Deep Breath Relaxation Training to Reduce Dysmenorrhoea Pain in Nursing Students, University of Muhammadiyah Gorontalo

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Abstract. *Dysmenorrhoea is one of the most common gynecological problems affecting more than 50% of women and causes an inability to perform daily activities for 1 to 3 days each month. One of the management of pain during menstruation is by relaxing deep breaths, namely by teaching clients how to do deep breaths and how to exhale slowly so as to reduce pain intensity and also increase lung ventilation and increase blood oxygenation. The purpose of this community service is to provide training to nursing students on deep breathing relaxation which can reduce menstrual pain (dysmenorrhoea). Deep breath relaxation training is carried out through the pretest stage, the training stage and the post test. There are 42 students who were given training in community service, namely nursing students from the 2016 and 2017 Muhammadiyah University of Gorontalo. The degree of dysmenorrhoea pain at the time of the pre test was mild pain 0% moderate pain as much as 81.0% and severe pain 19.0%. 9% and severe pain 19.0%. Based on the results of the training, it showed that most female students stated that this training was very useful because they gained knowledge and understanding of overcoming menstrual pain, after doing deep breathing relaxation students felt a decrease in dysmenorrhoea pain.*

Keywords: *Deep Breath Relaxation, Dysmenorrhoea Pain*

INTRODUCTION

Dysmenorrhoea is one of the most common gynecological problems, affecting more than 50% of women and causing inability to perform daily activities for 1 to 3 days per month in about 10% of these women. The absence of adolescents from school due to dysmenorrhea reaches approximately 25% (Aningsih, Sudiwati, & Dewi, 2018). Dysmenorrhea is painful menstruation that affects 30% of women. Dysmenorrhoea is divided into two, namely primary dysmenorrhoea, namely there is no pathological basis aged 20 to 25 years, secondary dysmenorrhea, there is a pathological disease aged 30 to 40 years (Yang & Kim, 2016)

According to data from the World Health Organization (WHO) in 2011, there was an incidence of 1,769,425 people (90%) of women who experienced dysmenorrhoea with 10 to 15% of them experiencing severe dysmenorrhoea, resulting in limited activity complained by 15% of young women who experience dysmenorrhea (Organization, 2011). Dysmenorrhea pain can also occur along with nausea, headaches, feelings of fainting, irritability.

Of the 42 nursing students at Muhammadiyah University of Gorontalo who were given training, all said that they had experienced dysmenorrhea, 12 female students who understood dysmenorrhea, namely taking medication, 8 female students when dysmenorrhea pain could not do activities and deal with pain only by resting, 12 female students when Dysmenorrhea pain occurs only by taking anti-pain medication to reduce pain. because of the severe pain felt by the female students and even fainted, 22 female students felt irritable, bad mood, and irritable, and 8 female students at the time of dysmenorrhea felt nausea, vomiting, diarrhea, dizziness, and headaches, but only left alone. just like that because they think it's a common thing.

Before conducting the training, we also asked female students about the menstrual cycle so that in selecting respondents to be sampled exactly according to the existing criteria. The results of interviews with 40 nursing students, 28 female students said they experienced regular menstrual cycles every month, while 8 female students said they experienced irregular menstrual cycles that usually occur every month sometimes also occurs after every two months, and 4 students said they had two menstrual periods. times a month. As for the purpose of the training is that students are equipped with knowledge and skills in dealing with dysmenorrhea / pain during menstruation by doing deep breath relaxation.

METHODS

The materials used in this training are deep breath relaxation videos that are played using an LCD and a projector board, for the material given in the form of Power points and as presenters, our team (lecturers from the Faculty of Health Sciences) Muhammadiyah University of Gorontalo. In this training also uses observation sheets to see the extent to which students understand before and according to training. So that the team can measure the differences in knowledge and understanding of the training provision. The design used in this study was a pure experiment pre-test and post-test involving a control group and an intervention group (Riyanto, 2011).

The targets in this training were nursing students at the University of Muhammadiyah Gorontalo, batch 2016 and 2017, who were taken randomly so that 50 female students were obtained. This deep breath relaxation training was carried out from January 13 to January 31, 2017. That is the initial stage of collecting data on female students related to menstrual pain and menstrual cycles experienced, the second stage conducting a pre test, the second stage of training by providing materials and direct practice related to relaxation deep breaths to reduce pain during menstruation and the third stage is doing a post test to review the understanding and actions of female students in deep breathing relaxation after training.

In this training we looked at the results of the pre-test and post-test, where the pre-test was the result before the deep breath relaxation training was carried out, while the post-test was the result after the deep breath relaxation training was carried out.

How to measure pain scale by observation, namely by using a pain scale sheet according to the Wong Baker Pain Branch Scale, namely:

Pain Scale 0-10

1. Pain scale 0: no pain

2. Pain scale 1 to

3: mild pain (can still be endured, activity is not disturbed)

Pain scale 4 to 6: moderate pain interferes with physical activity)

Pain scale 7 to 9: severe pain (inability to do activities)

Pain scale 10: very severe pain

RESULTS AND DISCUSSION

Differences in the degree of dysmenorrhoea pain pre-test and post-test in the control group

Table 1 distribution of pain degrees of dysmenorrhoea pre-test and post-test in the control group of nursing students, Muhammadiyah University of Gorontalo

Dysmenorrhoea pain	Mean	N	Std. deviation	P Value
Before relaxing deep breath	5,86	21	1.062	0,000
After relaxing deep breath	3,19	21	1.632	

Based on Table 1 above, the average dysmenorrhoea pain in the control group at the beginning of the meeting can be seen in the mean column which is 6.00 with a standard deviation in the SD column which is 1.049 while for the average dysmenorrhoea pain in the control group at the end of the meeting it can be seen in the mean column, namely 5 , 10 with a standard deviation of 1.546. The results of the paired sample T-test statistical test showed a significant value or P value was 0.002.

Differences in the degree of dysmenorrhoea pain before and after deep breath relaxation in the intervention group. Dysmenorrhoea pain in the intervention group before deep breathing relaxation can be seen in the mean column, namely 5.86 with standard deviation

The SD column is 1.062, while the average dysmenorrhoea pain after deep breathing relaxation can be seen in the mean column, namely 3.19 with a standard deviation of 1.632. The results of the paired sample T-test statistical test obtained a significant value or P value is 0.000. From these results it can be concluded that the Ha hypothesis is accepted, namely there is an effect of deep breath relaxation on reducing dysmenorrhoea pain.

Dysmenorrhoea is a common problem that is often complained by women who experience menstruation, it is the main gynecological problem that is most often complained of. Dysmenorrhoea can also be defined as pain during menstruation that prevents women from doing normal activities (Hapsari & Anasari, 2015; Muhammad & Sumarmi, 2019). Dysmenorrhoea is painful menstruation that occurs without signs of pelvic infection or disease. Dysmenorrhea usually occurs due to the excessive release of a certain prostaglandin, prostaglandin F2 alpha, from uterine endometrial cells (Kustriyanti & Boediarsih, 2017)

The causes of primary dysmenorrhea are uterine hyperactivity, endothelin, increased prostaglandins, vasopressins and peripheral nerve damage. Uterine hyperactivity is related to uterine blood flow. Uterine hyperactivity occurs in endometriosis and adenomyosis. The contracted uterus causes angina, causing pain (Yang & Kim, 2016)

Endothelin is potent uterotonin in the uterus that is not pregnant. Endothelin plays a role in inducing smooth muscle contraction at the border with the endometrial gland. The place that contains the most endothelin bonds is the glandular epithelium at that site. prostaglandin (PGF2α) and induces other glands to produce other endorphins (paracrine). Ischemia that occurs due to contractions further stimulates the release of endorphins and prostaglandins (PGF2α) which will cause further dysperistalsis (Nurindasari & Hengky, 2020).

Causes of secondary dysmenorrhea

Secondary dysmenorrhoea can be caused by endometriosis where uterine tissue grows outside the uterus and this can occur in both young and old women. This implant still reacts to estrogen and progesterone so that it can shed during menstruation. Shedding results if it falls into the abdominal cavity and stimulates the peritoneum to produce pain. Endometriosis is found in 10-15% of women aged 25-33 years. Secondary dysmenorrhoea can also be caused by fibroids, pelvic inflammatory disease; IUD; tumors in the fallopian tubes, intestines, or bladder; uterine polyps, and edenomyosis, which is a condition in which the endometrium grows through the myometrium (Yang & Kim, 2016)

CONCLUSION AND SUGGESTION

From the results of deep breath relaxation training for Nursing Students of Muhammadiyah University of Gorontalo, it was concluded that 34 students experienced menstrual pain / dysmenorrhoea and 8 students who experienced moderate dysmenorrhoea pain degrees. Deep breath relaxation training has an effect on reducing dysmenorrhoea pain before and after deep breathing relaxation in nursing students at Muhammadiyah University of Gorontalo.

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