

## Alexander Technique To Reduce Lower Back Pain In 3<sup>rd</sup> Trimester of Pregnancy

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### ABSTRACT

**Background** : Studies back pain due to pregnancy 25-90%, was estimated 50% of pregnant women experience back pain. As many as 80% of pregnant women said that back pain during pregnancy interfere with daily routines and 10% unable to work. The Alexander Technique exercises 65-72% effective in reducing back pain. Learning the Alexander technique have an impact on long-term reductions significantly to lower back pain. Research to determine the effectiveness of the Alexander Technique to the level of lower back pain in the third trimester pregnant mothers.

**Method** : pre-experimental research with one group pretest posttest design. Population this study the third trimester pregnant women who experience lower back pain amounting to 31 people in Selopampang public health center Temanggung district. Collecting data used a pain scale observation sheet NRS (Numerical Rating Scale). Analyze data used Wilcoxon test.

**Result** : research showed the Z value of -3.859. It showed that the Alexander technique is effective in reducing low back pain that is felt as much as 3x with Asymp. Sig. (2-tailed) 0.000, which means there is a difference low back pain before and after alexander technique intervention.

**Conclusion** : the Alexander Technique could be an alternative to reduce lower back pain in 3<sup>rd</sup> trimester of pregnancy

Keyword : *Pregnant women third trimester, lower back pain, alexander technique*

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**Background.** Based on the Indonesia Health Profile 2017 the number of pregnant women is 5,324,562 people, which is about 2.03% civilian in Indonesia are pregnant women. Meanwhile, according to the Central Java Health Profile 2017 amounted to 542 201 pregnant women or approximately 3% of the population are pregnant women. Furthermore, in Temanggung District alone there are 10 455 people or 2.8% of the population are pregnant women.

Pregnancy involves various physiological changes including physical and psychological changes. The changes that occur during pregnancy usually cause discomfort such as back pain and stiffness in the legs. These changes cause specific symptoms according to the stages of pregnancy that consists of three trimesters. The period that require special attention is during the third trimester, because this period is a period of growth and development of the fetus occurs increasing (Mediarti *et al.*, 2014)

Backache as a minor disorder that most often occurs in pregnancy it is because almost 90% of pregnant women may experience back pain during pregnancy. Obesity, a history of

back problems and a greater parity increases the likelihood of back pain (Medforth *et al.*, 2011). Along with increasing gestational age, the shoulders of pregnant women pulled back as a result of the enlargement of the abdomen protruding and to maintain body balance as curvature of the spine excessively inward commonly called lordosis. Increasing gestational age fetus becomes larger so that the curvature of the lower back is increasing. It can also aggravate back pain (Wahyuni and Prabowo, 2012).

A number of studies on back pain due to pregnancy about 25% to 90%, was estimated that 50% of pregnant women will experience back pain. As many as 80% of pregnant women said that back pain during pregnancy interfere with daily routines and 10% of them reported not to work for it (P *et al.*, 2011). A study conducted (Mafikasari and Kartikasari, 2015) found that 60.5% of 172 pregnancies in women have problems with low back pain, 68% multiparous and 49% primiparous. The results of other studies in pregnant women in various regions of Indonesia reaches 60-80% of people who experience back pain in pregnancy

Trying a variety of different body positions could reduced the lower back pain.(Dewi *et al.*, 2015), showed that the principle of proper body mechanics to prevent lower back pain in the third trimester pregnant women, it proved there were approximately 58.33% with a good body mechanism is not experiencing lower back pain during pregnancy, or more than half respondents did not experience lower back pain with good body mechanism.(WM *et al.*, 2016), stating that incorrect sitting and standing position can cause lower back pain in the third trimester pregnant women.

The negative impact of lower back pain, which can negatively impact the quality of life for pregnant women because of the disruption of daily physical activity (P *et al.*, 2011) . Learning the Alexander technique long-term impact on a significant reduction of the pain. Alexander technique works by releasing tension, spinal decompression, as well as more balancing muscle activity and increased flexibility. In poor body coordination, torsion, compression of the spine and muscle asymmetry associated with the state of chronic back pain. Alexander engineering focus is on raising awareness of the movement which was expected to improve the perception on posture, position, and balance in the body (Little *et al.*, 2013).

(McCleanS, S and L, 2015); said that the Alexander technique in the field of health led to modest improvements in health outcomes and costs incurred in conditions associated with decreased pain when using this technique. The observed differences in pain disorders are the respondents can manage their pain, for example, more than half stopped or reduced their pain disorder treatment because learning this Alexander technique. The qualitative data showed that the change was the relationship with the pain management and the management of their pain, then some individuals were more committed to maintaining their practice of the Alexander technique. From the results of this study explained that the majority of participants reduce / stop seeking pharmacological treatment with this technique because it was considered more effective in treating pain. (Woodman and Moore, 2012), stating that the practice of the Alexander Technique 65-72%

effective in reducing back pain, so that the Alexander Technique has become an effective therapy in overcoming back pain.

Based on a preliminary study conducted by researchers during the month of December 2018 - February 2019 in the Selopampang public health care, there are concerns about lower back pain most often complained of pregnant women while doing ANC especially in the third trimester pregnant women. We conducted interviewing 10 third trimester pregnant women, there were 7 patients (70%) experienced lower back pain during pregnancy, this can sometimes last a long time and some of it interfere with daily activities they do, 2 (20%) experienced pain without indications of any activity and 5 (50%) say the pain that is felt towards going to bed and after doing daily activities. They say that back pain was felt discomfort. 80% of pregnant women running position were not true because the pedestal on the lower back and spine were not straight, as well as when sitting in a chair 60% of mothers were sitting on the shoulder section only or upper back was relying so the spine is not straight. 70% of pregnant women 3<sup>rd</sup> trimester had a stand that was not good with his back leaning forward.

The increasing gestational age and maternal weight, some say the difficulty in sitting and walking, it was compatible with the conditions of poor posture due to support the weight of the body and balance the body's own mother. Approximately 70% of women say keep doing little exercise like a walk every morning approximately 30 minutes, and 80% said that the mother is often busy with taking care of household chores, and then for pregnant women knowledge about the Alexander technique, the entire sample said that not knowing about the technique. So that why this research was interested in examining the effectiveness of the Alexander Technique of Lower Back Pain rate in 3<sup>rd</sup> trimester pregnant women

**Methods.** Pre-Experimental Research Design with one group pretest posttest design Design. Sampling technique using nonrandom sampling technique with this type of sampling, the sampling was saturated, as many as 31 third trimester pregnant women in the region of Selopampang Public Health Center after going

through the process of inclusion and exclusion criterion. The statistical test used in the study was Wilcoxon test. This study used a pain scale NRS as an observation sheet.

**Result and Discussion.**

Table 1. The level of lower back pain in pregnant women before the intervention alexander technique

Pain Level	Frequency	%	Pain category
1	5	16.1	Mild
2	11	35.5	Mild
3	8	25.8	Mild
4	1	3.2	Moderate
5	3	9.7	Moderate
6	1	3.2	Moderate
7	2	5.5	Severe
Total	31	100	

According to the table 1 is known lower back pain measurement results using observation sheet NRS (Numeric Rating Scale) in most samples were mild pain, which is 77.4% with the number 24 and the lowest is severe pain with a score of 7, which is 6.5% with the number 2, while the pain was 16.1% with the number 5.

Table 2. The Level Overview Lower Back Pain in Pregnancy After Intervention Alexander Technique

Pain Level	Frequency	%	Pain category
0	7	22.6	Painless
1	12	38.7	Mild
2	5	16.1	Mild
3	5	16.1	Mild
4	2	6.5	Moderate
Total	31	100	

Tabel 3. The change Level Lower Back Pain in Pregnancy third trimester Before and After Intervention Alexander Technique

Variable	Me	Medi	Ra	Pval	Variable	Me	Medi	Ra
	an	an	nk	ue		ble	an	an
	Pre	Post	Pre	post		Pre	Post	Pre
Low back pain level	2.9	1.45	2.0	1.00	2	20	9	0,0
	0		0					0

The level of lower back pain in pregnant women third trimester before granting alexander technique has an average of 2.90 and an average decline after the Alexander technique to 1.45. Median at the level of lower back pain in pregnant women third trimester also decreased from 2 to 1, while positive rank increased by 2 respondents and pain level decreased by 20 respondents

Tabel 4. The effectiveness of the Alexander Technique On The Level Lower Back Pain in Pregnancy third trimester

Changing	freq	%	Pvalue	Z-score
Negative	20	64.52	0.00	-3.859
Positive	2	6.45		
Ties	9	29.03		

The results showed that the level of lower back pain as many as 20 people (64.52%), did not change as much as 9 people (29.03%) and 2 (6.45%) others have an increased level of pain. The analysis of the effectiveness of the Alexander technique to the level of lower back pain in third trimester pregnant women used Wilcoxon statistical test, with the result because the value of Z = -3.859. Z count tables 1.96 and -3.859, meaning that Z was the rejection region of H0, or Alexander technique effectively reducing the level of lower back pain as much as 3 degrees or 3 times; p = 0.000

Results of research conducted in pregnant women third trimester who experience lower back pain in Selopampang Public health center mostly mild pain with activity as much as 77.4% of households assisted by the family, the pain was as much as 16.1% with normal household activities such as before pregnant and adequate rest, and 6.5% severe pain with activity more than others and less rest time especially at night, most of the mothers said, despite experiencing pain but still could do with a good activity.

Lower back pain in pregnancy was a pregnancy disorder that most often experienced by pregnant women, especially entering the third trimester (Marmi, 2014). This pain including acute pain group because of pain that occurs due to damage that were sudden, it comes from trauma, surgical wounds, lacerations. The layout of the sick superficial skin surface, localized and self-limited, that the pain will disappear with healing, takes place with a short duration (a few seconds - 6 months) (Aribawa *et al.*, 2017).

Factors that caused lower back pain in pregnant women may vary. Pain is due to uterine enlargement, increased hormone levels, the pressure on the nerve root, fatigue in carrying out the activity, obesity, history of back problems, parity, body posture, or other discomfort was experienced (Marmi, 2014). All pregnant women have additional burden resulting Uterus overdistended structural changes in pregnancy alter the body dimensions and center of gravity causes

increased lordosis heavy load conditions. Mechanical factors that occur in the form of weight gain can affect the body's center of gravity to the front (anterior) will increase the burden that will be borne by the paraspinal muscles and vertebrae (Wahyuni and Prabowo, 2012).

Enlargement of spinal muscles can cause muscle fatigue in the back (P *et al.*, 2011). This will cause back pain in pregnant women (Paryono, 2012). So during late pregnancy aches and pains experienced in the body caused by the lordosis (Wahyuni and Prabowo, 2012).

Along with increasing gestational age, pregnant women back position change shoulders pulled back as a result of the enlargement of the abdomen protruding and to maintain body balance as curvature of the spine excessively inward commonly called lordosis. Increasing gestational age fetus becomes larger so that the curvature of the lower back is increasing. It can also aggravate back pain (Wahyuni and Prabowo, 2012). In addition to mechanical factors, the response of the intervertebral disc in the event of vertebral compression after pregnant woman doing activities that cause back pain resolved duration (P *et al.*, 2011)

Oversight the spirit of the hormone progesterone, which makes the muscles relax and stretch makes the pain felt in the mother and the end of pregnancy in which the production of the hormone estrogen increases will stimulate spending relaxin so relaxing muscles in the mother's body including the diaphragm abdominal (rectus abdominal) that will exacerbate pain states lower back felt by the mother (Fraser and Cooper, 2009), (Rukiah *et al.*, 2009) (Widatiningsih and Dewi, 2017).

Lumbosacral spine curvature that increases as an expanding uterus causes pressure on the nerve roots caused by muscle spasm, it also causes more pain increases with gestational age (Marmi, 2014). L5-S1 is an area that receives very heavy burden given the lumbar have comprehensive motion while sacrum rigid (stiff). Consequently lumbosacral segments receive the load movement and the greatest weight in the lumbar region (Sugijanto, 2012).

During pregnancy, the ligaments become softer under the influence of the hormone relaxin and stretched to prepare the body for childbirth. It is mainly focused on the pelvic joints and ligaments that become more flexible

to accommodate the baby during delivery. An imbalance between the muscles agonists and antagonis, namely M. erector spine and lumbar neksor group. State or the wrong position if prolonged will lead to strain on the ligaments and muscles that cause fatigue in the abdominal (Latief, 2016). Effects can put a strain on the lower back and pelvic joints, which can cause back pain (Medforth *et al.*, 2011).

The nervous system may explain the relationship of pain with anatomical components involved. Durameter bag after penetrating the anterior and posterior roots unite to form n.spinalis in foramen intervetebralis and fill the 35% -50% of the foramen upper chamber n.spinalis then forked namely ramus ventralis and dorsalis. Ramus ventralis n.spinalis gave branches namely : 1) Muscular branches, innervate m.psoas, m.kuadratus, m. InIntertransversari; 2) Skeletal branches, supplying the lig. Longitudinalis anterior, posterolateral part nulus fibrosus and periosteum; 3) N. Sinuvertebralis. This nerve joins with the sympathetic branch of the gray communicating rami and back through the foramen invertebralis lig.longitudinalis innervate a posterior, the outer layer of the posterior portion of the annulus fibrosus, durameter lining the anterior and posterior root of the vertebral body and blood vessels as well as an epidural. N.sinuvertebralis sometimes dainggap as direct branches n.spinalis.

While the dorsal rami n.spinalis gave branches namely : 1) The lateral branches innervate m. Iliokostalis lumborum; 2) Intermedialis branches innervate m. Longusimus; 3) Innervate the medial branch m.multifidus, m. Interspinalis, m. Interspinosus. Also supply the facet joints above and below it, lig. Flavum, fascia and skin

The onset of radicular pain due to chemical and mechanical irritation of the nerve roots. Chemical irritation causing a strong nerve root becomes easily irritated by the soft disc nucleus pulposus (Aribawa *et al.*, 2017).

Muscle responsible in the lower back area is m. Kudratus lumborum, m. Sakrospinalis, m.multifidus, m. Intertransversarii, and m. Interspinalis. m. Sakrospinalis is the main extensor muscles assisted m. Kudratus lumborum. Another extensor muscles is m. Multifidus which acts as a rotator and m. Interspinalis. A spinal muscles play a role in the stability of extrinsic to withstand the load. The burden on the lumbar spine can be studied with

the discus intervertebralis as a fulcrum. When someone lift heavy loads then force the hand, arm and body must be offset by contraction of muscles, especially m. Erector spinae with a ratio of 15: 1.

In addition, the posture and poor body mechanics will increasingly favor the occurrence of discomfort and risk of injury. The risk of injury is also higher because the center of mass of the mother has changed. Before pregnancy, the center of mass is in the mid-central simfisis; when the stomach is bigger then the higher center of mass is closer to the center, thereby reducing the stability (because away from the ground / floor / base of support). Thus, the backbone can increase the load during pregnancy (Widatiningsih and Dewi, 2017). Pregnant woman's body posture can affect back pain that is felt, by having poor posture can affect the lower back pain that is felt (Dewi, 2016).

Activities also affect the level of pain experienced by pregnant women. (Khafidhoh, 2016) pregnant women were able to control their work with rest time have better health status and can further reduced back pain that experienced. Activity was associated with fatigue can increase a person's pain perception, can cause intense pain sensation and decreases the ability of someone in coping. If accompanied by sleeplessness then the perception of pain will be felt more severely (Judha, Sudarti and Fauziah, 2012). Activities and time owned by a pregnant woman is different, so this can affect the level of pain felt, all pregnant women move as a housewife, but the intensity and frequency used in conducting activities undertaken break,

The problem worsens if it turns out the woman's muscles weak thus failing to sustain the enlarged uterus. Without support, the uterus relaxes, conditions that create a curved spine lengthening. Abdoment muscle weakness is more common in grand multiparous women who did not exercise. The primigravid women usually have excellent abdoment muscle because the muscle stretch have never experienced before. Thus, the severity of lower back pain typically increase parity (Ummah, 2012). Parity also affect pain experienced, such as in the study of pain perception multiparous mother more than primiparous mothers.

The weakness of the abdominal muscles was more common in pregnant women who

were too often give birth (grand multiparous) who do not exercise to restore muscle tone abdomen every time after giving birth, so the level of lower back pain typically increase parity. In addition to the above factors, the risk of back pain in pregnancy increases in women who previously have back pain and obesity (Yosefa, Misrawati and Hasneli, 2013).

Another thing that can affect when respondents predicted that the pain felt can be exaggerated or less, respondents do not always provide accurate information about pain, lack of knowledge of the respondents to take decisions (Potter P.A dan Perry G.A., 2006). Interpretation of pregnant women on pain in this study are subjective because of differences in the level of knowledge of each mother and viewpoints of respondents to the pain.

Chosen way to reduced lower back pain in pregnancy that is the natural therapy or non-pharmacological treatment. Non-pharmacological treatment is pain management does not used drugs, were inexpensive, simple, and effective, with no adverse effect (Maryunani and Sukaryati, 2011). One of these natural therapies was the Alexander Technique, which is a series of movements that aim to teach someone to move more efficiently in performing daily activities (Little *et al.*, 2013). This therapy can be applied in everyday life so that flexible used (Yardley *et al.*, 2010).

Alexander Technique was easy physical therapy to strengthen the abdominal muscles, pelvis and spine. In this study the Alexander technique is done for 2x in one week. It was consistent with the theory (Charlish and Davies, 2012), that this learning session was usually given once or twice a week. For best results on each exercise takes 15-30 minutes (Vall, 2010)

Alexander technique has benefits among the benefits can overcome the problem of back pain, improve posture and balance of the body, can improve thinking skills, reduce stress, improve self-confidence, can move his body better (Harer and Munden, 2009).

The workings of the Alexander Technique to train someone aware of bad habits thus began to stand and move in a way that better naturally. This technique emphasizes to always ensure the position of the head in a straight line with the spine, so that the neck can move freely from the pressure reducing back pain (Charlish and Davies, 2012).

Head of the bottom is a curved structure of the spine. The spine consists of a series of bones called vertebrae. Each vertebra is adjacent to the spine for the next possible flexibility in a person's spine was limited. There is a curve that leads to the front of the spine is the neck, the curve toward the back in the sternum, curves toward the front of the spine, there is a curve toward the back in the sacrum, there is a curve leading to the front at the bottom of the spine, and slightly curved pointing forward in the coccyx (Leibowitz and Connington, 2011).

One function of the curve in the spine serves as the anchoring system shocks. If the spine straight as a stick, then when run will thrill your whole body. The structure of the spinal curve helps improve flexibility of movement. The level of the curve in the spine depend on the body structure of each person, some people have a more pronounced curve than others. This is one reason why everyone looks the same. Alexander technique purpose is to achieve the optimal position of the spine in the structure skletal someone (Leibowitz and Connington, 2011).

Movement Alexander technique in this study there were 6 movement Mechanical Alexander begins with awareness of posture, then the upright position and balance exercises with movement count 2x8, sitting in a chair that has arm motion count 2x8, positioning train your back muscles and train your back muscles with movement 2x8 count, and lie on your back to relax by practicing breathing.

Alexander Technique at first movement is awareness of the posture, during the first session will be asked to performed a simple movement and then the patient performs a simple movement such as standing, sitting and moving (Charlish and Davies, 2012). It was done in a study to assess whether the mother's body position is correct and determine possible causes of lower back pain experienced by the mother.

In the second and third movement of the Alexander Technique, mothers are trained to familiarize themselves in a good position with the body when standing and sitting. When standing, the position of the head should be straight so that the neck can move freely, his head held high above the spine, lower back muscles should be relaxed, arms and hands beside the body. Spine, shoulders, and back into the center / fulcrum of the entire body,

maintaining steady yet flexible so that in the rest condition of this area would be balanced without pressure. When starting this movement make sure the spine straight, eyes forward and his head held high, it will feel strange at the beginning but when they were accustomed to these things can help in balancing the body. Important when sitting use a chair that has a backrest, so that it can support the lower back and puts feet comfortably on the floor. If the body bending muscles will weaken, this can cause strain on the ligaments were interested and connections as well as the discs. When the shoulder bending can cause pressure on the neck. So that pregnant women were advised when sitting use a chair that has a backrest.

In the fourth and fifth motions Alexander technique, stretching was done to pelvic muscles and back simultaneously during exercise sitting on the floor with the hands and spine straightened. This movement serves to reduce the strain on the flanks. When foot meets, it can release the tension in the muscles of the thigh (Brennan, 2013). In a study of pregnant women said the movement back and pelvis muscles is very convenient to do, especially for the part of back pain that is felt.

In the last movement, the relaxation techniques, the purpose of this exercise is to help a person relax. This exercise looks simple, but the movement is very important in the foundation of all movement (Vall, 2010). This position can be combined with relax movement with breathing from the nose and removed through the mouth. In research for some mothers do only 2-3 minutes due to gestational age approaching childbirth cause this uncomfortable position to do if it is too long.

This therapy could be applied in everyday life so that flexible use (Yardley *et al.*, 2010). Overall movement Alexander technique can be performed in day-to-day activities, so that mothers do not need a special time in the motion, in addition to exercise these techniques together, the respondents also apply them in everyday activities.

The scale of the pain felt in each individual differently before the intervention of the Alexander Technique ranging from mild pain, pain of moderate to severe pain. According to James, 2012, mild pain when having a pain scale 1-3, 4-6 moderate pain and severe pain 7-10. Mild pain is pain that lasts a while and not too intrusive in the move. Moderate pain is pain that requires medication to relieve pain, but can

still continue the activities. Meanwhile, severe pain is pain that requires rest and medication to relieve pain (Manuaba, Manuaba and Manuaba, 2010)

The results of the assessments that have been made in the provision of interventions Alexander technique, movement of the Alexander Technique that most influence the reduction of lower back pain was the movement of the fourth and fifth, because the movement pelvic muscles and back simultaneously, so that the mother can train and stretch the back muscles properly, other than that of the movement the mother feel more freedom to move back. For the second and third movements affect the mother's daily activities, because in this study the body movement mechanic to fix your posture so that the daily habituation could be done with reference to these two and the third movement. Because the second and third movements are similar to the mechanic body workout will improve posture mother, stretch your back will help the spine to relax, there by reducing pain. Strengthening the abdominal muscles can help prop up load from the rear waist besides abdominal muscles also maintain coordination, stabilization and balance of movement.

Results of research conducted in pregnant women third trimester experiencing lower back pain after the Alexander technique experienced mostly mild pain as much as 93.5% and 6.5% experienced moderate pain. After this intervention almost the majority of women experience mild pain, so pain experienced by the mother could be resolved without disturbing the mother's daily activities.

Lower back pain is one discomfort that experienced by pregnant women third trimester as much as 70% of women experience back pain in pregnancy (Astuti, 2009). (Woodman and Moore, 2012), granting the Alexander Technique exercises 65-72% effective in reducing back pain. Giving Alexander technique was considered effective in reducing back pain because the movement was simple and could be done in a day-to-day activities.

Results of research conducted by (Banoofateme, Oreyzi and Bahadoran, 2017), recommended pregnant women using the Alexander Technique is because it has a variety of benefits gained during pregnancy. According (Cacciatore *et al.*, 2011), Alexander Technique training on the subject of short-term

low back pain can reduce the axial stiffness experienced.

The results of the current research study interviewed pregnant women who have been in the Alexander Technique intervention, most said that the decrease lower back pain that is felt. In addition, this technique does not required a long time and special treatment or this technique is simple, all it takes is a commitment in the training yourself.

Results of the analysis of the effectiveness of the Alexander Technique to the level of lower back pain in third trimester pregnant women at Selopampang public health center. Waterford, which is 20 respondents (64.52) decreased level of pain, 9 respondents (29.03%) fixed and 2 respondents (6.45%) increased. It can be concluded Alexander technique effectively affect the level of lower back pain in third trimester pregnant women.

Alexander Technique was unique, which gives responsibility on everyone to learn these techniques. They were required to have an awareness of themselves in doing their daily activities (Brennan, 2016). The Alexander technique is to repeat the process of learning, not a quick solution, although it could do with some exercises to make changes are important in controlling oneself in some cases of back pain. Respondents may experience decreased pain level as in movement Alexander technique, not only during training but it was applied in everyday life.

Additionally movements performed with daily habituation causes stiff movements do not because it uses the body's muscles according to function, so there is no compensation movement in the muscles that are not supposed to work on one particular movement. As a result, movement to be effective and efficiencies in train the muscles of the body. Alexander technique also requires a strong commitment to themselves besides repeating the learning process, not a quick solution, although it could do with some exercises to make changes are important in controlling oneself in some cases of back pain (Harer and Munden, 2009). So that if the respondents who do not get used to the Alexander Technique, or apply them in everyday life, it will reduce back pain reduction optimally.

Learning the Alexander technique long-term impact on a significant reduction of the pain. Alexander technique works by releasing tension, spinal decompression, a more

balanced muscle activity and increased flexibility. Alexander engineering focus is on raising awareness of the movement which is expected to improve the perception on posture, position, and balance in the body (Little *et al.*, 2013).

The Alexander technique in the field of health, especially with pain, stating that improvements in health outcomes in conditions associated with decreased pain when using this technique. The observed differences in pain disorders are the respondents can manage their pain, for example, more than half stop or reduce their pain disorder treatment because Alexander's studying engineering (McClellan, S and L, 2015).

Alexander technique than could be overcome lower back pain, can train good body mechanics, improve thinking skills, reduce stress, relax the body balance training back. With the difference in the effectiveness of the Alexander Technique to the level of lower back pain in pregnant women third trimester, midwives as health professionals were expected to perform and study the Alexander technique for easier movement and simple can help pregnant women in reducing lower back pain experienced.

**Conclusion and Suggestions.** Based on the analysis and discussion that has been described by investigators in the previous chapter, it can be concluded that before the Alexander technique, the measurement results lower back pain in most samples obtained by mild pain, which is 77.4% with the number of 24 people, who experience moderate pain as much as 16.1% with the number 5, and the lowest is severe pain with 9.7% with the number 3. Meanwhile, after the intervention of the Alexander Technique, as much as 93.5% mild pain, moderate pain as much as 6.5%, while for severe pain not found the samples undergo severe pain. Based on Wilcoxon test was obtained p value = 0.000, so the p value <0.05 can be concluded that "There is a difference Level Lower Back Pain In Pregnancy third trimester before and after the Alexander Technique". Alexander Technique 64.52% effective enough in reducing lower back pain in pregnant women third trimester. Factors that affect the Alexander Technique in reducing lower back pain is the body posture, activity of the mother, the mother breaks do, and family support.

For pregnant women who experienced low back pain recommended familiarize themselves and perform Alexander technique because this technique was effective, easy to performed and can be done at any time. For Midwives Alexander technique can be applied midwives to pregnant mothers to provide care to pregnant women who experience low back pain to reduce the pain that is felt. The need for cooperation between midwives, pregnant women, and families in doing this alexander technique. And to further researcher looking for factors other than low back pain for the use of these techniques, or can be compared with other techniques are more effective and easier to reduce low back pain in pregnant women third trimester. Besides paying attention confounding variables in the study to avoid bias

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