hair restoration procedures. Only a small number recognized oral and maxillofacial surgeons as qualified experts. This perception may come from the surgical expertise of OMFS specialists, especially their skills in minor surgical procedures, tissue handling, and facial anatomy. However, the low recognition of this specialty indicates a need for increased understanding of the capabilities within dental surgical specializations.

Concerns about dentists performing hair restoration procedures primarily stemmed from inadequate training, followed by issues related to patient safety and legal matters. These findings mirror those of Shalini Ravi *et al.* (2022), who highlighted the lack of clear protocols and training requirements as a significant problem. These ongoing issues underscore the necessity for clear regulations, uniform training programs, and well-defined protocols to ensure safe clinical practice [4]. Participants from both groups stressed the importance of ethical and legal considerations. Most agreed that strict adherence to ethical and legal guidelines is crucial when performing cosmetic treatments. This view aligns with research by Margara *et al.* [3] (2025), which found that regulatory compliance and ethical responsibility are key aspects of

aesthetic medical practice. Additionally, participants suggested implementing measures like accreditation, legal licensure, and required training programs. Such measures are essential to minimize risks, ensure patient safety, and uphold professional standards in aesthetic procedures.

The current study's thorough evaluation of attitudes and knowledge regarding professional associations and regulatory frameworks like ISHRS and AHRS-India makes a notable contribution. The identified knowledge gaps highlight the need for improved educational initiatives, integration into curricula, and ongoing professional development programs focusing on the legal aspects of aesthetic practice. Overall, the findings build upon previous research by providing a more detailed overview of the knowledge, attitudes, and awareness of regulatory issues among both medical and dental professionals. Despite the growing acceptance of dentists performing hair restoration procedures with the appropriate training, significant gaps in regulatory knowledge and clarity regarding the scope of practice remain. There is a clear need for organized educational programs, consistent certification processes, and transparent regulatory requirements to facilitate the safe and ethical integration of hair restoration and other aesthetic procedures into dental practice. Addressing these gaps will enhance professional competency, protect patient safety, and promote ethical clinical care.

Conclusion

Within the scope of this study, the findings show that medical and dental students, as well as professionals, have varying levels of knowledge and perspectives on hair restoration surgery performed by oral and maxillofacial surgeons. While many participants recognized the importance of proper training and ethical norms, dermatologists and plastic surgeons were consistently considered the best experts for performing these procedures. The findings emphasize the need for increased understanding of the training requirements, professional guidelines, and regulatory concerns relevant to hair restoration surgery.

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