

Quality of Life of the Plastic Surgeon in the Midwest of Brazil

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Background: The quality of life theme is much studied in the area of plastic surgery; however, there are few studies on the quality of life of plastic surgeons. The main aim of this study was to describe the quality of life of the plastic surgeon in Center-West of Brazil.

Methods: A cross-sectional study was performed of plastic surgeons in the greater state of Goiás, Center-West of Brazil, registered until January 2015. A sample with power of 80%, 115 surgeons from 163 WHOQOL-BREF, and a social-demographic and professional questionnaire were used as instruments. The data were compared between qualitative variables of the questionnaire and WHOQOL-BREF using the Mann-Whitney and Kruskal-Wallis tests.

Results: One hundred sixteen surgeons answered; for WHOQOL-BREF, domain statistics were as follows: physical, 57.85; psychological, 62.9; social, 74.13; and environment, 68.56. The higher scores in each domain were related: physical: monthly income higher than US\$ 11,200, more than 10 years of experience, weekly work hours lower than 40, being an associate or full member, and more than 4 surgeries/week; psychological: man, married, and having only private patients; social: man, monthly income higher than US\$15,000, more than 20 years of experience, and weekly work hours lower than 40; and environment: monthly income higher than US\$15,000, more than 10 years of experience, weekly work hours lower than 60, and more than 4 surgeries/week.

Conclusion: The study demonstrates that the youngest surgeon, with a duration of less than 10 years, has the worst quality of life. (*Plast Reconstr Surg Glob Open* 2018;6:e1802; doi: 10.1097/GOX.0000000000001802; Published online 8 August 2018.)

INTRODUCTION

In the last decades, concern for human well-being and quality of life has grown, thus influencing the definition of health and the therapeutic approach of patients.¹

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Plastic surgery is a medical specialty whose training covers the reconstructive area and aesthetics, although the glamour often referred to as its identity, is similar to that of surgeons in general,^{2,3} presenting stressful aspects such as dedication of time, personal responsibility, contact with human suffering, working many hours, accumulation of employment links, and unsatisfactory working conditions that can lead to stress and decrease the perception of quality of life.

Several studies have reported the development of fatigue in physicians, which can lead to burnout syndrome and serious conditions that can lead to the abandonment of the profession and worsening of quality of life.²⁻⁶

Although the quality of life theme is well studied among patients, few studies⁷ in Brazil have addressed this issue with regard to the medical profession. The objective of this study was to describe the quality of life of the plastic surgeon of the state of Goiás, as a representative of the Center-West of Brazil.

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MATERIALS AND METHODS

A survey was conducted using a questionnaire with socioeconomic data developed for this research, with 17 items: age, sex, marital status, postgraduation, state of practice, number of children, time working as a plastic surgeon, the Brazilian Society of Plastic Surgery (SBCP) and type of bond to this, type of attendance, work shifts, weekly workload, number of surgeries per week, types of surgery, use of auxiliary and monthly income, together with the WHOQOL-BREF (World Health Organization Quality of Life abbreviation instrument) quality of life assessment instrument. The research received the registration number 37151714.9.000.5078 on the Brazilian Ethics Committee platform (see questionnaire, Supplemental Digital Content 1, which displays the inquiries needed for these data, <http://links.lww.com/PRSGO/A817>).

The WHOQOL BREF instrument uses a version with domains: physical, psychological, social relations, environment, and overall quality of life and general perception of quality of life.

The data collection was done initially through the internet, through the form developed and filed in Google forms and sent by e-mail to the members of SBCP in the Goiás region, who were registered until January 2015. The sending of e-mails was carried out in a range of about 15 days. In case of noncompletion of the questionnaire in the first e-mail, the professional would receive a telephone contact communicating the sending of the e-mail. After this period, the data were collected in person, during regional courses or in the doctor’s office or hospital where the surgeon worked. For currency conversion, US\$ 1.0 was used, which equals R\$ 3.5.

Inclusion criteria were considered to be the realization of residence by the Minister of Education or in a service stage accredited by the SBCP and to be working in this specialty in the state of Goiás. Resident physicians were excluded, even if they were working in plastic surgery. The research was confidential, ensuring the anonymity of the participants, and everyone provided informed consent. A sample calculation was performed according to the selected population of 163 surgeons (registered by January 2015), and a sample of 115 surgeons was selected for a power of 80%. Data analysis was performed by SPSS, version 24 (IBM SPSS version 24).

RESULTS

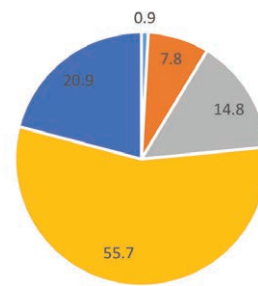
The questionnaire was submitted to the Cronbach alpha reliability test with a score of 0.886 for the 26 items, indicating the good quality of the instrument. A total of 116 surgeons answered the questionnaire, whereas a total of 28.8% not answered, as seen in Table 1.

Regarding the frequency of the distribution of life quality in general and satisfaction with one’s own health, the results are found in Figure 1.

In a previous study, the data on socio-demographic and occupational profiles were published.⁷

According to the data in Table 2, which show the correlation of the socio-demographic data with the WHOQOL BREF domains, the following results are observed: the female sex presents lower scores in the psychological and social

Quality of life in general



■ Very bad ■ Bad ■ Neither bad nor good ■ Good ■ Very good
Fig. 1. Quality of life in general and satisfaction with one’s health.

domains. Married men have better psychological scores than singles. The number of children and the place of performance were not statistically correlated when compared with each domain. Regarding the level of income, we observed higher scores in the physical domain for those who earn more than 30 thousand Brazilian Reals (BRL) per month, and better scores in the social and environment domains for those who receive a value greater than BRL 40 thousand per month.

Table 3 correlates the professional profile with the WHOQOL BREF domains. The office location had no significant influence on the areas analyzed. The scores of the physical and environment domains were higher in surgeons with more than 10 years of surgeries and the social domain in surgeons with more than 20 years of surgeries. Associate members and holders have higher scores in the physical domain than the specialist. The realization of postgraduation did not show among the participants. Surgeons who attend only private patients have a better score in the psychological domain. Those who are on duty in another area have a worse score in the physical and environment domains when compared with those who work on-call in plastic surgery or those who do not work. The physical and social domains had higher scores for those working less than 40 hours per week compared with those working 60 hours. The environment domain had a significant difference in scores when comparing those working less than 60 hours per week with those who work longer than this. Those who perform more than 4 surgeries per week present better scores in the physical and environment domains. The type of surgery and the presence of an auxiliary are not accompanied by statistical difference between the domains.

DISCUSSION

The aspects related to the work have great impact on the quality of life of the physician; in plastic surgery, this is no different. In studies by Balch et al.,⁸ it was ob-

Table 1. Descriptive Statistics of WHOQOL BREF Domains

Domains	Medium	Average	SD	Minimum	Maximum
Physical	57.14	57.85	7.6	42.86	82.14
Psychological	62.50	62.9	8.51	41.67	83.33
Social	75	74.13	14.24	16.67	100
Environment	68.75	68.56	11.85	34.38	93.75

Table 2. Comparison of Quality of Life among Sociodemographic Data

Partner Demographic	Physical Domain	Psychological Domain	Social Domain	Environment Domain
Sex*	<i>P</i> = 0.11	<i>P</i> = 0.007	<i>P</i> = 0.01	<i>P</i> = 0.08
Female	54.67±4.70	56.41±8.61	61.54±19.70	63.22±12.05
Male	58.26±7.82	63.73±8.18	75.74±12.64	69.24±11.71
Marital status†	<i>P</i> = 0.06	<i>P</i> = 0.03	<i>P</i> = 0.72	<i>P</i> = 0.10
Married	57.72±7.39	63.98±8.06a	74.14±14.49	69.97±10.70
Divorced	63.69±5.26	60.42±5.74a, b	77.78±18.00	65.63±21.56
Single	56.82±8.53	59.28±9.95b	73.11±12.58	63.78±12.15
No. children†	<i>P</i> = 0.20	<i>P</i> = 0.73	<i>P</i> = 0.68	<i>P</i> = 0.21
More than 2	60.20±8.27	64.29±5.09	77.38±12.84	72.32±11.09
None	56.82±7.26	62.31±9.34	73.48±12.99	66.62±12.60
1–2	58.08±7.68	63.01±8.59	73.83±15.55	69.13±11.33
Location*	<i>P</i> = 0.43	<i>P</i> = 0.28	<i>P</i> = 0.75	<i>P</i> = 0.15
Goiás and other states	56.25±7.55	60.42±8.74	72.40±14.50	65.04±14.08
Only in Goiás	58.12±7.62	63.30±8.45	74.41±14.25	69.13±11.43
Monthly income†	<i>P</i> = 0.001	<i>P</i> = 0.053	<i>P</i> = 0.02	<i>P</i> < 0.001
≤ 20k	53.08±6.26b	59.85±9.41	67.05±18.09b	58.24±11.43c
21–30k	56.75±8.01a, b	65.74±9.76	74.07±11.86a, b	66.09±10.71b, c
31–40k	59.07±7.30a	60.42±8.19	74.04±12.09a, b	69.71±10.52a, b
≥ 40k	60.45±7.02a	64.27±6.39	78.13±13.57a	75.16±9.09a

Different letters indicate that there were statistically significant differences at the 0.05 level.

*Mann-Whitney.

†Kruskal-Wallis

Table 3. Comparison of Quality of Life (WHOQOL-BREF) with the Data of the Professional Profile

Professional Profile	Physical Domain	Psychological Domain	Social Domain	Environment Domain
Office location*	<i>P</i> = 0.28	<i>P</i> = 0.28	<i>P</i> = 0.53	<i>P</i> = 0.06
Goiania	58.28±7.53	61.98±8.30	74.65±14.56	70.27±10.71
Goiania/another state	57.82±7.71	64.19±8.18	73.87±13.91	66.64±13.50
Only in the interior	52.98±7.29	65.97±12.48	69.44±13.61	59.90±9.96
Time as a plastic surgeon* (y)	<i>P</i> < 0.001	<i>P</i> = 0.82	<i>P</i> = 0.009	<i>P</i> < 0.001
≤ 5	54.48±6.88b	61.97±10.48	69.33±15.36b	63.30±11.48b
6–10	58.79±6.87a, b	64.10±6.88	76.92±11.38a, b	69.95±11.73a, b
11–20	59.62±6.91a	62.98±7.30	75.32±12.80a, b	72.96±8.52a
≥ 20	63.39±7.77a	63.54±6.36	81.77±13.34a	74.61±12.23a
Associate type SBCP*	<i>P</i> = 0.03	<i>P</i> = 0.53	<i>P</i> = 0.46	<i>P</i> = 0.09
Titular (full member)	60.36±7.70a	64.17±6.25	74.44±14.51	72.92±11.59
Associate	58.42±8.26a	61.76±9.00	75.00±15.04	68.08±10.67
Specialist	56.51±6.75b	62.95±9.32	73.81±13.89	66.91±11.83
Postgraduate studies*	<i>P</i> = 0.44	<i>P</i> = 0.49	<i>P</i> = 0.91	<i>P</i> = 0.37
Doctorate	55.36±7.58	64.58±8.84	75.00±0.00	68.75±8.84
MBA	64.29±7.14	63.89±6.36	77.78±25.46	82.29±11.83
Master	58.04±7.08	67.19±6.07	76.04±6.95	68.75±16.02
Does not have	57.70±7.67	62.50±8.72	73.86±14.55	68.14±11.46
Type of service†	<i>P</i> = 0.31	<i>P</i> = 0.02	<i>P</i> = 0.18	<i>P</i> = 0.59
Only private	59.11±7.96	59.34±7.93b	77.59±16.08	67.24±13.69
SUS	60.27±9.92	62.76±8.67a, b	72.92±15.37	66.02±17.19
Private insurance	56.79±6.72	64.40±8.38a	72.98±13.11	69.69±9.39
Works shifts*	<i>P</i> = 0.01	<i>P</i> = 0.42	<i>P</i> = 0.12	<i>P</i> = 0.005
Plastic surgery	59.52±7.43a	65.28±6.36	72.22±20.97	69.79±20.81a
Another area	54.69±7.08b	61.67±9.14	70.24±14.75	63.30±11.80b
No	59.23±7.49a	63.37±8.32	75.97±13.58	70.90±10.89a
Weekly workload* (h)	<i>P</i> = 0.02	<i>P</i> = 0.61	<i>P</i> = 0.04	<i>P</i> = 0.001
≤ 40	59.39±7.41a	62.62±9.56	76.67±16.27a	69.91±12.80a
41–60	58.07±7.5a, b	63.43±8.76	74.71±12.58a, b	70.91±9.94a
≥ 60	54.87±7.68b	61.93±5.93	68.56±14.07b	60.23±11.74b
No. surgeries†	<i>P</i> = 0.01	<i>P</i> = 0.06	<i>P</i> = 0.12	<i>P</i> = 0.002
≤ 3 weekly	56.26±7.59	61.34±9.04	72.13±15.58	65.42±12.31
≥ 4 weekly	59.66±7.26	64.66±7.58	76.39±12.30	72.11±10.30
Type of surgery†	<i>P</i> = 0.21	<i>P</i> = 0.98	<i>P</i> = 0.70	<i>P</i> = 0.82
Aesthetic	56.28±6.80	64.90±8.07	73.23±13.14	69.32±11.55
Aesthetic and reconstructive	58.49±7.85	62.09±8.60	74.49±14.72	68.25±12.02
Use of auxiliary* (%)	<i>P</i> = 0.38	<i>P</i> = 0.84	<i>P</i> = 0.73	<i>P</i> = 0.10
≤ 25	57.94±7.50	63.66±8.55	73.15±16.68	67.19±12.73
26–50	58.01±7.20	62.25±8.96	72.98±11.97	70.93±7.59
51–75	55.95±7.00	62.65±8.76	74.69±12.33	64.47±12.35
≥ 75	60.15±9.09	62.94±7.84	77.19±15.92	72.86±13.86

SUS, Sistema Unico de Saude public health system in Brazil.

served that the fatigue index was 37% and 27%, presenting worse mental quality of life among American plastic surgeons. Querish et al.⁹ revealed a 30% rate of fatigue

in plastic surgeons. Factors such as the number of hours worked, the number of weekly shifts, the subspecialty chosen, lack of control of working hours, annual in-

come, and academic life negatively influence the quality of life.¹⁰

In this study, the physical and psychological domains of plastic surgeons were inferior to those of several health professionals,¹¹ such as nurses and nursing technicians,¹² anesthetist, and nonanesthetist physicians.^{13,14} This may be related to the model of the profession that demands good physical health to perform surgeries and the need for psychological development in the treatment of patients and their complaints.

When evaluating the physical domain found in this study, better scores are seen in surgeons who have more than 2 children, have a monthly income higher than BRL 30 thousand, have a performance over 10 years, are members or associate members, perform on-call in the area of plastic surgery or do not perform any type of shift, weekly workload less than 40 hours per week, and number of surgeries greater or equal to 4 per week. This specialty needs to gain the trust of the public and considering that most of the patients come from others who are satisfied, we can conclude that over the years, more than 10 years, the surgeon can create a set of patients who make it possible to work less, not give shifts, and receive a little more through the number of weekly surgeries, which allows better physical disposition. A relevant fact is observed that those who do not perform on duty and those who perform on duty in their specialty present the same quality of life in this similar field. In Brazil, the plastic surgeon is rarely seen as an “on-the-job” surgeon, but their work is broadly involving trauma, facial fractures, burns, and complications. A stimulus on the part of government and social classes in the creation of hospital structures covering reconstructive plastic surgery, at least in the capitals, would be an interesting option for surgeons new to this profession.

The factors related to the best psychological domain were that male surgeons, married, and those who only privately perform had a better score in the psychological domain. When observing the sex, the female presents a dual responsibility associated with the care of the home and the children, which impacts on their quality of life. The married man has partner support to advance his achievements, and those who only charge privately present a degree of experience and stability not yet won by those who are just starting out in the profession.

When evaluating the social domain, the best scores were related to males, with an income above BRL 30 thousand, the time of performance over 20 years, and the weekly workload less than 40 hours. Males have a better social domain because they generally perform physical activity and participate in social events, whereas the female sex is more likely to be more restricted due to the need to reconcile care of the children, the home, and the professional career. The income of more than BRL 40 thousand per month and the longer working time allow a greater influx into the social and entertainment environment, whereas those who work more than 60 hours a week have no disposition or do not have enough money to invest in social and entertainment relationships.

In the environment domain, the monthly income, the time of action, the weekly workload, and the number of

surgeries were factors related to the best score. With the longer time of operation, the influx of patients increases; as a consequence, the number of surgeries and monthly income increases, which makes it possible not to work in other areas or to give shifts.

In a recent study by Peckham,¹⁵ the American plastic surgeon works about 50 hours a week, of which about 10 hours are devoted to paperwork completion, and the remaining hours most referring to as the rewarding factor due to gratitude and the relationship with patients. In a study carried out by Medscape¹⁶ in 2012, about 84% of plastic surgeons are happy, presenting as their main hobby physical activity or traveling, 75% have voluntary activities, preferring international travel, and those with a companion present themselves happier.

Factors related to the worst domain and quality of life are related to new surgeons who, to maintain an acceptable standard of living, need to work in another area, work more than 60 hours, and have fewer surgeries per week. It is necessary to change the current system to absorb the new surgeons when they reach the market, either through continuing education, creation of a bank of auxiliary surgeons, and creation of jobs for them in large hospitals. This factor includes the newcomers in the system, allows them to learn with more experienced surgeons, and occupy the spaces of our specialty, thus preventing the invasion by others.

CONCLUSIONS

The data collected and analyzed bring a reflection on the influence of labor and demographic variables on the quality of life of the plastic surgeon.

The study demonstrates that quality of life can be influenced by several factors and that for better quality of life of the plastic surgeon factors such as being married, having children, having monthly income exceeding BRL 30 thousand, a working time over 10 years, being at least a specialist, not giving shifts, or if necessary to do it within the specialty, having a weekly workload of up to 40 hours, and performing more than 4 surgeries a week positively influencing a better quality of life for the plastic surgeon.

As shown in the data, the youngest surgeon, with a duration of less than 10 years, to enter the market, ends up doing shifts in other areas, has a high weekly workload, and a monthly income of less than BRL 30 thousand per month. The improvement of working conditions, especially at the beginning of the career, may allow an improvement in the quality of life of surgeons with gains for the specialty.

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