



Adult Knowledge in Postoperative Complications of Rhinoplasty in Aseer Region, Saudi Arabia

Waleed Alghamdi^{1*}, Walaa H Algadhi², Ibrahem H Erwe¹, Raghad Y Albassam Alqahtani³, Hind Ghaythan Jrais³ and Khalid Alshehri¹

¹Otolaryngology Department, Aseer Central Hospital, Saudi Arabia

²Otolaryngology Department, Abu-Arish General Hospital, Saudi Arabia

³Medical Intern, College of Medicine, King Khalid University, Saudi Arabia

*Corresponding Author: Waleed Alghamdi, Otolaryngology Department, Aseer Central Hospital, Abha, Saudi Arabia.

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Abstract

Background: Rhinoplasty is a cosmetic surgery aimed at reshaping the nose for improved aesthetics and function. It has evolved from ancient reconstructive techniques to modern surgical procedures that blend art and science. The procedure challenges surgeons to meet high patient expectations.

Objectives: To assess the awareness of rhinoplasty postoperative complications among both genders living in Aseer region, Saudi Arabia.

Methodology: It is a cross-sectional study which was conducted in Aseer Region, Saudi Arabia from 1st of November to 31st of December 2024 using an online questionnaire which was distributed among people who are desiring or going to do rhinoplasty procedure at Aseer Central Hospital.

Results: Among 183 respondents, a majority expressed uncertainty ("I do not know") regarding rare complications such as death (78.14%, n=143), with only 21.86% (n=40) being aware. Higher levels of awareness were reported for complications such as breathing disorders (68.85%, n=126) and dissatisfaction with the new nose (64.48%, n=118). Awareness of the mismatch of the new nose with the rest of the face (63.39%, n=116) and the need for reoperation (62.84%, n=115) was also prevalent. Complications like smell disorders (59.56%, n=109) and nasal blockage (57.38%, n=105) were moderately recognized.

Conclusion: Most respondents show moderate awareness of common complications, on the other hand, knowledge regarding rare complications was limited. The findings show the need for pre-operative counseling and educational interventions in managing expectations and enhancing informed decision-making among respondents.

Keywords: Rhinoplasty, Nasal surgery, Complications, Aseer

Introduction

Rhinoplasty is a surgical intervention that modifies both the internal and external structure of the nose [1]. It is one of the most complex and challenging surgical procedures that requires a combination of anatomy knowledge, surgical judgment, and technical

skills to achieve the patients' goals [2,3]. The types of rhinoplasty are cosmetic and functional. The purpose of cosmetic rhinoplasty is to improve the nose appearance, while the purpose of functional rhinoplasty is to improve airway obstruction and enhance nasal breathing [4].

According to the International Society of Aesthetic Plastic Surgery, rhinoplasty is the 5th common plastic surgery worldwide with 298,413 rhinoplasties which were performed in the United States [5]. Furthermore, it is representing 30.4% of all cosmetic procedures in Saudi Arabia [6]. The reasons behind the increase of rhinoplasty are due to a desire to correct dysmorphic facial features, and the impact of social media [1,7].

Rhinoplasty is associated with complications, either early or late complications. The early complications include skin necrosis, periorbital hematoma, infection, epistaxis, and septal hematoma, while septal perforation, hypertrophy of scar, and enophthalmos are considered late complications [2]. In addition, the disturbances of breathing had been reported by 70% of all revision rhinoplasty patients [7].

In 2012, a study was done among 320 female students from high schools in Kerman, Iran, to explore the interest in rhinoplasty and awareness about its postoperative complications demonstrated that 91.07%, 89.48%, 89.44, and 89.29% of participants did not know that nasal discharge, recurrent nausea and vomiting, skin discoloration, and sensitivity to strong odors may be considered as postoperative complications of rhinoplasty, respectively [8].

Regarding the attitude toward rhinoplasty, the previous study showed that 53.65% want to do a rhinoplasty and the reasons of that they want to do it for beauty (91.12%) and to catch up with the mode (7.10%) [8].

A study conducted among 399 cosmetic surgery patients between January to March 2018 in a facial plastic clinic in King Abdulaziz University Hospital, Riyadh, Saudi Arabia found that rhinoplasty was the most common facial plastic procedure (59%) as well as around 67% of participants wished for a procedure in the future [5].

Based on a cross-sectional study conducted in the Western and Southern Regions of Saudi Arabia, published in 2023, A total of 1645 participants responded to the survey. The study revealed that 38.75% of participants expressed dissatisfaction about the shape of their noses, and 23.60% of them showed their desire to perform rhinoplastic surgery for self-confidence (32.48%). However, 76.36% of participants showed no intention to do rhinoplastic surgery due to self-acceptance and they believe there is no benefit of the cosmetic surgeries [9].

A study was done in 2023 in the Western Region of Saudi Arabia to investigate adult knowledge about postoperative complications of rhinoplasty found that 605 (62.50%) out of 968 were happy about the appearance of their nose, and 749 (77.38%) had no intention to a plastic surgery for their nose. On the other hand, 219 (22.62%)

of participants expressed a desire to do rhinoplastic surgery due to fashion trends 78 (36.79%). Regarding for their knowledge about postoperative complications of rhinoplasty, 66.63% know that rhinoplastic surgery causes breathing disorders. However, 96.18%, 74.59%, 70.25%, 66.22%, and 65.50% of participants did not know that rhinoplastic surgery can cause nasal discharge, recurrent nasal mucosal irritation, sensitivity to strong odors, need for reoperation, and nose blockage, respectively [2].

The awareness of rhinoplasty complications should be part of an individual decision-making process, so our study aimed to assess the awareness of rhinoplasty postoperative complications among male and female adults aged 18 years and above living in Aseer region, Saudi Arabia.

Methods

Study Design

This cross-sectional study was conducted in Asser Region, Saudi Arabia from 1st of November 2024 to 31st of December 2024 to evaluate awareness and attitudes toward rhinoplasty and its post-operative complications. A total of 183 participants were included. The participants were selected using the convenience sampling method.

Data Collection

Data were collected using an online questionnaire, deployed using Google Forms, and distributed among people who are desire or going to do rhinoplasty procedure at Aseer Central Hospital. The questionnaire consisted of 28 items, covering demographic information (e.g., age, gender, marital status, education level, work environment), prior cosmetic procedures, attitudes toward the appearance of their nose, Interest in rhinoplasty, reasons for considering the procedure, and awareness of potential post-operative complications. Additionally, a section on knowledge of rhinoplasty complications was included, consisting of 12 questions. Each correct answer was assigned one point, and a composite knowledge score was calculated for each participant, with higher scores indicating greater awareness.

Ethical Considerations

Ethical approval was obtained from the Aseer Institutional Review Board. The questionnaire included an introductory section outlining the purpose of the study and a consent statement. Participants were required to agree to the terms before proceeding. Participants were assured of the confidentiality of their responses and their right to withdraw at any time without consequences.

Data Analysis

Statistical analysis was performed using R v 4.3. Counts and percentages were used to summarize categorical variables. Knowledge scores were summarized using means and standard deviations (SD). Group comparisons were performed using Chi-square tests for categorical variables and independent-sample t-tests or

ANOVA for continuous variables. Multivariate binary logistic regression analysis was conducted to identify predictors of Interest in rhinoplasty, while ordinal logistic regression was used to assess awareness of complications. Cronbach's alpha (α) was used to assess the reliability of awareness questions and was found to be 0.9, indicating good internal consistency. Knowledge score was calculated by summing the number of correct responses for each participant with a possible maximum score of 16. Knowledge was classified as poor (0 -5), good (6 - 10), and excellent (> 10). All statistical tests were two-tailed, with significance set at $p < 0.05$.

Results

Descriptive Statistics

The participants (n=183) had a mean age of 29.8 ± 9.98 years.

Most participants were aged ≤ 30 years (61.7%, n=113), followed by those aged 30-40 years (26.2%, n=48) and >40 years (12.0%, n=22). Regarding gender, the majority were female (67.8%, n=124), while males comprised 32.2% (n=59). In terms of marital status, 56.8% (n=104) were single, 35.0% (n=64) married, 7.10% (n=13) divorced, and 1.09% (n=2) widowed. For education, 73.2% (n=134) held a bachelor's degree or diploma, 19.1% (n=35) had a high school education or less, and 7.65% (n=14) completed post-graduate studies. Work environment distribution showed that 45.9% (n=84) worked in mixed environments, 36.6% (n=67) in separate settings, and 13.1% (n=24) reported having no work environment. Students accounted for 3.39% (n=6), while retired individuals comprised 1.09% (n=2). Regarding cosmetic procedures, 35.0% (n=64) reported having previously undergone a cosmetic procedure, whereas 65.0% (n=119) had not (Table 1).

Table 1: Descriptive statistics for the study sample.

	N = 183
Age (Mean \pm SD)	29.8 \pm 9.98
Age	
≤ 30	113 (61.7%)
30 - 40	48 (26.2%)
> 40	22 (12.0%)
Gender:	
Female	124 (67.8%)
Male	59 (32.2%)
Marital status:	
Divorced	13 (7.10%)
Married	64 (35.0%)
Single	104 (56.8%)
Widowed	2 (1.09%)
Education:	
High school or less	35 (19.1%)
Bachelor or Diploma	134 (73.2%)
Post-graduate	14 (7.65%)
Work environment:	
Mixed	84 (45.9%)
None	24 (13.1%)
Retired	2 (1.09%)
Separate	67 (36.6%)
Student	6 (3.39%)
Previously undergone any cosmetic procedure:	
No	119 (65.0%)
Yes	64 (35.0%)
Data were summarized using n (%) unless otherwise stated.	

Attitude towards Rhinoplasty

Out of the total respondents (N=183), 37.2% (n=68) reported feeling happy with the appearance of their noses, while 10.4% (n=19) stated that they did not care about its appearance. The

majority, 52.5% (n=96), expressed dissatisfaction, indicating they were unhappy with their nose. Regarding the desire to undergo rhinoplasty, 70.5% (n=129) of respondents showed Interest in undergoing the procedure, whereas 29.5% (n=54) did not wish to pursue it (Table 2).

Table 2: Attitude towards rhinoplasty.

	[ALL]
	N=183
Feelings toward the appearance of the nose:	
Happy	68 (37.2%)
Do not care	19 (10.4%)
Unhappy	96 (52.5%)
Desire to undergo rhinoplasty:	
No	54 (29.5%)
Yes	129 (70.5%)
Data were summarized using n (%)	

The bar chart in Figure 1a reveals that the most common reason for undergoing rhinoplasty was aesthetic concerns (68%, n=88), followed by medical reasons (60%, n=78). Fewer respondents reported being influenced by insistence from family and friends (10%, n=13) or a desire to keep up with trends (7%, n=9). The Venn diagram in Figure 1b illustrates the overlap of these rea-

sons. Thirty-eight respondents (29.5%) selected only aesthetic reasons, while 33 (25.6%) cited only medical reasons. Overlaps were observed for 37 respondents (28.7%) who selected aesthetic and medical reasons. More minor overlaps included combinations with insistence from family and friends or keeping up with trends, and only one respondent (0.8%) selected all four reasons (Figure 1).

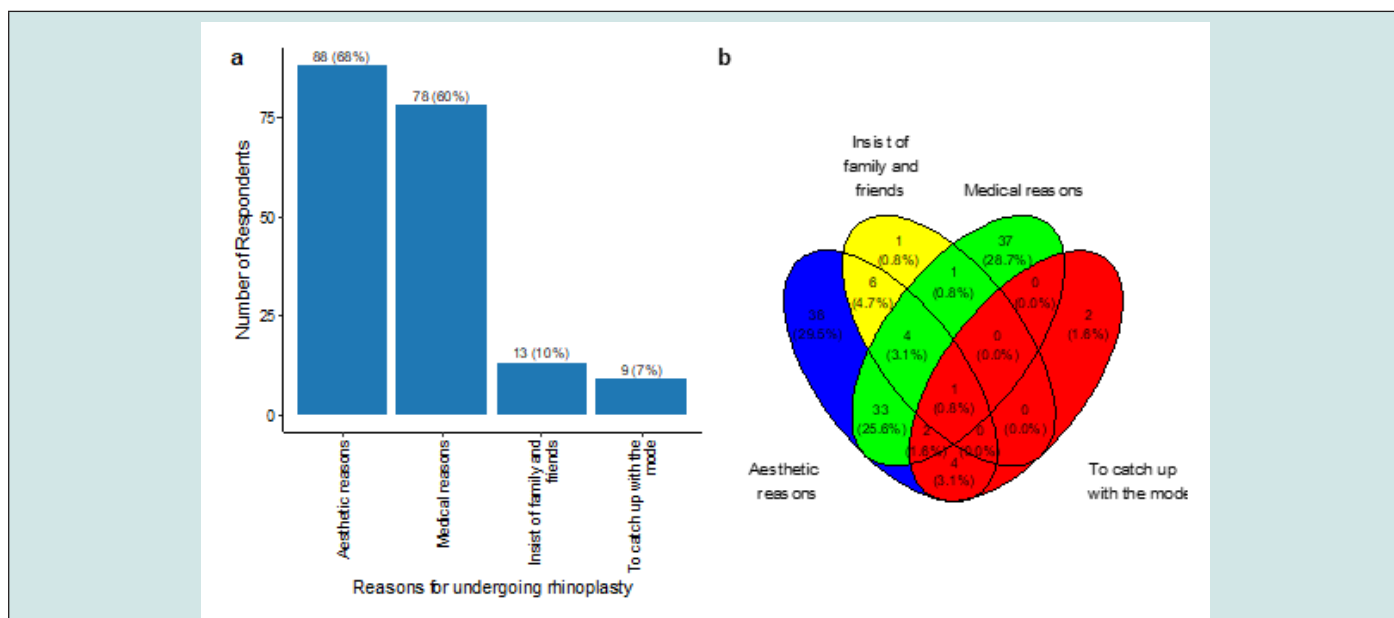
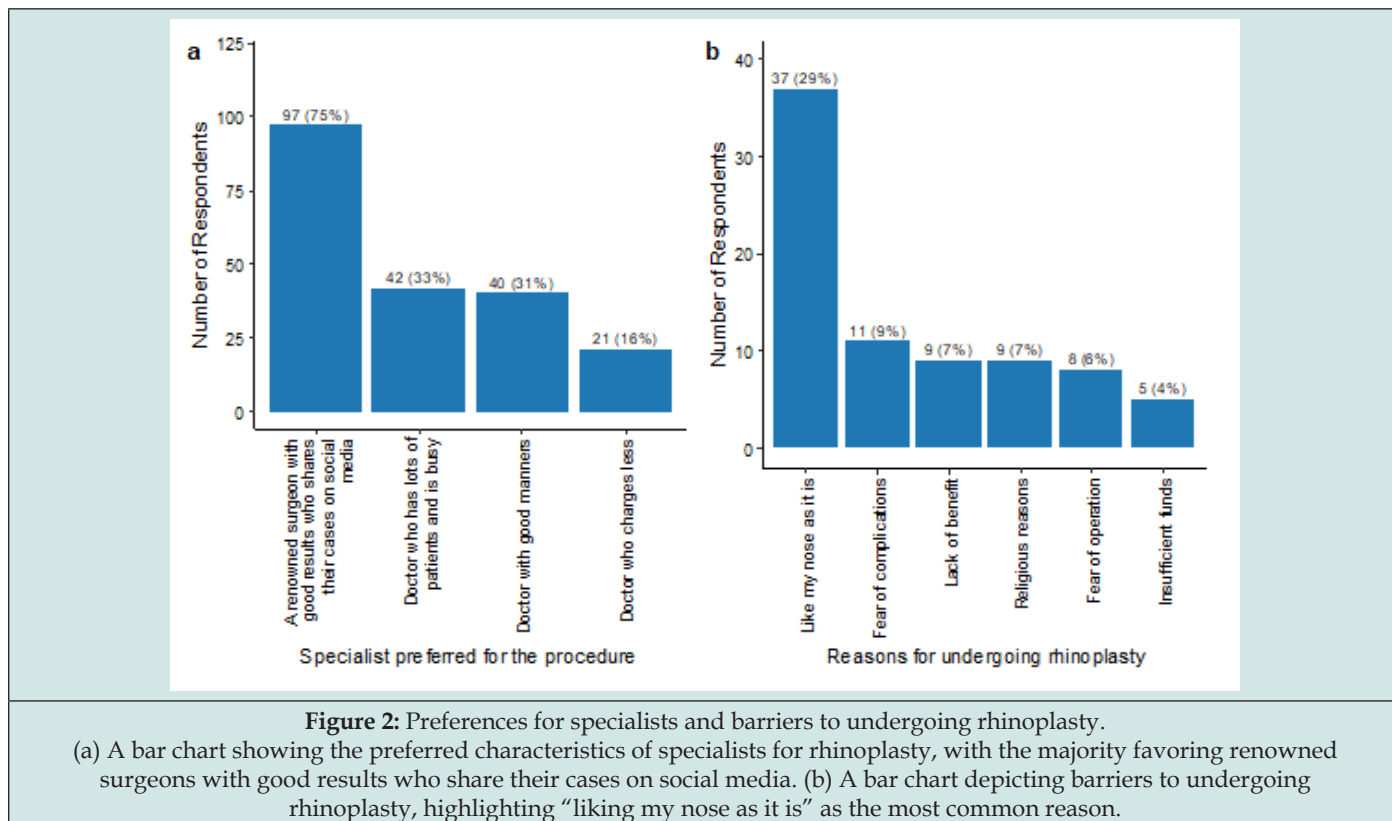


Figure 1: Reasons for undergoing rhinoplasty and their overlap among respondents.

(a) A bar chart showing the distribution of reasons for undergoing rhinoplasty, including aesthetic and medical reasons, insistence from family and friends, and keeping up with trends. (b) A Venn diagram illustrates respondents' overlap based on the reasons they selected.

Interpretation: The bar chart in Figure 2a shows that 75% of respondents (n=97) preferred renowned surgeons with good results who share their cases on social media. Other preferences included doctors with many patients and a busy schedule (33%, n=42), doctors with good manners (31%, n=40), and doctors who charge less (16%, n=21). Figure 2b highlights barriers to under-

going rhinoplasty. The most common reason was satisfaction with their nose as it is (29%, n=37). Additional barriers included fear of complications (9%, n=11), lack of perceived benefit (7%, n=9), religious reasons (7%, n=9), fear of the operation (6%, n=8), and insufficient funds (4%, n=5) (Figure 2).



Awareness Regarding Complications

The awareness of potential complications associated with rhinoplasty was evaluated among respondents (N=183). A majority expressed uncertainty ("I do not know") regarding rare complications such as death (78.14%, n=143), with only 21.86% (n=40) being aware. Similarly, awareness was low for complications like numbness in the upper front teeth (32.24%, n=59), while 67.76% (n=124) were uncertain.

On the other hand, higher levels of awareness were reported for complications such as breathing disorders (68.85%, n=126) and dissatisfaction with the new nose (64.48%, n=118). Awareness of the mismatch of the new nose with the rest of the face (63.39%, n=116) and the need for reoperation (62.84%, n=115) was also prevalent. Complications like smell disorders (59.56%, n=109) and nasal blockage (57.38%, n=105) were moderately recognized.

Complications like headache (55.19%, n=101), recurrent nasal mucosal irritation (50.27%, n=92), and nasal congestion (50.82%, n=93) showed relatively balanced levels of awareness and uncertainty. Meanwhile, less than half of the respondents were aware of

complications such as nasal discharge (53.01%, n=97) and sensitivity to strong odors (47.54%, n=87). The least recognized complication was recurrent nausea and vomiting, with only 25.14% (n=46) being aware, while 74.86% (n=137) expressed uncertainty. The awareness regarding complications score, calculated across 16 questions, ranged from 0 to 16 with a median score of 8 (IQR 5 - 11.5). The mean score was 7.94 ± 4.86 . Notably, 25 respondents (13.66% of the total) scored 0, indicating no awareness of any complications (Figure 3).

Predictors of Wanting to do Rhinoplasty

Among the respondents (N=183), those who did not desire rhinoplasty (n=54) were significantly older on average compared to those who desired the procedure (32.3 ± 12.1 years vs. 28.7 ± 8.78 years, $P=0.05$). Gender distribution showed that males were more likely to desire rhinoplasty (78.0%, n=46) compared to females (66.9%, n=83), but the difference was not significant ($p=0.175$). Regarding marital status, there were no significant differences between groups ($p=0.465$), with singles forming the most significant proportion of those desiring rhinoplasty (74.0%, n=77).

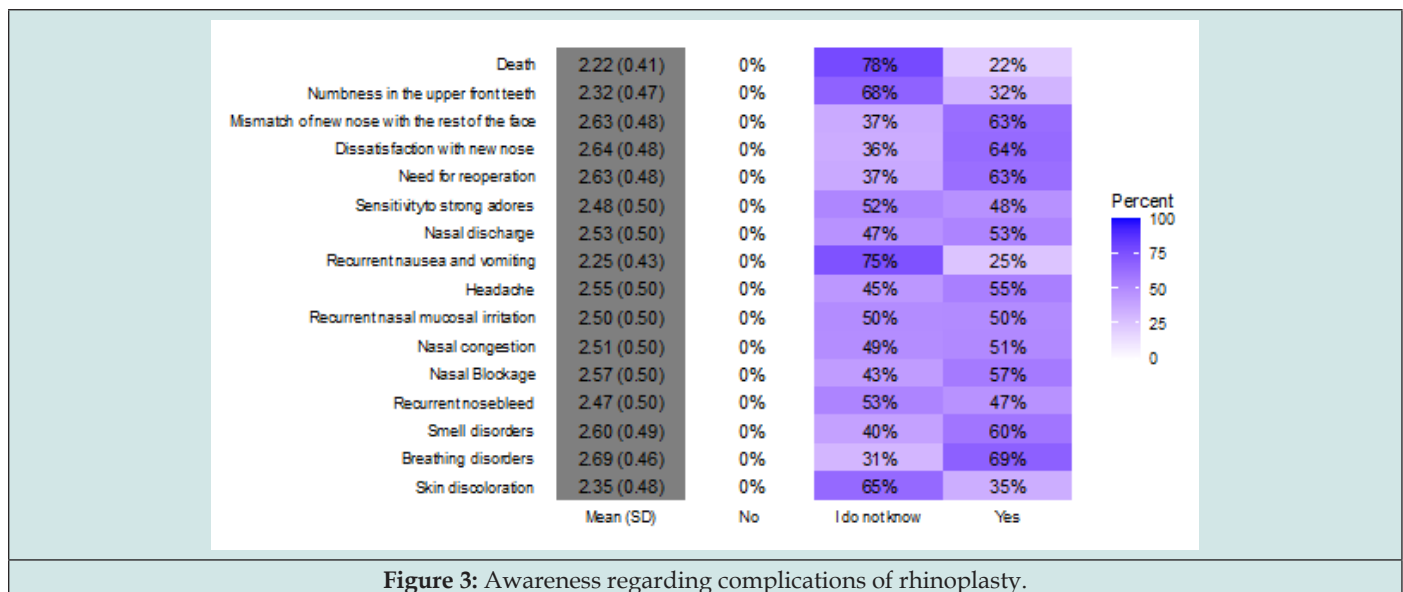


Figure 3: Awareness regarding complications of rhinoplasty.

Education level was significantly associated with the desire for rhinoplasty ($p=0.005$). Respondents with high school education or less were more likely to express a desire for rhinoplasty (91.4%, $n=32$) compared to those with a bachelor's degree or diploma (65.7%, $n=88$) or post-graduate education (64.3%, $n=9$). The work environment was not significantly associated with the desire for rhinoplasty ($p=0.261$), with the majority in both groups working in mixed environments (66.7%, $n=56$ in the "Yes" group).

Previous cosmetic procedures did not significantly differ be-

tween groups ($p=0.896$), with 71.9% ($n=46$) of those who desired rhinoplasty having no prior cosmetic procedures. Feelings toward nose appearance were significantly associated with the desire for rhinoplasty ($p < 0.001$). Those who were unhappy with their nose were most likely to desire rhinoplasty (97.9%, $n=94$), while those who were happy (42.6%, $n=29$) or indifferent (31.6%, $n=6$) were less likely to express this desire. Age categories did not show significant differences ($p=0.168$), although younger respondents (74.3%, $n=84$, aged ≤ 30 years) were more likely to desire rhinoplasty compared to older groups (Table 3).

Table 3: Factors associated with the desire to undergo rhinoplasty.

	No	Yes	P
	N=54	N=129	
Age (Mean \pm SD)	32.3 \pm 12.1	28.7 \pm 8.78	0.05
Gender:			0.175
Female	41 (33.1%)	83 (66.9%)	
Male	13 (22.0%)	46 (78.0%)	
Marital status:			0.465
Divorced	5 (38.5%)	8 (61.5%)	
Married	21 (32.8%)	43 (67.2%)	
Single		77 (74.0%)	
27 (26.0%)			
Widowed	1 (50.0%)	1 (50.0%)	
Education:			0.005
High school or less	3 (8.57%)	32 (91.4%)	
Bachelor or Diploma	46 (34.3%)	88 (65.7%)	
Post-graduate	5 (35.7%)	9 (64.3%)	
Work environment:			0.261

Mixed	28 (33.3%)	56 (66.7%)	
None	3 (12.5%)	21 (87.5%)	
Retired	1 (50.0%)	1 (50.0%)	
Separate	20 (29.9%)	47 (70.1%)	
Student	2 (33.3%)	4 (66.7%)	
Previously undergone any cosmetic procedure:			0.896
No	36 (30.3%)	83 (69.7%)	
Yes	18 (28.1%)	46 (71.9%)	
Feelings toward the appearance of the nose:			<0.001
Happy	39 (57.4%)	29 (42.6%)	
Do not care	13 (68.4%)	6 (31.6%)	
Unhappy	2 (2.08%)	94 (97.9%)	
Data were summarized using N (%) unless otherwise stated			
Analysis was performed using the Chi-square test of independence for categorical variables and unpaired t-test for continuous variables			

The association between awareness levels regarding rhinoplasty complications and age categories was statistically significant ($p=0.050$). Respondents aged ≤ 30 years were more likely to have good (40.7%, $n=46$) or excellent (35.4%, $n=40$) awareness compared to poor awareness (23.9%, $n=27$). In contrast, respondents aged 31-40 years were more likely to have poor awareness (39.6%, $n=19$) compared to good (35.4%, $n=17$) or excellent (25.0%, $n=12$) awareness. Similarly, respondents aged >40 years were most likely to have poor awareness (40.9%, $n=9$) compared to good (31.8%, $n=7$) or excellent (27.3%, $n=6$) awareness. This indicates that younger respondents (≤ 30 years) have higher awareness levels than older age groups.

Gender distribution was significantly associated with awareness ($p=0.045$). Males were more likely to have poor awareness (40.7%, $n=24$), whereas females were more likely to have good (40.3%, $n=50$) or excellent (34.7%, $n=43$) awareness. Marital status showed significant differences ($p=0.029$). Married respondents were more likely to have poor awareness (45.3%, $n=29$), while single respondents were more likely to have good (41.3%, $n=43$) or excellent (36.5%, $n=38$) awareness. Education level was not significantly associated with awareness ($p=0.171$). However, those with a

high school education or less were more likely to have poor awareness (40.0%, $n=14$), while respondents with a bachelor's degree or diploma were evenly distributed across good and excellent awareness (36.6%, $n=49$ each).

Work environment was significantly associated with awareness levels ($p < 0.001$). Respondents in mixed environments were more likely to have excellent awareness (47.6%, $n=40$), whereas those in separate environments were more likely to have poor awareness (43.3%, $n=29$). Prior cosmetic procedures were not significantly associated with awareness ($p=0.747$), as respondents with and without prior procedures were similarly distributed across all categories.

Feelings toward nose appearance prior to rhinoplasty were not significantly associated with awareness levels ($p=0.717$). Those who were unhappy with their nose were evenly distributed across poor (32.3%, $n=31$), good (35.4%, $n=34$), and excellent (32.3%, $n=31$) awareness. Desire to undergo rhinoplasty also showed no significant differences ($p=0.153$), although those who did not desire rhinoplasty were more likely to have good awareness (46.3%, $n=25$) (Table 4).

Table 4: Factors associated with knowledge regarding complications.

	Poor	Good	Excellent	P
	N=55	N=70	N=58	
Age category:				0.05
≤ 30	27 (23.9%)	46 (40.7%)	40 (35.4%)	
31 – 40	19 (39.6%)	17 (35.4%)	12 (25.0%)	
> 40	9 (40.9%)	7 (31.8%)	6 (27.3%)	
Gender:				0.045

Female	31 (25.0%)	50 (40.3%)	43 (34.7%)	
Male	24 (40.7%)	20 (33.9%)	15 (25.4%)	
Marital status:				0.029
Divorced	3 (23.1%)	6 (46.2%)	4 (30.8%)	
Married	29 (45.3%)	19 (29.7%)	16 (25.0%)	
Single	23 (22.1%)	43 (41.3%)	38 (36.5%)	
Widowed	0 (0.00%)	2 (100%)	0 (0.00%)	
Education:				0.171
High school or less	14 (40.0%)	14 (40.0%)	7 (20.0%)	
Bachelor or Diploma	36 (26.9%)	49 (36.6%)	49 (36.6%)	
Post-graduate	5 (35.7%)	7 (50.0%)	2 (14.3%)	
Work environment:				<0.001
Mixed	14 (16.7%)	30 (35.7%)	40 (47.6%)	
None	11 (42.3%)	13 (50.0%)	2 (7.69%)	
Separate	29 (43.3%)	23 (34.3%)	15 (22.4%)	
Student	1 (16.7%)	4 (66.7%)	1 (16.7%)	
Previously undergone any cosmetic procedure:				0.747
No	38 (31.9%)	44 (37.0%)	37 (31.1%)	
Yes	17 (26.6%)	26 (40.6%)	21 (32.8%)	
Feelings toward the appearance of the nose:				0.717
Happy	20 (29.4%)	26 (38.2%)	22 (32.4%)	
I do not care				
4 (21.1%)				
10 (52.6%)				
5 (26.3%)				
Unhappy	31 (32.3%)	34 (35.4%)	31 (32.3%)	
Desire to undergo rhinoplasty:				0.153
No	11 (20.4%)	25 (46.3%)	18 (33.3%)	
Yes	44 (34.1%)	45 (34.9%)	40 (31.0%)	
Data were summarized using N (%) unless otherwise stated				
Analysis was performed using the Chi-square test of independence for categorical variables				

Discussion

The current study evaluated the awareness and attitudes toward rhinoplasty and its post-operative complications. Results showed that 52.5% of the respondents were dissatisfied with the appearance of their noses, while 37.2% were satisfied, and 10.4% were neutral. Moreover, three-quarters of the respondents indicated a willingness to undergo rhinoplasty. The most common reasons were aesthetic concerns (68%) and medical reasons (60%). The influence of Society/family and adherence to trends were less commonly reported as reasons accounted for smaller proportions (10% and 7%, respectively). The reported reasons in the current study are similar to those reported in the literature, emphasizing dissatis-

faction as a primary motivator for rhinoplasty. Jalili and colleagues identified the lack of confidence and the desire to improve physical appearance as the main predictors of the willingness to undergo rhinoplasty in the Iranian population [10]. Another study reported that women with negative self-image were more likely to consider rhinoplasty, which highlights the negative impact of perceived flaws [11]. In the US, motivations for rhinoplasty include improving nasal function, correcting deformities, and enhancing facial harmony to improve self-esteem and confidence [12].

The decision to undergo rhinoplasty is usually affected by social and cultural norms, which impact the perceptions of facial aesthetics [13]. Interestingly, rhinoplasty is the second most com-

mon cosmetic procedure in Saudi Arabia, constituting 60% of all plastic surgeries performed in 2019 [14]. This could be explained by societal attitudes and affordability, which significantly shape the willingness of individuals to undergo surgery, especially among younger respondents [15]. Another study found that social media significantly influenced more than two-thirds of rhinoplasty candidates, with social media platforms such as Snapchat and Instagram playing essential roles in such decisions [16]. In addition to cultural norms, other studies highlighted personality traits such as perfectionism and heightened sensitivity as factors that increase dissatisfaction with facial appearance and influence the decision of individuals to seek surgical solutions [17].

Psychological factors, such as self-esteem and mental health, are also important. Several studies have shown that individuals seeking rhinoplasty often expect improvements in confidence, social relationships after surgery, and quality of life [18-21]. On the contrary, other studies failed to find any direct association between rhinoplasty and psychological improvement [22,23]. This suggests that psychological outcomes following rhinoplasty may be based on the pre-operative expectations of the individual and their psychological status before the operation. It further emphasizes the role of surgeon-patient communication in managing expectations. Ferreira and colleagues noted that the most common cause of dissatisfaction and unnecessary revision is the misalignment of the perceptions of nasal aesthetics and post-operative goals between the patient and surgeon [24]. Another study showed that complications and dissatisfaction often relate to unmet expectations or inadequate pre-operative counseling, especially regarding functional outcomes such as nasal airflow [25].

The study showed varying levels of awareness regarding the complications of rhinoplasty in the included respondents. The most commonly identified complications were breathing disorders (68.85%), dissatisfaction with the new nose (64.48%), mismatched facial appearance (63.39%), and the need for reoperation (62.84%). Numbness in teeth (32.24%), death (21.86%), and recurrent nausea/vomiting (25.14%) were less commonly identified. Alarmingly, 13.66% of participants were not aware of any complications. These results suggest that some complications are widely known while familiarity with less common and rare complications is low. Knowledge regarding these less common complications could have implications for informed decision-making. Existing research supports the inconsistent awareness regarding the complications of rhinoplasty. A study conducted in the Western Region of Saudi Arabia found that respiratory complications were the most commonly identified (66.63%), while the awareness of less common complications, such as nausea and vomiting, was very low [2]. Another study conducted among females in the Northern Border Region of Saudi Arabia showed that 88.4% of the respondents were aware of at least one complication, with breathing disorders being the most common (74.6%). Nonetheless, familiarity with less common complications, such as headaches and mismatched nasal appearance, was low [26]. Another study also found that college stu-

dents in Saudi Arabia had poor knowledge about rhinoplasty risks, with cost and cosmetic concerns outweighing safety considerations [15]. Another identified religious and cultural attitudes as factors that outweigh comprehensive risk assessments when individuals decide to undergo rhinoplasty [27]. The previous results also align with global trends, which showed low knowledge about serious or rare complications and further highlighted the gap in informed consent [28,29].

Interestingly, the study's findings align with broader research emphasizing the importance of pre-operative psychological evaluations and how unrealistic expectations or lack of awareness about complications often lead to dissatisfaction [30]. In addition, dissatisfaction following rhinoplasty is not always due to surgical errors but can arise from the psychological predispositions of the patients or an incomplete understanding of risks [31]. Studies further emphasize the inconsistencies in the way complications are presented. Heilbronn and colleagues reported that surgical risks such as infection and bleeding are among the most discussed during informed consent, although dissatisfaction with the results and revision surgeries are the most reported complications. Nevertheless, they are usually poorly represented [29]. Similarly, Layliev and colleagues discussed how combining rhinoplasty with other procedures could increase the risks and should draw particular attention to proper education regarding every step of treatment in the pre-operative phase since rare risks, such as pulmonary complications, are relevant, especially in cases involving older patients and in instances of combined procedures [32]. Thus, extended pre-operative counseling is necessary to inform patients of potential risks, such as functional deformities, aesthetic dissatisfaction, and possible revision surgeries, which are generally under-discussed [33].

In the current study, age was significantly associated with both Interest in rhinoplasty and awareness of its complications, with younger individuals showing more Interest in rhinoplasty and having higher levels of awareness. This finding aligns with other studies that showed that younger patients are more affected by societal beauty standards and view rhinoplasty as a way to enhance self-esteem and social confidence [34,35]. Younger participants are also more engaged with digital resources, which increases their exposure to surgical risks and outcomes [2,36] and unrealistic expectations about outcomes, which can lead to dissatisfaction after surgery [24]. The study found no significant differences between genders regarding the Interest in rhinoplasty. On the contrary, a statistically significant difference was observed in awareness levels, with females showing higher awareness. This gender disparity in awareness reflects the broader trends in the literature that show higher proactivity amongst women in seeking information about surgical risks. This is partly attributed to societal pressures and their focus on achieving aesthetic ideals [26,36]. The higher awareness in females reflects their engagement with cosmetic consultations and educational materials. Education level was significantly associated with the Interest in rhinoplasty. Participants with a high school education or less showed the highest interest rate compared

to those with bachelor's or post-graduate education. Other similar studies noted that individuals with lower education levels usually view cosmetic surgery as a tool to enhance social mobility and self-confidence, especially in settings where appearance is closely related to professional and social success [11,17]. Additionally, education may influence awareness levels indirectly since individuals with higher education levels are more likely to seek information about surgical procedures, which leads to better awareness of both common and rare complications [28].

Nasal dissatisfaction was the strongest predictor of Interest in rhinoplasty, with 97.9% of dissatisfied participants expressing Interest, compared to 42.6% of happy participants and 31.6% of indifferent participants ($p < 0.001$). This finding is consistent with other studies that identified dissatisfaction with nasal aesthetics as the primary driver of rhinoplasty interest, often exacerbated by societal beauty standards [19,37,38]. Dissatisfaction is usually linked to psychological factors such as low self-esteem and body image concerns, and individuals with poor self-image are more likely to seek rhinoplasty to align their appearance with perceived societal ideals [22,39].

Limitations

The findings from the current study highlight the importance of pre-operative counseling in increasing awareness regarding both common and rare complications, which helps align the patients' expectations with realistic outcomes. Nonetheless, this study has several limitations. Convenience sampling was used in the current study, and self-reported measures were used for data collection. These limitations could introduce selection and reporting biases, limiting the results' generalizability. In addition, individuals with limited access to digital resources or low knowledge of social media platforms may be excluded, which could overestimate their awareness levels.

Conclusion

The current study highlights the interplay between demographic factors, psychological motivations, and awareness levels regarding rhinoplasty. Younger respondents and respondents with lower education levels showed greater Interest in rhinoplasty, while dissatisfaction with nasal appearance was the most significant predictor. Awareness of common complications was moderate, while the knowledge regarding rare complications was limited. The findings emphasize pre-operative counseling and educational interventions' vital role in managing expectations and enhancing informed decision-making among respondents.

Conflict of Interest

The authors declare no conflicts of interest regarding the publication of this article.

References

1. A Alissa, F A Ferri, B Fad, M P Andres (2023) Functional Rhinoplasty. *Cureus* 15(9): e45993.
2. M Taha, H A A AlZubaidi, A A A Alrezqi, A M O Alsulbi, A A A Alrashdi, A A K Alzubaidi, et al. (2023) Adult Knowledge About Postoperative Complications of Rhinoplasty in the Western Region of Saudi Arabia. *Cureus* 15(4): e37183.
3. A N Boustany, R Grover, H Alnaeem, N Seyidova, R J Rohrich, S J Lin (2023) Cosmetic Rhinoplasty. *Plast Reconstr Surg* 151(2): 315e-329e.
4. M L Li (2022) Rhinoplasty. *JAMA Otolaryngol Neck Surg* 148(12): 1188.
5. R Almuhaya, A Alarfaj, L Alturki, L Al Tawil, A Alrajeh, et al. (2019) The reasons behind the trending of facial plastic surgery in Saudi Arabia. *Sch J Oto* 1: 93-98.
6. SE Alharethy (2017) Trends and demographic characteristics of Saudi cosmetic surgery patients. *Saudi Med J* 38(7): 738-741.
7. A M Alsulaiman, S Alrashid, S Alabdulkareem, R Najjar, A Arafat, et al. (2023) Interest in Rhinoplasty and Awareness of Postoperative Complications Among Female High School Students in Riyadh, Saudi Arabia. *Cureus* 15(6): e40783.
8. AA Mianroodi, M Eslami, N Khanjani (2012) Interest in rhinoplasty and awareness about its postoperative complications among female high school students. *Iran J Otorhinolaryngol* 24(68): 135142.
9. M Taha, HAA AlZubaidi, IH Alkhairy, AMO Alsulbi, H Alsuhabi, et al. (2023) The Influence of Social Media on the Decision of Rhinoplasty Among Adults in the Western and Southern Regions of Saudi Arabia: A Comparative Cross-Sectional Study. *Cureus* 15.
10. A Jalali, P Abasi, Z Ghaffari (2021) Factors involved in the decision of Iranian men to undergo rhinoplasty: A grounded theory study. *Plast Aesthetic Nurs* 41(2): 86-94.
11. IM Javo, T Sørli (2010) Psychosocial characteristics of young Norwegian women interested in liposuction, breast augmentation, rhinoplasty, and abdominoplasty: A population-based study. *Plast Reconstr Surg* 125(5): 1536-1543.
12. LE Ishii, TT Tollefson, GJ Basura, RM Rosenfeld, PJ Abramson, et al. (2017) Clinical Practice Guideline: Improving Nasal Form and Function after Rhinoplasty Executive Summary. *Otolaryngol - Head Neck Surg (United States)* 156(2): 205-219.
13. AR Kumar, LE Ishii (2020) How You See Yourself: Cultural Considerations and Self-Image for Rhinoplasty Patients. *Otolaryngol Clin North Am* 53(2): 209-212.
14. A Reham (2019) The Reasons Behind the Trending of Facial Plastic Surgery in Saudi Arabia. *Sch J Otolaryngol* 1.
15. K Alshami, R Alsaati (2023) Perception and attitude of college students toward cosmetic rhinoplasty. *Iran J Otorhinolaryngol* 35(129): 199-205.
16. W Alghamdi (2020) Effect of Social Media on Decision to Undergo Rhinoplasty. *Glob J Otolaryngol* 22.
17. O Babuccu, O Latifoğlu, K Atabay, N Oral, B Coşan (2003) Sociological aspects of rhinoplasty. *Aesthetic Plast Surg* 27(1): 44-49.
18. C Günel, IK Omurlu (2015) The effect of rhinoplasty on psychosocial distress level and quality of life. *Eur Arch Oto Rhino Laryngology* 272(8): 1931-1935.
19. C Cingi, M Songu, C Bal (2011) Outcomes research in rhinoplasty: Body image and quality of life. *Am J Rhinol Allergy* 25(4): 263-267.
20. N Chauhan, J Warner, PA Adamson (2010) Adolescent rhinoplasty: Challenges and psychosocial and clinical outcomes. *Aesthetic Plast Surg* 34(4): 510-516.
21. RJ Rohrich, J Ahmad (2011) Rhinoplasty. *Plast Reconstr Surg* 128(2): 49e-73e.
22. P Piroomchai, S Suetrong, S Arunpongpaisal (2011) Psychological Status in Patients Seeking Rhinoplasty. *Clin Med Insights Ear Nose Throat* 4: 31-35.

23. AR Zahiroddin, AR Shafiee Kandjani, E Khalighi Sigaroodi (2008) Do mental health and self-concept associate with rhinoplasty requests?. *J Plast Reconstr Aesthetic Surg* 61(9): 1100-1103.
24. MG Ferreira, M Santos, DOE Carmo, JC Neves, CAE Sousa, et al. (2018) Rhinoplasty-Do Patients and Surgeons See the Same? A Double-Blind Study with 100 Randomized Patients. *Facial Plast Surg* 34: 356-362.
25. N K C, B AK, D V H, M C, B M, R J D, et al. (2013) Cosmetic rhinoplasty: Revision rates revisited. *Aesthetic Surg J* 33(1): 31-37.
26. YA Elsayed Elboraei, RAR Alruwaili, MT k ALanazi, YYM Ainaser, TM Alenezi, et al. (2024) Awareness and Interest in Rhinoplasty and Its Postoperative Complications Among Females in the Northern Border Region, Saudi Arabia. *Cureus* 16(5): e61209.
27. M Bakhshae, M Asghari, MR Sharifian, SJ Ashtiyani, B Rasoulia (2018) Islamic attitudes and rhinoplasty. *Iran J Otorhinolaryngol* 30(97): 91-96.
28. G Rettinger (2018) Risks and complications in rhinoplasty. *GMS Curr Top Otorhinolaryngol Head Neck Surg* 6: Doc08.
29. C Heilbronn, D Cragun, B JF Wong (2020) Complications in Rhinoplasty: A Literature Review and Comparison with a Survey of Consent Forms. *Facial Plast Surg Aesthetic Med* 22(1): 50-56.
30. P Parmar, H Mills, H Saleh (2024) Patient selection, Outcome and Unhappy patients in Rhinoplasty. *Facial Plast Surg*.
31. MB Constantian (2012) What motivates secondary rhinoplasty? a study of 150 consecutive patients. *Plast Reconstr Surg* 130(3): 667-678.
32. J Layliev, V Gupta, C Kaoutzanis, NG Kumar, J Winocour, et al. (2017) Incidence and preoperative risk factors for major complications in aesthetic rhinoplasty: Analysis of 4978 patients. *Aesthetic Surg J* 37(7): 757-767.
33. JB Surowitz, SP Most (2013) Complications of Rhinoplasty. *Facial Plast Surg Clin North Am* 21(4): 639-651.
34. JA Schwitzer, FP Albino, RK Mathis, AM Scott, L Gamble, et al. (2015) Assessing demographic differences in patient-perceived improvement in facial appearance and quality of life following rhinoplasty. *Aesthetic Surg J* 35(7): 784-793.
35. LM Arima, LC Velasco, RSL Tiago (2012) Influence of age on rhinoplasty outcomes evaluation: A preliminary study. *Aesthetic Plast Surg* 36(2): 248-253.
36. A Mawkili, A Shawish, A Hobani, A Albarrati, F Almalki, et al. (2024) Interest in rhinoplasty and awareness of postoperative complications among female university students in Jazan, Saudi Arabia: a cross-sectional study. *Int J Med Dev Ctries* pp. 1419-1425.
37. K Zhang, EC Deane, DG Becker (2024) Persistent cosmetic dissatisfaction in rhinoplasty & management of the difficult patient. *Plast Aesthetic Res* 11
38. I Khansa, L Khansa, GD Pearson (2015) Patient Satisfaction after Rhinoplasty: A Social Media Analysis. *Aesthetic Surg J* 36(1): NP1-NP5.
39. P Shriwastav, A Sahai, M Navalakhe, A Gaikwad (2024) Exploring the psychological facets of cosmetic rhinoplasty. *Int J Res Med Sci* 12: 1796-1799.




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