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KNOWLEDGE, ATTITUDE, AND PRACTICE REGARDING COSMETIC PROCEDURES AMONG THE GENERAL POPULATION

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Abstract

Background *Cosmetic procedures are increasingly common, influenced by social media, changing beauty standards, and greater public access to aesthetic services. Adequate knowledge and positive attitudes are important for informed decision-making and safe practices. Limited awareness of complications, contraindications, practitioner qualifications, and post-procedure care may increase potential risks.*

Objective *To assess the knowledge, attitude, and practice regarding cosmetic procedures among the general population of Lahore, Pakistan, and to determine their associations with selected demographic characteristics.*

Methods *A descriptive cross-sectional study was conducted among 384 adults in Lahore using a structured questionnaire comprising demographic, knowledge, attitude, and practice sections. Data were analyzed using SPSS Version 27. Frequencies, percentages, means, and standard deviations were calculated. Chi-square tests and correlation analysis were used to examine associations and relationships among variables. Statistical significance was set at $p < .05$.*

Results *Nearly half of participants demonstrated moderate knowledge (49.0%), while 32.3% had good and 18.8% had poor knowledge. Positive attitudes were observed in 54.7%, neutral attitudes in 29.4%, and negative attitudes in 15.9%. Practice levels were poor among 40.9%, moderate among 37.8%, and good among 21.4%. Social media was the major information source (41.9%). Knowledge, attitude, and practice were significantly positively correlated.*

Conclusion *Participants demonstrated moderate knowledge and generally positive attitudes but comparatively poor practices. Strengthening public education, professional consultation, reliable social media information, and safety awareness is recommended.*

INTRODUCTION

Cosmetic procedures are surgical or non-surgical procedures performed primarily for the purpose of altering, improving, restoring or enhancing the appearance of the body. These surgeries include: Rhinoplasty, Liposuction, Breast enhancement, Abdominoplasty, Eyelid surgery and facelift surgery. Non-surgical treatments encompass hair removal, chemical peels, laser therapy, dermal fillers, non-surgical skin tightening and botulinum

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toxin injections. Knowledge involves the understanding of what cosmetic procedures are, their indications, benefits, risks, complications, contraindications, and the qualifications of the provider(s). The term attitude is used to describe a person's beliefs, perceptions, acceptance and willingness to undergo cosmetic procedures. Practice is defined as actual use, previous experience or planning for cosmetic procedures. Public knowledge, attitudes and practices have become important factors in the safe and informed process of cosmetic choice, as these have become more accessible and widely accepted (Boen & Jerdan, 2022; Mironica et al., 2024).

In the last decade, cosmetic procedures have grown substantially and non-surgical procedures are a significant part of the growing field of cosmetic medicine. In 2023, the International Society of Aesthetic Plastic Surgery (ISAPS) estimated that there were approximately 34.9 million surgical and non-surgical aesthetic procedures performed worldwide, of which over 15.8 million were surgical procedures and 19.1 million were non-surgical procedures. The number of aesthetic operations grew by about 40% compared to the previous four years. In fact, the 2024 survey of global procedures reported nearly 38 million procedures, with over 17.4 million being surgical procedures and 20.5 million being non-surgical procedures, an increase of 42.5% in 4 years (International Society of Aesthetic Plastic Surgery [ISAPS], 2024, 2025; Swanson, 2024). The most common non-surgical treatments comprised of botulinum toxin, hyaluronic acid fillers, hair removal, non-surgical skin tightening and chemical peels (ISAPS, 2025).

The increasing numbers of cosmetic procedures performed in various regions and among different populations around the globe is also an indicator of the global burden of cosmetic procedures. Surgical procedures such as liposuction, breast augmentation, eyelid surgery, abdominoplasty and rhinoplasty are still major surgery types and minimally invasive treatments are still dominated by botulinum toxin and hyaluronic acid fillers. A study on international aesthetic-procedure trends highlighted a 14-year trend of increasing surgical and non-surgical procedures, including more dramatic growth post-COVID-19 pandemic (Swanson, 2024). Facial rejuvenation has become an important part of modern dermatological practice, and the number of injectables, lasers, energy-based techniques, and other minimally invasive technologies are increasingly being used (Gomes et al., 2024). The proliferation of procedures has led to a growing need for the public to be aware of what to expect, possible complications, practitioner's expertise, informed consent, and patient selection.

Information about cosmetic procedures is different amongst populations. A population-based study revealed low awareness of cosmetic procedures among 39.8% and low rates of cosmetic procedures among 8.4% of the respondents, in the Western Region of Saudi Arabia. Rhinoplasty was known as the most common surgical procedure, and filler injections were the most common non-surgical procedure. Friends, the Internet, and doctors were cited as the most frequently used sources of information. Bondagji et al., (2024) found that 85.7% of participants responded that social media had influenced their decision on cosmetic treatment. In a separate study, 47.2% of 388 Bisha, Saudi Arabia residents were aware of cosmetic procedures, and some of the most widely known included rhinoplasty, filler injections (Alam et al., 2024). The results show significant differences in public awareness, and highlight the need for a population-based assessment of knowledge.

The media has taken a major turn in association with perceptions of physical beauty and cosmetic interventions is social media.Social media is a huge factor in perceptions of physical beauty and cosmetic interventions. Instagram, TikTok, Snapchat, Facebook and others focus primarily on appearance, proffer constant examples of physical perfection, cosmetic ads, influencer content, treatment samples and digitally tweaked photos. There is a connection between appearance-centred social media exposure and body dissatisfaction and negative body-image outcomes (de Valle et al., 2021). Social media engagement is also linked to social comparison, appearance anxiety, and

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cosmetic procedure consideration (Rodgers & Rousseau, 2022). A review of research on social media and cosmetic-procedure attitudes reveals that repeated exposure to aesthetic content could foster a normalization of cosmetic interventions and heighten people's desire to have cosmetic procedures (Mironica et al., 2024). Because people can access unverified information on social media, it also raises a significant public-health issue as people may make decisions about treatment without understanding the risks, contraindications, complications, or practitioner qualifications.

In assessing public attitudes and practices, the psychological effects of cosmetic procedures need to be taken into account. Body dissatisfaction and low self-esteem, social comparisons, appearance anxiety, and perceived physical imperfections could be factors in their choice to pursue an aesthetic treatment. A systematic review and meta-analysis showed that the prevalence of BD among people who wanted cosmetic surgery was high, thus highlighting the need for psychological evaluation in cosmetic surgery (Salari et al., 2022). Some may have high expectations of what the cosmetic surgery will look like and feel disheartened if the results are not what they had hoped for.Those who have a significant body image issue might have unrealistic expectations of what it will look like and feel disheartened even if the procedures have been technically successful. Psychological and appearance-related factors that affect treatment-seeking have been revealed in research with people who sought aesthetic interventions (Castelnuovo et al., 2022). Public perceptions of cosmetic procedures should take into account the psychological motivations for undergoing cosmetic treatment as well as realistic expectations for treatment outcomes.

Another significant burden of the growing use of cosmetic procedures is safety. The perception that cosmetic procedures are relatively safe increases due to the fact that many of these procedures are elective and minimally invasive. Both surgical and non-surgical procedures can lead to complications. The botulinum toxin can lead to adverse effects such as ptosis, asymmetry, headache, localized reactions and more, and dermal fillers can cause inflammation, infection, vascular occlusion, tissue necrosis, visual complications and more. (Sethi et al., 2021; Samizadeh & De Boulle, 2023). There may be greater risk of complications if the procedure is done by poorly trained practitioners, if the wrong product is used, or if patients are not adequately counseled prior to the procedure. Patient awareness about risks, trusted professionals, informed consent, and post-procedure care is a key aspect of cosmetic-procedure safety (Di Santis et al., 2022).

Cosmetic procedures in Pakistan are becoming a growing concern in the country's overall healthcare and social landscape. There has been a rising trend in aesthetic medicine in Pakistan, fueled by a rise in cosmetic services, social media presence, evolving beauty standards, and a greater awareness of non-surgical treatments. Evidence of public knowledge and practices is still quite incomplete compared with that from countries having well-established aesthetic-medicine surveillance systems. A recent Pakistan-based study of medical residents revealed that 69% were approached with enquiries regarding cosmetic surgeries while 60% were aware of the cultural impact on patients' preferences. Formal training or private aesthetic-medicine courses were received by only a small fraction of the residents and 74% had never personally performed an aesthetic procedure (Shams et al., 2025). These findings suggest that there is a rising demand from the public, and a lack of formal education and structured training in aesthetic medicine in Pakistan.

Cosmetic procedures should be investigated in the local context in KPK, as there is limited population level evidence. The communities of the province are seeing an increase in their exposure to social media, the beauty industry, aesthetic influencers, and shifting body ideals. Public attitudes towards cosmetic interventions can be impacted by urbanization, better internet access, rising rates of cosmetic interventions provided privately, and exposure to national and international beauty trends. However, there are other factors that can affect decisions about

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cosmetic surgery, such as cultural beliefs, religious concerns, socioeconomic status, gender norms, family influence, and access to qualified healthcare professionals. Previous studies in Pakistan have focused on either health care workers or specific groups, but haven't been able to give a comprehensive picture of the knowledge, attitude, and practice of the general population (Shams et al., 2025). The gap in available local evidence restricts knowledge about whether individuals in Khyber Pakhtunkhwa have access to sufficient information on cosmetic procedures and if so, if they are on the basis of accurate health information.

Evaluation of the knowledge, attitude and practice of the general population regarding cosmetic procedures is essential to enhance patient education, increase informed patient choices, raise awareness of cosmetic procedure complications, and encourage safer use of cosmetic procedures. The global data shows significant societal changes in the volume of cosmetic procedures, the importance of social media, but also the differences in knowledge among the public, and rising psychological and security issues (ISAPS, 2025; Bondagji et al., 2024; Mironica et al., 2024). In Pakistan, a growing trend of aesthetic medicine interests in the population, paired with the lack of structured education and exposure in the profession, has been evidenced (Shams et al., 2025). There is still inadequate evidence from KP to assess the extent of the issue at the community level. A KAP study can determine misconceptions, gaps in information, perceived benefits and risks, sources of information, prior use and factors related to cosmetic-procedure practices. The results can be used as a basis for evidence-based health education, community awareness campaigns, professional counselling, ethical considerations about cosmetic surgery in the local population and future policy formulation.

Methods

Study Design and Setting

A descriptive cross-sectional research design was used to assess knowledge, attitude, and practice (KAP) regarding cosmetic procedures among the general population. The study was conducted in Lahore, Punjab, Pakistan, a major metropolitan city with diverse healthcare facilities, dermatology services, aesthetic clinics, beauty centers, and extensive exposure to social media and other sources of information related to cosmetic procedures. Pasted markdown.

Population and Sampling

The study population consisted of **adults from the general population residing in Lahore**. The required sample size was **384 participants**. A **non-probability convenience sampling technique** was used to recruit eligible participants. Adults aged 18 years and above who were Lahore residents, able to understand the questionnaire, willing to participate, available during data collection, and providing informed consent were included. Participants who did not meet these criteria or submitted substantially incomplete questionnaires were excluded. Pasted markdown.

Data Collection Procedure

Following ethical approval and permission from relevant authorities, eligible participants were approached and informed about the study objectives and procedures. The voluntary nature of participation, confidentiality, expected completion time, and right to withdraw were explained. **Written informed consent** was obtained before participation. A structured questionnaire was administered to assess demographic characteristics and participants' knowledge, attitudes, and practices regarding cosmetic procedures. Participants completed the questionnaire independently, while the researcher clarified instructions without influencing responses. Completed questionnaires were checked, coded, and prepared for data entry. Pasted markdown.

Data Analysis Procedure

Data were coded, entered, cleaned, and analyzed using SPSS Version 27. Frequencies and percentages were used for categorical variables, while means and standard deviations were calculated for continuous variables and KAP

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scores. Knowledge, attitude, and practice scores were categorized according to predetermined criteria. The Chi-square test was used to examine associations between demographic characteristics and categorized KAP levels, while Pearson's correlation coefficient was used to assess relationships among continuous KAP scores where appropriate. Statistical significance was set at $p < 0.05$ with a 95% confidence level.

Results and Analysis

Table 1 Demographic Characteristics of Participants (n = 384)

Variable	Category	Frequency (n)	Percentage (%)
Age	18–25 years	142	37.0
	26–35 years	121	31.5
	36–45 years	73	19.0
	46 years and above	48	12.5
Gender	Male	178	46.4
	Female	206	53.6
Marital status	Single	207	53.9
	Married	165	43.0
	Other	12	3.1
Educational level	Secondary	46	12.0
	Intermediate	72	18.8
	Graduate	169	44.0
	Postgraduate	97	25.3
Occupation	Student	112	29.2
	Employed	151	39.3
	Self-employed	67	17.4
	Unemployed	35	9.1
	Other	19	4.9
Total		**384**	**100.0**

The demographic information of the 384 participants used in the study can be seen in Table 1. A significant number of participants were between 18 and 25 years of age (37.0%), with 31.5% between 26 and 35 years of age, 19.0% aged 36 to 45 years and 12.5% aged 46 years or more. There were slightly more females in the sample (53.6%) than males (46.4%). In terms of marital status, over half of the participants were single (53.9%) while 43.0% were married and 3.1% were in other categories. Regarding educational level, the graduates were the largest group, with 44.0% of the participants, followed by the postgraduate category with 25.3%, intermediate level with 18.8% and secondary level with 12.0%. When looking at the occupation, the highest percentage of participants (39.3%) reported employment, while 29.2% were students, 17.4% self-employed, 9.1% were unemployed and 4.9% reported other occupations. The overall sample included mainly young adults with relatively high education.

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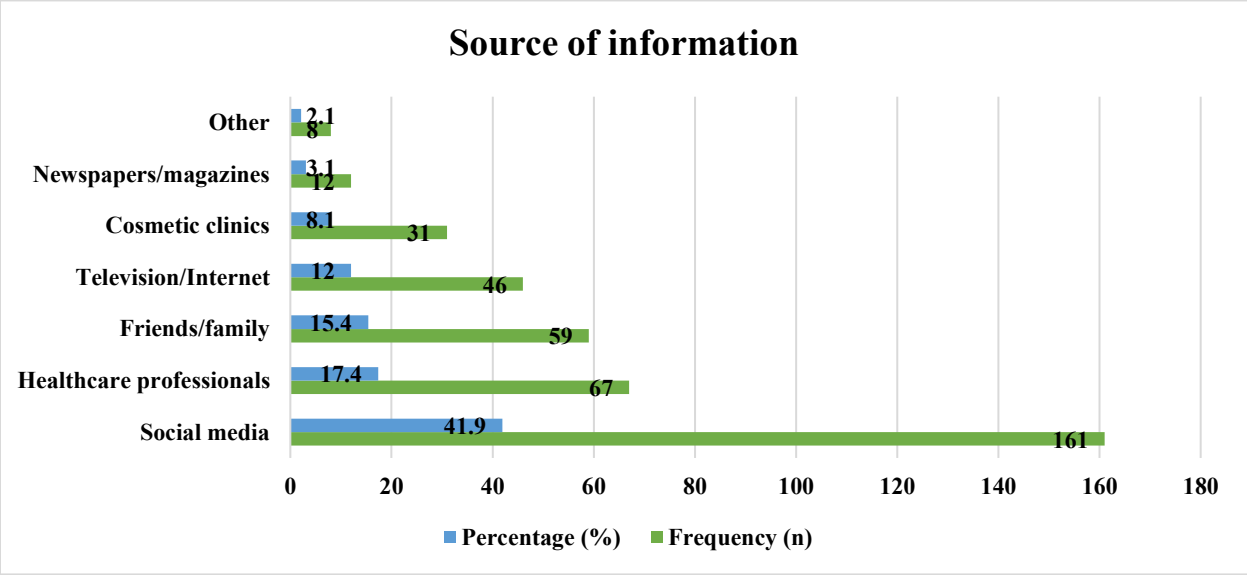


Figure 1 Sources of Information Regarding Cosmetic Procedures (n = 384)

The major sources of information about cosmetic procedures are shown in Figure 1. The social media platform was the most common channel reported, with 41.9% of participants reporting its use, showing its influential position in the dissemination of information on cosmetic procedures. 17.4% of participants said they found their source of information in healthcare practitioners, and 15.4% said their source was their friends and family. 12.0% of participants reported reading information in the television and 8.1% in the internet, while 8.1% read information in cosmetic clinics. Only 3.1% gave newspapers and magazines as their sources and 2.1% mentioned others. The results indicated that social media and informal information sources have a significantly bigger influence than traditional information sources on participants' awareness and understanding of cosmetic procedures.

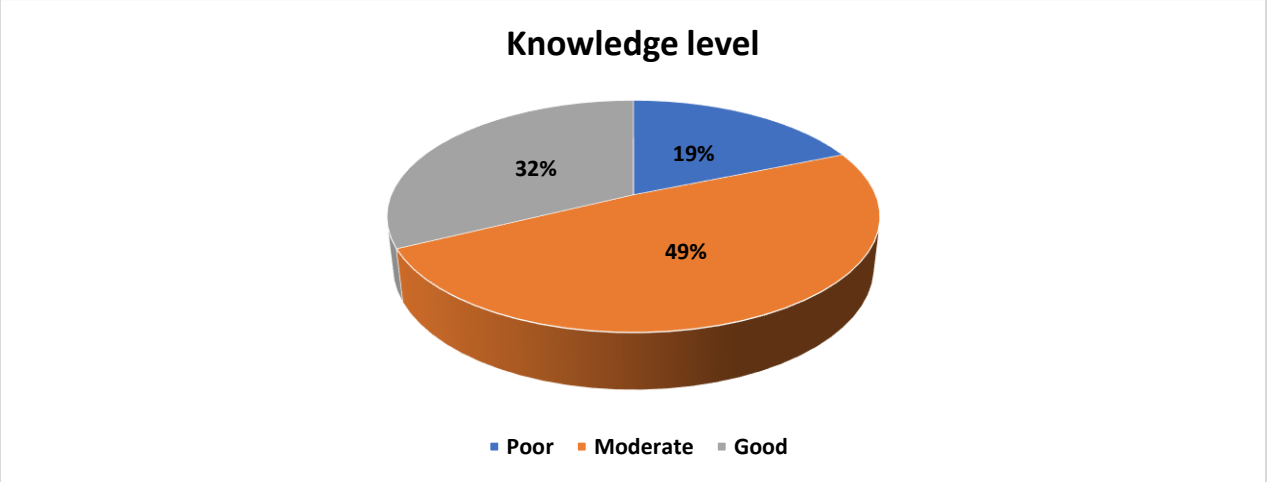


Figure 2 Overall Level of Knowledge Regarding Cosmetic Procedures (n = 384)

Figure 2 provides an overall picture of the participants' knowledge of cosmetic procedures. The level of knowledge in almost half (49.0%) was moderate; good knowledge was observed in 32.3% of the participants and poor knowledge was observed in 18.8%. So, the results show that while

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the majority had some knowledge about cosmetic procedures, only about a third had a high level of knowledge. The near 20% of participants with poor knowledge is significant as insufficient knowledge about complications, contraindications, practitioner qualifications, and post-procedure care could impact informed decision-making and safety. The overall findings indicate a need for effective education methods to enhance knowledge about cosmetic procedures in a comprehensive manner.

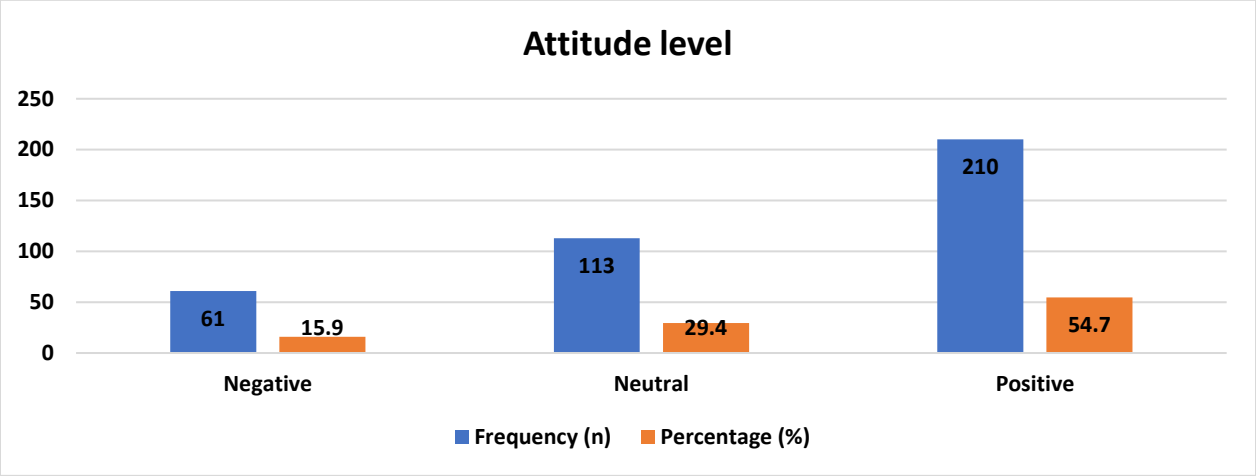


Figure 3 Overall Level of Attitude Toward Cosmetic Procedures (n = 384)

Figure 3 shows the overall attitude of the participants towards cosmetic procedures. Of those who responded, the majority (54.7%) had a positive attitude, 29.4% a neutral attitude and 15.9% a negative attitude. The majority of positive attitudes suggest that the study population had generally positive attitudes towards cosmetic procedures. However, the sizeable percentage of people with neutral attitudes indicates that certain people still had some uncertainty and mixed feelings about cosmetic procedures. The smaller proportion of those who had negative attitudes suggests that there were fewer people with negative perceptions. In general, there was a positive attitude of the participants towards cosmetic procedures.

Table 2 Overall Level of Practice Regarding Cosmetic Procedures (n = 384)

Practice level	Frequency (n)	Percentage (%)
Poor	157	40.9
Moderate	145	37.8
Good	82	21.4
Total	**384**	**100.0**

Table 2 shows the overall practices of the participants in regard to cosmetic procedures. The largest group (40.9%) practiced poorly, the second largest group (37.8%) practiced moderately and a small group (21.4%) practiced well. The results showed that, although people generally have positive attitudes towards cosmetics procedures, they were not consistently applied. Many of the participants had poor practice, a relative proportion which may be due to low levels of consultation with a qualified practitioner, lack of verification of practitioners' credentials, limited consideration of complications or lack of attention to post-procedure care. The results thus reveal a

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significant difference between the attitudes and practices of the participants with regard to their safe use.

Table 3 Association Between Demographic Characteristics and Knowledge Level

Demographic characteristic	Category	Poor n (%)	Moderate n (%)	Good n (%)	χ^2	p-value
Age	18–25	19 (13.4)	65 (45.8)	58 (40.8)	18.62	<0.001
	26–35	17 (14.0)	62 (51.2)	42 (34.7)		
	36–45	20 (27.4)	39 (53.4)	14 (19.2)		
	≥46	16 (33.3)	22 (45.8)	10 (20.8)		
Gender	Male	38 (21.3)	89 (50.0)	51 (28.7)	3.74	0.154
	Female	34 (16.5)	99 (48.1)	73 (35.4)		
Education	Secondary	18 (39.1)	22 (47.8)	6 (13.0)	31.48	<0.001
	Intermediate	19 (26.4)	39 (54.2)	14 (19.4)		
	Graduate	25 (14.8)	83 (49.1)	61 (36.1)		
	Postgraduate	10 (10.3)	44 (45.4)	43 (44.3)		

Table 3. shows the relationship between the selected socio-demographic variables and participants' knowledge about cosmetic procedures. There was a significant difference between age group and level of knowledge χ^2 = 18.62, $p < .001$. Likewise, education was significantly correlated with knowledge (χ^2 = 31.48, $p < .001$) such that those with higher education were more likely to exhibit good knowledge. However, gender was not significantly related to knowledge (χ^2 = 3.74, p = .154). The results indicate that age and level of education might be important factors in knowledge about cosmetic procedures while gender did not show a statistically significant difference within this sample.

Table 4 Correlation Between Knowledge, Attitude, and Practice Scores

Variables	Correlation coefficient (r)	p-value
Knowledge–Attitude	0.412	<0.001
Knowledge–Practice	0.286	<0.001
Attitude–Practice	0.354	<0.001

The correlation among scores of knowledge, attitude and practice is given in Table 4. The statistically significant positive correlation between knowledge and attitude (r = .412, $p < .001$) revealed that there was a positive correlation between these two variables which means that the people with higher knowledge had more positive attitude toward cosmetic procedures. With practice, knowledge also showed a positive correlation which was statistically significant (r = .286, $p < .001$) but weaker in strength. Attitude, in turn, was also positively related to practice (r = .354, $p < .001$). These results show that the better the knowledge and positive attitudes, the more appropriate the practices. Some of the moderate to weak correlation coefficients, however, indicate that knowledge and attitude do not necessarily explain the actual practices of cosmetic procedures.

Discussion

Findings from the present study indicate that the majority of respondents were young adults, with the highest number in the age group of 18-25 and

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over half of the respondents were female. The study was based on a relatively well-educated study population since a relatively high proportion had graduated or postgraduate education. This demographic trend was echoed by other studies, such as that by Bondagji et al. (2024) on the general population in western Saudi Arabia, which found that the majority of the study participants were young, female, and single. The average age among their participants was 27.4 years, indicating that younger adults were showing a significant interest in cosmetic surgeries. The demographic overlap between the present study and the Saudi Arabian study might be due to the fact that the younger adults may be more exposed to the new ideals of beauty, digital media and aesthetic information. The current results are different from some studies performed in more specific populations which included specific occupational or clinical groups and not the general population to determine demographic characteristics. Important to note is the significant representation of younger individuals because the majority of these individuals are exposed to digitally connected populations where cosmetic procedures are being discussed and promoted, especially those that frequently see content related to their appearance.

The findings of the present study revealed that people use social media as the most common source of information about cosmetic procedures (41.9%). Friends and family was reported as a source by 17.4% of the respondents, followed in number by the television/internet source, cosmetic clinics, and traditional print media. The result aligns with the systematic review by Mironica et al. (2024), which showed that social media platforms had a significant impact on appearance perceptions and cosmetic procedures with idealized and digitally enhanced images. Furthermore, Bondagji et al. (2024) found that 85.7% of the participants thought that the decisions on cosmetic treatments were affected by social media. The present finding aligns with other research that has shown that social media has become a primary location to obtain information about cosmetic procedures. In contrast, Sindi et al. (2023) reported that there was no significant association between social-media use and participants' history and desire to have cosmetic procedures performed in Makkah. The difference could be attributed to the cultural context, type of social media exposure, measurement differences, and to whether the social media is used as social media or whether they are involved with appearance related content.

The overall level of knowledge obtained from the present study was moderate, 49.0 % had moderate knowledge, 32.3 % had good knowledge and 18.8 % had poor knowledge. The participants had relatively good knowledge about basic concept and types of cosmetic procedures, and knowledge of contraindications, complications, infection risks and post-procedure care was comparatively lower. The results align with those of Al Hindi et al. (2022) who found that overall the knowledge of cosmetic procedure among the participants in Majmaah, Saudi Arabia was poor to moderate. A similar situation was noted by Bondagji et al. (2024) who found that 39.4% of the respondents had knowledge that was classified as good. This difference may be due to differences in the questionnaires, scoring methods, educational levels, or exposure to cosmetic services. This is of special significance since the observed lower level of knowledge in safety-related areas in the present study is important, as awareness of procedure type does not necessarily suggest sufficient knowledge for informed decision-making. A more clinically relevant aspect of public awareness is knowledge of risks, contraindications, and practitioner qualifications, as well as post-procedure care.

The present study revealed a positive attitude overall, with 54.7% of the participants rated as having a positive attitude, 29.4% who had a neutral attitude, 15.9% who had a negative attitude. Participants strongly favoured the idea of being able to consult with qualified professionals, and reported awareness of how cosmetic procedures might enhance their self-confidence and quality of life. The results are similar to those obtained by Al Hindi et al. (2022), who found that the participants had a positive attitude towards cosmetic procedures, despite their poor to

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moderate knowledge. In both studies, moderate knowledge and positive attitudes were found, which indicates that positive attitudes can be formed through social exposure (including peers and media images), personal preferences, and social influence to a great extent, not exclusively by broad knowledge of health. Similarly, Mironica et al. (2024) found that social media can also foster acceptance of cosmetic procedures, suggesting that aesthetics enhancement is desirable while reinforcing appearance concerns. The current results are inconsistent with studies on populations with cultural and social norms that could lead to more conservative attitudes toward cosmetic surgeries. Such disparities highlight the need to understand attitudes in a social and cultural context of the population under investigation.

The practice findings showed that there was a significant difference in positive attitudes and safety-related behavior. Twenty-five percent had previously had a cosmetic procedure, while 44.8% planned to have a procedure in the future. Only one-quarter reported to have seen a qualified practitioner or read information on practitioner qualifications before deciding to use a practitioner, and 28.4% reported that they had sought information before deciding. 40.9% of the participants had poor practice and 21.4% had good practice. Bondagji et al (2024) reported that there were fewer number of cosmetic procedures than reported by Al Hindi et al (2022) with only 8.4% of their participants reporting cosmetic procedures despite the positive attitudes. The relatively greater likelihood to have a procedure performed in the current study also suggests that positive attitudes do not always lead to current use. The results also indicate that the intention to undergo cosmetic procedures may be greater than the actual performance of the procedures, especially if financial, social, accessibility or safety factors play a role in the decision.

The results of the present study revealed significant relationships between age and knowledge, attitude and practice as well as education and the three domains. There were no significant associations between gender and knowledge, attitude or practice. The results indicate that age and education level might be more significant than gender in the current population with respect to KAP patterns. This was also observed by Alrashed et al (2023), who noted that the more one knew about FGCS, the younger they were and the higher their educational status. Bondagji et al. (2024) also found that the most prominent characteristics of the participants with good knowledge of cosmetic procedures were their young age, female sex, and their being single. The results are not all congruent with the results of some cosmetic-procedure studies, which indicate higher exposure, interest or acceptance among women. This difference might be due to changes in men's social normativization regarding cosmetic procedures, variation in the type of sample or to the wider range of cosmetic procedures analyzed in the current study.

Statistically significant positive correlation was found between knowledge and attitude ($r = .412$, $p < .001$), between knowledge and practice ($r = .286$, $p < .001$), and between attitude and practice ($r = .354$, $p < .001$) as revealed by the correlation analysis. Knowledge was observed to be related to attitude most with a positive association, meaning that the higher the knowledge the more positive the attitude of the participants concerning cosmetic procedure. Association between knowledge and practice was less, showing that having knowledge alone may not result in appropriate behaviour. The positive correlation between attitude and practice also indicates that positive attitudes can be a factor in good decision making, but other factors are probably involved. These results align with the overall evidence that many factors interact to influence cosmetic-procedure decisions such as social media exposure, appearance concerns, cultural expectations, and interpersonal influences (Mironica et al., 2024). In particular, the poor knowledge-practice correlation is significant due to the fact that it suggests that unsafe knowledge-practice may not be fully remedied by educational intervention.

The overall results showed that the level of knowledge of the participants was moderate, their attitudes were generally positive, and their

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practices were comparatively low with regard to cosmetic procedures. One of the key conclusions was that there seemed to be a disconnect between knowledge and safety-related practices. Participants knew what cosmetic procedures were, and had a general understanding of the possible benefits, but fewer participants reported seeking advice from qualified professionals, confirming the practitioners' qualifications, getting sufficient information, or following the correct post-procedure guidelines. The results align with the evidence that exists from Saudi Arabia regarding cosmetic procedures, which are socially accepted but in which detailed knowledge and safe practice aren't consistent (Al Hindi et al., 2022; Bondagji et al., 2024). In the current study, social media proved to be a relevant source of information, consistent with the systematic review findings regarding the role of appearance-related digital content in cosmetic procedure considerations and perceptions (Mironica et al., 2024). The findings confirm the importance of providing easy to access, public education that highlights evidence-based information, realistic expectations, possible complications, contraindications, selection of qualified providers, informed consent, and post-procedure care. Public-health and healthcare interventions for cosmetic procedures should not only aim to increase knowledge, they should also aim to transform knowledge and attitudes to safer decision making.

CONCLUSION:

In the present study, knowledge, attitude and practice of general population in Cosmetic procedures in Lahore was assessed. Findings confirmed the participants had a moderate knowledge level, highlighting key areas of interest around contraindications, complications, practitioner qualifications, infection prevention and post-procedure care. Over half reported a positive attitude towards cosmetic procedures, including their ability to enhance self-confidence and quality of life and the need for expert advice. However, the practice was relatively low despite this positive attitudes, suggesting that the participants experienced discrepancies in their knowledge, perceptions and safety related behaviors. Social media appeared as the most commonly reported source of information, emphasising its important role in raising awareness and influencing public decision making about cosmetic procedures. No statistically significant associations were observed between gender and KAP, while age and education level were strongly associated with KAP. There were also high significant positive correlation between knowledge and attitude, knowledge and practice, and attitude and practice. The results suggest that raising public consciousness is not enough to guarantee safe practices of cosmetic procedures. There needs to be more focus on verifying practitioner qualifications, informed decision making, medical complications, post-procedure care, and evidence-based information, professional consultation. Through education and regulatory measures, there is a potential for safer and more informed cosmetic procedure decisions in general.

RECOMMENDATIONS

1. Public awareness programs should be planned to enhance information about cosmetic procedures, including their risks, complications, contraindications, benefits and limitations.
2. The healthcare worker should offer correct, evidence-based counseling to people who are considering cosmetic procedures and promote informed decision-making.
3. Prior to undergoing any cosmetic procedure, particularly any invasive or potentially risky procedure, it is recommended to consult with a qualified practitioner.
4. Practitioners' qualifications, such as checking credentials, training, experience and professional registration of cosmetic-procedure providers, should be promoted through public education.
5. Health education on social media platforms should be done by healthcare professionals and institutions, creating reliable health education content to reduce misinformation and unrealistic expectations.
6. The majority of cosmetic clinics should offer uniform patient details including benefits of the

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procedure, potential complications, contraindications, results, after-care instructions and warnings about complications that call for medical intervention.

7. Regulatory bodies must implement more robust regulatory oversight of cosmetic procedure providers and facilities, to ensure compliance with standards of professionalism, patient safety, informed consent and proper infection-control protocols.
8. Educational efforts should focus on younger adults, as they comprised a significant portion of the population in the study and could be more likely to have higher exposure to social-media-based cosmetic information.
9. Future studies need to include larger and more representative samples of cities and regions of Pakistan to enhance the generalizability of the findings.
10. Future studies should examine how social media, body image, psychological factors, culture and societal norms, and socioeconomic factors affect cosmetic-procedure decision making.
11. Research into interventional studies should be undertaken to determine if educational intervention can increase knowledge and result in safer cosmetic-procedure practices that are followed.
12. Healthcare institutions and nursing professionals should be involved in public education, especially with supplying evidence-based information on risks, safety measures, and post-procedure care.

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