Effects of Equilibrium Therapy Exercise on Dysmenorrhea in Nursing Students

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Abstract

The purpose of this pre-experimental research (one-group pretest-posttest design) was to study the effects of the 4 Basics Exercise Model on dysmenorrhea for structural equilibrium changes in nursing students at Phachomklao College of Nursing, Phetchaburi Province, who were divided the 4 Basics Exercise Model for dysmenorrhea into pre- and post-test experimental groups. The sample group was composed of 31 persons, using the 4 Basics Exercise Model over three months for 30 minutes per day on Sundays, Tuesdays, and Thursdays. Data were collected on personal information, dysmenorrhea pain scores, and satisfaction in the 4 Basics Exercise Model for dysmenorrhea records. According to the research findings, the level of dysmenorrhea pain was significantly decreased in the experimental group for one, two, and three months post-exercise. In addition, the comparison of decreases in the dysmenorrhea pain of experimental group was significantly different at two and three months post-exercise at .01. The exception was at one month post-exercise when there was no statistically significant difference. According to the findings of the study, the 4 Basics Exercise Model for dysmenorrhea effectively decreased dysmenorrhea and the duration of menstrual periods with improving signs of menstruation. Therefore, nurses who provide gynecological care should learn and have knowledge regarding the 4 Basics Exercise Model to help relieve menstrual pain.

Keywords

Dysmenorrhea, effects, equilibrium therapy, student nursing

Dysmenorrhea is the most frequently encountered gynecological complication involving menstruation in 75% of all women. Of this number, 50% of the women are found that they do not have severe symptoms and do not require medication, while 30% of women are found to have moderate pain requiring medication, and 20% of women are found to have severe symptoms requiring leave from work and medication. Primary dysmenorrhea is a form of dysmenorrhea with undetermined causes in the pelvic cavity. Primary dysmenorrhea is usually encountered in adolescents aged under 20 years (Chatupon Srisomboon, Apichard Oranrattanachai, and Chanain Wanapiruk 1996). At present, dysmenorrhea is mostly composed of primary dysmenorrhea without abnormalities of the uterus and ovaries and primary dysmenorrhea is believed to be caused by hormonal changes during menstruation and abnormally high prostaglandin secretions causing uterine contractions and lower abdominal pain. Secondary dysmenorrhea usually includes uterine or ovarian abnormalities such as endometriosis. Ovarian abnormalities are called chocolate cysts, myoma, severely retroverted uterus.

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and pelvic inflammatory disease, etc. Emotions are believed to promote severity of both types of dysmenorrhea. For example, sensitive or stressed persons are found to have more severe pain than persons with positive emotions. According to data from the investigation into patient backgrounds, tongue and pulse examinations, Chinese doctors have been able to diagnose the causes of patients’ symptoms and know how to treat patients once the etiology has been determined. In this group, treatment can be provided in the form of both acupuncture and Chinese herbal medicine. Most menstruating women usually have problems with dysmenorrhea such as pain from uterine contractions and weight or pressure in the lower abdomen causing discomfort or suffering in menstruating women. The pain coping behaviors of each menstruating woman are different.

According to the research of Dr. Wichianchai Padungkiatwong (2003) who studied medical students at Phachomklao College of Nursing, Phetchaburi Province, the structure of the pelvic cavity can be adjusted and twisted pelvises are usually related to samples with dysmenorrhea. In addition, dysmenorrhea was found to have potential etiology stemming from the fact that pelvic cavity structures are twisted and unbalanced, thereby causing gynecological issues such as dysmenorrhea. Pelvic imbalance causes the body’s nervous, circulatory and lymphatic systems to function abnormally for a long and accumulated period of time before reaching a trigger point with pain following injuries caused by the imbalance of various system functions or stress. Muscles with trigger points will contract for a long and continual period, causing fatigue and localized ischemia resulting in changes to the environments outside the cells in addition to secretion of painful substances such as histamine, kinin and, in particular, prostaglandin, which will increase uterine contractions and result in dysmenorrhea. These changes occur in a cycle with increased motor or sympathetic activity that increases pain. Furthermore, signals sent from the trigger point to the central nerves will cause pain. If solutions for twisted pelvic cavity structures return pelvic cavity structures to balance with positive effects, these solutions will also effectively solve dysmenorrheal pain issues. According to the studies on the use of other alternative medications, many other methods have been found to be capable of reducing and relieving dysmenorrheal pain issues such as the use of reflexology principles in various organs in the body to reduce pain such as pressing four places on the ear consisting of the shenmen, uterus, endocrine and zero points. These four points are able to reduce and relieve pain from labor and dysmenorrheal pain (Ratinan Kiatmala 2004). Thai massage is another option capable of reducing and relieving dysmenorrheal pain. According to the study of Sunanta Yangwanitchaset (2005: 209-217), female students with symptoms before menstruation and dysmenorrheal pain found aerobic and yoga exercises to reduce dysmenorrheal pain.

According to preliminary data surveys of nursing students from Phachomklao College of Nursing, Phetchaburi Province, most students (42%) were found to have dysmenorrhea. According to the inquiries, this group of students were found to suffer severe discomfort and pain with impacts on learning and health conditions requiring some students to miss school when menstruating and resulting in significant impacts on education, because students who missed school for more than 20% of studying hours were not permitted to take tests for that subject. Therefore, due to the aforementioned problem, the research group came up with the concept of providing support to reduce dysmenorrheal pain issues in students by promoting health using the 4 Basics Exercise Model with equilibrium therapy exercise to adjust body structure, especially in the pelvic cavity. The researcher modified the concept of Dr. Wichianchai Padungkiattiwong in this study. Students were able to practice without requiring therapy from doctors or nurses, expenses or additional materials and
equipment. Hence, the researcher is interested in conducting research on effects of the 4 Basics Exercise Model with equilibrium therapy exercise on dysmenorrheal pain in nursing students at Phachomklao College of Nursing, Phetchaburi Province, in order to help students relieve suffering from dysmenorrheal pain or cure dysmenorrhea. The findings can be used to develop effective healthcare systems for students with dysmenorrheal pain at Phachomklao College of Nursing, Phetchaburi Province, by providing therapy using the 4 Basics Exercise Model with equilibrium therapy exercise instead of pain-relief medications which may have side-effects, thereby reducing costs due to the use of medications to relieve dysmenorrheal pain. Moreover, the findings will help improve students’ learning efficiency, thus improving the physical and psychological health conditions of students. Because no one has conducted research on this topic, the researcher is interested in studying and determining whether this 4 Basics Exercise Model with equilibrium therapy exercise can be used to reduce dysmenorrheal pain.

**RESEARCH OBJECTIVES**

(1) To study the effects of the 4 Basics Exercise Model with equilibrium therapy exercise on dysmenorrheal pain such as pain levels, number of days with pain, and number of menstruation days;
(2) To compare dysmenorrheal pain scores which drop at different times;
(3) To study satisfaction about the application of the 4 Basics Exercise Model with equilibrium therapy exercise.

**LITERATURE REVIEW**

Dysmenorrhea means lower abdominal pain related to menstruation and is a frequently encountered problem among reproductive-age women (Tirtongsong, Chatupon Srisomboon, and Apichard Oranrattanachai 1996). Dysmenorrhea is categorized into two types:

1. Primary dysmenorrheal pain is dysmenorrheal pain without apparent pathologies in the pelvic cavity caused by high prostaglandins secretions;
2. Secondary dysmenorrheal pain is dysmenorrheal pain caused by pathologies in the pelvic cavity such as inflammations or infections in the pelvic cavity and severely retroverted uterus, etc.

**GENERAL TREATMENT**

(1) Psychological treatments provided education concerning physiology and the reproductive system along with assurance that there are no abnormalities, patients can conceive and pain will decrease with age and after childbirth;
(2) Patients should rest when in severe pain;
(3) Hot water bags or pads should be applied to the lower abdomen;
(4) Women should exercise regularly during both menstruation periods and normal periods in order to relax from stress;
(5) Pharmacological treatments with good outcomes and capacity to solve abnormalities consisted of prostaglandin synthetase inhibitors and birth control medications;
(6) Other forms of alternative medicine such as acupuncture have insufficient evidence on the effectiveness in treating primary dysmenorrheal pain. However, studies of other alternatives such as aerobic and yoga exercises to adjust physical balance have been able to relieve dysmenorrheal pain (Sunanta Yangwanitchaset 2005: 217). Equilibrium therapy is another alternative science that can be used to adjust body structure.

Equilibrium therapy is a form of holistic healthcare that employs the principle of balancing body structures with social conditions by adjusting behaviors in order to comprehensively promote health, treat, and restore conditions (Ladawan Suwannakitti
Equilibrium therapy is a new line of therapy and healthcare science created by completely combining the application of Western and Eastern knowledge and wisdom (Wichianchai Padungkiatwong 2007).

The 4 Basics Exercise Model equilibrium therapy exercise positions, which were modified from various sciences such as yoga, qigong, and other exercise positions in addition to breathing effectively in order to stretch and adjust the equilibrium of muscles in all parts of the body. Dr. Wichianchai Padungkiatwong (2003: 217-223) conducted an experimental study to determine whether or not the pelvic cavity can be adjusted by studying 40 nursing students at Phachomklao College of Nursing, Phetchaburi Province, with twisted pelvic cavity structures by training students in the 4 Basics Exercise Model with equilibrium therapy exercise for 10 minutes and measuring pelvic cavity structure after exercising. According to the findings, 39 nursing students (92%) were found to be successful in returning pelvic cavity equilibrium to a normal and untwisted state. Furthermore, the study of Sunanta Yangwanitchaset (2005: 209-217) who studied dysmenorrheal pain symptoms and symptom relief in female students at Songklanakharin University, found most of the students (77.6%) have lower abdominal pain. The symptoms with impacts preventing students from performing daily activities consisted of lower abdominal pain (5.7%) and the students (41.5%) used medications to relieve pain together with various methods to relieve pre-menstrual symptoms such as the application of hot water bags, drinking warm water, self-massage, aerobic exercise, yoga, resting or sleeping after taking medications, or other methods. Pre-menstruation symptoms decreased with statistical significance at .05.

**METHODOLOGY**

This study was based on a one-group pretest-posttest research design. The population was composed of 49 first year nursing students with dysmenorrhea from Class 19 at Phachomklao College of Nursing, Phetchaburi Province.

The sample group consisted of 31 first year female nursing students at Phachomklao College of Nursing, Phetchaburi Province, with dysmenorrhea and interest in participating in the project. The samples were purposively sampled according to the following qualifications or inclusion criteria: (1) students who willingly consented to participate in the research project; (2) ability to participate throughout the project; (3) no use of pain relief medication throughout the project; and (4) no pain complications from gynecological diseases.

**INSTRUMENTATION AND DATA COLLECTION**

The instrumentation used in the study was the program to train in the 4 Basics Exercise Model with equilibrium therapy exercise by practicing 10 times in each position twice a day from the first to the fourth position before repeating. The samples trained for three days a week on Sundays, Tuesdays, and Thursdays at 30 minutes per day for a consecutive period of three months. Data collection instruments were composed of data recording forms and questionnaires created by the researcher from the form for recording research data of Dr. Wichianchai Padungkiatwong (2003), which was on whether the pelvic cavity can be adjusted and was composed of the form for recording basic demographic data, the dysmenorrheal pain assessment form, the form for assessing satisfaction about the use of the 4 Basics Exercise Model with equilibrium therapy exercise. Instrument quality was tested by presenting the questionnaires to a panel of three qualified experts who tested the instruments for content validity and data consistency along with providing recommendations for modifications and corrections by
using the criteria of consistent opinions of qualified experts at 80%. Reliability was determined by using Cronbach’s Alpha Coefficient. This study obtained a value of $\alpha = 7.5$.

The main researcher led each exercise with the following steps:

1. The researcher explained and provided knowledge regarding equilibrium therapy and the 4 Basics Exercise Model with equilibrium therapy exercise in the first training;

2. The researcher recorded every experimental group’s participatory activities and followed-up to record dysmenorrheal pain levels before and after participation;

3. The researcher trained the experimental group in the 4 Basics Exercise Model with equilibrium therapy exercise at the same time after the students’ daily praying session. The students exercised for 30 minutes per time in four positions according to the program for training in the 4 Basics Exercise Model with equilibrium therapy exercise of Dr. Wichianchai Padungkitawong (2007) as follows (see the figures below);

4. The researcher monitored and recorded data of dysmenorrheal pain levels after practicing the 4 Basics Exercise Model with equilibrium therapy exercise at one, two, and three months;

5. The researcher assessed satisfaction about practicing the 4 Basics Exercise Model with equilibrium therapy exercise at the end of the research project;

6. The researcher analyzed the data obtained from the study.

RESULT

Demographic data were analyzed by distributing frequencies, percentages, dysmenorrhea data, and satisfaction toward application of the 4 Basics Exercise Model with equilibrium therapy exercise. Data were analyzed with mean values and standard deviations, while comparison of differences between mean dysmenorrhea scores in each time was performed by paired t-tests and setting statistical significance at .01. The students in the experimental group had a maximum age of 27 years and a minimum age of 18 years with a mean age of 19.9 years. Most of the students (58.1%) were aged 19 years. The pre-test level of pain before practicing the 4 Basics Exercise Model with equilibrium therapy exercise of 31 students was found to have a mean score of 5.1 after exercising, the post-test mean pain scores per month decreased at one, two, and three months with mean pain scores of 4.4, 3.5, and 2.3, respectively. The mean duration of dysmenorrhea at the first month before exercising was 1.8. After exercising, the post-test duration of dysmenorrhea dropped to 1.7, 1.3, and 1.0 days at one, two, and three months, respectively. The duration of menstruation in the first month before the 4 Basics Exercise Model with equilibrium therapy exercise was found to have a mean duration of 5.2 days with decreases at one, two, and three months after performing exercises in Position 4 to 5.1, 4.9, and 4.6 days, respectively. According to the study, the students were found to have decreased mean pain scores after performing the 4 Basics Exercise Model with equilibrium therapy exercise at Months 0, 1, 2, and 3 with mean scores of 5.1, 4.4, 3.5, and 2.3, respectively. When the mean pre- and post-test pain scores for Months 1, 2, and 3 were compared, the students in the experimental group were found to have reduced and different mean level of pain scores with statistical significance at .01 at Month 2 and Month 3, except for Month 1 in which no statistically significant differences were indicated. According to the studies on the satisfaction among students after performing the four equilibrium therapy exercises, most of the students (48.4%) were found to have moderate satisfaction about performing exercises in the four positions, followed by high satisfaction (38.7%) and the highest impression or satisfaction (12.9%). No students were found to have no
Getting Ready

1. Sit on a secure chair or bench that is no higher than your knees. Sit close to the front edge, so your thighs are beyond the chair's edge. Place both of your hands on your thighs with your palms spread and facing up.

2. Place your feet completely on the floor with your toes pointing forward and parallel with one another. The slids should be perpendicular to the floor. Spread your feet and knees to a distance equal to the approximate width of your shoulders.

3. Maintain the basic position and breathing and all times.

Figures 1a and 1b. “Ready” Position.

Position 1

1. Begin at the “ready” position.
2. Maintain the basic position at all times. While leaning forward, bend only the legs. Use the index fingers and thumbs to hold the knees by placing the index fingers in the hollow place under the kneecaps and placing the thumbs or the upper edge of the kneecaps. Spread all other fingers by curling the little fingers around to the inside. Stretch the back and lean forward with the chest extending outward. Pull the shoulder blades close together in the middle of the back. Pull the chin close to the neck so the neck and back are in the same direction.
3. Inhale slowly and as deeply as possible while retaining the aforementioned sitting position at all times. Allow the chest to expand forward and lift up. Keep the shoulder blades close together at all times. If performed properly, the back and neck muscles will feel stretched.
4. Inhale slowly and relax all parts of the body. Swallow saliva.
5. Repeat 5 times before returning to the ready position.

Figures 2a and 2b. Physical Fitness Position 1.

Position 2

1. Begin at the “ready” position.
2. Place the hands together (fingers intertwined) at the chest area with the elbows parallel to the floor. Flip the palms of the hands outward and slightly raise the arms. The elbows must be stretched and the fingers must push outward.
3. Inhale slowly and draw the arms above the head. Stretch upward until the arms are next to the ears. Inhale continuously and as deeply as possible. Hold the abdominal muscles. Contract the biceps. Keep the chin against the neck. Face forward.
4. Inhale slowly and gradually lower the hands with the palms up to rest on the top of the head in line with the spine. Relax. Maintain the basic position. Swallow saliva.
5. While holding and resting the hands on the head in the basic position, inhale slowly and as deeply as possible. Allow the chest to fully expand.
6. Inhale slowly and gradually relax while maintaining the basic position. Swallow saliva.
7. Repeat 5 times. Observe and adjust positions, if necessary.

End of Position 2

While the hands are resting on the head in the basic position, inhale slowly and deeply so the chest fully expands. Pull the hands and exhale slowly before resting the hands on the thighs with palms facing downward and fingers in line with the legs. Maintain the basic position. Relax as much as possible. Swallow. Feel relaxed.

Figures 3a, 3b, 3c, and 3d. Physical Fitness Position 2.
Position 3
1. Begin at the "ready" position. Place the palms of the hands downward.
2. Exhale slowly and deeply while extending the arms as far forward as possible. Keep the elbows straight. Place the palms of the hands so the index fingers make a 90-degree angle and face forward. Maintain the basic position at all times.
3. Exhale slowly and lift the right hand so the palm of the right hand is perpendicular to the index, middle, and ring fingers of the left hand. Swallow.
4. Inhale slowly and deeply. Use the right hand to pull all three fingers from the left hand to the body by bending the left wrist inward. The left arm must remain stretched. Hold the stomach in. Keep the chin against the neck. Face forward and twist the shoulders backward.
5. Exhale slowly. Relax the body and return the right hand to its former position. The left arm is to remain stretched. Spread the hands and fingers to the fullest. Relax the body. Maintain the basic position. Swallow.
6. Exhale slowly and deeply while fully spreading the fingers. Bend the wrist from down to up. Stretch the ring, middle, and index fingers onto a table and switch.
7. Exhale slowly. Relax the body. Return the hands to the position in the "ready" position with the palms of the hands facing downward. Swallow.
8. Repeat from the beginning and switch approximately 3 times per side. Then return to the "ready" position.

Figures 4a, 4b, 4c, and 4d. Physical Fitness Position 3.

Position 4
1. Begin at the "ready" position.
2. Maintain the basic position. Stretch by leaning slightly forward. Bend only at the hip joint with the hands extended slightly backward with both hands holding the sides of the chair and placed slightly behind the hips. Allow both shoulders to fully bend backward with the shoulder blades close together. The torso is straight in the basic position.
3. Slowly inhale as deeply as possible as the chest expands in the basic position.
4. Slowly exhale while extending the left foot and leg outward until it is elevated steady with the chair and the knees are taught. Slightly lift the heels from the floor. Swallow saliva and try to maintain the basic position.
5. Slowly, deeply inhale while lifting the toes and foot upward so the ankle is bent upward. Extend the toes as far as possible and try to hold the basic position.
6. Slowly exhale. Relax. Keep the feet elevated above the floor with the knees locked. Maintain the basic position and swallow saliva.
7. Slowly, deeply inhale while extending the toes as far as possible. Maintain the basic position.
8. Slowly exhale. Relax. Keep the feet elevated above the floor with the knees locked. Maintain the basic position and swallow saliva.
9. Slowly, deeply inhale. Rotate the ankle and toes as widely as possible. Begin by elevating the ankles and rotating outward first. Maintain the basic position.
10. Slowly inhale. Stop rotating. Relax. Keep the foot above the floor. Swallow saliva and maintain the basic position.
11. Slowly, deeply inhale. Rotate the ankle in the same direction as at first. Maintain the basic position.
12. Slowly exhale. Return the foot to its original place in the "ready" position. Swallow saliva.
13. Repeat from the start by switching sides for approximately three times per side. Always maintain the basic position.

Figures 5a, 5b, and 5c. Physical Fitness Position 4.
satisfaction or low satisfaction toward exercises in the four positions. When satisfaction of students with moderate and higher satisfaction was added, only 51.6% of students were found to be satisfied.

**DISCUSSION**

According to the findings, the students in the sample group were found to have reduced levels of pain after receiving training in the 4 Basics Exercise Model with equilibrium therapy exercise. At Months 1, 2, and 3, when the mean pain scores were compared at different times at Months 1, 2, and 3, the students were found to have reduced mean scores with statistical significance at .01, except for in Month 1. The 4 Basics Exercise Model with equilibrium therapy exercise were used to adjust structural equilibrium. These exercise positions adjusted every muscle of the body for equilibrium in both the left and right sides by functioning to coordinate with every part and adjusting or organizing the bone structure in the muscle group requiring equilibrium. The findings concurred with the study of Wichianchai Padungkiatwong (2003: 220), who found the four basic exercise positions to be able to adjust the pelvis and the fact that the pelvis twisted and lost equilibrium was a cause of gynecological diseases such as dysmenorrheal pain (Wichianchai Padungkiatwong 2003: 222). The fact that the pelvis has lost equilibrium, causes the body’s nervous, circulatory, and lymphatic systems to function abnormally for an accumulated period of time before reaching a trigger point with pain following injuries due to loss of balance in the functioning of various systems or stress. Muscles with trigger points will contract for a long and continual period, causing fatigue, localized ischemia, and changes to environments outside the cells, including secretion of pain-causing substances such as histamine, kinin, and prostaglandin. Prostaglandin will increase uterine contractions, causing dysmenorrheal pain. These changes create a cycle of increased motor or sympathetic activity causing more pain. Furthermore, signals sent from trigger points to the central nerves also cause pain (Kanokwan Diloksakunchai 2009: 22). These findings were found to concur with the study of Ratinan Kiatmala (2004: 103) who studied and found the application of the four exercise positions to be able to reduce menopausal symptoms. The aforementioned findings also concurred with the study of Natnicha Pumsawai (2003: 95-98) who studied self-care models of pregnant women with equilibrium therapy guidelines at the Pre-Natal Clinic, Cha-am Hospital, Phetchaburi, and found the level of symptoms occurring during the pregnancies of the experimental group to be lower than the control group after the experiment and the health conditions of pregnant women in the experimental group were found to be better than the control group, thereby indicating that performance of the 4 Basics Exercise Model with equilibrium therapy exercise was able to reduce dysmenorrheal pain. Equilibrium adjustments using the 4 Basics Exercise Model with equilibrium therapy exercise were positions applied from yoga positions, which caused muscles and bones to move and adjust equilibrium in the same manner, which concurred with the study of Sunanta Yangwanitchaset (2005: 209-217) who conducted a descriptive study of pre-menstruation symptoms, dysmenorrheal pain and practice to relieve symptoms of female students of Songkhlanakarin University with the aim of studying pre-menstruation symptoms, dysmenorrheal pain and practices to relieve symptoms of female students. According to the findings, aerobic and yoga exercises were found to have helped to reduce pain with statistical significance at .05. Observations found the practice of the 4 Basics Exercise Model with equilibrium therapy exercise to require a minimum continual training period of three times per week in order to achieve visible effects because training had to
be gradual for the purpose of allowing the muscles to organize or adjust bone structure. Time is required for muscles to gain equilibrium and have strength to support bone structures with balance at all times. In this study, a period of two months was required to achieve visible effects. A period of one month was able to reduce symptoms without statistically significant differences at .01 because loss of equilibrium in the sample group had differences with some samples having severe symptoms and requiring longer correction time than persons with structures who had minor equilibrium loss.

According to the findings of this study, most of the students had high degrees of satisfaction (Maximum Satisfaction) at only 12.9% and 38.7%, which amounted to only 51.6% of samples with overall satisfaction above good levels. Hence, the findings did not support the set hypothesis at 80%. The 4 Basics Exercise Model with equilibrium therapy exercise was difficult to practice because the positions involved breathing practices which required breathing with the arms folded over the abdomen while also constricting the buttocks. The samples had to be trained for a long period of time. Furthermore, the exercise positions had to involve breathing. Therefore, training in the 4 Basics Exercise Model with equilibrium therapy exercise encountered difficulties in training correctly. In addition, the samples had to exercise continually and regularly in order to have positive outcomes because, if the samples stopped exercising or exercised inconsistently, the adjusted structures would return to the original conditions before training unless the muscle systems had adequate strength to support the structure. Hence, the indication is that the 4 Basics Exercise Model with equilibrium therapy exercise depended on determination to exercise in order to achieve satisfaction about the 4 Basics Exercise Model with equilibrium therapy exercise. Moreover, some students encountered aching muscles when exercising at the beginning of the first week. Hence, the students felt that these four exercise positions disturbed the students’ health and made them uncomfortable. Consequently, the students withdrew from the sample group. In addition, some of the students were not impressed. According to the interviews, the students who withdrew from the sample group stated the following:

I can’t keep up with the training. I felt like I had a fever on the first day after training. My muscles were aching so much that I couldn’t sleep. I had to take two paracetamol pills before I felt better and was able to sleep. You did explain that this symptom may occur and I improved slightly on the next day. So, I tried to join the group and train with you again. The same symptom occurred. I had to take pills again. I’d like to stop training. I’m afraid this will happen every time I train. I think I will go back to taking pain relief medication when I have dysmenorrhea next month.

**CONCLUSIONS**

According to the findings, the application of the 4 Basics Exercise Model with equilibrium therapy exercise to adjust structures was able to reduce pain and the positions have to be practiced regularly for at least three times per week over a consecutive period of two months in order to realize the outcomes with changes capable of reducing pain. The findings also revealed the positions to be able to reduce the duration of menstruation and dysmenorrhea.

**References**


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