

## Original articles

# Quality of life of women submitted to facial aesthetic myofunctional therapy – educational status influence

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## ABSTRACT

**Objective:** to analyze the influence of educational status on the quality of life of women submitted to facial aesthetic myofunctional therapy.

**Methods:** a self-controlled experimental clinical trial conducted at the *Universidade Aberta à Terceira Idade* (Open University for Seniors – UNATI) of the *Pontifícia Universidade Católica* (Pontifical Catholic University – PUC) of Goiás, Brazil. The 44 participating women, aged 50 to 65 years, were divided into group 1 (having completed middle or high school) and group 2 (with a higher education degree) and were submitted to aesthetic myofunctional therapy. Data analysis was made with the paired t-test, Levene test, t-test to compare the means of independent groups, and Spearman correlation, at the 5% significance level.

**Results:** after the aesthetic myofunctional therapy, the wrinkles and orofacial myofunctional balance improved significantly in groups 1 and 2. The physical aspects and overall health status mean scores increased significantly in group 1, after the intervention. There was no statistically significant difference in the women's quality of life between groups. The correlation between educational status and the quality-of-life domains was predominantly low.

**Conclusion:** the educational status did not interfere with the quality of life of women submitted to aesthetic myofunctional therapy.

**Keywords:** Quality of Life; Educational Status; Myofunctional Therapy; Esthetics

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## INTRODUCTION

Body image is a complex human phenomenon with cognitive, affective, and sociocultural aspects. It is closely related to the concept of self and is influenced by dynamic interactions between the person and the environment where they live<sup>1</sup>.

Age has been associated with body image satisfaction<sup>2</sup>. Hence, aging is a major source of attention and concern for people, nowadays<sup>3</sup>. The face shows early signs of aging, beginning by 30 years old, approximately<sup>4</sup>, when the eyebrows drop, the nasolabial folds deepen, wrinkles appear, and the skin becomes flaccid<sup>5</sup>. In addition to physical changes, psychosocial ones also occur<sup>6</sup>, such as anxiety, fear of rejection, and fear of losing vitality<sup>7</sup>.

Adjusting body image to stereotyped expectations is a goal in present-day society<sup>1</sup>. Accordingly, rejuvenating techniques are being improved<sup>8</sup>, originating different intervention approaches.

Speech-language-pathology (SLP) in facial aesthetic procedures are part of the field of oral-motor function. They aim to attenuate the signs of aging<sup>4</sup> by balancing the facial mimetic and/or neck muscles so the structures involved in orofacial functions will be symmetrical and harmonious<sup>9</sup>. Muscle and functional rebalance attenuates wrinkles and folds, improves flaccidity<sup>4</sup>, and better defines the lines that rejuvenate the face<sup>10</sup>, improving the person's self-esteem and quality of life<sup>11</sup>.

The WHOQOL Group<sup>12</sup> has defined the quality of life as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their expectations, standards, and concerns".

Inner (individual) and outer (social and cultural) determinants influence the overall quality of life<sup>13</sup>. The school environment is one of the main human development settings, helping shape and develop people's perceptions and evaluations of their skills and competences<sup>14</sup>. Educational attainment, in its turn, strongly influences people's lifestyle and quality of life<sup>15</sup>, as it is associated with different values, norms, habits, and attitudes that help explain how each person perceives their health status<sup>16</sup>.

Studies reveal that people with higher educational status obtain higher scores in quality-of-life domains<sup>17-24</sup>. People with higher educational attainment tend to better estimate their living conditions, evaluate more favorably the environment where they live<sup>25</sup>, better adhere to disease prevention and health promotion measures, and correct more often their unhealthy

lifestyles and habits<sup>16,26</sup>. Higher educational attainments are also associated with finding better employment, higher incomes, and better housing – which in turn influence better health-related attitudes<sup>27</sup>.

In Western societies, sociocultural elements are the main etiological factors of the degree of body image satisfaction or dissatisfaction<sup>28</sup>. A study on male body image satisfaction verified that the higher the educational attainment, the higher the body image dissatisfaction<sup>29</sup>.

Knowledge of quality of life and the variables that influence it aids health professional interventions and healthcare and health service management improvements to promote well-being and guide therapeutic procedures.

Thus, the objective of this study was to analyze the relationship between the educational status and quality of life of women submitted to facial aesthetic myofunctional therapy.

## METHODS

This self-controlled experimental clinical trial was conducted at the *Universidade Aberta à Terceira Idade* (Open University for Seniors – UNATI) of the *Pontifícia Universidade Católica* (Pontifical Catholic University – PUC) of Goiás, in Goiânia, Goiás, Brazil.

The project was approved by the Research Ethics Committee of both the *Universidade Federal de Goiás* (Federal University of Goiás) and PUC-Goiás, under evaluation report no. 705.210/14, complying with the recommendations of Resolution 466/12 of the National Health Council<sup>30</sup>.

A group of women who attended UNATI/PUC-Goiás participated in the study. The sample size was determined based on values in the paper by Nicodemo<sup>31</sup> – 5% significance, 80% test power, and 6% margin of error –, resulting in a sample of 39 people. Considering possible withdrawals, the sample was enlarged to 66 subjects. The women were divided into groups 1 and 2, according to their educational attainment. The women in group 1 had completed middle and high school, while those in group 2 had a higher education degree.

Women aged 50 to 65 years who agreed to participate in the study and signed an informed consent form were included.

Those with anatomical-physiological changes, acne, wounds, or eczema on the face, or who were planning to have a facial massage, dermatological aesthetic treatment, plastic surgery, or any other facial

aesthetic treatment along with the SLP techniques were excluded.

The instruments used were the Medical Outcome Study 36-item Short-Form (SF-36); a sociodemographic questionnaire based on the WHOQOL – Portuguese version<sup>32</sup>; the medical history protocol of the Muscle Improvement Program in Facial Aesthetic SLP Therapy (PAMFEF, in Portuguese)<sup>33</sup>; the aesthetic assessment protocol proposed by Pierotti<sup>4</sup>; and a photographic documentation protocol. The last three were used for SLP assessment.

The SF-36 has 11 questions with 36 items, distributed into eight domains. They assess functional capacity (10 items), physical aspects (4 items), pain (2 items), overall health status (5 items), vitality (4 items), social aspects (2 items), emotional aspects (3 items), and mental health (5 items). The domains make up two components: physical and mental health. Functional capacity, physical aspects, pain, and overall health status belong to physical health, while vitality, social and emotional aspects, and mental health belong to mental health<sup>34</sup>. The domains are given scores ranging from 0 to 100, in which 0 corresponds to the worst health status, and 100, to the best health status. There is no single score encompassing all domains.

The sociodemographic questionnaire addressed age, monthly family income, occupation, educational attainment, marital status, number of children, housing, health status, presence of diseases, and medication use.

The medical history protocol had questions on personal and medical data, addictive and postural behaviors, eating, sleep, exercising, sun exposure, routine, facial expression, tension, aesthetic treatments, and beauty standards<sup>33</sup>.

The aesthetic assessment encompassed body, orofacial (forehead, glabella, eyebrow, eyes, nose, cheeks, mouth, lips, chin, mandible, tongue, tonsils, and teeth), skin (phototype, Glogau scale, skin biotype, scars, wrinkles), and stomatognathic function analyses (breathing, mastication, swallowing, phonation, and articulation)<sup>4</sup>.

SLP photographic documentation was made with a protocol developed for this study. The photographs pictured the head, neck, and chest from five angles (front, right and left profile, right and left angled profile). The part of the room where the patients were photographed and the distance at which they stood from the camera tripod were standardized to compare the photographs before and after the intervention. They

were instructed to look fixedly on a spot on the room wall, whose height was 10 cm lower than the patient's height, and the head position was established with an imaginary line from the tragus to the nasion. A SONY DSC-S650 digital camera was used. Before taking the photographs, the patients were asked to read and, if they agreed with it, sign a photo consent form.

After they had signed the informed consent form, the sociodemographic questionnaire was administered.

The SF-36 was applied individually in interviews with the lead researcher. The other procedures were carried out by duly trained SLP students of the originating institution in clinical fellowship. The researcher participated in all sessions to supervise the cases.

The SLP weekly intervention lasted 14 weeks from medical history survey to discharge. The regions to be toned or relaxed were defined, as well as the functions to be adjusted, the mimics and other habits of which they needed to be aware, the exercises to be done, and instructions to be given them.

The sessions lasted 40 minutes each and took place once a week, for 10 weeks. The therapies included facial stretching, massage, isometric exercises, stomatognathic exercises (mastication, swallowing, and/or speech), raising awareness of repetitive mimics, and giving instructions on the importance of wearing sunscreens and sunglasses, drinking water, eating healthily, sleeping well, and practicing sports.

Missing three aesthetic myofunctional therapy sessions was a criterion for exclusion.

After finishing the SLP intervention period, the SF-36, photographic documentation, and assessment protocol were reapplied.

The data collected in this study were confidentially stored at the SLP teaching clinic of the originating institution and will be incinerated after 5 years.

The data were analyzed with the Statistical Package for the Social Sciences (SPSS) for Windows (version 20.0). The paired t-test was used in the SLP results before and after the myofunctional intervention and in the comparison of the initial and final SF-36 domain results. In the analysis of the SF-36 domains with the women's educational attainment, the Levene test was used to verify whether the groups had equal variance, and the t-test, to compare the means of independent groups. The Spearman test was used to correlate the SLP results with SF-36 domains and the educational attainment with SF-36 domains. The sociodemographic data were analyzed descriptively. In all analyses, the 5% significance level ( $p \leq 0.05$ ) was used.

## RESULTS

Of the 66 women who began the aesthetic myofunctional therapy, 66.6% (n = 44) concluded all sessions. As for the 22 who did not finish the therapy, 54.5% (n = 12) withdrew from the treatment, and 45.5% (n = 10) were excluded from it because they missed more than three SLP therapy sessions. There were 26 women in group 1 and 18 in group 2.

Regarding sociodemographic aspects, the mean age of the women in group 1 was 58.4 years, their mean monthly family income was R\$ 3,902.00, and 50% of them were retired. Concerning educational attainment, high school predominated, with 22 (84.6%) subjects. Most women were married (42.3%), with two to four children (73.1%), and lived in their own homes (84.6%). As for health status, most of them reported good health (61.5%), with the presence of diseases (61.5%) and regular medication use (88.5%) (Table 1).

In group 2, the mean age was 57.8 years, with a mean monthly family income of R\$ 5,885.00; 50.3% of them had an occupation. In this group, 100% of the women had a higher education degree. Most women were married (44.4%), with two to four children (72.2%), and lived in their own homes (83.3%). As for health status, most of them reported good health (61.1%),

with the presence of diseases (66.7%) and regular medication use (83.3%). In both groups, the questionnaires were self-administered (Table 1).

The aesthetic myofunctional therapy changed (improved or adjusted) muscle tension (on the forehead, glabella, eyes, lips, tongue, and cheeks), mastication, swallowing, and speech of women in both groups, with statistically significant difference between pre- and post-intervention results.

The SLP assessment verified a predominance of secondary wrinkles and the presence of nasolabial folds in 100% of the women in both groups. After the aesthetic myofunctional therapy, statistically significant changes were observed in the forehead, glabellar, and periorbital wrinkles in groups 1 and 2.

The mean SF-36 domain scores in the initial assessment in group 1 ranged from 5.11 (emotional aspect) to 24.88 (functional capacity), while in group 2 they ranged from 5.27 (emotional aspect) to 25.66 (functional capacity). In the final assessment, the mean scores of all domains increased, except for vitality and mental health in group 2. The comparison between the initial and final mean SF-36 domain scores revealed a statistically significant increase in physical aspects and overall health status in group 1 (Table 2).

**Table 1.** Sociodemographic characteristics of adult women at UNATI/PUC-Goiás (Groups 1 and 2), submitted to aesthetic myofunctional therapy

	Group 1	Group 2
<b>Age (years)</b>		
Mean (standard deviation)	58.40 (4.52)	57.7 (3.81)
Minimum – Maximum	50 - 64	50 - 65
<b>Family Income (Reais)</b>		
Mean (standard deviation)	3,902.00 (5,134.05)	5,885.00 (5,642.88)
Minimum – Maximum	720.00 - 25,000.00	724.00 - 5,000.00
<b>Occupation (%)</b>		
Retired	13 (50%)	7 (38.9%)
Housewives	9 (34.6%)	2 (11.1%)
With an occupation	4 (15.4%)	9 (50.3%)
<b>Educational Attainment (%)</b>		
Middle School	04 (15.4%)	0 (0%)
High school	22 (84.6%)	0 (0%)
Higher Education	0 (0%)	18 (100%)
<b>Marital Status (%)</b>		
Single	4 (15.4%)	3 (16.7%)
Married	11 (42.3%)	8 (44.4%)
Separated	3 (11.5%)	2 (11.1%)
Divorced	6 (23.1%)	1 (5.6%)
Widow	2 (7.7%)	2 (11.1%)
<b>Children (%)</b>		
None	3 (11.5%)	3 (16.7%)
One	4 (15.4%)	2 (11.1%)
Two to four	19 (73.1%)	13 (72.2%)
<b>Housing (%)</b>		
Own home	22 (84.6%)	15 (83.3%)
Financed home	1 (3.8%)	1 (5.6%)
Rented home	3 (11.5%)	2 (11.1%)
<b>Health</b>		
Poor	1 (3.8%)	1 (5.6%)
Neither poor nor good	5 (19.2%)	2 (11.1%)
Good	16 (61.5%)	11 (61.1%)
Very good	4 (15.4%)	4 (22.2%)
<b>Disease</b>		
Yes	16 (61.5%)	12 (66.7%)
No	10 (38.5%)	6 (33.3%)
<b>Medication use</b>		
Yes	23 (88.5%)	15 (83.3%)
No	3 (11.5%)	3 (16.7%)

Descriptive analysis

**Table 2.** Comparison of the mean scores of the SF-36 domains before and after the aesthetic myofunctional therapy with adult women at UNATI/PUC-Goiás

Domain	Initial		Final		P <sub>1</sub>	P <sub>2</sub>
	M <sub>1</sub> /SD	M <sub>2</sub> /SD	M <sub>1</sub> /SD	M <sub>2</sub> /SD		
Functional capacity	24.88 (4.26)	25.66 (3.85)	25.53 (3.72)	26.44 (3.34)	0.318	0.074
Physical aspects	6.46 (1.33)	6.72 (1.70)	7.42 (0.94)	7.11 (1.40)	<b>0.000</b>	0.185
Pain	7.70 (2.30)	8.92 (1.93)	8.35 (1.89)	9.16 (2.33)	0.100	0.605
Overall health status	18.73 (4.02)	20.52 (3.47)	20.37 (3.62)	20.61 (3.10)	<b>0.005</b>	0.900
Vitality	16.58 (3.57)	16.55 (3.71)	16.61 (3.46)	16.55 (3.79)	0.957	1.000
Social aspects	7.77 (3.58)	7.88 (1.77)	8.38 (3.46)	8.33 (1.87)	0.133	0.280
Emotional aspects	5.11 (1.10)	5.27 (1.13)	5.50 (0.70)	5.44 (1.10)	0.057	0.421
Mental health	20.61 (5.55)	22.77 (4.35)	21.84 (5.01)	22.61 (4.37)	0.154	0.833

**Paired t-test, at 5% significance level**

Captions:

M<sub>1</sub> – Mean scores of the quality-of-life domains in group 1M<sub>2</sub> – Mean scores of the quality-of-life domains in group 2

SD – Standard deviation

P<sub>1</sub> – Significance level between the mean scores of the quality-of-life domains in group 1, before and after the interventionP<sub>2</sub> – Significance level between the mean scores of the quality-of-life domains in group 2, before and after the intervention

The analysis of the SF-36 domains between groups 1 and 2 revealed no statistically significant difference in the quality of life between women who did not study

beyond high school and those who had a higher education degree, both before and after the intervention (Table 3).

**Table 3.** Comparison of the mean scores of the SF-36 domains between groups 1 and 2 before and after the aesthetic myofunctional therapy with adult women at UNATI/PUC-Goiás

Domain	Group 1		Group 2		Initial P <sub>1/2</sub>	Final P <sub>1/2</sub>
	Initial M/SD	Final M/SD	Initial M/SD	Final M/SD		
Functional capacity	24.88 (4.26)	25.53 (3.72)	25.66 (3.85)	26.44 (3.34)	0.537	0.413
Physical aspects	6.46 (1.33)	7.42 (0.94)	6.72 (1.70)	7.11 (1.40)	0.573	0.384
Pain	7.70 (2.30)	8.35 (1.89)	8.92 (1.93)	9.16 (2.33)	0.071	0.213
Overall health status	18.73 (4.02)	20.36 (3.62)	20.52 (3.47)	20.61 (3.10)	0.134	0.819
Vitality	16.58 (3.57)	16.61 (3.46)	16.55 (3.71)	16.55 (3.79)	0.985	0.957
Social aspects	7.76 (1.98)	8.38 (1.57)	7.88 (1.77)	8.33 (1.87)	0.839	0.922
Emotional aspects	5.07 (1.12)	5.50 (0.70)	5.27 (1.12)	5.44 (1.10)	0.565	0.839
Mental health	20.61 (5.55)	21.84 (5.01)	22.77 (4.34)	22.61 (4.37)	0.174	0.603

**Levene test****T-test to compare the means of independent groups, at the 5% significance level**

Captions:

M – Mean scores of the quality-of-life domains

SD – Standard deviation

P<sub>1/2</sub> – Significance level between the mean scores of the quality-of-life domains in groups 1 and 2

Low to moderate correlation between aspects addressed in the aesthetic myofunctional therapy and the SF-36 domains post-intervention predominated in groups 1 and 2. Chart 1 shows the correlation

coefficients between aspects addressed in the aesthetic myofunctional therapy and the SF-36 domains with a statistically significant correlation.

**Chart 1.** Spearman correlation coefficient between the aspects addressed in the aesthetic myofunctional therapy and the SF-36 domains after the intervention (Groups 1 and 2), with statistical significance

Spearman correlation coefficient	Functional capacity	Physical aspects	Pain	Overall health status	Vitality	Social aspects	Emotional aspects	Mental health
Puffy eyes	.590**	.455	.496*	.385	.492*	.409	.284	.484*
Increased eye muscle tension	.134	.115	.472*	.015	.003	.346	.378	.024
	.357	.480*	.212	.000	.542*	.310	.000	.388
Decreased tongue muscle tension	.228	.482*	.080	.013	.293	.214	.475*	.025
	.405	.260	.082	.309	.402	.384	.530*	.578*
Predominant unilateral mastication	.313	.249	.189	.404*	.427*	.242	.092	.101
	.631**	.486*	.514*	.663**	.124	.129	.220	.123
Mastication with mimics	.229	.029	.243	.006	.216	.406	.307	.471*
Peribuccal mimics	.355	.011	.449*	.269	.325	.260	.115	.181
Increased forehead muscle tension	.212	.415*	.016	.115	.084	.133	.126	.028
Forehead wrinkles	.123	.463	.126	.052	.623**	.377	.298	.385
Periorbital wrinkles	.006	.271	.443*	.159	.007	.329	.602**	.066
	.371	.496*	.425	.128	.407	.525*	.305	.500*

Spearman test

\*\* . Significant correlation at 0.01.

\* . Significant correlation at 0.05.

■ Group 1 ■ Group 2

The correlation between educational attainment and SF-36 domains pre-intervention was very low, except for pain and overall health status, which was low, with

statistical significance for pain. In post-intervention, such correlation was very low, except for pain (low), without statistical significance (Chart 2).

**Chart 2.** Spearman correlation coefficient between educational attainment and the SF-36 domains before and after the intervention

Spearman correlation coefficient	Functional capacity	Physical aspects	Pain	Overall health status	Vitality	Social aspects	Emotional aspects	Mental health
Educational attainment	.099	0.135	.306*	.260	.020	.015	.097	.184
	.150	.076	.202	.020	.042	.019	.093	.060

Spearman test

\* Significant correlation at 0.05

■ Pre-intervention ■ Post-intervention

## DISCUSSION

The aesthetic myofunctional rebalance therapy in women of groups 1 and 2 significantly improved their orofacial muscle tension, forehead, periorbital, and glabellar wrinkles, and stomatognathic functions (mastication, swallowing, and speech)<sup>4,10,11,33,35-38</sup>.

Facial harmony and rejuvenation improve the person's self-esteem and quality of life<sup>11</sup>. The women's quality of life was analyzed based on the aesthetic myofunctional therapy. Their mean quality-of-life scores

pre- and post-intervention were closer to 0 than 100 in both groups – the closer to 0 and the farther from 100, the worse the health status<sup>34</sup>. The worst mean scores referred to emotional aspects, and the best ones, to functional capacity, in both groups before and after aesthetic myofunctional therapy.

The moderate significant correlation between aspects addressed in the aesthetic myofunctional therapy and the quality-of-life domains in groups 1 and 2 suggests that myofunctional rebalance and

aesthetic gains reflect on the women's improved quality of life in some domains. In group 1, the pain was the domain that most significantly correlated with aspects addressed in therapy; in group 2, physical aspects and mental health did so. This indicates that satisfaction with one's appearance predisposes to good physical and mental health<sup>6</sup>. Muscle tension (in groups 1 and 2) and unilateral mastication (in group 2) were the aspects addressed in aesthetic myofunctional therapy that most significantly correlated with the quality-of-life domains. This suggests that myofunctional rebalance is related to the quality of life.

The comparison between the mean SF-36 domain scores post-intervention revealed a statistically significant increase in physical aspects and overall health status in group 1. This indicates an improvement in physical health, represented by functional capacity, physical aspects, pain, and overall health status in the SF-36 model<sup>34</sup>. The rejuvenation techniques have improved due to both technological advancements and the population's concern with health and physical appearance because of greater longevity<sup>8</sup>. Women give particular importance to maintaining a younger appearance for as long as possible in present-day society, at work, in social circles, and at home<sup>3</sup>. The desire to improve or maintain their appearance is a great source of motivation<sup>7</sup> and favors a better quality of life<sup>31</sup>.

The mean quality-of-life domain scores did not show statistically significant improvements in group 2. These women had higher education degrees, which may indicate different values and expectations for the therapy. Different values, norms, habits, and attitudes are associated with the different educational attainments. This helps explain how each person perceives their health status<sup>16</sup>. Patients with lower educational attainments tend to be more satisfied with the services they are offered because lower expectations are more easily met<sup>39</sup>. When people have lower educational attainment, they tend to make fewer value judgments and be more understanding of the health services they attend, showing greater satisfaction<sup>40</sup>, less criticism, and fewer demands. Individuals with higher educational attainments may be more self-critical of their body image because of access to social media, rejuvenation techniques, and greater social expectations of a younger appearance. As the service in this study is conducted free of charge by SLP students in a clinical fellowship, group 2 subjects (with higher educational attainments) may have looked at it more critically, as

the aesthetic results and the correlation between the aesthetic myofunctional therapy and the quality of life were similar in both groups.

There was no statistically significant difference between the SF-36 domains in groups 1 and 2 before and after the aesthetic myofunctional therapy. Educational attainment had a very low correlation with the quality-of-life domains, which suggests that higher educational attainments are not related to a better quality of life, as found in the literature<sup>17-24</sup>. Most pieces of research surveyed do not report a statistically significant relationship between educational attainment and the quality of life, and none of them used the aesthetic myofunctional therapy addressed here.

There are studies on educational attainment and the quality of life involving chronic obstructive pulmonary disease (COPD), human immunodeficiency virus (HIV), older adults, and cardiovascular health – not always investigating the subjects' quality of life, but also their fragility, sexuality, depression, and degree of satisfaction<sup>15,19,21-25</sup>. The studies did not always conclude on the relationship between educational attainment and the quality of life. Educational attainment was often only described as one of the investigated socioeconomic aspects, not in combination with the quality of life – although it was proposed in some articles. Also, only one of the surveyed studies addressed educational attainment and body image<sup>29</sup>, investigating the satisfaction of males with their body image. Most of the other studies researched adolescents and university students; some of them used data on the parents' educational attainment.

The quality of life is a multidimensional construct<sup>12,13</sup> integrating physical health, psychological status, degree of independence, social relationships, personal beliefs, and so forth. Nevertheless, the results suggest that facial changes after the aesthetic myofunctional therapy improved group 1 women's quality of life. A good appearance facilitates social interaction, and aesthetic treatment improves psychosocial aspects<sup>31</sup>. Group 2 women's expectations and perception of their health, the service offered them, and their body image may have influenced their judgment of the post-intervention quality of life.

In-depth studies on educational attainment and the quality of life should be conducted to aid health professional procedures and health management and ensure the best intervention to the subjects' well-being.

## CONCLUSIONS

After the aesthetic myofunctional therapy, the women analyzed in this research had a significant improvement in orofacial muscle tension, wrinkles, and stomatognathic functions, with myofunctional rebalance and facial rejuvenation. Educational status did not influence the quality of life of the women submitted to the aesthetic myofunctional therapy.

## REFERENCES

- Adami F, Fernandes T, Frainer D, Oliveira F. Aspectos da construção e desenvolvimento da imagem corporal e implicações na educação física. *Revista Digital – Lecturas [journal on the internet]*. 2005 [accessed on 2015 Nov 14]; 10(83): [about 8 p.]. Available at: <http://www.efdeportes.com>.
- Matsuo RF, Velardi M, Brandão MRF, Miranda, ML de J. Imagem corporal de idosas e atividade física. *Revista Mackenzie de Educação Física e Esporte*. 2007;6(1):37-43.
- Tariki VR, Yunan EK. Cosmeatria e preenchimento facial. In: Mauad R, editor. *Estética e cirurgia plástica: tratamento no pré e pós-operatório*. São Paulo: SENAC; 2003. p.161-231.
- Pierotti S. Atuação fonoaudiológica na estética facial. In: Comitê de Motricidade Orofacial da Sociedade Brasileira de Fonoaudiologia, editor. *Motricidade Orofacial: como atuam os especialistas*. São Paulo: Pulso; 2004. p.281-7.
- Yamaguchi C, Sanches O. Rejuvenescimento facial. In: Mauad R, editor. *Estética e cirurgia plástica: tratamento no pré e pós-operatório*. São Paulo: SENAC; 2003. p. 79-125.
- Carruthers JA, Wesseis NV, Flynn TC. Intense pulsed light and botulinum toxin type a for the aging face. *Cosmetic Dermatology*. 2003;16(5):2-16.
- Pitanguy I. *Cartas a um jovem cirurgião: perseverança, disciplina e alegria*. Rio de Janeiro: Elsevier; 2009.
- Velasco MVR, Steiner D, Ribeiro ME, Okubo FR, Bedin V. Rejuvenescimento da pele por peeling químico: enfoque no peeling de fenol. *An. Bras. Dermatol*. 2004;79(1):91-9.
- Conselho Federal de Fonoaudiologia. Resolução CFFa nº 352. *Jornal do CFFa*. 2008;ano IX(37).
- Frazão Y, Manzi S. Eficácia da intervenção fonoaudiológica para atenuar o envelhecimento facial. *Rev. CEFAC*. 2012;14(4):755-62.
- Toledo PN. *Fonoaudiologia & estética: a motricidade orofacial aplicada na estética da face*. São Paulo: Lovise; 2006.
- The WHOQOL Group. The World Health Organization Quality of Life Assessment (WHOQOL): position paper from the World Health Organization. *Social Science and Medicine*. 1995;41(10):1403-9.
- Fleck MPa. Problemas conceituais em qualidade de vida. In: Fleck MPA, editor. *A avaliação de qualidade de vida: guia para profissionais da saúde*. Porto Alegre: Artmed; 2008. p. 19-28.
- Magalhães S, Neves SP, Santos NL. Auto-conceito de competência: diferenças entre cursos de carácter geral e profissional no ensino secundário Português. *Revista Galego-Portuguesa de Psicologia e Educación*. 2003;8(10) ano 7:263-72.
- Hirsch C, Anderson ML, Newman A, Kop W, Jackson S, Gottdiener J et al. Cardiovascular Health Study Research Group. The association of race with frailty: the cardiovascular health study. *Ann Epidemiol*. 2006;16(7):545-53.
- Vintém JM. Inquéritos Nacionais de Saúde: auto-percepção do estado de saúde: uma análise em torno da questão de gênero e da escolaridade. *Revista Psicologia da Saúde*. 2008;26(2):5-16.
- Ganz PA, Greendale GA, Petersen L, Kahn B, Bower JE. Breast cancer in younger women: reproductive and late health effects of treatment. *J Clin Oncol*. 2003;21(22):4184-93.
- Feliciano AB, Moraes SA, Freitas ICM. O perfil do idoso de baixa renda no município de São Carlos, São Paulo, Brasil: um estudo epidemiológico. *Cad Saúde Publica*. 2004;20(6):1575-85.
- Mazo GZ. Atividade física e qualidade de vida de mulheres idosas. *Revista Brasileira de Cineantropometria e Desempenho Humano*. 2003;5(2):115-8.
- Carneiro RS, Falcone E, Clark C, Del Prette Z, Del Prette A. Qualidade de vida, apoio social e depressão em idosos: relação com habilidades sociais. *Psicol Reflex Crít*. 2007;20(2):27-35.
- Reis RK, Santos CB, Dantas RAS, Gir E. Qualidade de vida, aspectos sociodemográficos e de sexualidade de pessoas vivendo com hiv/aids. *Texto & Contexto Enferm [journal on the internet]*. 2011 [accessed on 2014 Out. 1]; 20(3): [about 11 p.]. Available at: <http://www.scielo.br/pdf/tce/v20n3/19.pdf>.

22. Cedano S, Belasco AGS, Traldi F, Machado MCLO, Bettencourt AR de C. Influência das características sociodemográficas e clínicas e do nível de dependência na qualidade de vida de pacientes com DPOC em oxigenoterapia domiciliar prolongada. *J. bras. pneumol.* [journal on the internet]. 2012 [accessed on 2016 Jan 2]; 38(3):[ about 8p.]. Available at: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S1806-37132012000300008&lng=en](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1806-37132012000300008&lng=en).<http://dx.doi.org/10.1590/S1806-37132012000300008>.
23. Costa TL, Oliveira DC, Gomes AMT, Formozo GA. Qualidade de vida e pessoas vivendo com AIDS: relação com aspectos sociodemográficos e de saúde. *Rev. Latino-Am. Enfermagem* [journal on the internet]. 2014 [accessed on 2015 Dez 02]; 22(4):[ about 9p.]. Available at: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0104-1692014000400582&lng=en](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-1692014000400582&lng=en). <http://dx.doi.org/10.1590/0104-1169.3350.2455>.
24. Passos SMK, Souza LD de M. An evaluation of quality of life and its determinants among people living with HIV/AIDS from Southern Brazil. *Cad. Saúde Pública* [journal on the internet]. 2015 [accessed on 2016 May 2]; 31(4):[ about 15p.] Available at: [http://www.scielo.org/scielo.php?script=sci\\_arttext&pid=S0102-311X2015000400800&lng=en](http://www.scielo.org/scielo.php?script=sci_arttext&pid=S0102-311X2015000400800&lng=en). <http://dx.doi.org/10.1590/0102-311X00000514>.
25. Seidl EMF, Zannon CMLC, Tróccoli BT. Pessoas vivendo com HIV/AIDS: enfrentamento, suporte social e qualidade de vida. *Psicologia: Reflexão e Crítica*. 2005;18(2):188-95.
26. Lima ALP, Rolim NCOP, Gama MEA, Pestana AL, Silva EL, Cunha CLF. Rastreamento oportunístico do câncer de mama entre mulheres jovens no Estado do Maranhão, Brasil. *Cad Saúde Pública* [journal on the internet]. 2011 [accessed on 2015 Out 5]; 27(7):[about 7 p]. Available at: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0102-311X2011000700018](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0102-311X2011000700018).
27. Marmot M, Bell R. Social determinants and dental health. *Adv Dent Res*. 2011;23(2):201-6.
28. Heinberg LJ. Theories of body image disturbance: Perceptual, development, and sociocultural factors. In: Thompson JK, editor. *Body image, eating disorders and obesity: an integrative guide for assessment and treatment*. Washington, DC: American Psychological Association. 1996. p.27-47.
29. Souza LR de M, Santos CAV, Lima SF, Vasconcelos AC, Melo GF. O corpo na perspectiva masculina: a satisfação com a Imagem Corporal e sua relação com discrepância na percepção, IMC, escolaridade e idade. *R Bras Ci e Mov*. 2013;21(2):49-56.
30. Brasil. Ministério da Saúde. Conselho Nacional de Saúde. [homepage on the internet]. Resolução nº 196 de 10 de outubro de 1996. Aprova as diretrizes e normas regulamentadoras da pesquisa envolvendo seres humanos. 1996 [accessed on 2014 Jan 11]. Available at: <http://conselho.saude.gov.br/docs/Resolucoes/Reso196.doc>
31. Nicodemo D. Escala de auto-estima Rosenberg / UNIFESP – EPM, Self-Report Questionnaire-20, Short-Form 36 em pacientes classes III submetidos à cirurgia ortognática [dissertação]. São Paulo (SP): Escola Paulista de Medicina; 2005.
32. Organização Mundial de Saúde. Divisão de Saúde Mental. Grupo WHOQOL. Versão em português dos instrumentos de avaliação de qualidade de vida (WHOQOL) 1998. [accessed on 2014 Set 5]. Available at: <http://www.ufgrs.br/psiq>.
33. Tasca SMT. Programa de aprimoramento muscular em fonoaudiologia estética facial (PAMFEF). São Paulo: Pró-fono; 2002.
34. Ware JE Jr. SF-36 health survey update. *Spine*. 2000;25(24):3130-9.
35. Takacs AP, Valdrigui V, Assencio-Ferreira VJ. Fonoaudiologia e estética: unidas a favor da beleza facial. *Rev. CEFAC*. 2002;4(2):111-6.
36. Franco MZ. Fonoaudiologia e estética: um novo alcance da motricidade oral. In: Comitê de Motricidade Orofacial da Sociedade Brasileira de Fonoaudiologia, editor. *Motricidade Orofacial: como atuam os especialistas*. São Paulo: Pulso; 2004.p.289-95.
37. Franco MZ. Atuação fonoaudiológica na suavização das rugas de expressão e estética da face. In: Silva PB, David RHF, editors. *Cadernos do Fonoaudiólogo: Motricidade Orofacial*. São Paulo: Lovise; 2008.p.15-21.
38. Mattia FA, Czylusniak G, Ricci CCPP. Contribuição da Fonoaudiologia na estética facial: relato de caso. *Rev. Salus-Guarapuava*. 2008;2(2):15-22.
39. Brandão ALRBS, Giovanella L, Campos CEA. Avaliação da atenção básica pela perspectiva dos usuários: adaptação do instrumento EUROPEP para grandes centros urbanos brasileiros. *Ciência & Saúde Coletiva*. 2013;18(1):103-14.

40. Cotta RMM, Marques ES, Maia TM, Azeredo AM, Schott M, Franceschini SCC et al. A satisfação dos usuários do Programa de Saúde da Família: avaliando o cuidado em saúde. *Scientia Medica*. 2005;15(4):227-34.