
ARTICLE INFO

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Article history

Received 24-10-2023
 Revised 12-12-2023
 Accepted 22-03-2024
 Available online

Please cite this article in APA 7th edition style as:

Soekanto, A., Tania, P. O. A., Devi, E., Hardiyono. (2024). Effectiveness of Facial Acupressure and Acupuncture on Musculus Faciei. *Jurnal Ilmiah Kedokteran Wijaya kusuma*, 13(1), XX-XXX
<https://doi.org/10.30742/jikw.v13i1.3401>

Effectiveness of Facial Acupressure and Acupuncture on Musculus Faciei

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Abstract

Background: Fatigue on the face can affect the brightness of the face, if the facial muscles function well, the health of the face will be immediately visible. There are many facial care methods currently offered, which can be done with facial acupuncture and acupuncture. This study aims to determine the effectiveness of facial acupressure and acupuncture on the facial muscles, which has never been done before. **Methods:** Analytical experimental research was divided into two groups, the first group was given facial acupuncture treatment and the second group was given facial acupuncture treatment. The data obtained in the form of facial muscle relaxation is indicated by the disappearance of wrinkles on the face with a score of (1, 2, 3). The dependent variables are facial acupuncture and facial acupuncture. Inclusion criteria were women aged 40 – 50 years, agreed to take part in this study, and had no facial abnormalities. The exclusion criteria are women aged less than 40 years or over 50 years, and there are defects in the facial area. This research will be carried out in May – June 2023 at the Wijaya Surabaya doctor's practice and polyclinic. **Results:** The results of the study found that 20 minutes of facial acupuncture was useful for relaxing the facial muscles by up to 60%, on the sixth day the face looked brighter and cleaner, while acupuncture therapy on the facial muscles experienced relaxation of up to 60% on the sixth day with 30 minutes. The effectiveness of facial acupressure therapy is 10 minutes faster than acupuncture. **Conclusion:** Facial acupressure therapy and acupuncture therapy have proven to be effective in relaxing the facial muscles.

Keywords: facial acupressure, acupuncture, muscle faciei

Original Research Article

INTRODUCTION

Relaxing the facial muscles will eliminate facial fatigue due to smooth blood flow, body metabolism, and muscle contraction mechanisms. Signs of fatigue that appear on the face are as follows: the face will become dull pale, wrinkles will begin to appear on the skin of the face, facial muscles will appear to decrease and look saggy, wrinkles will appear in the forehead area under the lips, and eye bags will appear so that the face will look dull, pale and not bright. If the facial muscles function well, facial health will radiate bright, healthy, and clean and reduce fatigue that appears on

the face (Westbrook et al., 2022a). Plus, as a woman ages, the elasticity of muscle fibers begins to decrease. At the age of 30 – 50 years, women usually start doing facial care to maintain their daily appearance so they still look beautiful and charming. Facial acupressure therapy and acupuncture methods are methods that can be offered to reduce facial fatigue by providing relaxation to the facial muscles. Facial acupressure functions to reduce anxiety and relax facial muscles because pressing signals can stimulate the nerves to release endorphins which can balance the nervous system and pressing with fingers can make the face shine and no longer dull. (Sulistiyorini, 2020)(Abdurachman, 2016) (Westbrook et al., 2022)(Kwon et al., 2015).

The acupuncture method is used to relax the face by piercing acupuncture points which stimulate the balance of yin bioenergy as a method that can cause neuroendocrine release. The acupuncture method has the effect of being a natural analgesic and relaxing the body(Hutto & Vattoth, 2015). Previous research looking at changes in the anatomy of the facial muscles after giving infrared therapy and acupuncture found that the facial muscles relax and appear more supple and elastic (Soekanto et al., 2022). In women aged 40-50 years who are experiencing the premenopausal phase, muscle elasticity, and elasticity begin to decrease due to a decrease in the hormone estrogen. For this reason, it is necessary to look for methods to increase the relaxation of the facial muscles (Soekanto et al., 2022) (Hutto & Vattoth, 2015)(Supriadi. et al., 2015). Contraction and relaxation of the facial muscles are related to functions related to studying the anatomy of the skin and muscles in the facial region. Anatomy of the muscles in the facial region such as the procerus muscle, the front occipitalis muscle, the zygomaticus major - minor muscle, the orbicularis oculi muscle, the orbicularis oris muscle, musculus mentalis (Netter, 2023)(von Arx et al., 2018)(Zhang et al, 2021).

Facial acupressure is massaged for approximately 15 – 20 minutes with the hands at acupuncture points or meridian pathways also known as the flow of Chi on the front face, top of the head, and back of the face accompanied by the distribution of Chi so that the blood flow becomes smooth and will restore the condition of the facial muscles. become healthier, and face brighter and more beautiful. The smooth flow of Chi or meridians makes blood circulation smooth(Sumantri et al., 2016) (Sulistiyorini, 2020).

Facial acupuncture will give the effect of facial skin looking brighter, healthier and more youthful. Punctures carried out in the facial muscles will cause blood circulation under the skin to become smoother and skin cell regeneration will occur (Saputra K, 2017). The urgency of this research is to obtain an effective method using acupuncture and facial acupressure to relax the muscle faciei in women aged 40-50 years, where at this age is the premenopausal phase there is a decrease in the amount of the hormone estrogen which results in skin elasticity and suppleness of the muscle faciei also experiencing a decline.

The results of acupuncture are not instant but require regular needling to stimulate the formation of collagen which can relax the muscles in the face and relieve tension in the facial muscles (Kwon et al., 2015). This manual acupuncture technique involves piercing meridian points for 20 – 30 minutes in the facial area using special acupuncture needles. Facial acupuncture is the safest facial relaxation technique, with minimal side effects (Kwon et al., 2015)(Li et al., 2012). In previous research conducted by Soekanto in 2022 entitled mapping changes in the anatomy of the facial muscles when providing infrared exposure with acupuncture, the results of this research acupuncture therapy on the facial muscles was proven to provide a relaxing effect on the facial muscles more quickly than providing infrared exposure, acupuncture therapy can be used Alternative therapy for relaxing facial muscles. It is hoped that by continuing new research using acupuncture therapy to compare the effectiveness of facial acupressure and acupuncture on the facial muscles on changes in relaxation of the facial muscles (Soekanto et al., 2022).

MATERIALS AND METHODS

This research uses analytical experimental research, that has passed an ethical test numbers 15/SLE/FK/UWKS/2024. Treatment was given to two groups of respondents, divided into 15 people

who were given facial acupressure therapy, and 15 people who were given facial acupuncture therapy. The inclusion criteria used in this study were women aged 40 - 50 years who were willing to fill out informed consent to take part in this study, had no facial abnormalities, and the exclusion criteria were women aged over 50 years. and aged less than 40 years, there are scars or defects on the face (Fadli, 2021) (Smith et al., 2020). Each group was given treatment for three weeks, each week given two treatments, so that a total of six treatments were given. The research independent variable observed changes ranging from facial muscle relaxation to the disappearance of facial wrinkles with a score of (1, 2, 3) (Kotimah & Chandra, 2022) (Soekanto et al., 2022). The results are assessed with a score, namely score 1, there is a change in facial muscle relaxation of 20%; a score of 2 means there is a change in facial muscle relaxation of 40%; A score of 3 means that there has been a change in facial muscle relaxation of 60% (von Arx et al., 2018). The dependent variable was seen in facial acupressure treatment for 20 minutes and facial acupuncture treatment for 30 minutes, carried out on the facial muscles in the frontal, maxillary and orbital areas (Donoyama et al., 2012)(Smith et al., 2020)(Spaskova, 2018) (Istiqomah et al., 2022). The research will be carried out in May – June 2023 at the Wijaya Surabaya doctor's practice and polyclinic. Statistical analysis with IBM SPSS statistical software, using the independent T test ($\alpha= 0.05$) to see the difference between two samples between facial acupressure treatment and facial acupuncture on muscle relaxation (Yun et al., 2013b)

RESULTS

The results obtained from samples that received facial acupressure treatment were shown in Figure 1 below:



Figure 1. Sample with facial acupressure (A) before; (B) when face acupressure; (C) immediately after the 1st treatment; (D) after the 6th treatment (source: Primary Data).

In Figure 1, part (A) is the correspondent before getting facial acupressure, part (B) after having 1 face acupressure done, part (C) is a picture after getting face acupressure treatment, part (D) is a picture after having face acupressure done 6 times. In facial acupressure or what is also known as massage at acupuncture points in the facial region, the steps are carried out in the following order. The first step is precleansing by cleaning the face with cleansing soap, followed by washing the face with clean water to clean the facial skin and function to open the pores. skin to the deepest part. The second step is to acupress the face for 20 minutes with the index finger or middle finger for 1 - 2 minutes, each point is done repeatedly, with the following stages, stage one in the middle curve between the two eyebrows, anterior face with a sequence of eyebrow acupuncture points. eyes, continued in the second stage at the bottom of the anterior palpebra, continued in the third stage in the maxilla and next to the ear, continued in the fourth stage starting next to the mouth, nose and finally in the fifth stage in the forehead, temples, next to the ear, when doing facial acupressure This can be added by applying royal jelly liquid or facial serum which functions apart from being a lubricant and can also remove dead skin cells, smooth rough skin, increase skin elastic activity and increase skin firmness (Mehta et al., 2017)(Kwon et al., 2015).

The results obtained from samples that received acupuncture treatment on the face were shown in Figure 2 below:



Figure 2. Samples with acupuncture treatment; (A) before acupuncture; (B) during acupuncture; (C) immediately after the 1st acupuncture treatment; (D) after the 6th acupuncture treatment (source: Primary Data)

Picture 2, part (A) shows the picture before acupuncture is carried out, part (B) starts first with the sequence of sterilizing the face by applying an alcohol swab and then doing acupuncture in the facial region in stage one on the eyebrows at the Taiyang, Yintang acupuncture points. , GB 14, the second stage of the eye bags at the St 1 acupuncture point, GB 2, in the third stage on the cheek next to the ear the Erlmen acupuncture point, SI 19, GB 2, in the fourth stage next to the mouth, next to the nose piercing the St acupuncture point 3, St 4, Ren 24 and finally in the fifth stage at the acupuncture points on the forehead, temples, next to the ear by piercing at the acupuncture points GV 23, GV 15, Erchong. This acupuncture treatment was carried out for 30 minutes with the correspondent asked to lie down while the acupuncture was being carried out and was carried out 6 times. Figure 2 (C) is after acupuncture therapy was carried out for 30 minutes and the changes in the image on the face were seen. The final results of the acupuncture therapy treatment after 6 times were visible changes on the face, visible elasticity and relaxation in the facial muscles (Figure 2 D)(Spaskova, 2018)(Smith et al., 2020).

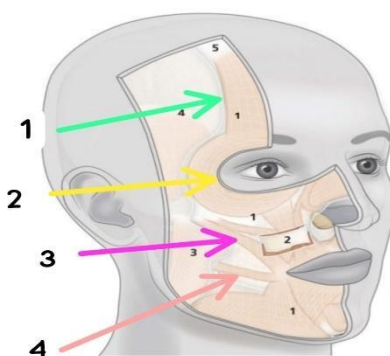


Figure 3. Facial Acupressure and Acupuncture Areas on the Face (1) Frontal; (2) Preorbitalis; (3) Maxilla (4) Mandible (von Arx et al., 2018)(Smith et al., 2020).

The parameters observed at the end of the treatment were relaxation in the facial muscles, with facial acupressure treatment giving scores referring to changes in relaxation in the facial muscles, namely in the fronto-occipital muscles, orbicularis oculi muscles, zygomatic muscles major and minor, muscles. risorius, m. depressor anguli oris, m. depressor labii inferior by 20% (score 1); There was a change in relaxation in the facial muscles by 40% (score 2), and a change in the facial muscles by 60% (score 3) in the Frontal, Preorbitalis, Maxilla and Mandible areas(Spaskova, 2018)(Smith et al., 2020).

Table 1. Musculus elasticity in facial acupressure with age

Correspondent		Face acupressure (relaxation of facial muscles)					
Numb er	age	Days to					
		1	2	3	4	5	6
1	43	1	1	2	2	3	3
2	40	1	1	2	3	3	3
3	45	1	1	1	2	2	3
4	42	1	1	2	3	3	3
5	40	1	1	2	3	3	3
6	48	1	1	1	2	2	3
7	47	1	1	1	2	3	3
8	45	1	1	1	2	3	3
9	44	1	1	1	2	3	3
10	46	1	1	1	2	3	3
11	41	1	1	2	3	3	3
12	43	1	1	1	2	2	3
13	42	1	1	2	3	3	3
14	42	1	1	2	3	3	3
15	45	1	1	1	2	2	3

Description : = 1 (20 %) , 2 (40 %) , 3 (60 %)

In the table there are 15 people who received facial acupressure therapy, each person did it 6 times for 3 weeks, twice a week for 20 minutes. It can be seen that all samples on days 1, 2 and 6 showed the same muscle relaxation score, namely a score of 1 on days 1 and 2, on day 3 there was a change in relaxation to 40% in 7 respondents (46.7%). 6 all samples showed a change in relaxation of 60%. Changes in facial muscle relaxation can be seen from changes in the disappearance of wrinkles on the face and forehead, the face looks brighter and the facial muscles feel more elastic when held (Wahyuningtyas et al., 2015)(Soekanto et al., 2022)(Spaskova, 2018)(Smith et al., 2020).

Table 2. Muscle elasticity in acupuncture therapy with age

correspondent		Acupuncture (muscular elasticity)					
Number	age	Days to					
		1	2	3	4	5	6
1	40	1	1	2	3	3	3
2	43	1	1	2	3	3	3
3	45	1	1	1	2	2	3
4	42	1	1	2	3	3	3
5	46	1	1	1	2	2	3
6	44	1	1	1	2	2	3
7	48	1	1	1	2	2	3
8	44	1	1	2	3	3	3
9	45	1	1	1	2	3	3
10	47	1	1	1	2	2	3
11	42	1	1	2	3	3	3
12	44	1	1	1	2	2	3
13	43	1	1	1	2	2	3
14	44	1	1	1	2	2	3
15	43	1	1	2	3	3	3

Description : = 1 (20 %) , 2 (40 %) , 3 (60 %)

Table 2 above was carried out on 15 sample people using acupuncture on facial muscles for 30 minutes twice a week and for 2 weeks. Then an assessment of facial muscle relaxation is carried out by looking at the disappearance of wrinkles in the facial muscles. female correspondents aged between 40 – 47 years who received manual acupuncture treatment, namely being directly pricked with sterile 1 cun Huangqiu brand needles from day 1 to day 6 and observed changes in facial muscle relaxation. Using a score of 1 means there is a change in facial muscle relaxation of 20%, a score of 2 means a change in facial muscle relaxation of 40% and a score of 3 means a change of 60%. Changes in facial muscle relaxation can be seen from changes in the disappearance of wrinkles on the face and the face looks brighter and the muscles feel more elastic when held (Wahyuningtyas et al., 2015). From the research results, it is known that the samples who received acupuncture therapy for 30 minutes felt that their facial muscles felt more relaxed starting on the first day, increasing until the sixth day. On the sixth day, wrinkles were visible in the forehead and lip corners of the face. Of the 15 samples, those who felt 20% relaxation on the first day and on the third day felt 40% and on the sixth day felt facial muscle relaxation of 60% (Soekanto et al., 2022) (Wahyuningtyas et al., 2015). Changes in relaxation during facial acupuncture treatment were similar to facial acupressure, namely on days 1, 2 and 6, all samples showed the same score, namely a score of 1 on days 1 and 2, and a score of 3 on day 6. On day 3, an increase in relaxation was carried out. 40% occurred in 6 samples. A comparison of the effectiveness of facial acupressure and acupuncture treatment for muscle relaxation can be seen in Table 3.

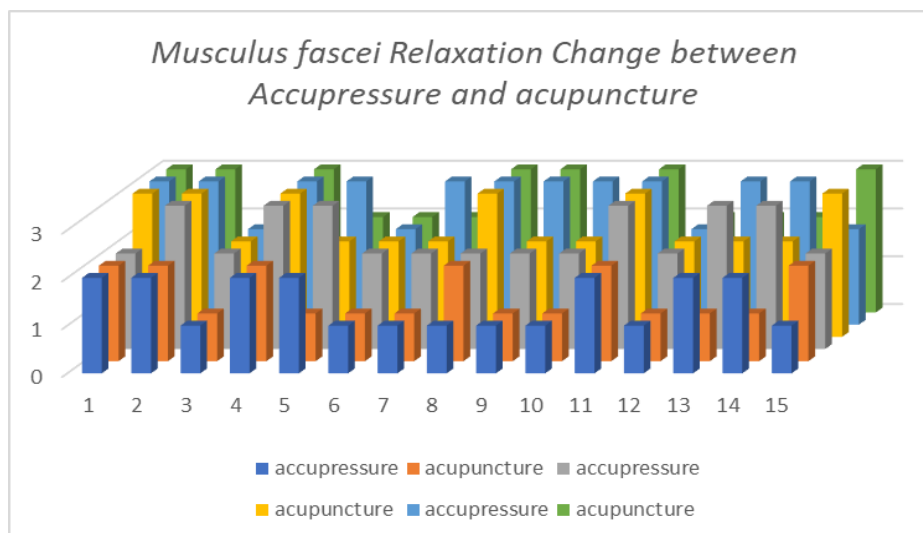


Figure 4. Graph of Changes in Musculuc fascei Relaxation in Each Sample between Facial Acupressure and Acupuncture Treatment on days 3, 4 and 5.

Changes in elasticity in sample no. 3, 6, and 12 for both facial acupressure and acupuncture, until day 5 there was still no change in relaxation of up to 60%. If we observe that the samples are women aged 45, 48 and 43 years who were given facial acupuncture, while sample no. 3, 6 and 12 are 45, 44 and 44 years old.

Table 3. Statistical Test Results of Differences between Facial Acupressure and Acupuncture Treatments on Musculus Fascei Relaxation.

	Musculus fascei Relaxation (p value)					
	Day 1 treatment	Day 2 treatment	Day 3 treatment	Day 4 treatment	Day 5 treatment	Day 6 treatment
Face	1.000	1.000	0.526	1.000	0.067	1.000
1. Acupressure						
2. Acupuncture						

In the table above, it can be seen that there is no difference in treatment between administering facial acupressure and acupuncture on muscle relaxation on days 1, 2, 3, 4, 5 or day 6, but there is a difference in muscle relaxation on treatment days. 3rd and 5th in facial acupressure and acupuncture treatment. Facial acupressure treatment showed a change in muscle relaxation of 40% (score 2) to 46.7%, while relaxation of 60% (score 3) was found in 11 samples (73.3%). Acupuncture was given on the 3rd day in 6 samples (40%), while on the 5th day it was given in 7 samples (46.7%).

DISCUSSION

From the results of this study, it was found that the sample that received acupuncture therapy felt that the muscles of the face felt more elastic, starting from the first treatment, it increased until the sixth treatment felt more elastic. Of these 15 samples, after the first treatment all samples felt 20% relaxation and in the 3rd treatment there were 3 samples who felt 40% relaxation of the muscle muscles and in the 6th treatment all samples felt 60% relaxation in the muscles face. Description of the facial acupressure therapy carried out on 15 samples from the first to the sixth time, the samples felt that their facial skin felt cleaner and tightened their face, cheeks, forehead, removed wrinkles on their facial skin, lightened acne, reduced black spots, reduced forehead wrinkles, relieve eye bags, lighten pupil fat folds, eye and lip creases. When acupressing your face, adding royal jelly liquid has benefits, including removing dead skin cells from the surface of the skin, reducing wrinkles and eye bags, improving muscle condition, especially muscle elasticity.

Facial acupressure in patients aged less than 45 years showed that after 3 acupressures, muscle elasticity progressed more quickly and muscle relaxation increased after the 4th – 6th facial acupressure, with the results of muscle relaxation reaching 60%(Spaskova, 2018)(Smith et al., 2020)(Sanchez et al., 2018). In patients over the age of 45 years, the relaxation of the facial muscles after the fourth facial acupressure was 40% and followed by the facial acupressure 5-6 times, the result was 60%. In facial acupressure, there was an increase in muscle relaxation in the 5th treatment, namely by 56%. From the results of this facial acupressure, the patient felt that his face felt more elastic and supple. The function of elastin is influenced by age, aging will affect elastic fibers and collagen fibers which affect skin elasticity. In patients aged 40 – 44 years after facial acupressure therapy, results were obtained faster compared to patients aged 45 – 48 years. (Yun et al., 2013)(Yusharyahya, 2021)he description of patients who received acupuncture therapy from one to six showed the results of increasing cell renewal to make the skin youthful, brightening melanin, reducing pigmentation and dark circles, tightening the face, and activating facial skin cells so that blood circulation around the face improves smoothly. In acupuncture therapy in patients aged less than 45 years, it was found that on the 3rd therapy the patient felt it and the muscles seemed to be more relaxed, the average fever was 1.4 (28%) and continued on days 4 - 6, reaching muscle relaxation of 60%. Patients over the age of 45 years on the 4th acupuncture therapy only felt muscle relaxation of 30% and on the 5th – 6th therapy, the results were up to 60%. increasing of age followed by the thickness of the dermis layer affects the elasticity and collagen of the dermis layer. In patients under the age from 45 years old, it has been proven that changes in elasticity and relaxation in the facial muscles occur more quickly compared to patients aged over 45 years - 48 years (Yusharyahya, 2021)(Shojaeddin et al., 2023). Even though this 30 minute acupuncture therapy takes longer compared to facial acupuncture which is done for 15 - 20 minutes, it is equally proven to be useful for relaxing the facial muscles(Spaskova, 2018).

In facial acupressure therapy, only used fingers so it can be done independently, whereas acupuncture therapy must be done with an acupuncturist who understands acupuncture because they use acupuncture needles (Tengah et al., 2021)(Dewi et al., 2018). Both facial acupressure therapy and acupuncture use meridian pathways so that the results obtained are equally beneficial in relaxing the facial muscles (In & Eality, 2021).The importance of studying the facial expressions seen can be explained by further studying the structure of contraction and relaxation of the facial muscles which are related to the anatomical function of the skin and muscles in the facial region. Musculus anatomy found in the facial region such as the procerus muscle, zygomaticum major - minor muscle, orbicularis

oculi muscle, orbicularis oris muscle, mentalis muscle, inferior and superior levator labii muscles (Hutto & Vattoth, 2015) (Westbrook et al., 2022b)(Supriyadi et al., 2015).

Facial acupressure is one of the treatments for facial beauty to relax the muscles in the face, increase blood circulation in the face, eliminate tension in the muscles of the face with minimal side effects. Beautifying your face can be done using the facial acupressure method. This facial acupressure has been used to remove wrinkles, firm facial muscles, brighten facial skin and improve circulation in the face(Yulia E et al., 2022). For facial acupressure, massage is done with the hands at acupuncture points or meridian pathways, also known as Chi flow, located on the front of the face, top of the head, and back of the face, accompanied by the distribution of Chi and blood flow. If the blood flow is smooth, this will restore the condition of the facial muscles to healthier, and the face will look brighter because the smooth flow of Chi or meridians makes blood circulation smooth(Smith et al., 2020)(Yun et al., 2013b)(Spaskova, 2018).

The results of research on facial acupressure therapy which was carried out following the anatomical structure of the facial area for approximately 20 minutes by pressing meridian points in the facial area proved to be more effective. 10 minutes can make the skin firm, supple and feel more relaxed. Meanwhile, facial acupuncture therapy, which takes only 30 minutes, gives the effect of facial skin looking brighter, healthier and more relaxed. Facial acupressure is 10 minutes more effective than acupuncture in providing relaxation to the facial muscles. Facial acupressure and acupuncture have both been proven to be effective in relaxing the facial muscles. Punctures carried out on the facial muscles cause blood circulation under the skin to become smoother and skin cell regeneration occurs. If done regularly it can stimulate the formation of collagen which can relax the facial muscles and relieve tension in the facial muscles. Facial acupressure and acupuncture have both been proven to be effective in relaxing the facial muscles. Facial acupressure therapy and acupuncture therapy can be used as alternative therapies to relax the facial muscles.

CONCLUSION

Research on the effectiveness of facial acupressure and acupuncture, in facial acupressure, found that facial acupressure treatment for 20 minutes, 6 times a week, 3 times a week can be beneficial for relaxing the facial muscles by up to 60% on the sixth day, with the result that on the sixth day the face looks brighter and cleaner, wrinkles at the corners of the lips and forehead disappear. 30 minutes of acupuncture therapy done 6 times can provide muscle relaxation benefits of up to 60% on the sixth day, 10 minutes of facial acupuncture therapy provides muscle relaxation faster. Facial acupressure therapy and acupuncture therapy have been proven to be equally effective in relaxing facial muscles. Facial acupressure therapy and acupuncture therapy can be recommended as alternative therapies to relax the facial muscles

CONFLICT OF INTEREST

The researchers declare did not any conflict of interest.

ACKNOWLEDGEMENTS

Thank you to LPPM UWKS for supporting funding for this research and thank you to the correspondents who were willing to be involved in this research.

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