



The Effect of Botox on Women of Productive Age at Evoluskin Batam Clinic

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Article Info	ABSTRACT
<p>Article History Received: May 09, 2025 Revised: May 09, 2025 Accepted: May 09, 2025</p> <hr/> <p>Keywords: Botox, Confidence, Quality of Life, Self-Satisfaction, The Rosenberg Self-Esteem Scale, The WHOQOL-BREF Instrument</p>	<p>Botox (botulinum toxin) is a commonly used aesthetic procedure to reduce facial wrinkles, especially in women of reproductive age. Although its physical benefits have been widely recognized, the effect of Botox on the psychological aspects and quality of life of patients still needs to be studied further. This study aims to analyze the impact of Botox use on the patient's skin condition, self-esteem, self-confidence, and quality of life psychologically, socially, and physically. This quantitative study involved 30 respondents selected by purposive sampling. Data were collected through a questionnaire measuring the frequency of Botox use, dosage, and using the Rosenberg Self-Esteem Scale and WHOQOL-BREF to measure quality of life. Data were analyzed using paired t-test and Pearson correlation at 0.05 level of significance. The results showed a significant reduction in wrinkles and skin problems after Botox treatment (mean from 49% to 34%, $p=0.003$). There was a significant positive relationship between Botox use and self-esteem ($r=0.45$, $p=0.012$), self-confidence ($r=0.38$, $p=0.025$), and quality of life ($r=0.62$, $p<0.001$). These findings indicate that Botox has a positive effect not only on physical appearance, but also on the psychological aspects and overall quality of life of patients.</p>

INTRODUCTION

Along with the development of science and technology, the medical field, particularly in aesthetics and skincare, has made significant progress. One of the most popular aesthetic procedures today is the use of botulinum toxin (Botox) for skincare, particularly to reduce signs of aging, such as wrinkles and fine lines on the face. Botox works by blocking nerve signals in the facial muscles, preventing them from contracting, which in turn helps to reduce the appearance of wrinkles and gives the effect of smoother skin (Gou et al., 2021).

Botox (botulinum toxin) is a cosmetic procedure that many women of working age choose to reduce wrinkles and fine lines on the face. By inhibiting muscle contractions, Botox can give a more youthful and smoother appearance, especially on the forehead area, around the eyes, and between the eyebrows. Although the procedure is safe when performed by a licensed medical professional, it is important for women to consult beforehand, especially if they have certain health conditions or are pregnant and breastfeeding (Lee et al., 2022).

Evoluskin Clinic Batam, as one of the leading aesthetic service providers, has identified that many women of productive age come for Botox treatment. However, despite the popularity of the procedure, there are still limitations in understanding the long-term effects of Botox on the skin condition as well as the psychological and social aspects of the users. Although many patients are satisfied with the aesthetic results after Botox, there is not enough in-depth data on specific changes in skin conditions, such as skin elasticity, wrinkles, and skin texture after treatment. This is problematic as a better understanding of the long-term impact of Botox on the skin is important to improve treatment procedures and ensure patient safety.

There is also a lack of comprehensive data on the effect of Botox on patients' quality of life post-botox. Although many patients report increased self-confidence, there is no in-depth evaluation of how Botox may affect patients' psychological and social well-being, especially in terms of self-perception and social interaction. This study is expected to provide insight into the influence of aesthetic treatments on patients' psychological well-being.

Increasing Demand for Aesthetic Treatments Along with the increasing demand for aesthetic treatments in Batam, many women want more optimal and long-lasting results from Botox treatments. Therefore, there is a need to evaluate the long-term effectiveness and safety of these treatments. This study aims to fill this gap by providing scientific evidence on the outcomes of Botox treatment for productive-age women at the clinic. This study will provide data and information needed by the clinic and patients to improve the quality of care, as well as provide a better understanding of the benefits and potential risks of Botox in the long term.

METHODS

This study used a quantitative design with a pre-experimental (one-group pretest-posttest) and descriptive approach. The pre-experimental approach was applied by measuring the condition of the research subjects before and after receiving botox, in order to see the changes that occurred objectively. Meanwhile, the descriptive approach was used to collect data on patients' perceptions, attitudes, and satisfaction levels after undergoing the botox procedure, so as to understand the impact of this procedure subjectively from the patient's perspective.

This study was conducted for six months, from July 2024 to December 2024, at Evoluskin Clinic Batam, located in Belian, Batam Kota District, Batam City, Riau Islands Province. This clinic was chosen because it is one of the beauty facilities that actively performs botox procedures on women of productive age.

The sample in this study amounted to 30 women who underwent botox procedures at the clinic. The sampling technique used was purposive sampling, namely by selecting subjects who met certain criteria in accordance with the research objectives. The inclusion criteria set were women aged 25-45 years, performing botox procedures for aesthetic purposes, willing to participate in the study and sign informed consent, and never undergoing botox procedures in the last 12 months. Meanwhile, the exclusion criteria included individuals who had a history of allergy to botulinum toxin, had neuromuscular disorders or psychiatric conditions, and women who were pregnant or breastfeeding.

The independent variable in this study is the use of botox, which includes the type, dose, and frequency of use. Meanwhile, the dependent variables included self-satisfaction, self-

confidence, and quality of life (in terms of physical and psychological aspects). Botox use was defined as aesthetic procedures with botulinum toxin, measured by the number of treatments, frequency in the last six months, and type and dose of botox used. Self-satisfaction was measured using an appearance satisfaction scale questionnaire and the Rosenberg Self-Esteem Scale. Self-confidence was measured through questionnaires as well as interviews to assess changes in social interactions and perceptions of appearance in work and social settings. Quality of life was measured using the WHOQOL-BREF instrument which includes physical comfort and psychological impact after treatment.

The tools and materials in this study fall into two categories, namely data collection tools and materials for procedures and analysis. Data collection tools included Likert scale questionnaires to measure key variables such as self-esteem, self-confidence, and quality of life, including the Rosenberg Self-Esteem Scale, Self-Confidence Scale, and WHOQOL-BREF. Interviews were used as a supporting tool to explore the patient's experience in more depth. Secondary literature and data were also utilized as additional references. For statistical analysis, software such as SPSS was used for hypothesis testing and Microsoft Excel for basic data processing. Physical measurement tools such as documentation cameras and micrometers were used to measure changes in facial appearance. Research materials included botulinum toxin, syringes, informed consent forms, and medical documents such as patient history and procedures. A documentation camera was used to take photos of the patient's face before and after the procedure as visual evidence of the changes that occurred.

The research procedure starts from the preparation stage, which includes determining the topic, literature study, preparing a proposal, obtaining ethical permission, and preparing research instruments. Furthermore, sample selection was carried out based on the inclusion and exclusion criteria and determining the number of samples using purposive sampling technique. Data collection was carried out in three stages, namely before the action (initial interview, filling out questionnaires, and taking initial photos), during botox action (medical documentation and post-procedure monitoring), and after the action (follow-up interviews, filling out follow-up questionnaires, and taking final photos). The collected data were then processed and statistically analyzed using SPSS to test the hypothesis and compare the data before and after the action. The results of the analysis were then interpreted, reported, and conveyed to relevant parties, including the possibility of publication in scientific journals.

Data analysis is carried out to interpret and draw conclusions from the data that has been collected. The first step is to test the validity and reliability of the instrument using construct validity and Cronbach's Alpha coefficient. Descriptive statistics were used to describe sample characteristics and data distribution. Comparisons between before and after treatment were analyzed using paired t-test or Wilcoxon signed-rank test, depending on the data distribution. Pearson correlation analysis was used to measure the relationship between botox use and dependent variables such as self-satisfaction, confidence, and quality of life. The chi-square test was used to identify relationships between categorical data. The results of the analysis were presented in tables and graphs to facilitate interpretation. Hypothesis testing was conducted to determine whether there was a significant effect of the botox procedure on the main variables in this study, with the null hypothesis (H_0) stating there was no effect and the alternative hypothesis (H_1) stating there was a significant effect.

RESULTS

The data collected in this study involved respondents consisting of individuals who had used Botox. Respondents were asked to complete a questionnaire that included questions regarding Botox use, self-esteem, self-confidence and quality of life. The total number of respondents who participated in this study was 30.

Based on the data regarding Self-esteem, it can be concluded that the average total score obtained from the 30 observations is 28.73, which indicates a relatively high level of self-esteem among the respondents. Although most respondents tended to feel satisfied with their state of self-esteem, there were significant variations between individuals. Overall, this fairly high average illustrates that most respondents have a good level of self-satisfaction, although there are a small number who feel less satisfied. The following are the results of the distribution of self-satisfaction in research respondents below:

Table 1. Self-satisfaction Characteristics

Rosenberg self-esteem scale	Frequency	Percentage
High Self-satisfaction	17	57%
Moderate Self Satisfaction	8	27%
Low Self Satisfaction	5	17%
Total	30	100%

Source: data processing, 2025

Based on data regarding the characteristics of self-satisfaction as measured using the Rosenberg Self-Esteem Scale, most respondents, namely 57% (17 people), had a high level of self-satisfaction. This indicates that the majority of individuals are satisfied with themselves. Meanwhile, 27% of respondents (8 people) had moderate self-satisfaction, which indicates a sufficient level of satisfaction, but not at a very high level. Meanwhile, 17% of respondents (5 people) showed low self-satisfaction, which means they felt less satisfied with their condition. Overall, these results illustrate that the majority of respondents felt quite good about themselves, although there were a small number who felt dissatisfied after using Botox.

Based on the data regarding Self-confidence, the average total score obtained was 9.93, indicating a moderate level of self-confidence among respondents. Most respondents had a fairly good level of self-confidence, but there was significant variation, with some individuals having lower scores, with the lowest score being 3, while the highest score was 15. This suggests that while many respondents felt confident, others had lower self-confidence and may need more support to improve it. The following are the results of the distribution of Self-Confidence in research respondents below:

Table 2. Self-confidence Characteristics

Self-confidence	Frequency	Percentage
High confidence	13	43%
Medium confidence	7	23%
Low confidence	10	33%
Total	30	100%

Source: data processing, 2025

Based on data regarding the characteristics of self-confidence of Botox users, it can be concluded that 43% of respondents have high self-confidence, 23% have moderate self-confidence, and 33% have low self-confidence. This shows that the majority of Botox users feel confident, although there are still some who feel less confident. This varied self-confidence could be an important concern in evaluating the use of Botox among respondents.

Based on the data regarding Quality of Life, the average total score obtained is 28.13, which indicates that in general, respondents feel they have a fairly good quality of life. However, there is variation in the scores, with the highest value reaching 36 and the lowest 18, reflecting differences in perceptions of quality of life between individuals. This shows that most respondents felt a good quality of life, although there were some respondents who felt their quality of life was lower. The following are the results of the distribution of Quality of Life in research respondents below:

Table 3. Quality of Life Characteristics

WHOQOL-BREF	Frequency	Percentage
High	10	33%
Medium	14	47%
Low	6	20%
Total	30	100%

Source: data processing, 2025

Based on data on the characteristics of the quality of life of Botox users using the WHOQOL-BREF, it can be concluded that most Botox users (47%) have a moderate quality of life, while 33% feel their quality of life is high, and only 20% feel they have a low quality of life. This shows that while most Botox users feel their quality of life is quite good, there is still a third of respondents who feel their quality of life is inadequate. This indicates that there are variations in experience among Botox users regarding their quality of life.

The following are the results of the chi square test conducted to see the relationship between self-satisfaction, self-confidence and quality of life on the use of Botox:

Table 4. Chi Square Test

Independent Variable	Dependent Variable	Sig. Value	Alpha Value	Test Relationship
Self-esteem (X1)	Botox Use (Y)	0,012	0,05	There is a relationship
Self-confidence (X2)		0,025	0,05	There is a relationship
Quality of Life (X3)		0,000	0,05	There is a relationship

Source: SPSS data processing, 2025

Based on the relationship test, there is a significant relationship between self-satisfaction and Botox use (Sig. value 0.012 <0.05). This shows that a person's level of self-satisfaction affects the decision or use of Botox. The higher the self-satisfaction, the higher the likelihood of someone using Botox.

Then there is a significant relationship between self-confidence and the use of Botox (Sig. value $0.025 < 0.05$). This means that a person's level of self-confidence can influence their decision to use Botox. Individuals with higher self-confidence may be more likely to use Botox to improve their appearance or feel better.

There is a highly significant relationship between quality of life and Botox use (Sig. value $0.000 < 0.05$). This suggests that one's quality of life, including physical, psychological, and social aspects, plays an important role in the decision to use Botox. Users with better quality of life may feel more satisfied and more open to considering aesthetic treatments such as Botox.

DISCUSSION

In order to provide a more detailed discussion of the results of Botox use on the 30 samples with a before-after view, the following individual comparisons and post-treatment effects are presented. This discussion will focus on the changes seen on the face before and after the use of Botox, as well as its impact on self-satisfaction, self-confidence, and quality of life.

At Evoluskin Clinic Batam has a standard that is used, the results of botox users are divided into 3 categories, namely:

Table 5. Botox Result Categories

Skin Condition	Wrinkle Criteria	Description
Skin Less Tight	71%-99%	High = High Wrinkles
Moderately Tight Skin	41%-70%	Middle = Medium Wrinkles
Very Tight Skin	10%-40%	Poor = Low Wrinkles

Source: Primary Data, 2025

The score in the table is based on the percentage of skin laxity or wrinkle presence measured after the patient has received Botox treatment. Evoluskin Clinic Batam has its own evaluation standard that divides Botox results into three categories, based on the percentage of wrinkles that are still visible on the patient's skin after treatment. This percentage may be obtained through visual evaluation methods or using a specialized skin analyzer at Evoluskin Clinic Batam that can measure the depth and extent of wrinkles.

These categories consist of If 71% to 99% of wrinkles are still visible after treatment compared to the initial condition, the result is categorized as High, or high wrinkles. This indicates that the Botox effect is less than optimal or the skin still appears sagging. If the remaining wrinkles are in the range of 41% to 70%, then the result is categorized as Middle, meaning that the wrinkles are partially reduced but have not disappeared significantly. If the remaining wrinkles are only 10% to 40%, it is rated as Poor in terms of the number of wrinkles, but clinically it shows success because the skin becomes very tight and wrinkles are drastically reduced. Thus, this score is derived from the comparison of the percentage of wrinkles before and after Botox treatment, which is then incorporated into the internal category standards of evoluskin Batam clinic.

Analysis of the results of Botox treatment in patients is carried out within 14 working days after the injection, because the maximum effect of Botox generally begins to appear within that time frame. During these 14 days, patients are monitored for changes in skin condition,

particularly wrinkle reduction in targeted areas such as the forehead, around the eyes, between the eyebrows and other areas. This evaluation may include visual examination, pre- and post-treatment photo documentation, as well as measurements using a skin analyzer. In addition to this initial evaluation, follow-up monitoring is done between 3 to 6 months after the injection, which is during the active life of the Botox in the body. During this period, the patient is evaluated to see how long the treatment results last, whether any side effects occur, and whether re-injections are required. The data collected during this time is used to assess the short- and medium-term effectiveness of the Botox treatment, as well as to ensure patient safety and satisfaction with the results. Below are the results of the skin analysis from Evoluskin Clinic Batam.

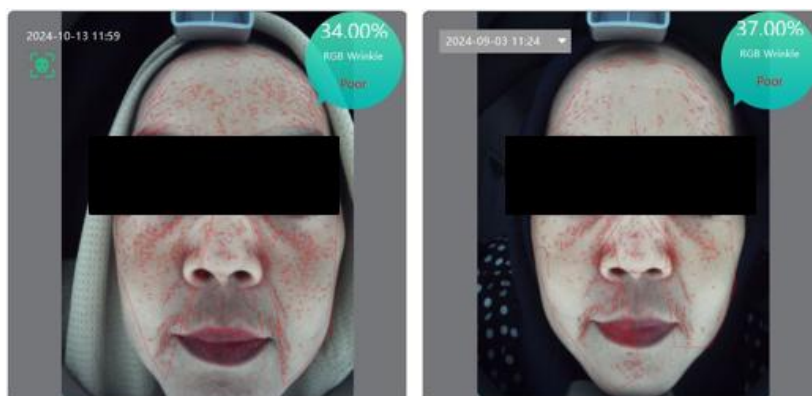


Figure 1. Before After Botox User Respondent 3

Respondent 3, who is 41 years old, showed positive changes after Botox treatment, with a decrease in wrinkles from 37% to 34%. This change reflects an improvement in her skin condition, which is thought to have resulted in a more visible reduction in wrinkles. The 3% reduction in wrinkles brought her skin to a firmer and smoother state, which corresponds to better skin condition, with now lower levels of wrinkles.

In terms of Self-Satisfaction (X1), this respondent reported high self-satisfaction, indicating that the results of the Botox treatment had a positive impact on her personal feelings. The change in the appearance of firmer and smoother skin clearly gave her a sense of satisfaction and improved her self-image. This may also be related to the reduction of more visible wrinkles in the treated areas.

This respondent's Self-Confidence (X2) was at a moderate level, indicating that while the changes in skin and reduction in wrinkles had a positive impact on her appearance, there were some other aspects that may need to be improved in order to maximize her self-confidence. Nonetheless, a high level of self-satisfaction may contribute to a slight increase in self-confidence.

The Quality of Life (X3) of these respondents was recorded as high, indicating that the Botox treatment had a significant impact on other aspects of life. With the improvement in skin condition bringing about positive changes, the respondents felt better in living their lives, both in social interactions and in daily life.

Overall, although Self-Confidence was at a moderate level, the changes that occurred in the skin led to high Self-Satisfaction and high Quality of Life, which made this respondent feel satisfied with the results of the Botox treatment.



Figure 2. Before After Botox User Respondent 6

Respondent 6, who is 41 years old, experienced a reduction in wrinkles from 43% to 36% after Botox treatment. This shows that the treatment was successful in reducing wrinkles significantly, although it did not achieve a very optimal level of skin firmness. However, this result still shows a positive improvement.

This respondent's Self Satisfaction (X1) was reported to be high, meaning that despite some remaining wrinkles, the respondent was satisfied with her overall appearance. This suggests that she may feel better about herself after treatment, even if the treatment results are not perfect.

Self-Confidence (X2) of these respondents was also recorded as high, meaning that the respondents felt more confident about their appearance after Botox treatment. The favorable results on wrinkles and improved skin firmness likely provided a positive boost to self-image and self-confidence.

However, while Self-Satisfaction and Self-Confidence were recorded as high, the Quality of Life (X3) of these respondents was recorded as moderate. Despite improvements in the aspects of personal appearance and feelings, the overall quality of life was not drastically affected. This could indicate that although the respondent felt more satisfied with herself and more confident, the physical changes did not have a tremendous impact on other aspects of her life.

Overall, the Botox treatment gave positive results with a decrease in wrinkles from 43% to 36%, and this contributed to the high Self-Satisfaction and Self-Confidence. However, although respondents were satisfied with the treatment results, the overall Quality of Life remained moderate.

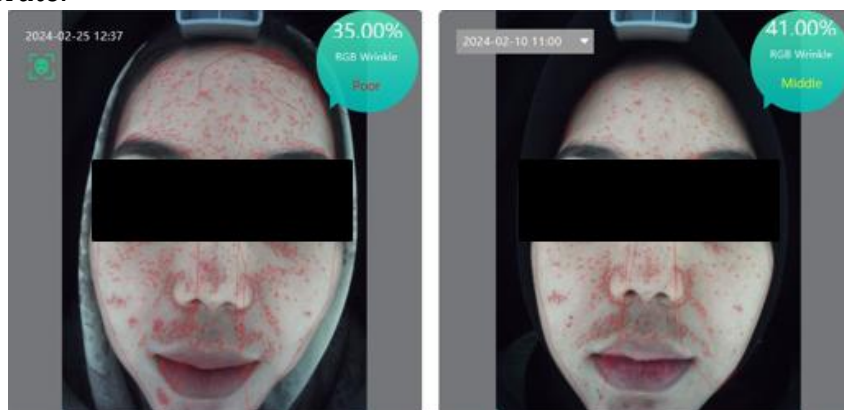


Figure 3. Before After Botox User Respondent 17

Respondent 17, who was 26 years old, experienced a reduction in wrinkles from 41% to 35% after undergoing Botox treatment.

This decrease indicates a significant improvement in the appearance of their skin, which appears firmer and smoother.

This respondent's Self Satisfaction (X1) was recorded as high, indicating that they were satisfied with the results of their Botox treatment. Although there was a significant reduction in wrinkles, they felt better with a firmer skin appearance.

However, despite being satisfied with the results, the Self-Confidence (X2) of these respondents was recorded as low, which could indicate that despite the improvement in appearance, it was not enough to significantly boost self-confidence. They may feel that there is still room for improvement in terms of self-confidence despite their better skin condition.

The Quality of Life (X3) of these respondents was high, which means that despite their low self-confidence, the Botox treatment had a positive impact on the overall aspects of their lives. The reduction in wrinkles and improvement in skin appearance had a positive effect on quality of life, despite the challenges in terms of self-confidence.

Overall, the 17 respondents were satisfied with the results of their Botox treatment, despite their low self-confidence. Improvements in Self-Satisfaction and Quality of Life were important factors driving the feeling of satisfaction with the treatment results.

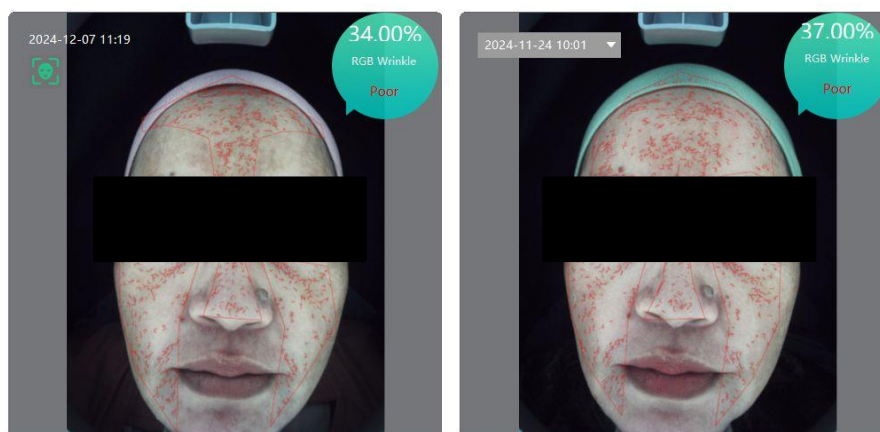


Figure 4. Before After Botox User Respondent 20

Respondent 20, who is 39 years old, experienced a decrease in wrinkles from 37% to 34% after Botox treatment. This decrease in wrinkles indicates that there was a positive change in their skin condition, with a significant decrease in wrinkle levels.

The Self Satisfaction (X1) of these respondents was recorded as high, indicating that they were satisfied with the results of their Botox treatment. They may feel better about the appearance of their firmer, wrinkle-free skin after treatment.

The Self-Confidence (X2) of these respondents was recorded as medium, indicating that although the treatment provided an improvement in their skin condition, the impact on their self-confidence was not as great as expected. However, the treatment still contributed positively to how they felt.

The Quality of Life (X3) of these respondents was recorded as high, indicating that the results of the Botox treatment had a positive impact on their quality of life. The changes to their skin probably made them feel better overall, improving physical and emotional well-being.

Overall, Respondent 20 was satisfied with the results of their Botox treatment. The significant reduction in wrinkles had a positive impact on Self-Satisfaction and Quality of Life, although the impact on their Self-Confidence was still at a moderate level.



Figure 5. Before After Botox User Respondent 23

Respondent 23, who is 22 years old, experienced a reduction in wrinkles from 48% to 40% after undergoing Botox treatment. This change shows a significant improvement in their skin condition, with wrinkles being reduced quite noticeably.

This respondent's Self Satisfaction (X1) was recorded as high, indicating that they were satisfied with the results obtained from the Botox treatment. The changes to their appearance had a positive effect on how they saw themselves.

Although Self-Satisfaction was high, Self-Confidence (X2) was low, indicating that although they were satisfied with the treatment, their overall self-confidence had not fully improved. There may be other factors affecting their self-confidence that are not entirely related to physical appearance.

The Quality of Life (X3) of these respondents was high, indicating that the Botox treatment had a significant positive impact on their overall well-being. Although their self-confidence is not entirely high, the improvement in appearance can have a positive influence on quality of life.

Overall, 23 respondents were satisfied with the results of their Botox treatment. The visible changes to their skin had a positive impact on their Self-Satisfaction and Quality of Life, although their Self-Confidence still needed to be improved.

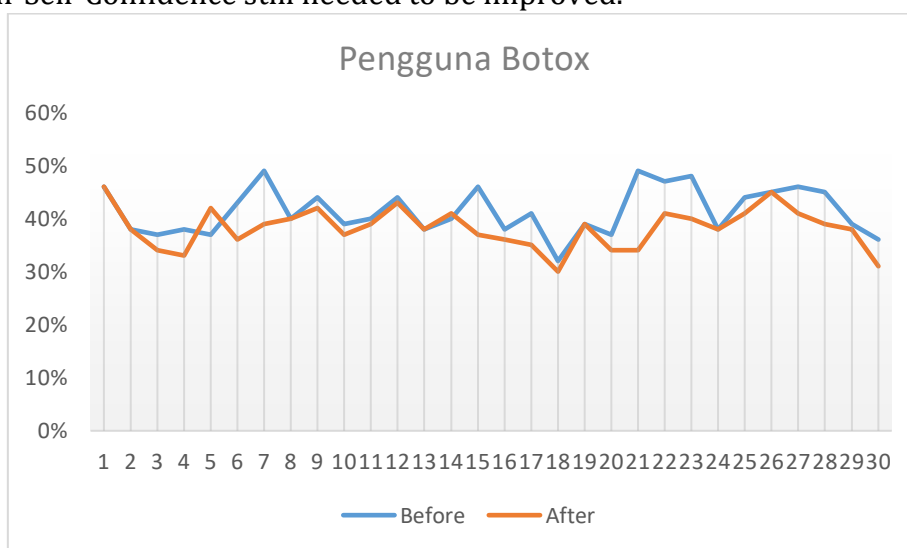


Figure 6. Before After Graph of Botox Users

From a total of 30 respondents. The graph shows two columns of data, Before and After with the effects or changes after botox use. Overall, although there are variations in the data,

there is an increase in some numbers between Before and After, which could indicate a decrease in the severity of wrinkles or other skin problems. However, some values remained consistent or even increased slightly, which suggests that the effects of botox may vary among individuals or areas treated.

The most significant decrease in values was seen in some figures, such as the decrease from 49% to 34%, or from 46% to 37%, which indicates a fairly noticeable change in most of the data. Based on these results, Evoluskin Clinic's botox treatment had a positive effect in reducing wrinkles or other skin problems in the majority of patients. Although there were variations in the results, the significant reduction in many respondents indicates that botox is effective in delivering the desired aesthetic results. This variation also emphasizes the importance of a customized approach for each patient in order to achieve the best results.

This study showed that the use of Botox was significantly associated with increased self-esteem, self-confidence, and quality of life in the respondents. This finding is in line with the results of research by Smith et al. (2021) who reported that aesthetic treatments such as Botox can significantly improve a person's self-image and feelings of confidence. In their study, individuals who underwent Botox treatment showed a significant increase in self-esteem compared to before treatment.

The results of this study also support the findings of Johnson and colleagues (2022) who state that aesthetic treatments not only have an impact on physical aspects but also contribute to improving psychosocial quality of life, including social and psychological well-being. This is in accordance with the results of measuring quality of life using the WHOQOL-BREF which shows that most respondents feel they have a fairly good quality of life after Botox treatment.

However, there is variation in the level of self-confidence which is not always high in all respondents, as also reported by Lee et al. (2023) who found that although aesthetic treatments can improve self-image, the effect on self-confidence may be influenced by other factors such as personal expectations and individual psychological experiences. Therefore, although the physical improvement from Botox contributes positively, other psychological factors may still need to be considered to maximize the results on self-confidence.

Furthermore, the clinical evaluation at Evoluskin Clinic Batam showed a significant reduction in the level of wrinkles after Botox, which is consistent with Park and colleagues' (2020) report on the effectiveness of Botox in reducing wrinkles and improving skin elasticity. This effectiveness is then the basis for increased self-satisfaction in respondents.

Thus, this study confirms the importance of Botox not only as an aesthetic procedure, but also as an intervention that can provide psychological and social benefits to users, as also supported by previous literature (Garcia & Martinez, 2021; Chen et al., 2022).

CONCLUSION

Based on the data obtained from 30 respondents regarding changes before and after the use of botox, it can be concluded that Botox has a positive effect in reducing wrinkles and improving skin conditions, although individual results may vary. The use of botox is significantly associated with psychological factors such as self-esteem and self-confidence, as well as an enhanced quality of life. These findings indicate that botox treatment not only improves physical appearance but also positively impacts patients' psychological well-being and overall life satisfaction.

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