



Article

## THE EFFECT OF MOZART CLASSIC MUSIC ON REDUCING INTENSITY OF PAIN IN DISMENORRHEA

Yuhendri Putra<sup>1</sup>, Sri Wahyuni<sup>2</sup>

<sup>1</sup>Bachelor program of Midwifery, Prima Nusantara Bukittinggi Health Institute, Bukittinggi, Indonesia

<sup>2</sup>Bachelor program of public health, Prima Nusantara Bukittinggi Health Institute, Bukittinggi, Indonesia

### SUBMISSION TRACK

Received: Januari 2019  
Final Revision: Maret 2019  
Available Online: Maret 2019

### KEYWORDS

Mozart music, dismenorrhea, pain relief

### CORRESPONDENCE

Phone: +62 812 6703 191  
E-mail: yuhendriputra@gmail.com

### A B S T R A C T

Dysmenorrhea is abdominal pain originating from uterine cramps and occurs during menstruation. Dysmenorrhea among young women often disrupts daily activities and learning activities in schools where 12% of teenagers in West Sumatra often do not attend school because of dysmenorrhea and 10% of teenagers in Bukittinggi often do not attend school because of dysmenorrhea. This study aims to determine the effect of Mozart classical music therapy on the reduction of dysmenorrhea intensity in students of Tilatang Kamang Junior High School in 2018. This type of research is quasi experimental with one group pre test-post test design approach. The population in this study were students of Tilatang Kamang Junior High School II, taking samples using accidental sampling technique with a sample size of 10 people. The results showed that the average intensity of dysmenorrhea pain before intervention was 4,5 and after intervention fell to 2,8. There is a difference in the average intensity of dysmenorrhea pain before and after the intervention with an average difference of 1,7 and p-value = 0,000. It can be concluded that Mozart classical music therapy has a significant effect on the intensity of dysmenorrhea pain. For this reason it is expected that respondents, generally women of childbearing age can utilize Mozart classical music as a form of effective complementary therapy to reduce the intensity of dysmenorrhea pain and can reduce dependence on pain relievers when dysmenorrhea.

## I. INTRODUCTION

Adolescent reproductive health is a healthy condition that concerns the reproductive systems, functions and processes of adolescents. Reproductive health is not only free from diseases and disabilities, but also mental and social health from the tools, systems, functions and processes of reproduction. The need for adolescent reproductive health is actually a world problem, but in our country it does not get adequate attention (Pinem, 2009).

Adolescent reproductive health problems are still a problem that needs attention. Adolescent reproductive health is not only a sexual problem but also concerns all aspects of reproduction, especially for young women who later become women who are responsible for their offspring. An understanding of menstruation is needed to be able to encourage adolescents who experience menstrual disorders to know and take the best attitude about the reproductive problems they experience in the form of cramps, pain and discomfort associated with menstruation which is called dysmenorrhea (Widyaningsih, 2007).

Dysmenorrhea is abdominal pain that comes from uterine cramps and occurs during menstruation. Called primary dysmenorrhea if no underlying cause is found, and secondary dysmenorrhea if the cause is an uterine abnormality. 50% of women have primary dysmenorrhea, 15% of whom experience severe pain. Usually occurs about 2 years after the first menstruation. Primary dysmenorrhea pain is thought to originate from uterine contact stimulated by prostaglandins.

The incidence of menstrual pain in the world is very large, on average more than 50% of women in every country experience menstrual pain (Helvina, 2016). An epidemiological study in a population of adolescents (12-17 years old) in the United States, reported a prevalence of menstrual pain of 59.7% of those who complained of pain, 12% of severe pain, 37% of moderate pain, and 40% of mild pain. This incident caused 14% of adolescents to frequently miss school. In Indonesia, it is estimated that 55% of women of reproductive age are tormented by menstrual pain. Meanwhile, the incidence of menstrual pain ranges from 45-95% among women of productive age (Helvina, 2016).

The therapeutic approach implies that all patients should be treated without drugs and through approaches. The psychotropic approach must be followed by knowing the individual. In this sense, the therapeutic approach can be categorized as drug treatment, drug-free treatment approach and treatment through removal of the uterus. Regarding the psychotropic approach, various drugs such as SSRIs (Fluoxetine, Sertraline, Paroxetine) and SNRIs (Venlafaxine, Desvenlafaxine, Duloxetine) have been used. The drug-free treatment approach can change your lifestyle or change your diet, using a combination of herbs, counseling, using relaxation methods.

Currently, non-pharmaceutical approaches are very widely used regarding this syndrome one of these approaches is Music-Therapy (MT) (Javad Setareh, 2017).

The American Music Therapy Association (AMTA) describes Music-Therapy as an approach to maintain, and improve the physical and mental health status of an individual, which allows therapy to shape changes in patient emotions and behavior (Javad Setareh, 2017).

At present, apart from pharmacotherapy and psychotherapy, MT is used as an effective method in the psychiatric setting regarding patients with various conditions. MT contains a variety of useful features and has been established to be effective in treating various disorders such as anxiety, depression, neurotic patient mood care, psychological hygiene and alleviating travail during natural labor and other problematic conditions. In Other countries, we do a study, which is more or less the same as the current study. Viswanathan (2015) says that listening to classical music meditation can dramatically relieve PMS symptoms. It seems plausible that due to the prevalence of STDs and the absence of an efficient cure for this issue, research is currently being carried out to achieve a therapeutic approach that is applicable, economical, safe and effective with regard to mitigating the severity of PMS symptoms (Javad Setareh, 2017).

From the initial survey the researchers conducted on 3<sup>rd</sup> grade students of SMPN 2 Tilatang Kamang. The results of a survey show that 10 female students, 5 people experienced dysmenorrhea by overcoming it by taking painkillers, and 5 people experienced dysmenorrhea by resting, sleeping, drinking water. and use eucalyptus oil. Meanwhile, during the survey, students said that they had never made any efforts to overcome dysmenorrhea in a non-pharmacological way, namely listening to Mozart's classical music. Based on the above background, the authors are interested in researching how the effect of Mozart's classical music therapy on reducing the intensity of dysmenorrhea in Tilatang Kamang 2 Junior High School students in 2018

## II. METHODS

Research conducted using this type of quantitative analysis with quasi experimental research design, one group pre-post test. This study was conducted in SMPN 2 Tilatang Kamang. The population in this study were all student 3<sup>rd</sup> grade who experience dysmenorrhea. The sample of this study was taken using non-random sampling technique, namely accidental sample. The measuring instrument used was the pain scale observation sheet to analyze the intensity of pain. the results of normally distributed data and using the Paired T-Test with a significance level of  $p < 0.05$  in bivariate analysis.

### III. RESULT

**Table 1. Average Dysmenorrhea Pain Before Mozart Classical Music Intervention**

Variabel	Mean	Min – Max	N
Pain scale before intervention	4,5	3 – 6	10

Based on table 1, the average f pain scale before intervention is 4.5 with minimum value 3 and maximum value is 6

**Table 2. Average Intensity of Menstrual Pain after Intervention in Breath Relaxation Technique**

Variabel	Mean	Min – Max	N
Pain scale after intervention	2,8	1 – 5	10

Based on table 2, the average f pain scale before intervention is 2.8 with minimum value 1 and maximum value is 5

**Table 3.  
Effect of Mozart Classical Music Therapy on Dysmenorrhea Pain Intensity**

Variabel	Mean	Mean Different	SD	t	df	95% CI	p-value	N
Pre Test	4,5					1,35		
Post Test	2,8	1,7	0,48	11,129	9	– 2,04	0,000	10

The mean pain intensity of dysmenorrhea before intervention was 4.5 and decreased to 2.8 after intervention. There is a difference in the average pain intensity of dysmenorrhea before and after the intervention with an average difference of 1.7 and p-value = 0.000. This means that Mozart's classical music therapy intervention has a significant effect on the intensity of dysmenorrhea pain.

#### IV. DISCUSSION

According to Hendrik (2006) dysmenorrhea found an increase in levels of PGE and PGF2 alpha in the blood, which will stimulate the myometrium resulting in an increase in uterine contractions and dysrhythmias. As a result, there will be blood flow and oxygen to the uterus and will result in ischemia. This results in a response from the nociceptors due to a harmful stimulus and initiates neural transmission by releasing substances that produce pain.

According to Bobak, Lowdermilk, Jonsen (2004) that listening to music can produce endorphinic substances (a morphine-like substance supplied by the body that can reduce pain / pain) which can inhibit the transmission of pain impulses in the central nervous system, so that the sensation of menstrual pain can be reduced, music also works on the limbic system which will be delivered to the nervous system which regulates the contraction of the body's muscles, thereby reducing muscle contraction.

Finnerty (2006) conducted a qualitative study entitled "Music Therapy As An Intervention For Pain Perception", with the statement that the results of the study were that music therapy could affect the body's biological state such as emotions, memory. A steady, calm beat exerts a strong influence on the patient, creating a relaxed state. This relaxed state triggers the activation of the parasympathetic nervous system which functions as a counterweight to sympathetic function. Music therapy can be a distraction of a person's pain and reduce analgesic side effects, music therapy can also reduce anxiety, depressive symptoms, increase motivation, thereby contributing to improving the patient's quality of life.

The results of this study are in line with research conducted by Arifa Rina (2011), regarding the effect of Mozart music therapy on reducing the degree of menstrual pain in female adolescents at SMAN I Karangnongko Klaten, where the results of the study of 25 respondents who were given classical music therapy have been clinically proven to reduce menstrual pain. In addition, classical music therapy is also seen as an alternative therapy that is cheap and easy to apply and has no side effects on young girls at SMAN I Karangnongko Klaten.

The results of this study are in line with research conducted by Maulina Rozi (2014), regarding the effect of Mozart classical music therapy on reducing dysmenorrhea pain in young women at SMPN 3 Batang Anai, and aims to see the effect of classical Mozart music therapy on the intensity of dysmenorrhea in adolescents, where the results Research from 14 respondents who were given Mozart classical music therapy found a reduction in dysmenorrhea pain in young girls at SMPN 3 Batang Anai.

The results of this study are in line with previous research, namely Andi Jumriati Zainuddin (2014), regarding the effect of religious music therapy on reducing the degree of

menstrual pain in the Makassar model of Man 2 students. However, there are fundamental differences between this study and previous research, namely starting from the place of research, and the number of respondents where in Andi Jumriati Zainuddin's study using a sample of 35 while this study used 10 samples, and the type of music used. The next difference is that the specific objective of Andi Jumriati Zainuddin's research is to determine the degree of primary menstrual pain on the second day after religious music therapy is carried out on grade 2 IPS MAN 2 students in Makassar Model. Meanwhile, the specific purpose of this study was to determine the effect of Mozart's classical music therapy on the decrease in the intensity of dysmenorrhea on the first day of the students of SMPN 2 Tilatang Kamang Tahun.

## V. CONCLUSION

Music provides pleasurable sensory stimulation which causes the release of endorphins that block pain impulses. Concretely, Mozart music therapy is effective in reducing the degree of dysmenorrhea pain because Mozart music can help a person's mind to rest, so that the pain that arises as a result of fatigue, anxiety and psychology can be reduced. It can be advised to students who experienced dysmenorrhea to listen mozart music as one of non pharmacologic treatment to reducing pain scale of menstrual.

## REFERENCES

- Aziz Alimul Hidayat, 2007. *Metode Penelitian Keperawatan dan teknik Analisa Data*, Penerbit Salemba Medika
- Anugoro, D. 2011. *Nyeri Haid*. Yogyakarta: Andi
- Bobak, Lowdermik. 2007. *Buku ajar keperawatan maternitas*. Jakarta: EGC
- Campbel, Don.2003. *Efek Mozart, Manfaat Kekuatan Musik*. Jakarta: EGC
- Djohan. 2006. *Terapi Musik Dan Teori Dan Aplikasi*. Yogyakarta: Galangpress
- Djohan. 2009. *Psikologi Musik*. Yogyakarta: Best Publisher
- Dofi, Bellavia A. 2010. *Psikologi Musik Terapi Kesehatan*. Jakarta:Golden Terayon Press
- Hendrik. 2006. *Problem Haid: Tinjauab Syariat Islam dan Medis*. Solo: Tiga Serangkai
- Jumriati, Ziabuddin, Andi. 2014. *Pengaruh Terapi Musik Religi Terhadap Penurunan Derajat Nyeri Menstruasi Pada Siswi Man 2 Model Makassar*. Skripsi. Universitas Islam Negeri Alauddin Makassar. [Http://uin-alauddin.ac.id](http://uin-alauddin.ac.id)
- Manuaba, Ida Ayu Chandranita, Dkk. 2009. *M emahami Kesehatan Reproduksi Wanita Edisi 2*. Jakarta: Egc
- Myles, I.A. 2014. *Fast Food Fever : Reviewing The Impacts Of The Western Diet On Immunity*. Nutrition Journal. Dapat Diakses Dari : [Http://Www.Nutritionj.Com](http://Www.Nutritionj.Com). Diakses Pada 26 September 2014.
- Notoatmodjo, S. 2010. *Metodologi Penelitian Kesehatan*. Jakarta : Rineka Cipta
- Rina, Arifa. 2011. *Pengaruh Terapi Musik Terhadap Nyeri Haid Pada Remaja Putri Kelas II Di SMAN 1 Karangnongko Klaten*. Skripsi thesis, STIKes Aisyiyah Yogyakarta. <http://lib.unisayogya.ac.id>
- Potter, P.A, Dan Perry, A.G. *Fundamental Of Nursing: Concepts, Process And Practice*. Edisi 4. Volume 2. Alih Bahasa: Renata, K Et Al. Jakarta: Egc. 2006

- Potter&Perry. 2005. *Buku Ajar Fundamental Keperawatan*. Edisi 4. Jakarta: Penerbit Buku Kedokteran EGC
- Prawirohardjo, Sarwono. 2009. *Ilmu Kebidanan*. Jakarta: Bp-Sp
- Tamsuri, A. 2007. *Konsep Dan Penatalaksanaan Nyeri*. Jakarta: Egc
- Winkjosastro, H., Saifuddin, A.B., Dan Rachimdhahi, T. 2009. *Ilmu Kandungan*. Edisi Kedua. Jakarta : Pt Bina Pustaka Sarwono Prawirohardjo
- Setareh, Javad. 2017. *Assessing efficacy of music therapy on Pre-menstruasi syndrome's severity of symptoms*, vol 4 issue 5, [2017]: 1-33, [online], Dari : <http://ecronicon.com>
- Setiyaningrum, Erna. 2014. *Pelayanan keluarga berencana dan kesehatan Reproduksi*. Jakarta: Trana Info Media
- Yuliatun, Laily. 2017. *Pengaruh terapi musik klasik terhadap intensitas Dismenore primer pada mahasiswi PSIK-A 2006-2007 FKUB Malang*, Vol.1 No.1 Dari : [www.jik.ub.ac.id](http://www.jik.ub.ac.id)