The impact of social media accounts on periocular cosmetic surgeries

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Abstract:

PURPOSE: The study aims to assess the impact of social media on patients who underwent periocular cosmetic surgeries during 2019 and to determine the appropriate platforms to enrich the knowledge and awareness of the general Saudi population regarding periocular cosmetic surgeries.

METHODS: A cross-sectional study was conducted at Ibn Rushd Hospital, Riyadh, Saudi Arabia. Three hundred and ninety-five participants with periocular cosmetic surgeries in 2019 were recruited for the study. The questionnaire included 43 questions distributed under four domains: demographics, personal and family history of periocular eye surgeries, influence of social media on cosmetic eye procedures, and psychological effects of social media.

RESULTS: Periocular cosmetic surgeries were more common among women, with eyelid surgery being the most popular type. About 48.9% of the participants knew their oculoplastic surgeons from social media platforms, and over 57% who used accounts on social media were interested in cosmetology managed by nonphysicians. The majority of the participants (64.1%) chose Instagram as a social media platform to find an oculoplastic surgeon. Consequently, 91.6% stated that seeing before and after photos on social media platforms affected their decision in selecting their oculoplastic surgeon. Besides, 82.8% revealed that visiting surgeons’ clinic came as a step next to their search for their accounts on social media.

CONCLUSION: The majority of the participants were, somewhat or another, affected by social media and this is due to people’s belief regarding social media as a beneficial source of medical information that can provide reviews and expert opinion. The accuracy of the information presented in social media accounts managed by both physicians and nonphysicians is essential in making the appropriate decision for undergoing this kind of surgeries or not.

Keywords: Cosmetic, periocular, plastic, social media, surgery

INTRODUCTION

Esthetic procedures are considered one of the most commonly performed surgeries in the medical field. According to the American Society of Aesthetic Plastic Surgery, over 17.7 million cosmetic procedures were performed; out of those, 206,000 were eyelid surgeries which were among the top five performed cosmetic procedures. In Saudi Arabia, Botox was the most common cosmetic intervention by 41% and rhinoplasty was the most common facial plastic procedure by 59%. In this regard, a total of 64% of the patients who underwent rhinoplasty between 2015 and 2020 were influenced by social media which in addition to celebrities have proven to have a strong impact on participants in the medical esthetics industry. Surprisingly enough, 58% of those affected by social media platforms were men. It is evident that the use of social networks is a potential factor for appearance pressures and consequently for appearance-changing behaviors such as cosmetic surgery. For instance, according to multiple studies conducted in the United Kingdom, approximately 55% of facial plastic surgeons indicated that patients, in their cosmetic practice,
were motivated by a desire to look better in selfies in 2017, up with 13% in 2016. Foster et al. reported that the chance of undergoing plastic surgery would increase with the increased media exposure, low self-esteem, and life satisfaction. Likewise, a research showed that the majority of patients with 65.7% who visited plastic surgery clinics in Saudi Arabia were influenced by the cosmetic surgery results or before and after photos posted on social media. Another study conducted in Saudi Arabia indicated the effect of social media influencers and celebrities by 72.2% on the trending of many facial plastic interventions. Correspondingly, many physicians use social media as a means not only to educate the public but also to collaborate with colleagues, to attract prospective patients, and to build professional recognition. Montemurro et al. revealed that 91.4% of breast augmentation patients used online methods including social media or websites to find information and 63% used them as their first source of information. Using social media platforms, the quality of information available for oculoplastic surgery is considerably inferior to other nonophthalmic specialties.

While ophthalmologists are underutilizing social media’s potential, many physicians report positive experiences from integrating it into their practices. At the same time, the content presented online gives a mixture of viewpoints, commercial interests, and various biases. Patients’ misinformation can be a major cause of doctors’ dissatisfaction. A survey of over 1000 doctors found that the majority of physicians had experienced patients who brought information from the Internet to their consultation. A total of 38% of those physicians felt the harm of this information to the consultation and only 16% felt that it had a beneficial effect.

However, there are comparatively few studies of this nature in ophthalmology. Even though the applications of oculoplastic surgeries have grown far beyond personal communications, there are a few works dealing with the influence of social media on periocular cosmetic surgeries in Saudi Arabia. To address this deficiency and provide further insight, our study aims to evaluate the impact of social media on patients who underwent periocular cosmetic surgeries.

**Methods**

After Institutional Review Board approval, a cross-sectional study was conducted in Ibn Rushd Hospital, Riyadh, Saudi Arabia. This study adhered to the ethical principles outlined in the Declaration of Helsinki of 1975 as revised in 2000. All patients aged 18 years or older, male and female, and who had periocular cosmetic surgeries (including eyelids, brows, and cheeks) during 2019 were included. Eight hundred and fifty-nine participants were contacted; out of those, 395 responded. The participants were reached out through a WhatsApp broadcast message that included the research question, objectives, rationale, and the online questionnaire along with reassurance of information anonymity.

The questionnaire was developed by the research team; it contained 43 questions distributed under four domains. These domains included demographics, personal and family history of cosmetic eye procedures, influence of social media on cosmetic eye procedures, and psychological effects of social media. For the validation of the questionnaire, 20 copies were distributed to 20 volunteers (not included in the main study). After the volunteers had completed the questionnaire, they were asked individually about what they understood from each question, and if there was any unclear question. Their feedback was collected, studied, assessed, and used in modifying the questionnaire until the final version was available. The results were tabulated on an Excel sheet. Data analysis was done using Statistical Package for Social Sciences SPSS V. 25.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics were demonstrated by frequencies, percentages, mean, and standard deviation. Appropriate statistical tests were used to perform the univariate analysis.  $P \leq 0.05$ and 95% confidence intervals were considered statistically significant. Written consent was obtained to participate in the study and the participants were assured that the information would be kept confidentiality.

**Results**

A total of 395 participants with periocular cosmetic surgery aged 18 years and above and living in Saudi Arabia contributed to this study with gender distribution of 377 females (95.4%) and 18 males (4.6%). In regard to the age, 17 (4.3%) participants were between 18 and 24 years old, 105 (26.6%) were between 25 and 34 years, 144 (36.5%) were between 35 and 44 years, 87 (22%) were between 45 and 54 years, and 42 (10.6%) were older than 54 years. The majority were highly educated; 312 (79%) had bachelor’s, master’s, or PhD’s degree. The other part (21%) had high school or diploma. Periocular cosmetic surgery was more common among women between 33 and 44 years with a bachelor’s degree with a statistical superiority ($P < 0.001$). In our population, the most common periocular cosmetic procedure was upper eyelid surgery with 92.4%, followed by lower eyelid surgery with 13.7% and browplasty with 6.6%. About participant’s awareness of oculoplastic surgical complications, no statistically significant difference was noted regarding gender, age group, or level of education.

When inquired about the main reason behind considering periocular cosmetic surgeries, 356 (90.1%) of the participants were seeking a better eye shape. However, only 8 (2%) were affected by social media platforms or influencers and only 3 (0.8%) were desiring of achieving self-confidence. One hundred and seventy-seven (44.8%) were not aware whether the social media influencers they follow advertise for periocular cosmetic surgeries or not and only 105 (26.6%) responded positively. Furthermore, it was noted that 78.5% of the participants did not consider undergoing periocular cosmetic surgeries because of the advertisements or posts they witnessed on social media. On estimating the prevalence of periocular cosmetic surgeries among the participants, 237 (60%) had a
friend or family member who underwent periocular cosmetic surgery.

The psychosocial impact of social media was assessed through asking the participants if they felt unattractive when looking at social media celebrities; 342 (86.6%) replied with “No”. In addition, when the participants were asked if they would feel happier in case they looked like a celebrity, 298 (75.4%) denied that. However, 179 (45.3%) felt unhappy to post their pictures on social media without using filters and 50 (12.7%) constantly compared their pictures to others. Upon the comparison between the hours spent on social media and the latter question, the response was negative with a statistically significant difference ($P < 0.001$) [Table 1].

When evaluating the association between the number of influencers followed by the participants and the consideration of undergoing periocular cosmetic surgeries, it showed that most participants answered negatively, with a statistically significant $P < 0.001$, except for those who are following more than 10 influencers.

The correlation between the number of influencers followed and the consideration of undergoing periocular cosmetic surgery to improve their social media account from one side and whether or not the participants were comparing their pictures to others showed a statistically significant difference with $P < 0.001$ [Table 2]. In further assessment, we measured the relation between the hours spent on social media platforms and the impact of advertisements and posts seen on these platforms. The majority answered negatively, with this association being statistically significant with $P < 0.001$. Moreover, when comparing the hours spent on social media platforms and the consideration of undergoing such surgeries to improve social media account, the participants answered “No,” and the comparison showed statistically significant difference with $P < 0.001$.

The majority of our population (48.9%) knew their oculoplastic surgeons from social media platforms. Other 103 (26.1%) participants depended on friends’ recommendations, 73 (18.5%) on family members’ or relatives’ recommendations, and 63 (15.9%) on another doctor’s recommendation. Among the participants, 225 (57%) using accounts on social media were interested in cosmetology accounts managed by nondonors. Moreover, 278 (70.4%) were, in fact, following oculoplastic surgeons on social media and 220 (79.1%) on Instagram. The participants also relied on other sources to obtain information about oculoplastic surgeries including asking friends in 255 (64.6%), TV programs in 97 (24.6%), and others in 65 (16.5%).

In accordance with what have been mentioned previously, 253 (64.1%) of the participants chose Instagram as a social media platform to find an oculoplastic surgeon. However, other participants preferred Snapchat (49 [12.4%]), YouTube (46, [11.6%]), Twitter (35, 8.9%), Facebook (1, [0.3%]), and others (12, [3.0%]).

Three hundred and twenty-seven (82.8%) participants revealed that they searched for their oculoplastic surgeon’s account

Table 1: Assessment of the impact of social media on the decision to undergo cosmetic eye procedures among patients who had any cosmetic eye procedure during 2019 in Saudi Arabia

| How many hours do you spend each day on social media platforms? | <1 h  | 1-2 h | 2-5 h | >5 h |
|---------------------------------------------------------------|------|------|------|------|
| Considered undergoing a cosmetic eye procedure or surgery from ads or posts seen on social media platforms |      |      |      |      |
| $n$ (%)                                                       | 13 (3.3) | 71 (18.0) | 189 (47.8) | 122 (30.9) |
| Yes ($n=85$), $n$ (%)                                         | 0     | 14 (19.7) | 34 (18.0)  | 37 (30.3)  |
| No ($n=310$), $n$ (%)                                         | 13 (100) | 57 (80.3)  | 155 (82.0) | 85 (69.7)  |
| $P$                                                         | $<0.001^*$ | $<0.001^*$ | $<0.001^*$ | $<0.001^*$ |
| Considered undergoing a cosmetic eye procedure since the procedure has been common among social media influencers |      |      |      |      |
| $n$ (%)                                                       | 13 (3.3) | 71 (18.0) | 189 (47.8) | 122 (30.9) |
| Yes ($n=32$), $n$ (%)                                         | 0     | 7 (9.9)   | 11 (5.8)   | 14 (11.5)  |
| No ($n=363$), $n$ (%)                                         | 13 (100) | 64 (90.1)  | 178 (94.2) | 108 (88.5) |
| $P$                                                         | $<0.001^*$ | $<0.001^*$ | $<0.001^*$ | $<0.001^*$ |
| Considered undergoing a cosmetic eye procedure to improve my social media account (increase followers, get likes, etc.) |      |      |      |      |
| $n$ (%)                                                       | 13 (3.3) | 71 (18.0) | 189 (47.8) | 122 (30.9) |
| Yes ($n=15$), $n$ (%)                                         | 3 (23.1) | 0      | 1 (0.5)    | 11 (9.0)   |
| No ($n=380$), $n$ (%)                                         | 10 (76.9) | 71 (100)  | 188 (99.5) | 111 (91.0) |
| $P$                                                         | $0.007^*$ | $<0.001^*$ | $<0.001^*$ | $<0.001^*$ |
| I constantly compare my pictures to pictures of others |      |      |      |      |
| $n$ (%)                                                       | 13 (3.3) | 71 (18.0) | 189 (47.8) | 122 (30.9) |
| Yes ($n=50$), $n$ (%)                                         | 0     | 2 (2.8)   | 19 (10.1)  | 29 (23.8)  |
| No ($n=345$), $n$ (%)                                         | 13 (100) | 69 (97.2)  | 170 (89.9) | 93 (76.2)  |
| $P$                                                         | $<0.001^*$ | $<0.001^*$ | $<0.001^*$ | $<0.001^*$ |

*Statistical significant
Table 2: Assessment of the impact of social media on the decision to undergo cosmetic eye procedures among patients who had any cosmetic eye procedure during 2019 in Saudi Arabia

|                            | 1-5 influencer | 5-10 influencers | >10 influencers | None |
|-----------------------------|----------------|------------------|-----------------|------|
| Number of influencers followed |                |                  |                 |      |
| **Considered undergoing a cosmetic eye procedure or surgery from ads or posts seen on social media platforms** |                |                  |                 |      |
| n (%) | 162 (41.0) | 48 (12.2) | 44 (11.1) | 141 (35.7) |
| Yes (n=85), n (%) | 47 (29.0) | 13 (27.1) | 18 (40.9) | 7 (5.0) |
| No (n=310), n (%) | 115 (71.0) | 35 (72.9) | 26 (59.1) | 134 (95.0) |
| P   | <0.001* | <0.001* | 0.090 | <0.001* |
| **Considered undergoing a cosmetic eye procedure since the procedure has been common among social media influencers** |                |                  |                 |      |
| n (%) | 162 (41.0) | 48 (12.2) | 44 (11.1) | 141 (35.7) |
| Yes (n=32), n (%) | 15 (9.3) | 2 (4.2) | 8 (18.2) | 7 (5.0) |
| No (n=363), n (%) | 147 (90.7) | 46 (95.8) | 36 (81.8) | 134 (95.0) |
| P   | <0.001* | <0.001* | <0.001* | <0.001* |
| **Considered undergoing a cosmetic eye procedure to improve my social media account (increase followers, get likes, etc.)** |                |                  |                 |      |
| n (%) | 162 (41.0) | 48 (12.2) | 44 (11.1) | 141 (35.7) |
| Yes (n=15), n (%) | 8 (4.9) | 2 (4.2) | 0 | 5 (3.5) |
| No (n=380), n (%) | 154 (95.1) | 46 (95.8) | 44 (100) | 136 (96.5) |
| P   | 0.007* | <0.001* | <0.001* | <0.001* |
| **I constantly compare my pictures to pictures of others** |                |                  |                 |      |
| n (%) | 162 (41.0) | 48 (12.2) | 44 (11.1) | 141 (35.7) |
| Yes (n=50), n (%) | 24 (14.8) | 9 (18.8) | 6 (13.6) | 11 (7.8) |
| No (n=345), n (%) | 138 (85.2) | 39 (81.3) | 38 (86.4) | 130 (92.2) |
| P   | <0.001* | <0.001* | <0.001* | <0.001* |

*Statistical significant

before visiting their clinic. In addition, 325 (82.3%) have made an online search about their oculoplastic surgeon’s qualifications. The majority of the population (91.6%) said that seeing before and after photos on social media platforms affected their decision in selecting their oculoplastic surgeon.

**Discussion**

The use of social media plays a role in appearance-changing behaviors such as cosmetic surgery. Therefore, we conducted this current investigation to determine the role of social media in the decision-making process for cosmetic eyelid surgery. According to a study conducted by the International Society of Aesthetic Plastic Surgery, Saudi Arabia ranks 29th among the top 30 countries, with the highest rates of cosmetic procedures performed worldwide, especially eyelid surgeries.

To study the impact of social media on decision-making among participants conducting oculoplastic surgery, we measured the hours spent and posts seen on social media along with the impact of advertisement, as they have been common among social media platforms. We also evaluated the psychosocial impact of social media in terms of whether the participants felt unattractive when comparing themselves to celebrities or not. In addition, we discussed whether the participants used social media, particularly Instagram as the main source of information to find oculoplastic surgeons. The following studies discussed similar topics but in different specialties. According to Arab et al., more than half of the respondents followed accounts of plastic surgeons. Likewise, the majority of our population knew their oculoplastic surgeons from social media platforms. The same study showed that almost all the participants had a family member or a friend who underwent plastic surgery and those who spent more than 5 h on social media platforms were among the participants who are highly influenced by advertisements. The former relation was comparable to our findings; however, the latter one was not found among our participants. Similarly, Walker et al. showed that the female participants who frequently used social media were significantly more likely to desire undergoing cosmetic surgery.

Park et al. found that public engagement such as featuring a doctor in advertisements had an effect on decision-making along with satisfaction. Klietz et al. indicated that social media was used as a marketing device as in an Instagram account known as “doctor.aesthetic” categorized into four groups: esthetics, private life, disease, and science, where every post was evaluated to give guidance and insight to private life. This marketing tool had an impact on communication and information gathering. About 57% of our participants who used accounts on social media were interested in cosmetology accounts managed by nondoctors, and it is considered rather high.

Arab et al. showed that the underlying reason behind the females’ cosmetic consultations was latent in the pressure exerted by social media and their peers, and not because of their desire of changing their appearance. It is also noted that...
advertisement had an impact on seeking cosmetic surgery. In contrast, our results showed that only 2% were affected by social media platforms or influencers. This may be due to the differences in the age groups included in which peers’ pressure appeared to be greater. Whereas advertisements or posts on social media had no impact on decision-making to undergo cosmetic surgery, Alghonami et al. [4] found that social media platforms, especially Snapchat, had an outstanding impact on the decision to undergo rhinoplasty. On the contrary, Alghonaim et al. [5] and Park et al. [6] found that Instagram, being the most influential platform, was in line with the findings in our study. Aldosari et al. [7] illustrated that the majority of patients visiting plastic surgery clinics were positively affected, but not exclusively, by media coverage of cosmetic surgery results. These outcomes were in conformity with ours.

Henderson-King et al. [8] found that consideration of cosmetic surgeries was more prevalent among females since physical appearance tends to be a concern for them. Moreover, the main reason behind cosmetic surgery is related to the fear of becoming unattractive. Similarly, Ashikali et al. [9] reported that cosmetic surgery advertisements had played a role in appearance-related self-discrepancy and in decision-making regarding undergoing cosmetic surgery. In our study, the psychosocial impact assessed through feeling unattractive played an important role by comparing their pictures with other celebrities denying that the majority were females. Furnham et al. [10] found that multiple factors play a major role in undergoing cosmetic surgery including low self-esteem, low life satisfaction, low self-rated physical attractiveness, and little religious beliefs. Those factors have increased the hours spent on social media and TV. Sorice et al. [11] observed that half of the patients preferred before and after photos. Similarly, Park et al. [12] revealed that viewers favored to see the final results of the procedures rather than seeing the whole steps of the procedure. Aldosari et al. [13] found that the majority of the patients visiting plastic surgery clinics were affected by before and after photos posted on social media platforms, and similar to our study, 91.6% of the participants believed that seeing before and after photos influenced their decision to undergo oculoplastic surgeries.

Arab et al. [14] showed that only 23.4% inquired about surgeon’s degrees and qualifications. Furthermore, Montemurro et al. [15] revealed that almost half of the participants (46%) sought information on such social media platforms. Among those, 40% were strongly influenced by the reviewed content and accordingly, they chose a certain clinic or a specific doctor. In other words, favorable and unfavorable feedback posted on social media can actually affect some patients’ decision in choosing a specific clinic or doctor. When Janik et al. [16] conducted a study to explore the differences in patients’ social media habits between public and private esthetic plastic surgery practice, esthetic patients were significantly more often looking for information about the surgeon’s qualifications, particularly those about completed specialty, training, courses, congresses, etc. Accordingly, 82.3% of our population looked for the surgeon’s qualifications before visiting the clinic. Alghonaim et al. [17] found that the majority of their population were aware of the complications of esthetic procedures and it came in line with our study which showed that 85% were conscious of the complications of oculoplastic surgeries. Hence, we can infer that the majority of our participants have a decent educational background.

This study has limitations. First, it is a cross-sectional questionnaire-based study conducted in one private-based center. Only associations could be suggested, rather than causal relationships. Furthermore, some participants who were not suitable for the questionnaire could be biased. Second, regional legislative diversities represent another limitation to our study. However, this study highlights the importance of social media in making a decision regarding cosmetic surgeries. It also highlights the need to encourage patients not to be influenced by social media without understanding the consequences and to focus on the main aim of the surgery considering the patient’s complaint only without having unnecessary harmful surgeries. The results of this study can be used to emphasize the importance of awareness of major surgical complication and a full thorough understanding before undergoing one. These results could also be used as an outline that may assess our approach to future patients undergoing oculoplastic surgery for better outcome and satisfaction.

Conclusion

The outcomes of this study demonstrate that the majority of patients visiting oculoplastic surgery clinics were, somewhat or another, affected by social media. Subsequently, these platforms have deep influence on one’s self-esteem that he/she will be willing to undergo a periocular cosmetic surgery. Taking into account, social media content needs to be monitored to stop the spread of such destructive leverage. Instead, it ought to focus on the esthetic of diversity and boost the viewers’ confidence. This is based on the fact that people use social media as a beneficial source of medical information that provides reviews and expert opinion.

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Conflicts of interest

There are no conflicts of interest.

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