A qualitative study of candidates’ awareness, expectations and motivational factors related to nose Job surgery (Rhinoplasty) in IRAN

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Abstract

Introduction: Interest to undergo nose job surgery, known as rhinoplasty, has grown among different strata of Iranian society. As an elective and non-emergency surgery, it is always accompanied by complications like other invasive surgeries. However, little is known about candidate’s awareness regarding these problems and also their expectations toward this famous plastic surgery.

Objectives: To assess the level of awareness of candidates as well as their expectations and motivational factors, and the reasons behind the high rates of nose job surgery in Iran.

Methods: Sixteen men and women aged 20-42 who were decided to undergo nose job surgery for first time in near future were interviewed using a semi-structured interview format. Twelve face to face with four telephone interviews (using WhatsApp application) were conducted. The research questions explored participant’s information level, persuasive reasons, and their achievements after having a surgery. The interviews were audio recorded and then transcribed verbatim. Conventional content analysis was used to evaluate data.

Results: The results of the analysis showed that the participants and even their family mostly had preliminary and superficial information regarding surgery complications. Negative feedback or misplaced judgements in the community, family and friends, media advertising, and scientific and technological advances are act as motivating factors. The tendency to undergo nose job surgery is not always for the sake of beauty. Sometimes it is done for therapeutic purpose. Improving the quality of life, giving better opportunity to find new friends or social interaction, increasing self confidence in public place, self-satisfied and freedom from obsession are counted as further achievements.

Conclusion: The awareness level regarding nose job surgery was limit and superficial. People usually think optimistically about the results and count it as a tool by which in addition to gaining beauty, they can gain higher social prestige and something new in life and get rid of daily life monotony. Mutual cooperation of psychologists and surgeons is necessary. This important can increase candidates’ satisfaction by identifying motivational criteria and their expectations.

Keywords: Awareness, motivation, Rhinoplasty, Iran
Acknowledgements

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1. Introduction

Cosmetic plastic surgery has increased in the recent years all around the world. One of the most popular plastic surgeries is rhinoplasty (known as nose job), in which the nose is reshaped in order to increase facial beauty and harmony between the components of the face. Initially, rhinoplasty was confined to repairing damage, but in modern times it has been used to change the nose shape for aesthetic purposes (Farshidfar, Dastjerdi, & Shahabizadeh, 2013).

Rhinoplasty is divided into two categories. The first category is corrective, which refers to cases where the nose is not acceptable in term of shape and function due to surgical injuries, tumors, trauma, and birth defects. The second category is done for beauty and the purpose of doing it is to change the appearance of the nose to the desire shape while maintaining the function of the nose. (Mortazavi, Toutounchi, Ansari, Gojazadeh, & Seyed, 2013).

In the past, plastic surgery was performed secretly and rarely talked about in public (Adams, 2009). Before modernity, human beings looked at beauty and appearance according to traditional standards, but today, the trend towards beauty has reached the stage of appearance and self-expression. Cosmetic surgery has now become a deceptive factor and a tool for people's luxury, which led to the establishment of unrealistic expectations in individuals and the distortion of facts about its true nature.

Each year millions of people decide to undergo cosmetic surgery, which according to the last report of International Society of Aesthetic Plastic Surgery (ISAPS), the most common including breast augmentation, liposuction, eyelid surgery, abdominoplasty, and rhinoplasty (surgery, 2018). In 2017 the rate of nose job surgery increased by 11% compared to previous year (Surgery, 2017). But in 2018, reduced slightly, so that Brazil, India, and USA have the top rank regarding number of nose job procedures (surgery, 2018). Check Table 1 and 2 in the appendix for more information.

It is said anecdotally that Iran is one of the countries with highest rate of cosmetic rhinoplasty in the world. In 2013 Iran ranked fourth in term of the number of nose job surgeries that were done (Surgery, 2013). But no specific reports have been received since then. This may suggest that nose job occur more widely than what has been reported officially in Iran, because significant number of rhinoplasty procedures are performed by unlicensed practitioners (doctors who are not
specialized in this field) in the private clinics, the exact number of which is not reported (Ebrahimi, Kalantar Motamedi, Shams, & Nejadsarvari, 2016).

It may be thought that cosmetic surgeries are only belong to the affluent strata of society, but it should be noted that due to cultural developments and changes in people’s ideals, today nose job surgery has become very common among men and women from middle and even low-income strata. This tendency has led to spend exorbitant and heavy costs that impose heavy economic pressure on families, and also leading to financial burden on healthcare system (TAVASSOLI & MODIRI, 2012).

1.1 Rational of this research:

Correct and adequate information and understanding expectation are often issues of concern among Plastic surgeons and patients, which have direct impact on patient’s decision making. A study from Saudi Arabia revealed that candidates are not often aware of post operation complications and have superficial information (Almohanna, Alswidan, Alarfaj, & Subhan, 2016). To avoid or reduce complications and dissatisfaction after rhinoplasty, it is better to consider and estimate one’s personality traits, goals, and expectations from this procedure (Zojaji, Javanbakht, Ghanadan, Hosien, & Sadeghi, 2007).

However, limited studies in Iran have so far investigated candidates’ awareness about post operation complications, motivation and expectation factors. Also, many researchers have had done their research in this area when patients have had their surgery. The perspective, experience, and amount of information that patients have before and after surgery are very different. Cosmetic surgery like any invasive medical procedure, has positive and negative consequences, affecting both the internal or personal aspect as well as the external or social aspect of individual’s life. It may be difficult to change one’s mind who decided to do this surgery, since nose job surgery is an elective operation that people decide to perform it arbitrarily and has no emergency aspect. What we as researchers can do is highlight their expectations and perspectives before surgery in order to raise the voice of patients to health system officials and inform the them about the needs and expectations of patients in a way that enables patients to achieve the best outcomes and high level of satisfaction after surgery.
This situation, therefore, has encouraged me to do in-depth interviews with participants who were waiting for surgery in order to explore these missing factors and also influenced criteria, which push them to perform nose job surgery. With this study, it is hope that in addition to increasing the public information, specially those who decide to undergo nose job surgery, physicians and surgeons consider the obtained results when interacting with patients before surgery.

1.2 **Research objectives:**

- To gain insight into important factors and criteria, which candidates will achieve with nose job surgery.
- To explore different motivation factors which push the applicants toward nose job surgery.
- To investigate how applicants, obtain correct and enough information related to nose job surgery.
- To evaluate the reasons of growing trend toward cosmetic nose job surgery in IRAN.

1.3 **Research questions:**

Although nose job surgery is not an emergency surgery and is chosen freely by individuals, but it has its own complications and risks like any other type of surgery. Therefore, these questions arise that:

- To what extend are candidates aware of nose job surgery complications?
- What are their main motivations and expectations factors toward nose job surgery?
- What are the reasons behind the high rates of nose job surgery in Iran?

1.4 **Literature review:**

Although the exact time of performing plastic surgery is not addressed in the medical and historical literature, the archaeological discoveries have proven that plastic surgery in its primitive forms dated back to sometime between 3000 BC, and 2500 BC in Iran, and the modern plastic surgery was founded just about 60 years ago (Kalantar-Hormozi, 2013).

Research of the literature began with multiple searches in different databases from 2005 to 2019 such as; ISI, PubMed, Cochrane library, Google Scholar. Because of the broad scope of cosmetic surgery, following combinations and synonyms key words were used: cosmetic surgery,
Rhinoplasty, expectation, awareness, motivation and Iran. Special terms AND and OR were used during the search process to connect words. Reference lists were examined in order to identify additional relevant articles. Non-English studies and research that only applied to a specific group, such as surgeons or medical staff and those which addressing a specific disease have been excluded.

Rhinoplasty is a plastic surgery procedure which can be done for medical reasons such as correcting breathing problems or resolving nasal injuries and correct disfigurement resulting from a trauma or birth defects. There are four types of rhinoplasty procedures:

1) Closed rhinoplasty which is the most common type of rhinoplasty and all incisions are hidden inside the nose with no external scars. The soft tissue moves slightly upward and the bone and cartilage will be accessible to perform the necessary changes. Because of its less invasive procedures there are several advantages such as, lessened detectable scarring and faster recovery after operation (Tebbetts, 2006).

2) Open rhinoplasty which is suited for patients who need extensive work done to the nose. The surgeon will make incisions in the skin between nostrils underneath the nose. This area is called the columella. Next, the skin is lifted to reveal the inside of the nasal cavity, giving rhinoplasty surgeon access to perform the necessary reshaping. After open rhinoplasty, the columella is sutured and the nose is taped for stabilization purposes. After the taping, a nasal splint is placed over the tape. The splint will help protect the delicate tissues of new nose during the healing process. It will be removed approximately one week after the surgery (Tasman, 2007).

3) Filler rhinoplasty which is a less common type of nose surgery. It is non-surgical in nature and can be done by dermatologists, cosmetic surgeons, physician assistants as well as general plastic surgeons. It’s not used to reduce the size of the nose. No incisions are made, but rather, injectable filler is used to correct minor imperfections in the nose. This is a good option for those who desire minimal change to the nose. Over time, the filler eventually absorbs back into the skin and requiring an additional procedure (Helmy, 2018).

4) Revision rhinoplasty which means doing surgery for second or third times. It is contemplated when the surgical result obtained has not met the patient's or the surgeon's
preoperative expectations. The main reason for revision surgery is breathing difficulty or a bump or irregularity of the bridge of the nose (Bagal & Adamson, 2002).

The majority of research published from 2005 about the nose job surgery have focused on establishing links between psychological and personality aspects of the individuals, and also investigating and comparison of the quality of life before and after surgery. For example, Mianroodi (2012) had found that nose job surgery is very popular among people with obsessive and narcissistic characteristics, and the main reasons for wanting rhinoplasty were beauty and because it is fashionable (Mianroodi, Eslami, & Khanjani, 2012). In this cross-sectional study, the familiarity of 320 female high school participants with the postoperative complications was also studied. The results showed that more than half of those interested in nose job surgery have no information about the possible complications after the operation. This study was the only conducted research in Iran, which examined the applicants’ knowledge regarding nose job surgery. Based on information from Iranian Journal of Otorhinolaryngology, which is also mentioned in Mianroodi’s (2012) study, the complications of Rhinoplasty divided into four groups:

- Intra-operative complications such as osteotomy complication and excessive bleeding.
- Immediate complication like airway obstruction and visual impairment.
- Early post operation complications like hemorrhage, skin necrosis, Numbness and pain.
- Late postoperative complications such as dental complications, difficulty in breathing, patient dissatisfaction, recurrent meningitis and negative impacts on the quality of life.

(See Appendix 3 for more comprehensive information).

Similar quantitative study was conducted in Saudi Arabia among 545 adults who want to undergo nose job surgery in order to assess the participants’ level of awareness. The results of this study showed, that many people who choose to do nose job surgery have good academic education and good literacy. But more than half of the participants did not know about the complications of this surgery, and had not encountered or read any information about rhinoplasty from books or brochures (Almohanna et al., 2016). Also, just 30% knew the different types of surgical and non-surgical options.

Because nose job surgery is an invasive procedure, those who are willing to do it should expect complications after surgery. The results of a study which was published by Mortazavi in 2013
confirm this idea. In this study the prevalence of complications after nose job surgery among 202 patients was evaluated. The frequency of complications in the studied patients was about 34% (Mortazavi et al., 2013). This research studied only short-term complications during surgery and a few days after surgery. As mentioned above, there may be other long-term complications which are not mentioned in this study. Also, the assessment of patients’ awareness of these possible complications has not been reviewed. The necessary information regarding these complications and sequelae should be shared with patients, so that they can make an informed decision before surgery or, if occurs, they can control and treat them after surgery.

The effects of rhinoplasty on the quality of life was investigated by a literature review conducted by Zojaji et al (Zojaji, Sobhani, Meshkat, & Javanbakht, 2018). In this study, the authors extracted the studies that were conducted by Iranian researchers, which focused on the quality of life after the rhinoplasty between the year 2000 to the end of 2017. They stated that the impact of nose job surgery on quality of life is a time-consuming process and takes at least six months to evaluate the results. Because the results of this literature review showed that quality of life in Iran is improved six months after rhinoplasty, and this change in quality of life is not significant before six months. Different factors affect the quality of life, including the comments and views of friends and family, personal satisfaction with the new face and appearance, income level, and social class of the person (Fatemi, Rajabi, Moosavi, & Soltani, 2012). Recent findings in Germany also confirm these results (Niehaus, Kovacs, Machens, Herschbach, & Papadopulos, 2017).

The important reasons for decrease in quality of life mentioned in this systematic review were medical errors and surgery without logical reason and without awareness (Mohammadshahi, Pourreza, Orojlo, Mahmoodi, & Akbari, 2014). So, as we see, making a rational and conscious decision to have surgery has a great impact on a person’s life. Examining the applicants’ awareness before surgery and the post operation achievements or their expectations by performing rhinoplasty are some topics that are not covered in mentioned articles.

Mozaffari Niya interviewed twenty-one men and women who had undergone face cosmetic surgeries, which include rhinoplasty to explore their personal motivations which leads to accepting the risk of surgery, and described three main themes as tempting factors: feelings of inferiority,
escape from loneliness and fear of the unseen by relatives and society (Niya, Kazemi, Abazari, & Ahmadi, 2018). In addition, the participants’ expectations from performing face cosmetic surgery were highlighted by analyzing the results of this study. Beside negative body image and fear of being compared, some participants mentioned that, they feel a series of inner weakness and by changing their appearance tried to eliminate these defects. Lack of love by the spouse and feeling lonely were cited as coercive factors to do cosmetic face surgery in order to get attention.

The result of other study conducted to investigate expectations of patients seeking cosmetic rhinoplasty and their Psychological health showed that, the appearance of nose has a direct effect on positive feedback of others, which leads to improve self-conscious, self-esteem, and self-confidence. Also, feeling of personal inadequacy and inferiority during interpersonal interactions act as stimulant factors. Psychologically, people who had obsessive compulsive symptoms, depression and body dysmorphic disorder are more likely to have nose job surgery (AFKHAM, Salehi, Ghalebandi, & KAFIAN, 2009).

Based on literature review, very limited research has been recorded on my research topic and rhinoplasty surgery. That’s why I decided to look at cosmetic surgery in a more general way in order to know the motivation and desire of people who resort to these types of surgeries and then compare them with my research findings.

A study carried out in Thailand by Yenchai to compare participants’ feelings before and after cosmetic facial surgery found that the applicants predicted and expected to have positive emotion such as satisfaction, feeling proud, and happiness after surgery. But the results showed that the actual emotions after surgery were different. Negative emotions such as fear, irritation, dissatisfaction and stress were more intense and last longer than forecasted feelings (Yenchai & Sirisook, 2018). This article emphasizes that correct information must be available to patients and evaluated before they make any wrong decision or undergoing re-surgery, as well as psychological help for those with negative emotions after surgery.

Other prior researcher reported that cosmetic surgery patients are often expect extra-physical benefits such as higher self-esteem and better sex life (Stofman, Neavin, Ramineni, & Alford, 2006).
Also, cosmetic surgeries are sometimes performed in addition to the aesthetics aspect for treatment. The results of a study conducted by Reardon on women who wanted breast reduction surgery showed that the main purpose of patients underwent this surgery is to relieve pain (Reardon & Grogan, 2011). Women with large breasts were experienced pain mainly in the neck, back and shoulders, which was sometimes accompanied by headaches. They find cosmetic surgery as an effective way to reduce pain and improve general health.

As we can see, cosmetic surgery has a lot of variety, and patients’ expectations of performing each of them are very variable. The previous studies highlighted that, as the number of rhinoplasty surgeries continues to increase, further research regarding the causes of this increase base on patient’s awareness and expectation are necessary. Since most of available research has been done by using quantitative method, thus, I have chosen to carry out a new study through qualitative method in order to go deeper in to these issues.

2. Methodology

2.1 Study design:

In this study a descriptive qualitative research design aim of exploring patients’ awareness, perceptions and identify their expectations regarding nose job surgery was chosen to collect data. Qualitative method is deemed to be optimal for this study, since it allows researchers to explore experiences in depth, quality and complexity of a situation, behaviors, perspectives, and feelings through a holistic framework (Holloway & Galvin, 2016). Also, it concentrates more on the individual than on the general (Mayring, 2003). Descriptive design aims to describe the essential findings in a rigorous way that is free from distortion and bias (Bradbury-Jones, Irvine, & Sambrook, 2010). It allows researcher and participants to develop a correct understanding of the facts interpretation and the questions asked, and helps discover new meaning, describe what currently exists, verify the rate of which something occurs, and categorize the information (Plas, Kvale, & KVALE, 1996).

In contrast quantitative research is a formal systematic approach which incorporates numerical data to obtain information about the world (Grove, Burns, & Gray, 2012). This method tries to evaluate social phenomena with numbers and tests hypotheses through fixed variables (Silverman, 2006).
The degree of flexibility is the key difference between qualitative and quantitative methods (Mack, 2005). Quantitative method is almost inflexible, and the researcher asks participants similar questions in the same order. The obtained answers in this method are fix and close-ended. On the other hand, qualitative method is flexible and provide a less formal atmosphere between researcher and participants, which allow them to answer more elaborately and in greater detail (Mack, 2005). Another advantage of qualitative method is that it allows the participants to describe their answers without restrictions, and allows researcher to clear up ambiguities with additional questions at the same time. Considering the effectiveness of the qualitative method, it was decided that this technique could be suitable to gain the information required for this study.

2.2 Study participants:
In order to have valid findings in qualitative study, it is not necessary to collect data from large groups or all members of the community (Mack, 2005). In this study, Purposive sampling strategy was used because the sample sizes were unclear before the data collection stage. Purposive sampling, also known as judgmental or selective, is a form of non-probability sampling in which the researchers based on their own judgment decide which eligible participants participate in their research (Tongco, 2007). According to the time period and accessibility to resources, sampling was performed using saturation law. Saturation principle refer to a stage of research process that analyzing the new data reveals very little new or surprising information, and further data collection present similar results (Small, 2009).

Because I was planning to use a purposive sample strategy, some exclusion and inclusion criteria considered in this study. Inclusion criteria were candidates (both gender) who decided undergo nose job surgery for first time in near future, and those over the age of eighteen. Also, in order to gain detailed responses and large amount of information minimum fourteen participants were considered for interview. Exclusion criteria were those who were health care profession (e.g. doctors, nurses, students, health care assistants), and those who want to do nose job surgery for the second or more times (revision surgery), because these people gained information or knowledge in the previous surgical procedure that could interfered with the aim of the study, which was to assess preoperative information. It should be noted that at first, I intended to interview seven people of both genders (seven male and seven female), but for some reason this balance was not maintained.
Some participants had time constraints and were not interested in conducting an interview more than 15 minutes. Some asked to have interview guides before the interview to think about the answers, and some participants were unwilling to talk about the research.

Eventually, sixteen participants who were interested to participate in this study after receiving the necessary permissions from ethic committees and obtaining their informed consent, which in the following I will explain the process in detail, were recruited. Twelve participants were female and four were male. They were between 20 to 42 years old with a mean age of 31 years. Also, other demographic characteristics such as marital status, level of education, and job status were asked at the beginning of the interview. Personal Characteristics of the Participants are summarized in the table below.

**Table 3: Personal Characteristics of the Participants**

<table>
<thead>
<tr>
<th>Variable</th>
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<tbody>
<tr>
<td>Gender</td>
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<tr>
<td>Male</td>
<td>4</td>
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<tr>
<td>Female</td>
<td>12</td>
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<tr>
<td>Age</td>
<td></td>
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<tr>
<td>20-30 years old</td>
<td>9</td>
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<td>&gt; 30 years old</td>
<td>7</td>
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<tr>
<td>Marital status</td>
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<tr>
<td>Married</td>
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<tr>
<td>Divorced</td>
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<tr>
<td>Level of education</td>
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<td>Academic</td>
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<tr>
<td>Occupation status</td>
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<tr>
<td>Employed</td>
<td>12</td>
</tr>
<tr>
<td>Unemployed</td>
<td>4</td>
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</table>
2.3 Recruitment process:

2.3.1 Study setting:

This study was conducted in Shiraz city. Shiraz, as the capital of Fars Province, is one of the largest cities in the south of Iran, which with modern surgical equipment, numerous public and private hospitals and top surgeons is considered as a prominent surgical pole in southern Iran (Jabbari, Zarchi, Kavosi, Shafaghat, & Keshtkaran, 2013). Shiraz city was chosen for this research because it is my birthplace, I grew up there and worked several years as a surgical technician. In addition, I did not have any language obstacles to communicate with the participants, and I also had colleagues in the health department who by expressing constructive ideas and opinions played an effective role in this study process. At first a governmental hospital, a private hospital and a plastic surgery clinic were selected to find interested participants for this study. But in the end, two treatment centers agreed to cooperate with this study. Concern about patients’ participation in this study, disruption in administrative and office affairs, and lack of comfort and security of administrative documents were the main reasons given by the third medical center for non-cooperation.

2.3.2 Access to participants:

In order to reach and find interested participants, it was decided to attend in registration sections of both hospitals after coordination with the management of hospitals and related secretaries. These places were the most convenient and accessible places to find people who received admission paper from their surgeon and presented in hospitals to register themselves in order to have nose job surgery in near future (Waiting times varied between three months to two years). Relevant candidates were directed to me by the secretary after completing their registration process. At this time, by considering inclusion and exclusion criteria, the necessary information about the subject and purpose of the study, the rights of participants, and other necessary information were fully explained. In addition, all these information were provided as an attachment to a written invitation letter along with a copy of the ethical approvals from the related hospital, the NSD, and a consent form. Applicants were given the opportunity to read the details of this study again at home and in
peace, and if they are interested in participating in the study, call the phone number or email address mentioned in the invitation letter.

It is worth noting that during the data collection period that took place between October 2019 to January 2020, forty-seven people who were eligible to participate in the study were talked and invitation letter were distributed. Of these, only sixteen candidates accepted my invitation and contacted me. Four women who indicated interest in participating but living in other cities were recruited in one on one phone interview using WhatsApp application. One of the reasons that WhatsApp software was chosen for telephone interviews was widely and easy use of this App among different social strata in Iran. The app is designed to allow users to easily share different types of media like photos and video and even record sound which is very efficient in qualitative research. Also, it is so cost effective and provide convenient communication, specially from far distance. As Sweet (2002) highlighted in her study, telephone interviews require much less space and allows both parties to remain comfortable during the interview process (Sweet, 2002). Some researcher believe that this strategy reduces noise and distractions, and prevents the unpleasant feeling of being interviewed in front of others or in public (Sturges & Hanrahan, 2004). Another advantages of this type of interview is that it provides an opportunity for busy professionals’ people who are interested to participate in the research based on their proper time, specially for parents when caring for their children at home (Holt, 2010).

This type of recruitment was done based on some researcher reports who mentioned, in order to avoid “cold-call”, it is better to recruit participants in person, then scheduling a telephone interview at a later date (Sweet, 2002), (Musselwhite, Cuff, McGregor, & King, 2007). Cold-call refer to a technique which is mostly used in trade and business sectors, and in research define as a circumstance when a respondent is first called or contacted in person by a survey interviewer without any prior information and background knowledge that he or she was selected as a sample to participate in the research (Tyrer, Seivewright, Ferguson, & Johnson, 2003).

2.4 Ethical consideration:

Prior to carrying out this study, it was tried to identify and address ethical and moral dilemmas in order to protect all participants from potential harm. This study was a part of my master program in Norway and according to research law in Norway, the first step was to get the ethical committee
approval. So, the objective and purpose of this study were explained to internal ethical committee in Oslo university. After evaluate, the committee decided that the approval of the Norwegian Center for Research Data (NSD) is required (See Appendix 4 for confirmation email of program Ethical Committee). Prerequisites were prepared for the next steps in Iran after registering for NSD and getting confirmation (See Appendix 5 for NSD confirmation report).

This study received approval from the ENT department of Shiraz University of Medical Science and director confirmation of two hospitals to ensure adherence to ethical research standards. Khalili Hospital as a center of Otorhinolaryngology (ENT) and eye surgery, and Ghadir Hospital as one of the largest private medical centers were hospitals that confirmed this research request. To obtain these approvals, a request letter along with research proposal, the NSD license, and interview invitations letter were submitted to the Hospital Ethic Committee in both Persian (Farsi) and English version (See Appendix 6 for confirmation letter of both hospitals, and Appendix 7 for participants invitation letter).

Despite careful planning, ethical challenges may arise at any stage of a research. Therefore, it is very important that ethical issues are well identified, reviewed, and prevented prior to, during and after the study. The following were the main ethical principals which were considered in this study:

2.4.1 Informed consent: This is a strategy to ensure that the participants in the study have a clear and unambiguous understanding of the content being studied, which helps them to participate in the research with awareness and discretion (Mack, 2005). During the recruitment stage, in addition to oral explanation of the study and its purposes, an informed written consent which attached to the invitation letter was distributed among interested participants. In this invitation letter a clear explanation about research purposes and procedures, extent of use of the collected data, discard of data, protection of privacy, rights of the participants including the right to withdraw from the research project at any time and refuse to answer any interview questions, contact information of the university (to clarify any inquire about the existence of this study), and my contact information for further coordination were presented. Both researcher and interviewees agreed to comply with research ethics through a signed informed consent form. Prior to the interview, participants were asked to return the signed consent form for the interview and audio-taping. In addition, a full explanation of the research and the contents of the invitation letter was provided verbally and then
oral consent was obtained. Participants who were interested in one on one phone interview were added to the study after they sent signed consent form by post.

2.4.2 Confidentiality: Social scientists point out that taking part in research can lead to anxiety and exploitation of participants, and that publication of research findings may damage the reputation of participants or members of their social group (Richards & Schwartz, 2002). Confidentiality, in a research context, refers to the fact that information shared on the basis of honesty and trust are protected from disclosure (Giordano, O'Reilly, Taylor, & Dogra, 2007). Confidentiality was maintained in all stages of the research process. All findings were portrayed in a confidential manner. Participant’s personal information and opinions were not judged or given to anyone else. No data was made available to anyone else who was not directly involved in this study. No names were recorded during the interview process. To safeguard privacy and confidentiality, special codes and symbols were used that were regularly maintained at all stages. Participants were even reminded not to use their name during collecting data, as interviews were recorded. The audio recorded interviews and the transcripts were stored in a password locked laptop with restricted access which only I had access to. All manuscripts like field notes were destroyed after being transferred to the laptop. Also, after gaining access to the University's data service for sensitive information (TSD), a copy of files was transferred to this security bank. Six months after the thesis is submitted, all data will be deleted.

2.4.3 Risks and benefits: Economic harm was one of the risks that could be posed to participants during this study. To avoid this, their travel expenses were returned to them in cash. Also, regarding telephone interview, the participants were reimbursed for internet charges as well as the cost of post (As mentioned above, these participants were asked to send back the signed consent form by post). One of the benefits in this study for participants was that it provided a way to convey the challenges, problems, and needs of people who want to undergo nose job surgery to health officials and surgeons which causes solutions to be implemented to execute their requests and increase the satisfaction rate both for surgeons and patients. During the interviews, it was possible that some specialized and ambiguities questions regarding nose job surgery entered the participants minds which required detailed and complete guidance. Reserve a counseling time was a time - consuming process and involved long waiting list. By making the necessary arrangements with an ENT
specialist, it was decided if I came across any participant during interviews who would benefit from additional advice, I could refer them to use an out of turn and free counseling session.

2.5 Interviews:

Participants who were interested in participating in this research project often called and expressed their interest. Four participants also announced their readiness by sending message, which were contacted in the next step in order to do the necessary arrangements for the interview and appropriate location. The locations of interviews were chosen according to the participants’ choice and comfort outside the medical and hospital environments and far away from stressful situations. Six interviews took place in the café, two in their workplace, two in the car, and two in the park. Prior to the interview, participants were asked to return the completed consent form. Again, anonymity was promised to the participants and they gave the permission to record the interview. All interviews were conducted in Persian (Farsi language) and were voice recorded. Each interview lasted between 40 and 50 minutes.

Open ended, semi structured, in-depth interviews were employed in this study because open ended allows participants to discuss their opinions, views and experiences fully in detail and also allows both the interviewer and participant to seek any clarification necessary. According to Polit and Beck (2008) with the use of semi structured interviews we have prepared a topic guide or a certain amount of questions to be covered with each participant (Polit & Beck, 2008). Therefore, considering the objectives of the research, a set of questions was prepared in consultation with the local supervisor. According to participant’s answers, more in-depth questions such as “what did you mean by this statement”, or “can you explain more” were asked. By using questions involved general information regarding the participant’s personal history and demographic detail, I started interviews. This strategy had been accepted as well by previous researchers such as Hill et al. (1997) who suggested it can build a relationship between participants and researcher to feel comfortable (Hill, Thompson, & Williams, 1997). This stage helps to break the ice and allowed to focus on main topic. In the next step, a set of broad questions were developed that addressed three general areas: (a) participant’s main motivations and expectations toward nose job surgery and influenced factors, (b) awareness about this surgery complications, (c) the reasons behind high rate of nose job surgery in Iran. In addition, the participants were encouraged to talk freely to provide
any other relevant information not addressed by the researcher. *(Appendix 8 show the interview guide).*

Regarding phone interviews, after receiving the original consent form by post, the appropriate time was chosen by the participants for the interview. After orally explaining the contents of the consent and participant’s rights, the questions were asked one by one through WhatsApp software. Similarly, the participants recorded their answers and returned them. After hearing and evaluating the answer to each question, additional question to clear up any ambiguity or subsequent questions were asked. Voice recording and simultaneous sending are the outstanding feature of this software. This method allows participants to express personal information in their spare time and in complete peace and comfort without any stress of face to face interviewing. The duration of the interview in this method was between 30 and 45 minutes.

### 2.5.1 Pilot study:

In face to face interview, the first two interviews were conducted, transcribed, analyzed, and considered as pilot study. Researchers benefit from carrying out a pilot study in the early stage of research because it allows for the identification of any weaknesses in the plans, to test study measures, estimation of interviews, testing validity of tools, estimation of outcome variables, and also to evaluate the interview location, audio recording sound, and time frames (Arain, Campbell, Cooper, & Lancaster, 2010). Through this course, the interview questions were examined and with the local supervisor agreement, two questions were added. Also, a table of possible complications of nose job surgery in different time periods, during and after the operation, which was mentioned in another study and also Iranian Journal of Otorhinolaryngology, was used to remind and orient the participants’ mind (Mianroodi et al., 2012). *(Appendix 3 show this table).*

### 2.6 Data analysis:

After conducting the first two interviews (pilot study), transcriptions were made and were read from recorded interviews to gather a general overview. The main guiding tools to identify appropriate themes and categorize data were interview guide and information provided in the interviews. I selected the initial related codes and themes by frequent reading. In the next step, an anonymous copy of these two interviews was prepared and given to local supervisor for review.
The data were re-examined and new sub-themes were introduced. This step was done once again at the end, when all the interviews were done. The codes and themes were analyzed and described, and the similarities and differences among participants and material were highlighted. Conventional content analysis method was used to evaluate data. This approach is used when the researcher aim is to describe and gain a richer understanding of a phenomenon, which there is little literature that supports and gives information about a specific topic (Hsieh & Shannon, 2005). Each participant’s transcript was read several times to identify and label desired themes which were in line with the aims and objectives of the study. In the next stage similarities and relevance of these themes checked out and formed clusters of concepts for each transcript. Finally, all these themes and clusters verified together to find any new sub or master theme which reflect participant’s perceptions regarding nose job surgery. This process continued until no new themes could be identified.

During this research process, in addition to the tips and advice of the local supervisor, I benefited from very effective comments and opinions of the main supervisor who accompanied us step by step. In order to ensure the correctness of the above-mentioned process, all interviews transcriptions were anonymously translated into English one by one. Then these translated interviews along with the detected codes and themes were sent to the main supervisor. In this step, the accuracy of the codes and themes as well as the writing style and materials arrangements were checked out and explained by him.

2.7 Trustworthiness

2.7.1 Credibility:

The trustworthiness and validity of a research means using strategies that give the researcher the opportunity to discuss the finding with the participants (Dahlgren, Emmelin, & Winkvist, 2007). In simpler terms, it means making sure the findings are correct (Shenton, 2004). In order to achieve credibility in this study, the interviews were cross-checked by the participants. This reduced the possibility of transcription error or misinterpretations about what was being said during interviews. After transcribed each interview, an anonymous copy was photographed or scanned and sent to related participant in order to confirm the accurate reflection of experiences. Most of them confirmed what was written, however, three participants asked to add or change some parts, which
in the later stage these reforms were made. To announced these changes, they either called or sent the recorded voice using WhatsApp application. Using this method helped reduce possible bias in the study (Birt, Scott, Cavers, Campbell, & Walter, 2016).

Also, peer debriefing is a tool to achieve credibility and refer to interaction with a colleague or research expert who is familiar with the research protocol and process in order to guide us during the research steps (Anney, 2014). As mentioned in this study, I used the guidance of two supervisors. During the data collection and analysis period, frequent consultations and check-up meeting with local supervisor who worked as a skilled surgeon in the cosmetic surgery field, which consisted of reviewing interviewing strategies and data collections strategies, were affected to assess identified codes and themes. It is worth noting that all our activities inside Iran were controlled and carefully re-evaluated by the main supervisor in Oslo. At the beginning and end of each step, he was given a translated version of how the steps were done and progressed. He played a key role in all stages of this research from protocol development to the end of data analysis and discussion of the findings, and his comments and criticisms helped me to make the necessary changes and adjustments so that they were suitable for writing an article.

To increase the credibility and validity in a qualitative research, various strategies such as multiple data gatherers, triangulation, saturation, reflexivity, member checks, and peer debriefing are used (Creswell & Clark, 2017). Triangulation refer to using different methods for data collection and data analyzing (Anney, 2014). In achieving this, beside field notes and in-depth interviews, I also used phone interviews and discussions to cross check the participants’ answer and find a more comprehensive and deeper understanding of the under-investigation subject.

During the interviews, some participants used proverbs and slang terms to convey their meaning. Because I had the same cultural and ethnic background as the participants, it was easy for me to understand them and helped to become familiar with the general context of the research site. Also, considering enough time to gather data gave me the opportunity to become more familiar with the reality and experiences of the participants and to understand their relationship to my study. I started data collection in October 2019 and finished in January 2020. This time helped me to build trust with my study participants.
2.7.2 Transferability:

Transferability also known as generalizability in qualitative research, referred to possibility and applicability of transferring findings from a research project to other contexts and samples (Dahlgren et al., 2007). It is hard to generalized the findings in qualitative study to other settings or circumstances, but to establish transferability in research, the researcher must ensure that he or she provides complete and comprehensive information and describing of the fieldwork so that readers or future researchers can evaluate transferability, and enabling them to repeat methods in other research environments (Guba, 1981). In this study the research methods have been explained step-by-step, with detailed information.

2.7.3 Dependability:

Dependability refer to the stability of data over time (Bitsch, 2005). In other word, it examines that if the study was repeated in the same context, with the same methods and with the same participants, similar results would be obtained or not (Denzin, Lincoln, & Giardina, 2006; Shenton, 2004). This concept is important because it proves that the research findings were consistent, repeatable, and show that the researcher carefully and without missing or misleading anything provided the final report. Repeating the same data collection activity with similar outcome is very difficult because the research environment and conditions are constantly change and therefor the researcher’s adaptability to these situations may be very diverse (Denzin et al., 2006). One technique to establish dependability is to have an outside researcher conduct an inquiry audit (known as external audit) on the research study. In this process, the findings are verified and matched with the collected data with the help of a researcher who was outside of the data collection and data analysis process (Anney, 2014). Under the constant monitoring and guidance of my supervisors, the intended protocol was followed and the necessary changes were implemented as necessary at each stage to ensure that the protocol of the study was followed appropriately.

2.7.4 Reflexivity:

Reflectivity has been referred to as ‘the knower’s mirror’, begins with identifying the researcher's preconceptions and prejudices, personal and professional experiences, initial beliefs about how to investigate the case, motives and circumstances in discovering a context, and theoretical
foundations related to interests (Malterud, 2001). As Horsburgh (2003) pointed out, reflexivity examines how these previous and active acknowledge of the researcher affect the stages of ongoing study (Horsburgh, 2003). Conducting research between participant with the same cultural and ideological background was a positive point that made it easier to understand what the participants meant during interviews, what can be potential sensitivities, and what to ask and how to ask more probing questions.

During the interview, some of the answers about the barriers to undergo nose job surgery in Iran or the literacy level of the parents regarding this surgery, seemed recognizable. However, I consciously asked more and detailed question about the topic so that I could have more discussion and learn more from the participants. A part of my study was about examining the participants’ awareness regarding surgery complications, I consciously tried to avoid using medical words and expressions during interviews. So, with the control of local supervisor, I prepared an interview guide in simple and understandable language. Even the list of surgical complications in different periods, which is mentioned above and accessible in Appendix 3 was explained in Persian language so that participants would not be misled by reading it.

Prolong engagement and member checking count as strategies to maintain reflexivity (Berger, 2015). As mentioned above, a draft of interview’s transcribe was provided anonymously after each interview to the participant to confirm the content. This frequent communication with the participant and asking for their opinion was a guarantee of reflecting the fact.

One thing I noticed during the fieldwork was that participants may be reluctant to answer the questions completely if they find out that I have related medical work experience. So, I introduced myself as a research student and not as a health worker. This empower the participant to speak fluently and interact freely with no sense of comparison or competition with the interviewer (Berger & Malkinson, 2000). For example, if they knew that I worked as a health worker, they might use phrases like “as you know” or “as you have experience” in their response when I asked them a question. Such answer can not deeply examine the subject under investigation and the researcher cannot gather powerful data.
3. Study findings:

Undoubtedly, any type of surgery has its side effects and risks. But it is very interesting to hear different attitudes of people toward surgery. Overall, the data from the 16 participants reflected that most of these people consider surgery as a tool in the first place and give less priority to the therapeutic aspect. The means by which they can gain something new in life and get rid of the monotony in daily life, a means that is considered as a symbol of higher prestige and enhance beauty. For example, a 25 years old female participant stated her view as follow:

“Although nose surgery is an invasive surgery, but it can make me more beautiful and worth the risk. Nowadays it is very common among girls and boys and consider as a symbol of high prestige”.

On the other hand, there were participants who realized the therapeutic importance of this surgery. In this case a female participant expressed her perception as follow:

“Before I saw deformities and fractures in the hospital or the doctor's office, I thought that people were tired of their faces and came to change their faces. But when I went to the doctor’s office for medical advice, I realized that this surgery is not just for beauty, and often helps the nose regain its natural structure”.

Except the therapeutic aspect, numerous factors pushed participants to think and make the decision to perform a nose job surgery. Almost all of the respondents interviewed mentioned that they had friends, family or acquaintances who had undergone nose job surgery and they also offered to do it. In this case a 36 years old male participant said:

“It's been less than a year since I started thinking about this surgery. Some of my friends had the surgery and upon seeing them I decided to do it by the same surgeon, because their facial changes were very noticeable”.

One of the inappropriate behaviors which the vast majority of participant (n=12, 75 %) could recall at least one negative experience was that, people’s appearance is judged directly and people express their opinion clearly, which sometimes led to negative emotion and feeling, irritation, stress and especially obsession. A female participant said:
“At first I had no idea about having a nose surgery. In my workplace, friends and co-workers said that if you had surgery you would have a much more beautiful face. They have said this many times over and over. Since then, it has come to my mind that there may be a defect or flaw in my face that my colleagues keep repeating. This thought always bothered me, so I was always cautious and stressful in social relationships and when I wanted to talk to someone”.

Conversely, one participant from the in-depth interview mentioned the benefits of these criticisms as follow:

“I thought about surgery almost a year ago, especially when one of my friends suggested that you have a beautiful face but a big nose. I was then encouraged to perform the surgery. And the interesting thing was that I did not know about the deviation of the nasal septum and its fracture before I had surgery consult with my physician. Because of this lack of awareness, I had been suffering from respiratory disorder for a long time. I was breathing very hard and did not know the cause”.

However, these negative comments and experiences also involved discussions and arguing with friends, family members, and colleagues in the workplace for some participants (n=3, 18.7%).

Encouraged by the mass media and the virtual world (Internet), negative self-concept, and the acceptance of nose job surgery (rhinoplasty) as a criterion of beauty in society were others influential factors in decision making. The words of a young female student confirm the above:

“I was completely opposed to undergo cosmetic nose surgery and ignore anyone who told me to do it. But social media changed my mind. I saw a photo of a bride smelling a bunch of flowers. The appearance and shape of the nose in this photo was the highlight of this photo and the first thing that caught my attention. I compared myself to the position of that photo, and since then I decided to have this surgery. Also, ninety percent of my classmates underwent this surgery and their noses matched their faces”.

Among participant in this study 31.2 percent (3 female and 2 male) suffered from respiratory disorders such as nasal congestion, and nasal septum deviation. Their top priorities were to treat these problems. The rest of participant consider just the beauty aspect of this surgery. The opinion of a 24 years old male participant was interesting:
“Two years ago, my nose was broken during exercise and my nose was severely distorted in appearance, which greatly affected my breathing. I get shortness of breath at night and during sleep. My main goal is to improve my breathing and because I accept the risk of anesthesia and surgery, I want to make some changes to its beauty at same time”.

There are various possible complications after nose job surgery. The familiarity and awareness of the participants with some postoperative complications of rhinoplasty based on their own words were as follow:

- Bruises around the nose and postoperative bleeding (56.2%).
- Inflammation (43.7%).
- Respiratory disorder and airway obstruction (43.7%).
- Olfactory disturbance (31.2%).
- Pain (31.2%).
- Allergy (31.2%).
- Revision or reconstruct surgery (25%).
- Numbness and runny nose (18.7%).
- Infection (18.7%).
- Mismatch with other facial components (18.7%).
- Anesthesia complication (12.5%).
- Dissatisfaction with the new face (12.5%).
- Remaining scar (12.5%).

The most important ways and sources of informing about these complications were:

- Social media, websites and chat forums (81.2%).
- Tips and advices from friends who underwent this surgery (75%).
- Applicants who had undergone surgery and had referred to doctor’s office and clinic for post-operative visit (43.7%).
- Consultation with physicians (31.2%).
- Medical magazines, booklets, and articles (12.5%).
Regarding the level of information and awareness of participant’s parents about nose job surgery, mostly reported (n=10, 62.5%) that their parents have no related knowledge and information. The rest (n=6, 37.5%) had general or superficial information based on observation of similar cases in society. According to this, twelve participants (75%) reported that their parents disagreed with them to do this cosmetic surgery, 18.7 percent agreed, and only 6.2 percent (n=1) was neutral. A female participant explained her family’s perspective like this:

“My family has no knowledge of nose job surgery, the consequences or the necessary medical care. I also did not consult with them and are unaware of my decision. I am sure they will definitely oppose me if they become aware. For this reason, I will not inform them until a week before surgery.”

Also, a male participant opinion confirms the knowledge that has been obtained experimentally:

“My brother underwent nose surgery five years ago due to a fracture and because of the nurse’s negligence a bump appeared in his nose, and he had some respiratory problems. That’s why my parents are very worried about my postoperative results. Their information is about post-surgical care, because my brother had done it before. For example, they know what to consider when changing dressing or which diet is proper for the patient.”

Factors which considered by the participants to select a surgeon were (in order of decreasing frequency): being an ENT specialist, friend suggestion, the amount of time which a surgeon devote for counseling and applicant’s guidance, being famous from the people’s point of view, sample works in internet and clinics, and registered scientific articles.

On the other hand, they also had criteria for choosing a hospital for their future surgery such as:

- low density and crowding of patients.
- Governmental hospital because there is better control over physician and medical staff performance.
- Be stylish, tidy, and having experienced staff.
- Providing high quality equipment and facilities.
“I chose a private hospital for surgery because it provides better patient care, it has less density and crowding population in compare to public hospitals, and also uses up-to-date equipment. To choose a surgeon, I tried to choose an ENT surgeon because they have more information about head and neck in compare to other medical groups such as plastic surgeons or general surgeons. In addition, I have seen that plastic surgeons rebuild and reshape the nose in a constant-routine form for most patients without any creativity and they don’t care about what the applicants want”. (Interview 5).

The participants’ expectations from their surgeon were mentioned as follow: surgeon must have the patience to listen to patients talk and concerns, having more consultation sessions before operation day, the surgeon himself do this surgery and not delegate work to a colleague or student and accept responsibility for his own work, quick and easy access to the surgeon after surgery in case of emergency.

“A surgeon, not only in the field of beauty but also in any field of specialty, must have the patience to listen to patients talk and concerns. Maybe a surgeon has a lot of experience and be at a very high scientific level that with the slightest talk and gesture of his patient identify what his/her problem is. But patients always need a trustworthy person who can share and talk their own intellectual problems and concerns and solve them”. (Interview 1).

One of the concerns voiced by most male participant was that produce subtle changes that make the nose appear natural, with preservation of facial harmony.

“I expect the surgeon to have a final consultation session if possible before surgery because as I get closer to the surgery date, new and ambiguous questions arise that I cannot answer alone. During surgery I expect to change my nose shape somehow to fit my masculine face”. (Interview 2).

All participants in this study articulated that nose job surgery will be their first cosmetic surgery experience, however there were 4 participants out of 16 (25%) who commented that they had other surgeries outside of the cosmetic category which play an important role in decision making and make them more determined to have a new surgery. For instance, in this quotation:
“I was always used to wearing glasses until I had LASIK surgery three years ago. After that I didn't have to wear glasses anymore and my nose was disproportionately on my face. I was not happy with my new face without glasses, especially when I was looking in the mirror. My friends and those around me also gave me negative feedback and said that when you wore glasses you had a more beautiful face. After that I decided to try a new face”. (28 years old male participant).

From the analysis of the interviews, we identified three barriers or obstacles categories and their related reasons (Table 4), which have deterrent role in performing this surgery in Iran.

**Table 4: Deterrent obstacles and their reasons regarding performing nose job surgery in Iran**

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Related reasons</th>
</tr>
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| **1) Social barriers**                                            | • Negative perceptions and feedback especially from the previous generation.  
• People comment freely regardless of the circumstances of the applicant.  
• Lack of pre-surgical psychological counseling which is often neglected.  
• Not allocating enough time for clear advice and eliminating ambiguities by the doctors due to the large number of applicants.                                                                                      |
| **2) Financial barriers**                                        | • Cosmetic surgeries are not or in very low percentage covered by public and private insurances.  
• High cost of surgery due to economic conditions which is not stable and change constantly.  
• Getting a support such as bank loan is not an easy task and it takes a long process.                                                                                                                                                                                  |
| **3) Political barriers**                                        | • There is no government control over the cost of this surgery.  
• The cost of surgery varies widely between hospitals and even doctors.  
• Physicians with different backgrounds and specialties such as general surgery or maxillofacial surgeons perform nose surgery too and there is no proper supervision of ministry health.                                                                 |

Exam: INTHE4012  
Year: 2020
The reasons behind the high rate of nose job surgery in Iran from the participants’ point of view were: social comparison, veil or cover as a limiting factor to express beauty, mass media that introduce ideal beauty standards and strongly influence the social comparison, the low cost of surgery in compared to other countries that causes many people as a tourist come to Iran to perform surgery, people's criticism of others looks and faces which can act as a motivating factor, negative body image and low self-esteem, the uniformity of daily life and a way to get rid of fatigue and daily weariness. Some participants also thought that nose in compare to the face is more disorganized in the Iranian race:

“I have traveled to many countries and I only see in Iran that people's nose doesn't fit very well with other components in face, maybe that is because of people's genetics”. (Interview 2).

In investigating the effects and consequences of nose job surgery on participant’s lives the following issues were raised: improving the quality of life by removing a defect such as breathing problems, feeling self-satisfied with new face, giving better opportunity to find new friends or social interaction, increasing self confidence in public place, intellectual peace and freedom from obsession.

“Certainly, it will increase my self-esteem and I will not allow other people to judge me anymore. Social interactions will also improve because people in the community behave accordingly”. (Interview 4).

If the expected results are not achieved, depression and regret because of people’s negative opinions and judgments.

4. Discussion:

The results of this study found that most of the participants considered cosmetic surgery as a normal device or facility in order to get pleasure, satisfactions and something positive in their lives regardless of its possible negative aspects and consequences as an invasive surgery. This way of thinking acts as a stimulus and is in line with the perspective of emotion theorists which state that emotion causes direct behavior and act as a motivation source (Baumeister, Vohs, Nathan DeWall, & Zhang, 2007).
In this research we understood that one of the seductive factors toward doing a cosmetic nose surgery was friends, family or acquaintances who had undergone nose job and they had enough satisfaction. This finding is consistent with a study from Thailand (Yenchai & Sirisook, 2018), which mentioned that people compare themselves with those who had similar successful surgery and created a visual identity that if they underwent cosmetic surgery, then they would achieve a same successful outcome like the others without considering the failures that might occur.

Inappropriate feedback from misplaced judgement and prejudices based on people’s appearance can cause dissatisfaction, unhappiness and negative attitude toward self-image especially during loneliness and privacy. These negative interpretations can suppress the confidence and leads to emotional distress which push persons to do cosmetic surgery as a way of escape from these disorders and obsession. This finding confirms the result of Mozaffari Niya study (Niya et al., 2018), which mentioned having negative self-image causes many stresses and finally leads to perform surgery as a way to escape.

The media has been constantly promoting or advertise beauty patterns and related standard criteria. In this study participants discussed intentionally or unintentionally felling bombarded with ideals of aesthetic attractiveness via the media and compare their appearance with those advertised criteria and judge themselves. The result of this judgment influenced the perception that one had so far of oneself. This can be a starting point for thinking about changing face and appearance by nose job surgery. These results are in line with studies which reported that the media is the driving force behind the growing demand for cosmetic surgery (Koning, Zeijlmans, Bouman, & van der Lei, 2009), and with other study that noted the media by affecting the level of body dissatisfaction normalized cosmetic surgery as being an acceptable way to improve the appearance of our bodies (Sharp, Tiggemann, & Mattiske, 2014). These confirmations contradict the finding of a 2007 study by Brown, who claimed that media exposure did not significantly predict likelihood of undergoing cosmetic procedures (Almohanna et al., 2016), (Brown, Furnham, Glanville, & Swami, 2007).

In the next step most participants try to gather basic or supplemental information over the internet and support forums which gave them a clearer perspective and make them more awareness for the next stages. For example, same as the results of Warner’s study, those who seek health information online were more likely to communicate with medical professionals about health treatments and
they try to obtain more precision information than those who did not use the internet as a source of information (Warner & Procaccino, 2007).

In this study the tendency and attraction for nose job surgery was not confined just to the beauty aspect. Almost one third of participants stated that their priority was the therapeutic aspect in order to repair a defect or problem such as nasal congestion, nasal septum deviation, nose fracture, and shortness of breath (Dyspnea). At the same time, they decided to focus on beauty as well, because they undertake the risk of surgery, anesthesia, and treatment cost once. Our findings are in contrast to the results of a study by Calogero et al (2010) who considered body shame as the cause of women’s desire for cosmetic surgeries (Calogero, Pina, Park, & Rahemtulla, 2010). Also with other study conducted by Mozaffari Niya et al (2018) which found that the increasing acceptance of cosmetic surgery is because of the reduced satisfaction with physical appearance and fear of being unattractive (Niya et al., 2018).

Face cosmetic surgeries are not emergency surgeries and may be associated with dangerous consequences. In our study the participants varied widely in the amount and type of information related to postoperative complications they had. The complications mainly recognized by the participants were more superficial and based on what they had seen in the surrounding community. They had no tendency to understand and obtain medical and in-depth information about complications. The most important reasons for this attitude were the following: fear of complications when they talk about it and prefer not to hear anything, consider most of them as temporary and transient, seeing or hearing negative consequences rarely when consulting with others, preferred and attention to the surgeon’s work so that a good surgeon can reduce the risk of complications, and they do not like to hear because they think positively.

In addition to the social media and websites that were the biggest sources of information for participants, friends and those who underwent nose job surgery counted as second important way to make themselves aware of surgery process and consequences. In our study only one third of participant mentioned that they received information leaflets and a full explanation of risks from their surgeon while others were less well informed. It seems that when the surgeon did not provide enough information, this lack or deficiency was compensated by resources mentioned earlier. This finding is in support of a study by Paling (2003) which noted that the doctors are not always
effective in ensuring patients are fully aware of risks involved in medical procedures (Paling, 2003).

Contrary to a report (Mianroodi et al., 2012) which indicated that the tendency to want cosmetic surgery decreased as parental information increased, we realized that the awareness level of parents and their opinion about whether or not to perform nose job surgery is not very important and in most cases ignored by the participants because despite their parent’s opposition, they were determined to have surgery and even some participants did not inform parents until they registered themselves for surgery at the hospital. Concern about nose manipulation, old beliefs and difference of generations, and incompatibility of surgery due to age were stated as reasons for parental opposition. The interesting reason given by some male participants was that their parents attributed this surgery to be for female only.

A significant factor for the success of therapy which highly influencing the satisfactions rate of a cosmetic surgery is the type of relationship and how the doctor interacts with the patient. Good and satisfying communication between doctor and patient play a vital role for the patient to receive good treatment (Lukoschek, Fazzari, & Marantz, 2003). In fact, the applicants want to build some kind of trust. This is something that our participants have mentioned many times and expected from their doctor to have more counseling sessions, because as they get closer to the day of surgery, new vague questions engage their minds. This issue is so important that our research participants considered the amount of time, which a surgeon devote for counseling and applicant guidance as one of the criteria for selecting their surgeon. This finding confirms the results of Safran’s (2003) report which stated establishing enough and good alliance is one of the main reasons for the success of therapy (Newhill, Safran, & Muran, 2003).

Although nose job surgery was the first cosmetic surgery for all our research participants, but some of them had surgery outside of cosmetic fields which the obtained results played an effective role on attitudes toward having future procedures. We have found that some of these results caused changes in the appearance of the person which forced them to perform additional surgery to eliminate an incompatibility or on the other hand give them experience and information that they planning to do new surgery in the future. This result is almost in line with the results from Adam’s
study which reported that satisfaction or dissatisfaction with the outcome did not always have a corresponding effect on attitudes toward having future procedures (Adams, 2010).

The barriers that our participants faced after deciding to have nose job surgery were divided into social, financial, and political barriers. One of the social barriers was the relationship between cosmetic surgery and the issue of psychology which is often neglected. There are many surgeons who feel that they are performing psychosurgery which means that they are making a change to the body that will also influence patients psychologically (Parker, 2010). Psychological counseling along with medical counseling is important because it can help physicians to understand the psychological reasons why a person may be or not be a good candidate for cosmetic surgery and also to find their expectations and act accordingly which leads to increase satisfaction rate for both sides.

In our study, social comparison was mentioned frequently as a reason regarding high rate of nose job surgery in Iran. People try to interact and compare themselves with members of society in order to generate social power or superiority and show themselves as an affluent class. In addition, Iran has a high potential to be a medical tourist destination. Reasons such as the existence of experienced doctors and medical staff, high number of service centers, cultural and historical tourist attractions, and reasonable cost compared to foreign currencies were prominent during our interviews. Also, Jones and Keith pointed out that providing fast services along with the low cost of travel had led people to travel to countries with high quality and low service costs without any waiting list (Jones & Keith, 2006).

5. Conclusions:

This study has attempted to explore the awareness level of participants about the complications of nose job surgery, and also identify their expectations and motivation factors. In particular, we tried to find the reasons behind high number of such a costly and painful procedure in Iran.

The findings suggest that mass media and negative feedback or misplaced judgements from people in the community play an important role in participant’s decisions to undergo nose job surgery. People usually think optimistically about the results of this surgery and count it as a tool by which in addition to gaining beauty, they can gain higher social prestige and something new in life and
get rid of daily life monotony. Improving the quality of life, giving better opportunity to find new friends or social interaction, increasing self confidence in public place, intellectual peace and freedom from obsession and achieve self-satisfied feeling are also considered to be the most important achievement of this surgery. The tendencies toward nose job surgery are not always for the sake of beauty. Repairing a defect or problem such as nasal congestion, nasal septum deviation and nose fracture are counted as a therapeutic aspect of nose job surgery.

Although the majority of clients have an academic background, the familiarity and awareness with some postoperative complications were more superficial and based on what they had seen in the surrounding community. Fear of knowing the details, considering possible complications as temporarily, and be optimistic are some factors that reduce their tendency to understand and obtain medical and in-depth information.

In today’s modern society, factors such as social and cultural conditions, family and friends, media advertising, and scientific and technological advances are some criteria that affect the standards of beauty in society. Psychologically, while most previous studies through quantitative studies have focused on the effects of this surgery on individual personality and quality of life, the results of this study showed that psychological counseling is often ignored or not given importance. Without psychoeducational supports and information training, clients will judge themselves with the society’s beauty ideals and internalize beauty standards, which mostly lead to body shame and dissatisfaction. This sense of self-loathing can act as a stimulant to change the appearance through the use of, for example, surgery (Grogan, 2016).

**Recommendations:**

The results presented here will potentially convince physicians to communicate more effectively with candidates who are seeking nose job surgery by considering more consultation time and provide them deep information. It would be a good idea for future study to find out what kind of information the applicants need to make a logical decision for surgery.

Time constraints and not allocating enough time in doctor’s office is a problem that has been repeatedly mentioned as a major challenge, not only in Iran but also in most countries of the world. If a comprehensive medical website can be setup under the supervision and control of the Ministry
of Health and the government in simple language for general understanding, which includes all the necessary information such as surgical procedure, complications, care and tips before and after surgeries, medication and sample surgery video, it can act as an auxiliary tool in medical counseling. In addition to face to face consultation, doctors can introduce this website to patients in order to find more accurate and explicit information. This idea can increase patient’s awareness and also remove ambiguities.

Cosmetic surgery has a dual effect, physically and psychologically. All clients should have psychological support as part of their care pathway (Clarke & Rumsey, 2018). It would be great if mutual cooperation of psychologists and surgeons before and after cosmetic surgery be considered as a mandatory rule in Iran. This important increase candidate’s satisfaction by identifying their motivation and expectation, and understanding the reasons why people decide to have non-medically necessary surgery, and make it possible to reconsider whether or not to have surgery.

Since the number of men participating in our research was much smaller than women, it would be beneficial to look at the perceptions and expectations of two genders separately in future studies. So, we can compare them in more details because a man’s world is very different from a woman.
6. References


Anney, V. N. (2014). Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria.


Berger, R. (2015). Now I see it, now I don’t: Researcher’s position and reflexivity in qualitative research. *Qualitative research, 15*(2), 219-234.


Richards, H. M., & Schwartz, L. J. (2002). Ethics of qualitative research: are there special issues for health services research? *Family practice, 19*(2), 135-139.


Appendix 1: Rate of some plastic surgery in 2017 - based on a report of International Society of Aesthetic Plastic Surgery (ISAPS).

<table>
<thead>
<tr>
<th>TOTAL PROCEDURES</th>
<th>2016</th>
<th>2017</th>
<th>% Change (overall volume)</th>
<th>% Change (for average surgeon)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Number of Plastic Surgeons</td>
<td>43,100</td>
<td>43,500</td>
<td>1% increase</td>
<td></td>
</tr>
<tr>
<td>FACE &amp; HEAD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brow Lift</td>
<td>261,663</td>
<td>249,343</td>
<td>-5%</td>
<td>-5%</td>
</tr>
<tr>
<td>Ear Surgery</td>
<td>298,975</td>
<td>287,070</td>
<td>-4%</td>
<td>-5%</td>
</tr>
<tr>
<td>Eyelid Surgery</td>
<td>1,347,509</td>
<td>1,346,886</td>
<td>0%</td>
<td>-1%</td>
</tr>
<tr>
<td>Facelift</td>
<td>427,065</td>
<td>465,296</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Facial Bone Contouring</td>
<td>109,775</td>
<td>98,003</td>
<td>-11%</td>
<td>-12%</td>
</tr>
<tr>
<td>Fat Grafting-face</td>
<td>596,836</td>
<td>602,760</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Neck Lift</td>
<td>264,050</td>
<td>263,219</td>
<td>0%</td>
<td>-1%</td>
</tr>
<tr>
<td>Rhinoplasty</td>
<td>786,852</td>
<td>877,254</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td><strong>Total Face &amp; Head Procedures</strong></td>
<td>4,092,725</td>
<td>4,189,830</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>BREAST</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast Augmentation—saline</td>
<td>61,780</td>
<td>70,683</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>Breast Augmentation—silicone</td>
<td>1,449,337</td>
<td>1,465,006</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Breast Augmentation—fat transfer</td>
<td>138,154</td>
<td>137,030</td>
<td>-1%</td>
<td>-2%</td>
</tr>
<tr>
<td>Breast Implant Removal</td>
<td>155,453</td>
<td>169,553</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Breast Lift</td>
<td>583,192</td>
<td>657,832</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>Breast Reduction</td>
<td>465,665</td>
<td>489,166</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Gynecomastia</td>
<td>236,371</td>
<td>245,272</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total Breast Procedures</strong></td>
<td>3,089,952</td>
<td>3,237,123</td>
<td>5%</td>
<td>4%</td>
</tr>
</tbody>
</table>
Appendix 2: Rate of some plastic surgery in 2018 based on a report of International Society of Aesthetic Plastic Surgery (ISAPS).

### NUMERO OF WORLDWIDE SURGICAL PROCEDURES PERFORMED BY PLASTIC SURGEONS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Breast Augmentation</td>
<td>1,862,506</td>
<td>17.6%</td>
<td>1,749,002</td>
<td>1,548,197</td>
<td>6.1%</td>
<td>27.6%</td>
</tr>
<tr>
<td>2</td>
<td>Liposuction</td>
<td>1,733,620</td>
<td>16.3%</td>
<td>1,573,680</td>
<td>1,572,901</td>
<td>9.2%</td>
<td>20.8%</td>
</tr>
<tr>
<td>3</td>
<td>Eyelid Surgery</td>
<td>1,099,960</td>
<td>10.4%</td>
<td>1,346,886</td>
<td>1,427,451</td>
<td>-2.2%</td>
<td>-29.8%</td>
</tr>
<tr>
<td>4</td>
<td>Abdominoplasty</td>
<td>888,713</td>
<td>8.4%</td>
<td>802,256</td>
<td>682,568</td>
<td>9.7%</td>
<td>23.2%</td>
</tr>
<tr>
<td>5</td>
<td>Rhinoplasty</td>
<td>726,907</td>
<td>6.9%</td>
<td>877,254</td>
<td>849,445</td>
<td>-20.7%</td>
<td>-16.9%</td>
</tr>
<tr>
<td>6</td>
<td>Breast Lift</td>
<td>710,014</td>
<td>6.7%</td>
<td>657,833</td>
<td>498,957</td>
<td>7.5%</td>
<td>29.7%</td>
</tr>
<tr>
<td>7</td>
<td>Fat Grafting (face)</td>
<td>542,305</td>
<td>5.1%</td>
<td>602,760</td>
<td>965,727</td>
<td>-11.1%</td>
<td>-78.1%</td>
</tr>
<tr>
<td>8</td>
<td>Breast Reduction</td>
<td>534,294</td>
<td>5.0%</td>
<td>499,146</td>
<td>432,280</td>
<td>8.5%</td>
<td>19.1%</td>
</tr>
<tr>
<td>9</td>
<td>Facelift</td>
<td>386,798</td>
<td>3.6%</td>
<td>465,296</td>
<td>477,425</td>
<td>-1.6%</td>
<td>-19.7%</td>
</tr>
<tr>
<td>10</td>
<td>Botox Augmentation (implants and fat transfer)</td>
<td>346,432</td>
<td>3.3%</td>
<td>372,496</td>
<td>222,429</td>
<td>-7.5%</td>
<td>35.8%</td>
</tr>
<tr>
<td>11</td>
<td>Gynecomastia</td>
<td>269,720</td>
<td>2.5%</td>
<td>243,772</td>
<td>172,048</td>
<td>9.9%</td>
<td>35.7%</td>
</tr>
<tr>
<td>12</td>
<td>Ear Surgery</td>
<td>262,078</td>
<td>2.5%</td>
<td>287,070</td>
<td>247,518</td>
<td>-9.5%</td>
<td>5.6%</td>
</tr>
<tr>
<td>13</td>
<td>Neck Lift</td>
<td>225,578</td>
<td>2.1%</td>
<td>263,219</td>
<td>NA</td>
<td>-16.7%</td>
<td>NA</td>
</tr>
<tr>
<td>14</td>
<td>Brow Lift</td>
<td>220,055</td>
<td>2.1%</td>
<td>240,342</td>
<td>NA</td>
<td>-13.3%</td>
<td>NA</td>
</tr>
<tr>
<td>15</td>
<td>Upper Arm Lift</td>
<td>158,022</td>
<td>1.3%</td>
<td>137,030</td>
<td>98,363</td>
<td>1.4%</td>
<td>29.2%</td>
</tr>
<tr>
<td>16</td>
<td>Labiaplasty (excluding vaginal rejuvenation)</td>
<td>132,664</td>
<td>1.3%</td>
<td>136,745</td>
<td>99,432</td>
<td>-4.6%</td>
<td>25.0%</td>
</tr>
<tr>
<td>17</td>
<td>Facial Bone Contouring</td>
<td>98,727</td>
<td>0.9%</td>
<td>98,005</td>
<td>123,654</td>
<td>0.7%</td>
<td>-25.2%</td>
</tr>
<tr>
<td>18</td>
<td>Thigh Lift</td>
<td>84,828</td>
<td>0.8%</td>
<td>86,728</td>
<td>NA</td>
<td>-2.6%</td>
<td>NA</td>
</tr>
<tr>
<td>19</td>
<td>Lower Body Lift</td>
<td>81,147</td>
<td>0.8%</td>
<td>88,029</td>
<td>NA</td>
<td>-8.5%</td>
<td>NA</td>
</tr>
<tr>
<td>20</td>
<td>Buttock Lift</td>
<td>43,554</td>
<td>0.4%</td>
<td>43,564</td>
<td>NA</td>
<td>0.8%</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>TOTAL SURGICAL PROCEDURES</td>
<td>10,407,237</td>
<td></td>
<td>10,740,062</td>
<td>9,018,375</td>
<td>0.6%</td>
<td>15.0%</td>
</tr>
</tbody>
</table>
**Appendix 3:** The complications of Rhinoplasty.

<table>
<thead>
<tr>
<th>Intra-operative complications</th>
<th>Immediate postoperative complications</th>
<th>Early postoperative complications</th>
<th>Late postoperative complications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive bleeding</td>
<td>Airway obstruction</td>
<td>Hemorrhage</td>
<td>Scar hypertrophy</td>
</tr>
<tr>
<td>Tears of mucoperichondrial flaps</td>
<td>Anaphylaxis</td>
<td>Septal hematoma</td>
<td>Polly Beak nasal deformity</td>
</tr>
<tr>
<td>Buttonholing of skin</td>
<td>Visual impairment</td>
<td>Infection</td>
<td>Synechiae Formation</td>
</tr>
<tr>
<td>Cautery burns</td>
<td></td>
<td>Dehiscence of incisions</td>
<td>Septal perforation</td>
</tr>
<tr>
<td>Collapse of bony pyramid</td>
<td></td>
<td>Persistent edema</td>
<td>Nasal valve Collapse</td>
</tr>
<tr>
<td>Disarticulation of upper lateral cartilage</td>
<td></td>
<td>Skin necrosis</td>
<td>Nasal stenosis</td>
</tr>
<tr>
<td>Osteotomy complications</td>
<td>Sequestra formation</td>
<td></td>
<td>Bossa Formation</td>
</tr>
<tr>
<td>Perinasal trauma</td>
<td>Cardiovascular insufficiency</td>
<td></td>
<td>Recurrent Meningitis</td>
</tr>
<tr>
<td></td>
<td>Cerebrospinal fluid rhinorrhea</td>
<td></td>
<td>Olegranuloma</td>
</tr>
<tr>
<td></td>
<td>Contact dermatitis</td>
<td></td>
<td>Dorsal Cyst</td>
</tr>
<tr>
<td></td>
<td>Nasal blockage</td>
<td></td>
<td>Aesthetic surgical misjudgments</td>
</tr>
<tr>
<td></td>
<td>Numbness and pain</td>
<td></td>
<td>Persistent Psychological complications</td>
</tr>
<tr>
<td></td>
<td>Olfactory Disturbances</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carotid-Cavernous fistula</td>
<td></td>
<td>Dental complications</td>
</tr>
<tr>
<td></td>
<td>Reassurance Demand</td>
<td></td>
<td>Gustatory rhinorrhea</td>
</tr>
<tr>
<td></td>
<td>Early psychological complications</td>
<td></td>
<td>Human adjuvant disease</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lacrimal Fistula</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Enophthalmos and silent sinus syndrome</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Patient dissatisfaction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Difficulty in Breathing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Long-term impacts on the quality of life</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sleep-related Breathing disorders</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nasal crusting,Synechiae, and Discomfort</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ozena or Advanced Atrophic Rhinitis</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Characterized by Chronic Crusting and Dysosmia</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Even resulting in Anosmia</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>due to the Destruction of Olfactory cells.</td>
</tr>
</tbody>
</table>

*Iranian Journal of Otorhinolaryngology No.3, Vol.24, Serial No.68, Summer-2012,137*
Appendix 4: Report of internal Ethical Committee in Oslo university.

Results of your case to the Program Ethical Committee

Terese Eriksen

Wed 2019-05-08 12:28

To: Farzad Najjarzadehghalati <farzad.najjarzadehghalati@studmed.uio.no>
Cc: Christoph Gradmann <christoph.gradmann@medisin.uio.no>

Dear Farzad,

The Program Ethical Committee have decided that they recommend you to apply to NSD.

Best,
Terese
Appendix 5: NSD confirmation report.

NSD's assessment

Project title
A qualitative study of patient’s awareness and expectations related to nose job (Rhinoplasty) surgery in IRAN

Reference number
228279

Registered
10.06.2019 av Farzad Najjarzadehghalati - farzad.najjarzadehghalati@studmed.uio.no

Data controller (institution responsible for the project)
Universitetet i Oslo / Det medisinske fakultet / Institutt for helse og samfunn

Project leader (academic employee/supervisor or PhD candidate)
Christoph Gradmann, christoph.gradmann@medisin.uio.no, tlf: 22850615

Type of project
Student project, Master’s thesis

Contact information, student
Farzad Najjarzadehghalati, farzadnajaranzhadeh@yahoo.com, tlf: 96731358

Project period
15.07.2019 - 14.07.2020

Status
19.06.2019 - Assessed

Assessment (1)
19.06.2019 - Assessed

Our assessment is that the processing of personal data in this project will comply with data protection legislation, so long as it is carried out in accordance with what is documented in the Notification Form and attachments, dated 19.06.2019. Everything is in place for the processing to begin.
NOTIFY CHANGES
If you intend to make changes to the processing of personal data in this project it may be necessary to notify NSD. This is done by updating the Notification Form. On our website we explain which changes must be notified. Wait until you receive an answer from us before you carry out the changes.

TYPE OF DATA AND DURATION
The project will be processing special categories of personal data about health, and general categories of personal data, until 14.07.2020.

LEGAL BASIS
The project will gain consent from data subjects to process their personal data. We find that consent will meet the necessary requirements under art. 4 (11) and 7, in that it will be a freely given, specific, informed and unambiguous statement or action, which will be documented and can be withdrawn.

The legal basis for processing special categories of personal data is therefore explicit consent given by the data subject, cf. the General Data Protection Regulation art. 6.1 a), cf. art. 9.2 a), cf. the Personal Data Act § 10, cf. § 9 (2).

PRINCIPLES RELATING TO PROCESSING PERSONAL DATA
NSD finds that the planned processing of personal data will be in accordance with the principles under the General Data Protection Regulation regarding:

- lawfulness, fairness and transparency (art. 5.1 a), in that data subjects will receive sufficient information about the processing and will give their consent
- purpose limitation (art. 5.1 b), in that personal data will be collected for specified, explicit and legitimate purposes, and will not be processed for new, incompatible purposes
- data minimisation (art. 5.1 c), in that only personal data which are adequate, relevant and necessary for the purpose of the project will be processed
- storage limitation (art. 5.1 e), in that personal data will not be stored for longer than is necessary to fulfil the project’s purpose

THE RIGHTS OF DATA SUBJECTS
Data subjects will have the following rights in this project: transparency (art. 12), information (art. 13), access (art. 15), rectification (art. 16), erasure (art. 17), restriction of processing (art. 18), notification (art. 19), data portability (art. 20). These rights apply so long as the data subject can be identified in the collected data.

NSD finds that the information that will be given to data subjects about the processing of their personal data will meet the legal requirements for form and content, cf. art. 12.1 and art. 13.

We remind you that if a data subject contacts you about their rights, the data controller has a duty to reply within a month.

FOLLOW YOUR INSTITUTION’S GUIDELINES
NSD presupposes that the project will meet the requirements of accuracy (art. 5.1 d), integrity and confidentiality (art. 5.1 f) and security (art. 32) when processing personal data.

To ensure that these requirements are met you must follow your institution’s internal guidelines and/or consult with your institution (i.e. the institution responsible for the project).

FOLLOW-UP OF THE PROJECT
NSD will follow up the progress of the project underway (every other year) and at the planned end date in order to determine whether the processing of personal data has been concluded/is being carried out in accordance with what is documented.

Good luck with the project!

Contact person at NSD: Jørgen Wincentsen

Data Protection Services for Research: +47 55 58 21 17 (press 1)
Appendix 6: Approval from the ENT department of Shiraz University of Medical Science and Research Ethics Committee of two hospitals with Persian versions.

Letter to Hospital Research Ethics Committee

Research Ethics Committee
Hospital / clinic Khah hospital

Research study: A qualitative study of patient’s awareness and expectations related to nose job (Rhinoplasty) surgery in IRAN.

Principal investigator:
- Farzad Najjarzadehghalati, Master student of International Community Health Programme, Institute of Health and Society, Faculty of Medicine, University of Oslo.

Supervisors:
- Reza Kaboodkhani, Assistant Professor - Department of Otorhinolaryngology- Head and Neck surgery - Shiraz university of medical science.
- Christoph Gradmann, Professor - Department of Community Medicine and Global Health, Faculty of Medicine, University of Oslo.

Dear research ethics committee,

I am currently undertaking a research study as part of my master’s study in International Community Health at the University of Oslo. In this letter I will give you information about the purpose of the project and I am writing to seek ethical approval in order to gain access to participants. I have also been allowed to do this research from the Norwegian Center for Research Data (NSD).

It is said anecdotally that Iran has the highest rate of cosmetic rhinoplasty in the world. The aim of this study is to answer the question: What are the reasons behind the high rates of nose job surgery in Iran? We also want to gain insight into important factors and criteria, which patients will achieve with nose job surgery and highlight patient’s information about both negatives and positives consequences. Individual opinions and their expectations for choosing this surgery have been always a worrying issue among Plastic surgeons and patients. The outcome of this study
will raise awareness and find deep insight in to patients opinion and understanding their expectation for choosing nose job surgery. Also the satisfaction rate will be increasing for both surgeons and patients if patients motivation factors, their awareness and expectations considered carefully.

In order to gain detailed accounts of the responses and allowing for large amounts of information to be analyzed, I decide to do minimum 14 interviews with both gender (7 male and 7 female). I would like to invite candidates who visit admission section for register few months before surgery. Individuals who interested to do nose job surgery for the first time in the next few months, will be requested to participate in one short audio taped interview (60-90 minutes), which will be held outside of the clinical setting far from stressful situation and allowing participants to choose the setting that is most comfortable for them. All ethical issues will be considered and addressed during and after the study.

A letter of invitation will be issued to all participants along with a consent form which must be read, signed and returned to me in order to take part in the study. Enclosed you will also find a copy of invitation letter and my research proposal.

If you have questions about the project, you can contact:

- Department of Community Medicine and send E-mail to our counselor Terese Eriksen by helsam-studentinfo@helsam.uio.no. Or you can call +47 22850526.

- My supervisor Christoph Gradmann by christoph.gradmann@medisin.uio.no, or call +47 22850615.

Thank you for taking the time to read this letter. If you have any queries please feel free to contact me at +989177070344 or email farzadnajzarzadeh@yahoo.com.

Yours sincerely,

Farzad Najzarzadehghalati

Dear Responsible Signature:
ببخش تحقيقات وكمية اختلاص بيمارستان

بيمارستان / درمانگاه: پزشکی خالی
با سلام.

موضوع تحقیق: مطالعه کیفی میزان آگاهی و انتظارات بیماران در مورد جراحی بینی (Rhinoplasty) در ایران.

محقق:

- فرزند نجارزاده قلایی، دانشجوی کارشناسی ارشد بهداشت جامعه بین المللی، موسسه بهداشت و جامعه، دانشکده پزشکی، دانشگاه اسلامی

اسانیاد راهنما:

- استاد رضا گرهالی، استادیار بخش گوش و هان و بینی و جراحی سر و گردن - دانشکده پزشکی، دانشگاه
- علوم پزشکی شیراز.
- گریستوف گرانمان، پروفیسر - گروه طب جامعه و بهداشت جهانی، دانشکده پزشکی، دانشگاه اسلامی

به استحضار میسرالانجی در حال حاضر مشغول انجام یکی پروژه تحقیقاتی به عنوان پایان نامه دوره کارشناسی ارشد در رشته بهداشت جامعه از طرف دانشگاه اسلامی است. در این نامه به نحو اطلاعاتی در مورد هدف این پروژه ارائه داده شده است. هدف از تقویم این نامه کسب نتایجی اخلاقی به منظور سنتی سی به شکلی که کنستان است. واقع در این انجام این پروژه از طرف اداره مربوط به تحقيقات تکنیک نروژ از بخش صدر کرگدن و در سمت پیوست نامیده

آن پسیمی گردیده است.

به صورت عیر نسیمیانمی شود که علیا ایران دارای بالاترین میزان ریونکلسی در جهان است. هدف این مطالعه، پاسخ به این سوال است: علت بالا بودن یک در ایران چیست؟ ما می‌خواهیم اطلاعاتی در مورد های در مورد فاکتورهای موثر بر توانایی متی و افزایش آگاهی بیماران با انجام جراحی بینی

بسته‌ی می‌تواند جمع آوری کمی دیگر بداند و انتظارات بیماران برای انتخاب این جراحی هم‌واره در میان جراحان

یا پیش‌بینی بیماران یک موضوع بحث برانگیز بوده است. نتایج این مطالعه باعث افزایش آگاهی بیماران و در نهایت توجه

این جراحی بین مقابله آنها و انتظارات آنها می‌شود. اگر به‌طور کلی بیماران، آگاهی و انتظارات آنها با دقت بیمار توجه

قرار گیرد، میزان رضایتمندی بعد از جراحی هم برای جراح و هم برای بیمار افزایش خواهد یافت. این موضوع باعث

کاهش تمایل مقابله آنها در بحث می‌شود (Revision surgery).

1
برای نست‌آوردن یک گزارش دقیق از تجزیه و تحلیل پاسخ‌ها در این مطالعه تصمیم گرفته شد حداکثر 12 مصاحبه با هر دو گروه (4 مرد و 8 زن) انجام نمود. می‌تواند داریم منفی‌سازیان شرکت در این طرح پژوهش را از بین افرادی که پیش‌تر مطالعه به آن‌ها ارجاع داده شده بودند مطالعه نموده و در کل طرح پژوهش آن‌ها را با شرکت کننده‌ها در انتخاب کنند که مناسب حالت و وضعیت باشد. 

در این مطالعه از قرارداد که برای اولین‌بار علانه می‌باشد، به این منظور اطمینان را که شرکت در این طرح مطالعه در حوزه این مطالعه شرکت کرده باشد، که به منظور شرکت در این طرح باید محیطی این که را به دقت مطالعه و رضایت‌برانگیز خود را اعلام کنند. اگر هرگونه در مورد صحبت و روند این پروژه دارد و یا ممکن است جایی در طرح پژوهشی، می‌توانند با بخش‌ها مصاحبه کنند. 

فهرست مطالعاتی که انجام شده‌اند در حوزه این مطالعه شامل دریافت کننده، هدف‌های مطالعه، مطالعاتی که انجام شده‌اند، شرکت‌هایی که در این مطالعه مشارکت کرده‌اند و دیگر اطلاعات مربوط به این مطالعه می‌باشد.

شنیدن و نشان دادن این مطالعات به شرکت‌های این مطالعه می‌تواند به شرکت‌های توانمند قسمت‌هایی از این مطالعات را بیش از حد توانسته‌اند.

- بخش پزشکی و سلامت جامعه، ارسال ایمیل به خانم مشاور Terese Eriksen به آدرس: 0047-22850526 beshin yerleşی www.helsam-studentinfo@helsam.uio.no
- صدر این مطالعات به Christoph Gradmann به آدرس: 0047-2288506155 chrishtoph.gradmann@medisin.uio.no
- بیش از شماره تماس 15

از اینکه برای مطالعه این درک‌ویژه وقت‌گذاری‌کنند نشان دهنده بلندی در خصوص این طرح نیاز به اطلاعات بیشتری دارد. نتایج از تصمیم‌گیری در خصوص این طرح نیاز faarzadnejrzaadeh@yahoo.com علی‌باش امید آدرس 09177070344 ویا ایمیل امیر Ads monitored.

در انتهای نشان از این پروپوزال تحفظ و دعوت نامه ای که برای شرکت کننده‌ها آماده کرده‌اند تا شرکت کننده‌ها تا جزئیات مرکز تحفظات کانون است. 

مهر و امضای مسئول مطرح.:
Approval of second Hospital:

Letter to Hospital Research Ethics Committee

Research Ethics Committee

Hospital/clinic

Research study: A qualitative study of patient’s awareness and expectations related to nose job (Rhinoplasty) surgery in IRAN.

Principal investigator:
- Farzad Najjarzadehghalati, Master student of International Community Health Programme, Institute of Health and Society, Faculty of Medicine, University of Oslo.

Supervisors:
- Reza Kaboodkhani, Assistant Professor - Department of Otorhinolaryngology - Head and Neck surgery - Shiraz university of medical science.
- Christoph Gradmann, Professor - Department of Community Medicine and Global Health, Faculty of Medicine, University of Oslo.

Dear research ethics committee,

I am currently undertaking a research study as part of my master’s study in International Community Health at the University of Oslo. In this letter I will give you information about the purpose of the project and I am writing to seek ethical approval in order to gain access to participants. I have also been allowed to do this research from the Norwegian Center for Research Data (NSD).

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will raise awareness and find deep insight in to patients opinion and understanding their expectation for choosing nose job surgery. Also the satisfaction rate will be increasing for both surgeons and patients if patients motivation factors, their awareness and expectations considered carefully.

In order to gain detailed accounts of the responses and allowing for large amounts of information to be analyzed, I decide to do minimum 14 interviews with both gender (7 male and 7 female). I would like to invite candidates who visit admission section for register few months before surgery. Individuals who interested to do nose job surgery for the first time in the next few months, will be requested to participate in one short audio taped interview (60-90 minutes), which will be held outside of the clinical setting far from stressful situation and allowing participants to choose the setting that is most comfortable for them. All ethical issues will be considered and addressed during and after the study.

A letter of invitation will be issued to all participants along with a consent form which must be read, signed and returned to me in order to take part in the study. Enclosed you will also find a copy of invitation letter and my research proposal.

If you have questions about the project, you can contact:

- Department of Community Medicine and send E-mail to our counselor Terese Eriksen by helsam-studentinfo@helsam.uio.no. Or you can call +47 22850526.

- My supervisor Christoph Gradmann by christoph.gradmann@medisin.uio.no, or call +47 22850615.

Thank you for taking the time to read this letter. If you have any queries please feel free to contact me at +989177070344 or email farzadnajarzadeh@yahoo.com.

Yours sincerely,
Farzad Najjarzadehghalati

Dear Responsible Signature:
بخش تحقیقاتی و کمیته‌های اخلاق بیمارستان

بیمارستان / درمانگاه: بهار تهران غرب
با سلام
موضوع تحقیق: مطالعه کوپی میزان آگاهی و انتظارات بیماران در مورد جراحی بینی (Rhinoplasty) در ایران.
محقق:
فرزاد نجفزاده قاتلی، دانشجوی کارشناسی ارشد بهدادت جامعه بین المللی، موسسه بهدادت و جامعه، دانشکده پزشکی، دانشگاه اسلو.

استاد راهنمای:
استاد رضا کوخدایی، استاد دانشگاه بهینه و حلق و بینی و جراحی سر و گردن – دانشکده پزشکی، دانشگاه علوم پزشکی شیراز.

کرسی استاد: استاد دانشگاه پزشکی، پروفسور - گروه طب جامعه و بهدادت جهانی، دانشکده پزشکی، دانشگاه اسلو.

به استحصال می‌رسود دانشجو در حال حاضر مشغول انجام بک پروژه تحقیقاتی به عنوان دانشجو بهدادت جامعه بین المللی در مورد باختر در طرف دانشگاه اسلو هستم. در این نامه به شما اطلاعیان در مورد هدف این پروژه ارائه داده شده است. هدف از نوشتند این نامه کسب تجربیات اخلاقی به منظور دسترسی به شرکت کنندگان است. شایان ذکر است که اجراه انجام این پروژه به طرف اداره مربوط به تحقیقات دکتر صادق گریزده و در قسمت پیوست تاییده شده است.

به مصوبات غیر رسیتالی می‌شود که علی‌الخصوص ایرانی دارای بالیننده میزان ریوپلاستی در جهان است. هدف از این مطالعه، پاسخ به این سوال است: علت بالای بردن میزان جراحی بینی در ایران چیست؟؛ همچنین می‌خواهیم اطلاعاتی در مورد فاکتورهای مؤثر بر نتایج مثبت و منفی این جراحی، انگیزه و معیارهای مهمی که بهدست آمده با انجام جراحی بینی بیست و چهارم جرداشته که نتایج آگاهی نسبت به دلایل انتخاب این جراحی بینی مناقشات و شناخت انتظارات آنها می‌باشد. این انگیزه بیماران اگاهی و انتظارات آنها با دقت مورد توجه قرار گرفته، میزان رضایتی مداوم از جراحی هم برای جراح و هم برای بیمار افزایش خواهد یافته و این موضوع باعث کاهش تمایل نشستن برای انجام جراحی مجدد (Revision surgery) می‌شود.
برای بست اوردن یک گزارش دقیق از تجربه و تحلیل پاسخ‌ها در این مطالعه تصمیم گرفته شده حضدار 16 مصاحبه با هر دو جنس (۷ مرد و ۷ زن) انجام شود. سپس اندازه‌گیری کیفیت مختلفی از شرکت در این مطالعه بر روی پژوهشی را از بین افرادی که مهارت آموزی آن‌ها به‌طور کلی ارزش‌مند است، با ارزیابی کیفیت در آن‌ها. 

در این مطالعه، هر یک از شرکت‌کنندگان به همراه دو نفر به صورت جداگانه از جامعه دانشجویانی که در آن‌ها شرکت کرده‌اند، مصاحبه می‌کند. در این مطالعه، شرکت کنندگان به‌طور خاص می‌توانند از این مطالعه به کسب‌و کار خود کمک کنند. 

همچنین، اگر شرکت‌کنندگان می‌خواهند اطلاعات‌دهند، می‌توانند از این مطالعه بهره ببرند. 

*بیشتر اطلاعات و مراحل مطالعه می‌توانید در طرح مطالعه www.helsam-studentinfo@helsam.uio.no به‌دست آورید.*

*آدرس خانم Terese Eriksen* 0047-228505026
*آدرس کار Christoph Gradmann* 0047-228850615
*آدرس: christoph.gradmann@medisin.uio.no* 

از اینکه برای انجام مطالعه این درختن وقت گذشتید کامل تشکر داریم. آگاهی از این مطالعه می‌تواند به اطلاعات بیشتری در زمینه‌های مختلفی در مورد شرکت‌کنندگان کمک کند. 

*آدرس: farzadnajarzadeh@yahoo.com* 091777070344
*آدرس: 0047-228505026* 

در ادامه نسخه ای از پروپوزال تحقیق و دعوت نامه ای که برای شرکت کنندگان تظیم شده به همراه تاکیدهای مراحل و ابهامات مربوط به سایر اطلاعات. 

*مهم و اضطراب یافته‌ها*
Appendix 7: Participants invitation’s letter

Letter of invitation:

Research study: A qualitative study of candidates’ awareness and expectations related to nose job (Rhinoplasty) surgery in IRAN.

Dear participant,

I am currently undertaking a research study as part of my master’s study in International Community Health at the University of Oslo. In this letter, I will give you information about the purpose of the project and what your participation will involve.

It is said anecdotally that Iran has the highest rate of cosmetic rhinoplasty in the world. The aim of this study is to answer this question; What are the reasons behind the high rates of nose job surgery in Iran? We also want to gain insight into important factors and criteria, which participants will achieve with nose job surgery and highlight their information about both negatives and positives consequences. Individual opinions and their expectations for choosing this surgery have been always a worrying issue among Plastic surgeons and patients. The outcome of this study will raise awareness and find deep insight into candidates’ opinion and understanding their expectations for choosing nose job surgery. Also, the satisfaction rate will be increasing for both surgeons and patients if patients’ motivation factors, their awareness and expectations considered carefully.

In order to gain detailed accounts of the responses and allowing for large amounts of information to be analyzed, I decide to do minimum 14 interviews with both gender (7 male and 7 female). I would like to invite candidates who visit admission section in hospital and clinic for register few months before surgery. Individuals who interested to do nose job surgery for the first time in the next few months, will be requested to participate in one short audio taped interview (60-90 minutes), which will be held outside of the clinical setting, far from stressful situation and allowing participants to choose the setting that is most comfortable for them.

Participation in the project is voluntary. If you chose to participate, you can withdraw your consent at any time without giving a reason. Then all information about you will
be made anonymous and be deleted. There will be no negative consequences for you if you chose not to participate or later decide to withdraw.

I will only use your personal data for the purposes specified in this information letter. I will process your personal data confidentially and in accordance with data protection legislation. Any information gathered during this study which is identifiable to you will remain fully confidential and anonymity will be maintained throughout the study. No data would be made available to anyone else who was not directly involved in my study. The data will be stored in password protected folders with restricted access. No names will be recorded during the interviewing process. All interviews will be coded and no names used, so your responses will not identifiable. Also, data will be fully anonymized at the end of the study.

The project is scheduled to end in 14.07.2020. After the end of the project, the collected data will be stored in anonymous form. Any sound recordings will be deleted, personally identifiable information will be removed, and the identification key will be disappeared.

In this process you have the rights:

- To not answer to questions that you may feel uncomfortable talking.
- To access the personal data that is being processed about you.
- To request that your personal data be deleted.
- To request that incorrect personal data about you be corrected.
- To receive a copy of your personal data.
- To send a complaint to the Data Protection Officer or The Norwegian Data Protection Authority regarding the processing of your personal data.

I will process your personal data based on your consent. You find a consent form attached with this letter of invitation, which you must be read, signed and returned to me in order to take part in the study.

If you have questions about the project, or want to be sure about your rights, you can contact:
• Department of Community Medicine and send E-mail to our counselor Terese Eriksen by helsam-studentinfo@helsam.uio.no. Or you can call +47 22850526.

• My supervisor Christoph Gradmann by christoph.gradmann@medisin.uio.no, or call +47 22850615.

Thank you for taking the time to read this letter. If you are interested in participating in the study or have any further questions you would like to ask before making a decision, please feel free to contact me. You can ring me on 09177070344 or email me: farzadnajjarzadeh@yahoo.com.

If you decide to participate in this research study, please sign the attached consent form and return it to me. Should I not hear from you, I will assume that you do not want to take part and I will not contact you again.

Yours sincerely,

farzad nijjarzadshalati

Consent form:

I __________________________ have read and understand the letter of invitation and have been given the opportunity to ask questions. Any questions have been answered to my satisfaction to take part in this research study: A qualitative research study investigating candidates’ awareness about nose job surgery complications and their main motivations and expectations toward this surgery. I have received adequate information regarding the nature of the study and understand what will be requested of me. I am aware of my right to withdraw at any point during the study without penalty.
I hereby consent to participate in a short-term tape-recording interview and allow the researcher to process my personal data outside Iran (in Norway) until the end date of the project.

Participant’s Signature: ____________________

Date: __________

Researcher’s Signature: ____________________

Date: __________
Appendix 8: Interview guide

Interview guide

A: Background information:

1. How old are you?

2. Who do you live with? Are you married?

3. For how long have you lived in Shiraz city?

4. What is your job?

5. What is your educational status?

B:

6. In your own words describe your perceptions about nose job surgery?

7. When and how this thought (nose job surgery) came to your mind for the first time? Which factors push you toward this decision?

8. Did you receive any guidance or information about nose job surgery? How?

9. Can you share with me some of this information?

10. What is your family information level? How far do they know about your nose job surgery?

11. How did your family and community react when they informed about your decision?
12. How far are you aware of surgery complications? Please tell me in details and also, your references?

13. What kind of supports do you need before and after surgery?

14. Which factors did you consider for choosing a plastic surgeon? And also, for Hospital?

15. What do you expect from your surgeon?

16. Have you ever had another cosmetic surgery? Could you tell me your experiences?

17. What are the barriers toward nose job surgery in our country?

18. Why this surgery is so common between both genders in our country?

19. What effects does this surgery have on your life? How?

20. Have we missed any point in this interview which you think is important?
Appendix 9: Publishable article based on above thesis

A qualitative study of candidates’ awareness, expectations and motivational factors related to nose Job surgery (Rhinoplasty) in IRAN

Farzad Najjarzadehghalati ¹, Christoph Gradmann ², Reza Kaboodkhani ³

Abstract

Introduction: Interest to undergo nose job surgery, known as rhinoplasty, has grown among different strata of Iranian society. As an elective and non-emergency surgery, it is always accompanied by complications like other invasive surgeries. However, little is known about candidate’s awareness regarding these problems and also their expectations toward this famous plastic surgery.

Objectives: To assess the level of awareness of candidates as well as their expectations and motivational factors, and the reasons behind the high rates of nose job surgery in Iran.

Methods: Sixteen men and women aged 20-42 who were decided to undergo nose job surgery for first time in near future were interviewed using a semi-structured interview format. Twelve face to face with four telephone interviews (using WhatsApp application) were conducted. The research questions explored participant’s information level, persuasive reasons, and their achievements after having a surgery. The interviews were audio recorded and then transcribed verbatim. Conventional content analysis was used to evaluate data.

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¹ Master student of International Community Health program, Institute of Health and Society, Faculty of Medicine, University of Oslo.
² Professor- Department of Community Medicine and Global Health, Faculty of Medicine, University of Oslo, Oslo, Norway.
³ Assistant Professor- Department of Otorhinolaryngology- Head and Neck surgery, Shiraz University of Medical Science, Shiraz, Iran.
Results: The results of the analysis showed that the participants and even their family mostly had preliminary and superficial information regarding surgery complications. Negative feedback or misplaced judgements in the community, family and friends, media advertising, and scientific and technological advances are act as motivating factors. The tendency to undergo nose job surgery is not always for the sake of beauty. Sometimes it is done for therapeutic purpose. Improving the quality of life, giving better opportunity to find new friends or social interaction, increasing self confidence in public place, self-satisfied and freedom from obsession are counted as further achievements.

Conclusion: The awareness level regarding nose job surgery was limit and superficial. People usually think optimistically about the results and count it as a tool by which in addition to gaining beauty, they can gain higher social prestige and something new in life and get rid of daily life monotony. Mutual cooperation of psychologists and surgeons is necessary. This important can increase candidates’ satisfaction by identifying motivational criteria and their expectations.

Keywords: Awareness, motivation, Rhinoplasty, Iran

Introduction

Cosmetic plastic surgery has increased in the recent years all around the world. One of the most popular plastic surgeries is rhinoplasty (known as nose job), in which the nose is reshaped in order to increase facial beauty and harmony between the components of the face. Initially, rhinoplasty was confined to repairing damage, but in modern times it has been used to change the nose shape for aesthetic purposes. Before modernity, human beings looked at beauty and appearance according to traditional standards, but today, the trend towards beauty has reached the stage of appearance and self-expression. Cosmetic surgery has now become a deceptive factor and a tool for people's luxury, which led to the establishment of unrealistic expectations in individuals and the distortion of facts about its true nature.

According to the report of International Society of Aesthetic Plastic Surgery (ISAPS), in 2017 the rate of nose job increased by 11% compared to previous year (Surgery, 2017). But in 2018, reduced
slightly, so that Brazil, India, and USA have the top rank regarding number of nose job procedures (surgery, 2018)

It is said anecdotally that Iran is one of the countries with highest rate of cosmetic rhinoplasty in the world. In 2013 Iran ranked fourth in term of the number of nose job surgeries that were done (Surgery, 2013). But no specific reports have been received since then. This may suggest that nose job occur more widely than what has been reported officially in Iran, because significant number of rhinoplasty procedures are performed by unlicensed practitioners (doctors who are not specialized in this field) in the private clinics, the exact number of which is not reported (Ebrahimi, Kalantar Motamedi, Shams, & Nejadsarvari, 2016).

It may be thought that cosmetic surgeries are only belong to the affluent strata of society, but it should be noted that due to cultural developments and changes in people’s ideals, today nose job surgery has become very common among men and women from middle and even low-income strata. This tendency has led to spend exorbitant and heavy costs that impose heavy economic pressure on families, and also leading to financial burden on healthcare system (TAVASSOLI & MODIRI, 2012).

The majority of research published from 2005 about the nose job surgery has focused on establishing links between psychological and personality aspects of the individuals, and also investigating and comparison of the quality of life before and after surgery. For example, Mianroodi (2012) had found that nose job surgery is very popular among people with obsessive and narcissistic characteristics, and the main reasons for wanting rhinoplasty were beauty and because it is fashionable (Mianroodi, Eslami, & Khanjani, 2012). Based on literature review conducted by Zojaji et al (2018) the quality of life improved six months after surgery and over time (Zojaji, Sobhani, Meshkat, & Javanbakht, 2018). Recent findings in Germany can confirm these results (Niehaus, Kovacs, Machens, Herschbach, & Papadopulos, 2017). Mozaffari Niya interviewed twenty-one men and women who had undergone face cosmetic surgery to explore their personal motivations which leads to accepting the risk of surgery, and described three main themes as tempting factors: feelings of inferiority, Escape from loneliness and Fear of the unseen by relatives and society (Niya, Kazemi, Abazari, & Ahmadi, 2018). Other prior researcher reported
that cosmetic surgery patients are often expect extra-physical benefits such as higher self-esteem and better sex life (Stofman, Neavin, Ramineni, & Alford, 2006).

Correct and adequate information and understanding expectation are often issues of concern among Plastic surgeons and patients, which have direct impact on patient’s decision making. A study from Saudi Arabia revealed that candidates are not often aware of post operation complications and have superficial information (Almohanna, Alsvidan, Alarfaj, & Subhan, 2016). To avoid or reduce complications and dissatisfaction after rhinoplasty, it is better to consider and estimate one’s personality traits, goals, and expectations from this procedure (Zojaji, Javanbakht, Ghanadan, Hosien, & Sadeghi, 2007).

However, limited studies in Iran have so far investigated patient’s awareness about post operation complications, motivation and expectation factors. In this article, we draw on in-depth interview with participants who were waiting for surgery in order to explore these missing factors and also influenced criteria, which push them to perform nose job surgery.

Although nose job surgery is not an emergency surgery and is chosen freely by individuals, but it has its own complications and risks like any other type of surgery. Therefore, these questions arise that to what extend are candidates aware of surgery complications? What are their main motivations and expectations factors toward nose job surgery? By qualitatively examining these questions, we can also find the reasons behind the high rates of nose job surgery in Iran. finally, we aimed to gain insight into important factors and criteria, which patients will achieve with nose job surgery.

**Methods**

**Participants:**

Sixteen participants (12 women, 4 men), aged from 20 to 42 years with a mean age of 31 years were recruited. Data were collected between September 2019 up to January 2020. Personal Characteristics of the Participants listed in Table 1.

Exclusion criteria included health care profession (e.g. doctors, students, health care assistants), and those who want to do nose job surgery for the second or more times (revision surgery). we selected candidates who decided undergo nose job surgery for first time.
Table 1: Personal Characteristics of the Participants

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Procedures:

Prior to carrying out this study, it was tried to identify and address ethical and moral dilemmas in order to protect all participants from potential harm. So, at the first step, we received the approval of the Norwegian Center for Research Data (NSD). This study also received approval from the ENT department of Shiraz University of Medical Science and director confirmation of two hospitals to ensure adherence to ethical research standards. Participants were those who received admission paper from their surgeon and presented in hospitals to register themselves for future surgery. Those who expressed interest in participating in our study were given an invitation letter with a consent form which included information regarding the research purposes and procedures, extent of use of the collected data, discard of data, protection of privacy, rights of the participants including the right to withdraw from the research project and refuse to answer any interview questions. We also added our phone numbers and email addresses to allow participants to clarify any queries and to determine the location of the interviews. Both researchers and interviewees
agreed to comply with research ethics through a signed informed consent form. Four women who indicated interest in participating but living in other cities were recruited in one on one phone interview using WhatsApp application after sent us signed consent form by post. The phone interviews were between 20 and 40 minutes in duration but the face to face interviews were took longer.

Interviews:

Open ended, semi structured, in-depth interviews were employed in this study because open ended allows participants to discuss their opinions, views and experiences fully in detail and also allows both the interviewer and participant to seek any clarification necessary. According to Polit and Beck (2008) with the use of semi structured interviews we have prepared a topic guide or a certain amount of questions to be covered with each participant (Polit & Beck, 2008). According to participant’s answers, more in depth questions such as “what did you mean by this statement”, or “can you explain more” were asked. By using questions involved general information regarding the participant’s personal history and demographic detail we started interviews. This stage helps to break the ice and allowed to focus on main topic. A set of broad questions were developed that addressed three general areas: (a) participant’s main motivations and expectations toward nose job surgery and influenced factor, (b) awareness about this surgery complications, (c) the reasons behind high rate of nose job surgery in Iran. In addition, the participants were encouraged to talk freely to provide any other relevant information not addressed by the researcher. Regarding phone interviews, it should be noted that the questions were asked one by one through WhatsApp software. Similarly, the participants recorded their answers and returned them. This method allows participants to express personal information in their spare time and in complete peace and comfort without any stress of face to face interviewing. Interviews were done at workplace, café, with a few in the park. With each participant's consent, the interviews were recorded and in further stage transcribed verbatim.

Data analysis:

Conventional content analysis method was used to evaluate data. This approach is used when the researcher aim is to describe and gain a richer understanding of a phenomenon, which there is little literature that supports and gives information about a specific topic (Hsieh & Shannon, 2005). Each
participant’s transcript was read several times to identify and label desired themes which were in line with the aims and objectives of the study. In the next stage similarities and relevance of these themes checked out and formed clusters of concepts for each transcript. Finally, all these themes and clusters verified together to find any new sub or master theme which reflect participant’s perceptions regarding nose job surgery. This process continued until no new themes could be identified.

In order to ensure the trustworthiness and validity of study after transcribed each interview, the encoded text was photographed or scanned and sent to participant in order to confirm. Also, to validate the suggested themes which found by first author, collaborative author re-read the translated copy, identifying themes and comparing these to the initial reading. At this stage some information were added, refined and some were discarded.

Results:

Undoubtedly, any type of surgery has its side effects and risks. But it is very interesting to hear different attitudes of people toward surgery. Overall, the data from the 16 participants reflected that most of these people consider surgery as a tool in the first place and give less priority to the therapeutic aspect. The means by which they can gain something new in life and get rid of the monotony in daily life, a means that is considered as a symbol of higher prestige and enhance beauty. For example, a 25 years old female participant stated her view as follow:

“Although nose surgery is an invasive surgery, but it can make me more beautiful and is worth the risk. Nowadays it is very common among girls and boys and considered as a symbol of high prestige”.

Except the therapeutic aspect, numerous factors pushed participants to think and make the decision to perform a nose job surgery. Almost all of the respondents interviewed mentioned that they had friends, family or acquaintances who had undergone nose job surgery and they also offered to do it. In this case a 36 years old male participant said:

“It’s been less than a year since I started thinking about this surgery. Some of my friends had the surgery and upon seeing them I decided to do it by the same surgeon, because their facial changes were very noticeable”.
One of the inappropriate behaviors which the vast majority of participant (n=12, 75%) could recall at least one negative experience was that, people’s appearance is judged directly and people express their opinion clearly, which sometimes led to negative emotion and feeling, irritation, stress and especially obsession. A female participant said:

“At first I had no idea about having a nose surgery. In my workplace, friends and co-workers said that if you had surgery you would have a much more beautiful face. They have said this many times over and over. Since then, it has come to my mind that there may be a defect or flaw in my face that my colleagues keep repeating. This thought always bothered me, so I was always cautious and stressful in social relationships and when I wanted to talk to someone”.

However, these negative comments and experiences also involved discussions with friends, family members, and colleagues in the workplace for some participants (n=3, 18.7%).

Encouraged by the mass media and the virtual world (Internet), negative self-concept, and the acceptance of nose job surgery (rhinoplasty) as a criterion of beauty in society were others influential factors in decision making.

Among participant in this study 31.2 percent (3 female and 2 male) suffered from respiratory disorders such as nasal congestion, and nasal septum deviation. Their top priorities were to treat these problems. The rest of participant consider just the beauty aspect of this surgery. The opinion of a 24 years old male participant was interesting:

“Two years ago, my nose was broken during exercise and my nose was severely distorted in appearance, which greatly affected my breathing. I get shortness of breath at night and during sleep. My main goal is to improve my breathing and because I accept the risk of anesthesia and surgery, I want to make some changes to its beauty at same time”.

There are various possible complications after nose job surgery. The familiarity and awareness of the participants with some postoperative complications of rhinoplasty based on their own words were as follow: bruises around the nose and postoperative bleeding (56.2%), inflammation (43.7%), respiratory disorder and airway obstruction (43.7%), olfactory disturbance (31.2%), pain (31.2%), allergy (31.2%), revision or reconstruct surgery (25%), Numbness and runny nose
(18.7%), infection (18.7%), mismatch with other facial components (18.7%), anesthesia complication (12.5%), dissatisfaction with the new face (12.5%) and remaining scar (12.5%).

The most important ways and source of informing about these complications were:

- Social media, websites and chat forums (81.2%).
- Tips and advices from friends who underwent this surgery (75%).
- Applicants who had undergone surgery and had referred to doctor’s office and clinic for post-operative visit (43.7%)
- Consultation with physicians (31.2%).
- Medical magazines, booklets, and articles (12.5%).

Regarding the level of information and awareness of participant’s parents about nose job surgery, mostly reported (n=10, 62.5%) that their parents have no related knowledge and information. The rest (n=6, 37.5%) had general or superficial information based on observation of similar cases in society. According to this, twelve participants (75%) reported that their parents disagreed with them to do this cosmetic surgery, 18.7 percent agreed, and only 6.2 percent (n=1) was neutral.

Factors which considered by the participants to select a surgeon were (in order of decreasing frequency): being an ENT specialist, friend suggestion, the amount of time which a surgeon devote for counseling and applicants guidance, being famous from the people’s point of view, see work samples in internet and clinics, and registered scientific articles.

On the other hand, they also had criteria for choosing a hospital for their future surgery such as: low density and crowding of patients, governmental hospital because there is better control over physician and medical staff performance, be stylish, tidy, and having experienced staff, providing high quality equipment and facilities.

The participants expectations from their surgeon were mentioned as follow: surgeon must have the patience to listen to patients talk and concerns, having more consultation sessions before operation day, the surgeon himself do this surgery and not delegate work to a colleague or student and accept responsibility for his own work, quick and easy access to the surgeon after surgery in case of emergency. One of the concerns voiced by most male participant was that produce subtle changes that make the nose appear natural, with preservation of facial harmony.
All participants in this study articulated that nose job surgery will be their first cosmetic surgery experience, however there were 4 participants out of 16 (25%) who commented that they had other surgeries outside of the cosmetic category which play an important role in decision making and make them more determined to have a new surgery. For instance, in this quotation:

*I was always used to wearing glasses until I had LASIK surgery three years ago. After that I didn't have to wear glasses anymore and my nose was disproportionately on my face. I was not happy with my new face without glasses, especially when I was looking in the mirror. My friends and those around me also gave me negative feedback and said that when you wore glasses you had a more beautiful face. After that I decided to try a new face (28 years old male participant).*

From the analysis of the interviews, we identified three barriers or obstacles categories and their related reasons (Table 2), which have deterrent role in performing this surgery in Iran.

**Table 2: Deterrent obstacles and their reasons regarding performing nose job surgery in Iran**

| 1) Social barriers | • Negative perceptions and feedback especially from the previous generation.  
|                    | • People comment freely regardless of the circumstances of the applicant.  
|                    | • Lack of pre-surgical psychological counseling which is often neglected.  
|                    | • Not allocating enough time for clear advice and eliminating ambiguities by the doctors due to the large number of applicants. |
| 2) Financial barriers | • Cosmetic surgeries are not or in very low percentage covered by public and private insurances.  
|                    | • High cost of surgery due to economic conditions which is not stable and change constantly.  
|                    | • Getting a support such as bank loan is not an easy task and it takes a long process. |
| 3) Political barriers | • There is no government control over the cost of this surgery.  
|                    | • The cost of surgery varies widely between hospitals and even doctors.  
|                    | • Physicians with different backgrounds and specialties such as general surgery or maxillofacial surgeons perform nose surgery too and there is no proper government oversight of their work. |
The reasons behind the high rate of nose job surgery in Iran from the participants’ point of view were: social comparison, veil or cover as a limiting factor to express beauty, mass media that introduce ideal beauty standards and strongly influence the social comparison, the low cost of surgery in compared to other countries that causes many people as a tourist come to Iran to perform surgery, people's criticism of others looks and faces which can act as a motivating factor, nose in compare to the face is more disorganized in the Iranian race, negative body image and low self-esteem, the uniformity of daily life and a way to get rid of fatigue and daily weariness.

In investigating the effects and consequences of nose job surgery on participant’s lives the following issues were raised: improving the quality of life by removing a defect such as breathing problems, feeling self-satisfied with new face, giving better opportunity to find new friends or social interaction, increasing self confidence in public place, intellectual peace and freedom from obsession. If the expected results are not achieved, depression and regret because of people's negative opinions and judgments.

**Discussion:**

The results of this study found that most of the participants considered cosmetic surgery as a normal device or facility in order to get pleasure, satisfactions and something positive in their lives regardless of its possible negative aspects and consequences as an invasive surgery. This way of thinking acts as a stimulus and is in line with the perspective of emotion theorists which state that emotion causes direct behavior and act as a motivation source (Baumeister, Vohs, Nathan DeWall, & Zhang, 2007).

In this research we understood that one of the seductive factors toward doing a cosmetic nose surgery was friends, family or acquaintances who had undergone nose job and they had enough satisfaction. This finding is consistent with a study from Thailand (Yenchai & Sirisook, 2018), which mentioned that people compare themselves with those who had similar successful surgery and created a visual identity that if they underwent cosmetic surgery, then they would achieve a same successful outcome like the others without considering the failures that might occur.

Inappropriate feedback from misplaced judgement and prejudices based on people’s appearance can cause dissatisfaction, unhappiness and negative attitude toward self-image especially during
loneliness and privacy. These negative interpretations can suppress the confidence and leads to emotional distress which push persons to do cosmetic surgery as a way of escape from these disorders and obsession. This finding confirms the result of Mozaffari Niya study (Niya et al., 2018).

The media has been constantly promoting or advertising beauty patterns and related standard criteria. In this study participants discussed intentionally or unintentionally felling bombarded with ideals of aesthetic attractiveness via the media and compare their appearance with those advertised criteria and judge themselves. The result of this judgment influenced the perception that one had so far of oneself. This can be a starting point for thinking about changing face and appearance by nose job surgery. These results are in line with studies which reported that the media is the driving force behind the growing demand for cosmetic surgery (Koning, Zeijlmans, Bouman, & van der Lei, 2009), and with other study that noted the media by affecting the level of body dissatisfaction normalized cosmetic surgery as being an acceptable way to improve the appearance of our bodies (Sharp, Tiggemann, & Mattiske, 2014).

In the next step most participants try to gather basic or supplemental information over the internet and support forums which gave them a clearer perspective and make them more awareness for the next stage. For example, same as the results of Warner’s study, those who seek health information online were more likely to communicate with medical professionals about health treatments and they try to obtain more precision information than those who did not use the internet as a source of information (Warner & Procaccino, 2007).

In this study the tendency and attraction for nose job surgery was not confined just to the beauty aspect. Almost one third of participants stated that their priority was the therapeutic aspect in order to repair a defect or problem such as nasal congestion, nasal septum deviation, nose fracture, and shortness of breath (Dyspnea). At the same time, they decided to focus on beauty as well because they undertake the risk of surgery, anesthesia, and treatment cost once. Our findings are in contrast to the results of a study by Calogero et al (2010) who considered body shame as the cause of women’s desire for cosmetic surgeries (Calogero, Pina, Park, & Rahemtulla, 2010). Also with other study conducted by Mozaffari Niya et al (2018) which found that the increasing acceptance of
cosmetic surgery is the reduced satisfaction with physical appearance and fear of being unattractive (Niya et al., 2018).

Face cosmetic surgeries are not emergency surgeries and may be associated with dangerous consequences. In our study the participants varied widely in the amount and type of information related to postoperative complications they had. The complications mainly recognized by the participants were more superficial and based on what they had seen in the surrounding community. They had no tendency to understand and obtain medical and in-depth information about complications. The most important reasons for this attitude were the following: fear of complications when they talk about it and prefer not to hear anything, consider most of them as temporary and transient, seeing or hearing negative consequences rarely when consulting with others, preferred and attention to the surgeon’s work so that a good surgeon can reduce the risk of complications, and they do not like to hear because they think positively.

In addition to the social media and websites that were the biggest sources of information for participants, friends and those who underwent nose job surgery counted as second important way to make themselves aware of surgery process and consequences. In our study only one third of participant mentioned that they received information leaflets and a full explanation of risks from their surgeon while others were less well informed. It seems that when the surgeon did not provide enough information, this lack or deficiency was compensated by resources mentioned earlier. This finding is in support of a study by Paling (2003) which noted that the doctors are not always effective in ensuring patients are fully aware of risks involved in medical procedures (Paling, 2003).

Contrary to some reports (Mianroodi et al., 2012) indicated that the tendency to want cosmetic surgery decreased as parental information increased, we realized that the awareness level of parents and their opinion about whether or not to perform nose job surgery is not very important and in most cases ignored by the participants because despite their parent’s opposition, they were determined to have surgery and even some participants did not inform parents until they registered themselves for surgery at the hospital. Concern about nose manipulation, old beliefs and difference of generations, and incompatibility of surgery due to age were stated as reasons for parental
opposition. The interesting reason given by some male participants was that their parents attributed this surgery to be for girls only.

A significant factor for the success of therapy which highly influencing the satisfactions rate of a cosmetic surgery is the type of relationship and how the doctor interacts with the patient. In fact, the applicants want to build some kind of trust. This is something that our participants have mentioned many times and expected from their doctor to have more counseling sessions, because as they get closer to the day of surgery, new vague questions engage their minds. This issue is so important that our research participants considered the amount of time, which a surgeon devote for counseling and applicant guidance as one of the criteria for selecting their surgeon. This finding confirms the results of Safran’s (2003) report which stated establishing enough and good alliance is one of the main reasons for the success of therapy (Newhill, Safran, & Muran, 2003).

Although nose job surgery was the first cosmetic surgery for all our research participants, but some of them had surgery outside of cosmetic fields which the obtained results played an effective role on attitudes toward having future procedures. We have found that some of these results caused changes in the appearance of the person which forced them to perform additional surgery to eliminate an incompatibility or on the other hand give them experience and information that they planning to do new surgery in the future. This result is almost in line with the results from Adam’s study which reported that satisfaction or dissatisfaction with the outcome did not always have a corresponding effect on attitudes toward having future procedures (Adams, 2010).

The barriers that our participants faced after deciding to have nose job surgery were divided in to social, financial and political barriers. One of the social barriers was the relationship between cosmetic surgery and the issue of psychology which is often neglected. There are many surgeons who fell that they are performing psychosurgery which means that they are making a change to the body that will also influence patients psychologically (Parker, 2010). Psychological counseling along with medical counseling is important because it can help physician to understand the psychological reasons why a person may be or not be a good candidate for cosmetic surgery and also to find their expectations and act accordingly which leads to increase satisfaction rate for both sides.
In our study social comparison was mentioned frequently as a reason regarding high rate of nose job surgery in Iran. People try to interact and compare themselves with member of society in order to generate social power or superiority and show themselves as an affluent class. In addition, Iran has a high potential to be a medical tourist destination. Reasons such as existence of experienced doctors and medical staff, high number of service center, cultural and historical tourist attractions, and reasonable cost compared to foreign currencies were prominent during our interviews. Also, Jones and Keith pointed out that providing fast services along with the low cost of travel had led people to travel to countries with high quality and low services cost without any waiting list (Jones & Keith, 2006).

Conclusions:
This study has attempted to explore the awareness level of participants about the complications of nose job surgery, and also identify their expectations and motivation factors. In particular, we tried to find the reasons behind high number of such a costly and painful procedure in Iran.

The findings suggest that mass media and negative feedback or misplaced judgements from people in the community play an important role in participant’s decisions to undergo nose job surgery. People usually think optimistically about the results of this surgery and count it as a tool by which in addition to gaining beauty, they can gain higher social prestige and something new in life and get rid of daily life monotony. Improving the quality of life, giving better opportunity to find new friends or social interaction, increasing self confidence in public place, intellectual peace and freedom from obsession and achieve self-satisfied feeling are also considered to be the most important achievement of this surgery. The tendencies toward nose job surgery are not always for the sake of beauty. Repairing a defect or problem such as nasal congestion, nasal septum deviation and nose fracture are counted as a therapeutic aspect of nose job surgery.

Although the majority of clients have an academic background, the familiarity and awareness with some postoperative complications were more superficial and based on what they had seen in the surrounding community. Fear of knowing the details, considering possible complications as temporarily, and be optimistic are some factors that reduce their tendency to understand and obtain medical and in-depth information.
In today’s modern society, factors such as social and cultural conditions, family and friends, media advertising, and scientific and technological advances are some criteria that affect the standards of beauty in society. Psychologically, while most previous studies have focused on the effects of this surgery on individual personality and quality of life through quantitative studies, the results of this study showed that psychological counseling is often ignored or not given importance. Without psychoeducational supports and information training, clients will judge themselves with the society’s beauty ideals and internalize beauty standards, which mostly lead to body shame and dissatisfaction. This sense of self-loathing can act as a stimulant to change the appearance through the use of, for example, surgery (Grogan, 2016).

**Recommendations:**

The results presented here will potentially convince physicians to communicate more effectively with candidates who are seeking nose job surgery by considering more consultation time and provide them deep information. It would be a good idea for future study to find out what kind of information the applicants need to make a logical decision for surgery.

Time constraints and not allocating enough time in doctor’s office is a problem that has been repeatedly mentioned as a major challenge, not only in Iran but also in most countries of the world. If a comprehensive medical website can be setup under the supervision and control of the Ministry of Health and the government in simple language for general understanding, which includes all the necessary information such as surgical procedure, complications, care and tips before and after surgeries, medication and sample surgery video, it can act as an auxiliary tool in medical counseling. In addition to face to face consultation, doctors can introduce this website to patients in order to find more accurate and explicit information. This idea can increase patient’s awareness and also remove ambiguities.

Cosmetic surgery has a dual effect, physically and psychologically. All clients should have psychological support as part of their care pathway (Clarke & Rumsey, 2018). It would be great if mutual cooperation of psychologists and surgeons before and after cosmetic surgery be considered as a mandatory rule in Iran. This important increase candidate’s satisfaction by identifying their motivation and expectation, and understanding the reasons why people decide to have non-medically necessary surgery, and make it possible to reconsider whether or not to have surgery.
Since the number of men participating in our research was much smaller than women, it would be beneficial to look at the perceptions and expectations of two genders separately in future studies. So, we can compare them in more details because a man’s world is very different from a woman.

**Acknowledgement:**

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