



Quality of life and self-esteem in elderly patients who did or did not have cosmetic surgery

Qualidade de vida e autoestima em idosas submetidas e não submetidas à cirurgia estética

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■ ABSTRACT

Introduction: The reality of aging has caught up with the field of plastic surgery, shown by the growth in the number of elderly patients who undergo cosmetic surgery (CS). To evaluate its importance in elderly women, this study examined differences in quality of life and self-esteem among those who did or did not undergo CS. **Methods:** This case-control study included 25 elderly women who underwent CS and a control group of 25 elderly women who did not undergo CS; the groups were matched by socioeconomic data. Assessment methods included the Mini-Mental State Examination, a quality of life (QOL) questionnaire (World Health Organization Quality of Life-Bref), the Rosenberg Self-Esteem Scale, and a questionnaire developed for the study of sociodemographic data, motivation, and satisfaction with CS. **Results:** The mean age was 67.26 years, with a mean of 9.96 years of education. The most common surgeries were abdominoplasty and blepharoplasty. The most common motivations were physical discomfort, desire to improve QOL, and dissatisfaction with self-image. No subjects were found to have low self-esteem and the level of satisfaction with personal or social life was high. There was no difference in QOL or self-esteem between the 2 groups. **Conclusion:** Physical and psychological motivations cause the elderly to undergo CS. There was no difference in QOL or self-esteem among elderly women who did or did not have CS. Elderly women who underwent CS showed high levels of satisfaction with their personal and social life.

Keywords: Health services for the elderly; Quality of life; Self-image; Reconstructive surgical procedures; Evaluation of results of therapeutic interventions

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■ RESUMO

Introdução: A realidade do envelhecimento populacional chegou ao campo da Cirurgia Plástica, provada pelo crescimento do número de idosos que se submetem à cirurgia estética (CE). A pesquisa objetiva avaliar a importância da CE para o idoso, e se existe diferença de qualidade de vida e autoestima entre idosas que se submeteram e que não se submeteram à cirurgia estética. **Métodos:** Pesquisa caso-controle, sendo o grupo-caso formado por 25 idosas que se submeteram à CE e o grupo-controle por 25 idosas que não fizeram CE, pareados pelos dados socioeconômicos. Os instrumentos aplicados foram: Minimental, questionário de qualidade de vida (WHOQOL-BREF), escala de autoestima de Rosenberg e um questionário elaborado para pesquisa de dados sociodemográficos, motivação e satisfação com a CE. **Resultados:** A média de idade foi 67,26 anos e a escolaridade média, de 9,96 anos. As cirurgias mais realizadas foram a abdominoplastia e a blefaroplastia. Os motivos mais escolhidos foram o desconforto físico, o desejo de melhoria da qualidade de vida (QV) e a insatisfação com a autoimagem. Não foram encontradas idosas com baixa autoestima e o nível de satisfação foi alto quando relacionado com a própria vida ou a vida social. Não houve diferença de QV e autoestima entre os dois grupos analisados. **Conclusão:** As motivações das idosas para realização de CE são de ordem física e psicológica. Não houve diferença de QV e autoestima entre idosas submetidas e não submetidas à CE. Analisando-se as idosas submetidas à CE, foram comprovados altos níveis de satisfação pessoal e na vida social.

Descritores: Serviços de saúde para idosos; Qualidade de vida; Autoimagem; Procedimentos cirúrgicos reconstrutivos; Avaliação de resultado de intervenções terapêuticas.

INTRODUCTION

Aging will inevitably reshape the world as we know it. This is a gradual process, leading to changes with an impact on health, well-being, social class, and individual usefulness in society. The current challenge is to understand the changes that already directly affect quality of life (QOL)¹.

QOL is a multidimensional construct, and each of its aspects (physical, emotional, psychological, spiritual, and social) is important to an individual, especially in old age, which is a heterogeneous stage of life².

Several studies have shown that cosmetic surgery (CS) can improve the physical and mental aspects of QOL^{2,5}, especially with respect to self-esteem, regardless of age, sex, or race.

Self-esteem is an important measure of mental health, defined as a sense of value and acceptance of oneself. The elderly tend to lose self-esteem due to

changes in appearance and function, personal loss, and loss of employment. Such difficulties expose the elderly to anxiety and depression. Thus, actions that favor an increase in self-esteem are important to mental health⁶.

Improvement of self-esteem has been identified as the main motivation to undergo CS. For the elderly, CS, along with less invasive esthetic procedures, can mitigate the most visible aspects of aging, thus improving self-esteem⁷.

Despite demonstrable improvement in self-esteem and QOL, rates of CS are still low among the elderly. Data from the American Society of Plastic Surgery show that 23% of 373,418 CS cases performed in 2015 were in those over 55 years of age; there was no specific survey of patients over 65 years of age, which is considered elderly in developed countries⁸. In Brazil, 5.4% of all plastic surgeries are performed in those aged 65 years or older⁹.

OBJECTIVE

Given the heterogeneity of aging and the perception of this phase of life, it is important to study the changes caused by cosmetic procedures in the elderly. The need to assess the association between CS and QOL in the elderly and its effects on self-esteem prompted a comparative study among elderly patients who did or did not undergo CS.

METHODS

This was a descriptive, case-control study, matched for socioeconomic conditions; only female participants were chosen because they represent a majority (84.6%) of CS cases worldwide. The sample consisted of 2 groups of women aged 60 years and above, 25 of whom underwent CS (case group) in the prior 5 years at a private plastic surgery practice near Brasília. These were matched with 25 elderly members of the Center for the Coexistence of the Elderly (CCI), maintained by the Universidade Católica de Brasília (UCB). This control group did not undergo CS. The 2 groups were matched according to age, marital status, education, and region of residence.

The case group included women aged 60 years or older who underwent CS between 2013 and 2017; the control group included elderly women who did not undergo CS. The exclusion criteria for both groups were: prior reconstructive plastic surgery, dementia, visual and auditory loss, inability to communicate, or residence other than in Taguatinga.

After informed consent was provided, an individual interview was held, with the researcher completing the questionnaires to avoid fatigue or other possible limitations in the elderly subjects¹⁰. The Mini-Mental State Examination¹¹, a cognitive, functional, and behavioral assessment instrument, was then applied to evaluate cognitive status, using the following cut-offs: for those without formal education, 20 points; for those with primary or secondary education, 25 points; and for those tertiary education, 28 points¹².

Those considered appropriate based on cognitive assessment then completed a questionnaire developed specifically for this study, to determine socioeconomic parameters, medical history, surgical history, motivation, and impact of CS on personal life and relationships. The control group was asked whether or not CS had been considered. Depending on the answer, the motivations for or against CS were evaluated.

The Rosenberg Self-Esteem Scale¹³ includes 5 items relating to a positive self-image and 5 related to a negative self-image; values and attitudes were assessed using a Likert scale¹⁴.

The interview ended with completion of the World Health Organization Quality of Life-Bref (WHOQOL-BREF) questionnaire¹⁵, which evaluates the physical, psychological, social, and environmental domains for each subject. The WHOQOL-BREF was chosen because it surveyed satisfaction with physical appearance and presented a smaller number of questions (26, with 5 response options).

The data were analyzed using STATA software, version 14.0. We performed the Shapiro-Wilk test to assess normality of quantitative variables, followed by a descriptive analysis. Qualitative variables were expressed as absolute and relative frequency and quantitative variables as mean and standard deviation. The Mann-Whitney U test, Fisher's exact test, and Cronbach's alpha for reliability were also used.

This study was approved by the Research Ethics Committee of the Universidade Católica de Brasília (No. 2124672, protocol CAAE 69067917.5.0000.0029).

RESULTS

Of 50 elderly women in the present study, 25 were in group 1 (non-operated or control group) and 25 in group 2 (operated or case group). Table 1 shows the characteristics of the sample.

Most of the elderly subjects were non-smokers, did not consume alcohol, and had comorbidities, especially hypertension and dyslipidemia.

The average number of surgeries per patient was 2.16 (SD = 1.21), with a minimum of 1 surgery and a maximum of 5; 36% had 1 CS and 64% had more than 1 CS, concomitantly or at different times. The most common surgeries were abdominoplasty and blepharoplasty, with 64% undergoing both, followed by facelift or rhytidectomy (40%) (Figure 1).

Of the 25 women in the case group, 16.0% had postoperative complications.

The complications included dehiscence (12%), seroma (8%), hematoma (4%), TEP (4%), and infection (4%). Six patients (24%) underwent surgical revision to improve the cosmetic result, most frequently for unsightly scars.

When asked about the motivation for surgery, physical discomfort, improvement of QOL, and dissatisfaction with self-image were the reasons most often cited, followed by the desire for rejuvenation and improvement of social interactions (Figure 2).

The level of satisfaction is shown in Table 2.

Table 3 shows the mean scores for the items and the overall scores on the Rosenberg Self-esteem Scale, as well as the reliability of the instrument in each group. The Rosenberg Self-esteem Scale in both groups showed

Table 1. Sociodemographic characteristics.

Variables	Total (n = 50) (n = 25)	Group 1 (n = 25)	Group 2 (n = 25)	p-value
Age (years), mean+ SD	67.26+5.35	67.36+5.49	67.16+5.32	0.915 ¹
Education (years), mean+ SD	9.96+4.84	9.44+4.77	10.48+4.95	0.395 ¹
Income (minimum), mean+ SD	4.58+3.36	3.00+2.08	6.16+3.68	0.001 ¹
Marital status, n (%)				
With partner	16 (32.0)	7 (28.0)	9 (36.0)	0.762 ²
Without partner	34 (68.0)	18 (72.0)	16 (64.0)	
Ethnicity, n (%)				
White	17 (34.0)	8 (32.0)	9 (36.0)	0.033 ²
Black	6 (12.0)	6 (24.0)	-	
Mixed	16 (27.0)	11 (44.0)	16 (64.0)	
Educational level, n (%)				
Primary	20 (40.0)	11 (44.0)	9 (36.0)	0.769 ²
Secondary	15 (30.0)	8 (32.0)	7 (28.0)	
Tertiary	15 (30.0)	6 (24.0)	9 (36.0)	

1. Mann-Whitney U test; 2. Fisher's Exact Test; SD: standard deviation.

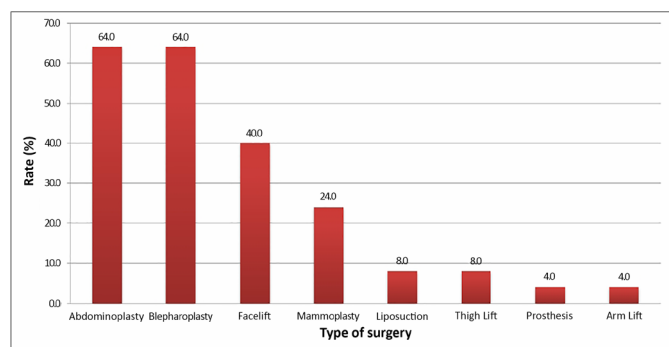


Figure 1. Types of surgeries performed in the case group.

a standardized Cronbach's alpha of 0.715, suggesting good internal reliability in the sample. Similar values were found for the case and control groups. There was no statistical difference in the overall self-esteem score between the case and control groups. However, the case group had a higher self-esteem score related to items 4 and 8 (improved sense of capability and self-respect).

None of the subjects were found to have low self-esteem. The prevalence of high self-esteem was greater in the case group than in the control group (68% vs. 52%), although this difference was not statistically significant ($p = 0.387$).

A positive correlation was observed between low self-esteem and age ($r_s = 0.312$; $p = 0.027$), i.e., the greater the age, the greater the self-esteem.

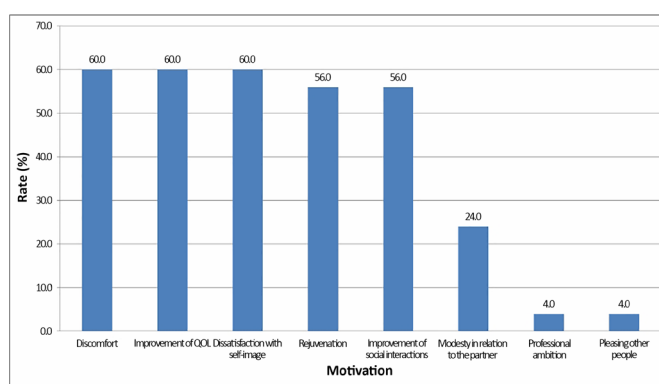


Figure 2. Motivation for surgery.

No significant difference was observed in the QOL scores for physical, psychological, social, and global relationships ($p > 0.05$). However, the QOL scores for the environmental domain ($p = 0.002$) were significantly higher in the case group than in the control group. In the descriptive analysis, the mean WHOQOL-BREF scores were higher in the case group for questions 24 and 25 (health services and means of transport) than in the control group (Table 4).

DISCUSSION

The mean patient age at the time of surgery was 67 years. One study of 6,786 elderly patients who underwent

Table 2. Level of satisfaction among elderly women who underwent surgery.

Aspect	Level of satisfaction				
	Very little	Little	Fair	High	Very high
With life	-	-	2 (8.0)	14 (56.0)	9 (36.0)
Self-image	1 (4.0)	1 (4.0)	2 (8.0)	12 (48.0)	9 (36.0)
Relationship with partner	14 (56.0)	3 (12.0)	3 (12.0)	4 (16.0)	1 (4.0)
Relationship with family	8 (32.0)	3 (12.0)	4 (16.0)	8 (32.0)	2 (8.0)
Work	17 (68.0)	2 (8.0)	-	4 (16.0)	2 (8.0)
Social	5 (20.0)	3 (12.0)	1 (4.0)	13 (52.0)	3 (12.0)

Note: Data presented in n (%).

Table 3. Comparison between items and self-esteem scores on the Rosenberg Scale in both groups

Items	Total group (n = 50)	Group 1 (n = 25)	Group 2 (n = 25)	p-value ¹
1	3.10 ± 0.42	3.00 ± 0.29	3.20 ± 0.50	0.081
2	3.10 ± 0.36	3.00 ± 0.29	3.20 ± 0.41	0.053
3	3.31 ± 0.62	3.24 ± 0.66	3.40 ± 0.57	0.408
4	3.04 ± 0.49	2.88 ± 0.33	3.20 ± 0.58	0.020
5	3.16 ± 0.51	3.04 ± 0.35	2.38 ± 0.61	0.073
6	3.12 ± 0.38	3.04 ± 0.35	3.20 ± 0.41	0.147
7	3.04 ± 0.57	3.08 ± 0.49	3.00 ± 0.64	0.637
8	2.78 ± 0.54	2.60 ± 0.50	2.96 ± 0.54	0.023
9	4.96 ± 0.73	3.04 ± 0.79	2.88 ± 0.67	0.450
10	3.60 ± 0.67	3.76 ± 0.52	3.44 ± 0.77	0.075
Global	31.22 ± 2.82	30.68 ± 2.62	31.76 ± 2.96	0.341
Reliability				
Cronbach alpha	0.715	0.724	0.709	-
CCI (95% CI)	0.701 (0.560-0.811)	0.732 (0.542-0.864)	0.685 (0.462-0.841)	-
p-value	< 0.001	< 0.001	< 0.001	-

Notes: Data presented as mean ± SD; ¹Mann-Whitney U test; CCI: Center for the Coexistence of the Elderly; CI: Confidence Interval.

CS indicate that 88.7% were women, with an average age of 68 years, similar to the findings in the present study¹⁶.

The same study reported that elderly patients who underwent CS were between 65 and 75 years of age (95%), indicating that the demand for CS by octogenarians is much lower. In the sample of the present study, the majority (80%) underwent CS at ages between 60 and 70 years, with no record of octogenarians. This finding may be related to cultural factors that discourage CS beyond a certain age.

The prevalence of comorbidities among elderly women surveyed showed no significant differences between the groups ($p < 0.05$). A study in 2008¹⁷ stated

that society is increasingly concerned with appearance, and that most people consider CS to be quick and safe, not hesitating to resort to surgery to improve self-image.

Thus, one can conclude that the presence of comorbidities is not an impediment to CS, which is considered safe. However, there are inherent risks in any surgery, and the plastic surgeon has to be thorough in preoperative evaluation and surgical planning.

The most popular types of surgery requested by the elderly in this study were abdominoplasty (body) and blepharoplasty (facial). Younger patients prefer body surgeries, particularly breast enlargement and liposuction, while elderly patients prefer facial surgeries¹⁸. The present study revealed an equal

Table 4. Comparison of the WHOQOL-BREF items between groups.

Question	Total group (n = 50)	Group 1 (n = 25)	Group 2 (n = 25)	p-Value ¹
1	3.94 ± 0.68	3.92 ± 0.64	3.96 ± 0.73	0.707
2	3.66 ± 0.74	3.68 ± 0.55	3.64 ± 0.91	0.923
3	2.04 ± 1.16	2.08 ± 1.19	2.00 ± 1.15	0.740
4	3.34 ± 0.92	2.40 ± 0.96	2.28 ± 0.89	0.573
5	3.20 ± 0.86	3.28 ± 0.94	3.12 ± 0.78	0.316
6	3.82 ± 0.56	3.76 ± 0.44	3.88 ± 0.67	0.349
7	3.16 ± 0.68	3.24 ± 0.66	3.08 ± 0.70	0.416
8	3.79 ± 0.58	3.84 ± 0.55	3.76 ± 0.61	0.570
9	3.70 ± 0.68	3.64 ± 0.70	3.76 ± 0.66	0.613
10	3.56 ± 0.64	3.44 ± 0.65	3.68 ± 0.62	0.296
11	3.72 ± 0.83	3.72 ± 0.93	3.72 ± 0.73	0.975
12	2.98 ± 0.77	2.76 ± 0.66	3.20 ± 0.82	0.054
13	3.46 ± 0.84	3.24 ± 0.88	3.68 ± 0.75	0.089
14	2.86 ± 0.83	2.88 ± 0.88	3.84 ± 0.80	0.877
15	4.26 ± 0.78	4.24 ± 0.60	4.28 ± 0.94	0.412
16	3.62 ± 1.07	3.48 ± 1.12	3.76 ± 1.01	0.357
17	3.84 ± 0.71	3.84 ± 0.74	3.84 ± 0.69	0.982
18	3.84 ± 0.68	3.84 ± 0.62	3.84 ± 0.75	0.857
19	3.88 ± 0.75	3.80 ± 0.82	3.96 ± 0.67	0.627
20	3.80 ± 0.83	3.68 ± 0.94	3.92 ± 0.70	0.415
21	3.54 ± 0.95	3.72 ± 0.98	3.36 ± 0.91	0.071
22	3.74 ± 0.80	3.56 ± 0.82	3.92 ± 0.76	0.122
23	3.78 ± 0.82	3.64 ± 0.76	3.92 ± 0.86	0.176
24	3.28 ± 1.23	2.88 ± 1.20	3.68 ± 1.14	0.017
25	3.66 ± 0.96	3.24 ± 1.16	4.08 ± 0.40	0.002
26	2.06 ± 0.62	2.08 ± 0.81	2.04 ± 0.35	0.840

Notes: Data presented as mean ± SD; ¹ Mann-Whitney U test.

preference for facial and body surgeries among the elderly, which can be explained by the fact that Brazil is a tropical country, where the opportunities for exposure of the body are more frequent.

It was found that 36% of elderly patients had 1 cosmetic surgery, while 64% had more than 1; surgeries were concomitant, or performed at different times. The complexity of surgery and surgical time greater than 4 hours were the main risk factors associated with postoperative complications¹⁹; there was no significant association with variables such as sex, age, nutritional status, sedentary lifestyle, or the presence of comorbidities. Another study found no significant difference in the risk of complications associated with CS in elderly and young patients¹⁶, suggesting that CS may be performed in both with equal safety.

The average number of CS procedures performed in each patient in this study was 2.16, which demonstrates the desire of the elderly to surgically correct several body

areas, the understanding of CS as a safe procedure, and the verification that postoperative recovery may not be difficult.

The few postoperative complications (16%) found in this study were considered minor, since their management was done on an outpatient basis and not in a hospital environment. Seroma (8%) and dehiscence (12%) were the most common, in contrast to the literature, which identified hematoma and infection as the most frequent complications^{16,19}. Six patients (24%) requested surgical revision to improve the cosmetic result. In the majority of cases, these were revisions for unsightly scars.

From the analysis of motivations for undergoing CS, it is clear that eliminating the physical discomfort caused by changes in body shape, the desire to improve QOL, and the desire for improved self-esteem are important in this phase of life. A review of 48 studies published between 2000 and 2007¹⁷, with the

objective of identifying the motivations for CS, revealed psychological, psychosocial, and psychiatric factors, which were summarized as problems with self-image, self-esteem, social isolation because of appearance (bullying), and dysmorphophobia.

This study identified the presence of a significant physical factor, i.e., discomfort caused by the shape of a body region (60%), as a reason for CS. This finding was also cited in a study in Rio de Janeiro⁴, which found that 26% of respondents of all ages cited this factor as a motivator, especially among candidates for reduction mammoplasty and abdominoplasty, indicating that large breast or abdominal size is a cause of physical discomfort.

Physical discomfort was cited by 60% of the elderly as a motivation for CS, and 92% reported high or very high personal satisfaction, suggesting resolution of physical discomfort. In addition, 60% of the elderly women cited improvement of self-image as an important reason for CS, and 84% said they had improved self-image after CS.

This study highlights the positive impact of CS in the life of the elderly, with significant improvement over preoperative expectations when one considers the perceived benefits. A desire for improvement of self-image may account for the growth in the number of cosmetic procedures in the elderly in the last decade. A 4% increase in the demand for CS and 26% when all aesthetic procedures were considered was reported among the elderly in the USA⁸.

Regarding the effect of CS in the relationship with a partner, only 20% of elderly patients reported significant or very significant improvement, and few (4%) cases were motivated by the desire to please another person. In contrast, in a study by the Ivo Pitanguy Institute that included patients of all ages, 65% reported an improvement of in relationship with a partner after CS⁴. Thus, there seems to be a difference in the way relationships are valued with advancing age. The elderly in the present study reported that CS was primarily chosen for personal benefit (92%), improvement in self-image (84%), and enhancement of social interactions (64%).

The present study showed no significant difference in the overall self-esteem score between the groups. A study that evaluated self-esteem before and after facial rejuvenation surgery²⁰ showed no significant differences in the group as a whole, but differences emerged when the group was subdivided. Patients with low self-esteem preoperatively experienced increased self-esteem after surgery; those with moderate self-esteem did not show significant changes following CS; and those with high

preoperative self-esteem showed decreased self-esteem postoperatively, suggesting likely preexisting depression, unrealistic expectations for surgery, or the presence of a personality disorder.

Although all reported sustained rejuvenation benefit of approximately 9 years, the positive outcome of surgery was not associated with improvement in self-esteem, suggesting that there is a wide spectrum of possible psychological reactions after CS.

In the current study, no elderly patients showed low self-esteem and the prevalence of high self-esteem was greater in the case group (68% vs. 52% with $p = 0.387$). The case group showed higher self-esteem scores in items 4 and 8, which refer to self-sufficiency and self-respect. The evaluation of these data shows that older people in general have good self-esteem; however, CS seems to make the patient feel more capable, with greater self-respect and an increase in self-worth.

Because they are more prone to loneliness, loss of family members, disease, stress, cognitive loss, anxiety, and depression, the elderly are more predisposed to a decrease in self-esteem. However, several studies^{5,21,22} confirm that a significant percentage of patients who undergo CS experience increased self-esteem, with decreased social withdrawal and enhanced ability to make friends.

Every effort to eliminate loneliness in the elderly increases their self-esteem and prevents psychological illness⁶. Therefore, it can be argued that CS in the elderly is justified by contributing to improvement in social interaction and prevention of psychological disorders such as anxiety and depression.

This study also showed no difference in global QOL or physical, psychological, and social domains between the groups. In contrast, a literature review³ reported that CS improves QOL. Another author who only assessed patients in the postoperative period reported that improvement in QOL is a consistent reason for undergoing CS²³. Their results indicated that 84% of patients were satisfied or very satisfied with the result and that 88.9% would recommend the surgery to a friend.

Two hypotheses emerge from the present study. Either the WHOQOL-BREF cannot detect changes caused by CS (responsiveness), or the assessment of QOL in the elderly is different from that in other age groups. This suggests that the elderly may have an idealized or unrealistic expectation of improvement from CS.

Despite the methodological difficulties in the present study, which may be related to the concomitant evaluation of various types of CS, the population of patients analyzed, and the use of validated, but

nonspecific questionnaires, the importance of studies involving cosmetic procedures in the elderly has been demonstrated.

CONCLUSION

The average age of elderly patients who underwent CS was 67 years, and most had mid-level education. The elderly also sought facial and body surgeries and the occurrence of complications and need for reintervention was not higher than in younger patients.

The motivations of the elderly to have CS were physical and psychological. The level of personal benefit from CS was high and social life was improved.

Elderly women who underwent CS did not show improved QOL and self-esteem when compared to those who did not undergo CS. However, when those who underwent CS were analyzed separately, high levels of personal satisfaction and improvement of social life were observed.

COLLABORATIONS

- LMSP** Analysis and/or interpretation of data; data collection; concept and design of the study; project management; methodology; writing and preparation of the original; validation; review.
- GAC** Final approval of the manuscript; project management; supervision.

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