

## CASE STUDY OF 1ST STAGE ACTIVE PHASE OF LABOR WITH CONTRACTION PAIN USING NON - PHARMACOLOGICAL THERAPY IN THE WATERSHED AREA (DAS) OF PALANGKA RAYA CITY

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### Abstract

*Background: Childbirth is the process of expelling a fetus that occurs at term (37-42 weeks) and is born spontaneously with a posterior presentation without complications for the mother and fetus. Childbirth is a normal physiological event. The Childbirth is a social event for mothers and families to look forward to for 9 months. During birthing process, the mother feels pain which can disrupt comfort during contractions, and can affect psychological conditions and cause complications during the birth process. Objectives: Providing Midwifery and Childbirth Care to Mrs. S G2P1A0 Age 27 Years Old during 1st Active Phase with Contraction Pain At UPTD Pahandut Community Health Center. Method: The type of research used is descriptive qualitative with a case study approach method. The design uses field observations. Data collection methods include interviews and analysis of midwifery care documentation. Data analysis was obtained from case study research by creating a narrative from the results of observations and descriptions of midwifery care analysis, assessment, formulating diagnoses, planning, implementing and evaluating midwifery care. The research was conducted in June 2024. Results: Mrs. S was willing to try alternative complementary medicine, using the Birthing Ball (Pilates ball) by doing movements such as sitting on the ball and rocking back and forth, and the mother felt that the pain relieved and more comfortable.*

**Keywords:** Contraction Pain, First Stage of Labor, Birthing Ball, Watershed (DAS).

### 1. INTRODUCTION

The Childbirth is a normal physiological event. The Childbirth is a social event for mothers and families to look forward to for 9 months [1]. During birthing process, the mother feels pain which can disrupt comfort during contractions, and can affect psychological conditions and cause complications during the birth process. Based on the target (Millennium Development Goals), one of the SGDs targets in 2020, namely MMR (Maternal Mortality Rate) 230 per 100,000 live births and IMR (Infant Mortality Rate) 24 per 1000 live births, shows that MMR and IMR in Indonesia in 2020. MGDs were then continued with SDGs (Sustainable Development Goals), one of the SDGs targets is to reduce MMR to less than 102 per 100,000 live births and IMR to 12 per 1000 live births by 2030 (WHO, 2021). According to the 2020 annual report of the directorate of family health, in Indonesia MMR and IMR are one of the health development indicators in the RPJMN (National Medium Term Development Plan) and SDGs (Sustainable Development Goals), based on SUPAS (Inter-Census Population Survey) data for both MMR and IMR including MMR of 305/100,000 and IMR of 22.23/1000 ([2]). The

Maternal Mortality Rate (MMR) in Central Kalimantan Province in 2023 increased in 4 districts/cities, namely Kapuas district, North Barito, Gunung Mas and Palangka Raya city. Where in 2022 there were 63 cases recorded, and in 2023 there were 72 cases. The main cause of maternal death in 2023 increased from 2022 because not all pregnant women receive 6 times the standard of service and not all mothers give birth at health service facilities centre due to difficulties in access to health service centers, readiness of health service facilities, financing, and socio-cultural influences[3]. Based on the results of a preliminary survey carried out on April 22 2024 at the UPTD Pahandut Health Center, Palangka Raya City, it was found that the number of normal births in the last month ( March – April 2024) there were 17 normal births.

## 2. METHODOLOGY

The type of research used is descriptive qualitative with a case study approach method. The design uses field observations. Data collection methods include interviews and analysis of midwifery care documentation. Data analysis was obtained from case study research by creating a narrative from the results of observations and descriptions of midwifery care analysis, assessment, formulating diagnoses, planning, implementing and evaluating midwifery care. The research was conducted in June 2024 at UPTD Pahandut Health Centre Palangka Raya, where this Health Centre is not far from the Kahayan watershed (DAS) in Palangkaraya City and many people in the Health Centre area live along the Kahayan river.

## 3. RESULTS

The results of the article review can be seen in the following table:

**Table 1: Article Summary**

| Journal  | Title   | Objective  | Research Method   | Result   |
|--|---|--|---|--|
| Author:<br>Silvia<br>Natasa, et<br>all                                   | <i>Effectiveness of<br/>Reducing Pain in<br/>1st Stage of Labor<br/>with<br/>Counterpressure<br/>Massage<br/>(Efektfitas<br/>Penurunan Rasa<br/>Nyeri Persalinan<br/>Kala 1 Dengan<br/>Country:<br/>Indonesia</i> | <i>is to know<br/>whether<br/>counterpressure<br/>massage can<br/>help reduce<br/>pain in the first<br/>stage of labor</i> | <i>This<br/>research<br/>uses<br/>qualitative<br/>research<br/>methods<br/>with a case<br/>study<br/>research<br/>strategy,</i> | <i>The subjects<br/>used were 2<br/>mothers giving<br/>birth with a pain<br/>scale of 8<br/>(severe pain).<br/>The care given<br/>to Mrs. M with a<br/>pain scale of 8,<br/>after<br/>counterpressure<br/>massage<br/>therapy the pain<br/>scale was<br/>reduced to 5.<br/>And for Mrs. I<br/>with an initial<br/>scale of 8 to 6<br/>after<br/>counterpressure<br/>massage<br/>therapy.</i> |
| Title of<br>Journal:<br>Journal of<br>Midwifery<br>Information<br>(JoMI) |   |  |   |  |
| Database:<br>Google<br>Scholar   |   |  |   |  |

**Table 2: Article Summary**

| Journal  | Title   | Objective   | Research Method  | Result   | Reasons for Selecting articles   |
|--|---|---|--|--|--|
| Author: Indriyani Makmun, et all<br>Published in: 2021<br>Country: Indonesia<br>Title of Journal: Jurnal Pengabdian Masyarakat Berkemajuan<br>Database: Google Scholar | <i>Birthing Ball Therapy to Reduce Pain in the First Stage of Labor in Mothers Giving Birth at Mataram City Regional Hospital</i><br>(Terapi Birthing Ball untuk Mengurangi Nyeri Kala I Persalinan pada Ibu Bersalin di RSUD Kota Mataram) | <p><i>Birthing ball is an active birth method using a Pilates ball which helps mothers in the first stage of birth. Using the Pilates ball by doing movements such as sitting on the ball and rocking back and forth, makes labor progress, provides a feeling of comfort and, and increases endorphin secretion due to the flexibility and curvature of the ball. stimulates receptors in the pelvis. The aim of this community service is to provide education and training about birth balls</i></p> | <p><i>Lecture/delivery of material using leaflets, practical work or direct training to participants as well as questions and answers to support mothers' knowledge about birthing ball therapy.</i></p> | <p><i>proven by the activeness of the participants in this activity, the implementation of the activity has been able to increase the knowledge of mothers in labor in reducing pain during the first stage of labor, can manage pain during contractions and maternal discomfort such as excessive anxiety and managing breathing and can reduce back pain and shortness of breath. The results of this activity have a very positive impact on the birth process of mothers who are born normally or vaginally without any intervention by carrying out a Sectio Caesaria procedure.</i></p> | <p><i>The research results and discussion can be used in childbirth care</i></p> |

**Table 3: Article Summary**

| Journal   | Title  | Objective  | Research Method  | Result   | Reasons for Selecting article                                      |
|---|--|--|--|--|--|
| Author: Atresia Ajeng, et all<br>Published in: 2022<br>Country: Indonesia | <i>REDUCE LABOR PAIN BY USING COMPLEMENTARY METHODS (MENGURANGI NYERI PERSALINAN DENGAN MENGGUNAKAN METODE KOMPLEMENTER)</i> | Normal labor pain occurs in every woman who is about to give birth, but each individual shows a different response. If the pain is left untreated, it will affect the mother's condition in the form of fatigue, worry, fear and cause stress, which can increase the pain and can affect the birthing process. So, it is necessary to review complementary methods including music therapy, aroma therapy, back massage, Gym Ball technique, relaxation techniques, combined massage, birth ball and, dhikr to reduce labor pain, Inhalation Aromatherapy Using Lavender Essential Oil, using massage techniques, counterpressure, Transcutaneous Nerve Electrostimulation (TENS) | literature study with a systematic search of computerized databases (PubMed, EBSCO, Elsevier, Google Scholar). | <i>Labor pain can be reduced with various complementary methods because they are easy, cheap, have minimal risk and are alternatives to reduce labor pain.</i> | The research results and discussion can be used in childbirth care |

#### 4. DISCUSIONS

- Notify the results of the examination to the mother and family that the mother is currently in labor.

Rationalization: The patient has the right to know everything related to her current condition, the planned action to be carried out and the risks of that action [4]. "Mother knows the results of the examination"

b) Explain to the mother about the discomfort such as heartburn and tightness in the stomach and the lower abdomen that the mother feels is a process that means the baby has entered the pelvic outlet and is looking for the right position for the baby's head in the birth canal. As well as providing moral support to mothers so they don't have to worry about their situation.

Rationalization: Labor pain occurs due to uterine contractions which will affect the body's overall stress response, such as increased oxygen demand, hyperventilation, increased blood pressure, and disrupting the digestive system. These contractions cause pain in the lower back, abdomen and gradually spread to the thighs. Pain is caused by stretching of the lower uterine segment and cervix, as well as ischemia of the uterine muscles, which causes an opening in the cervix, when the cervix opens, labor occurs [5] "The Mother understand the explanation given"

c) Encourage the mother to inhale and exhale through the mouth if contractions occur, and encourage the mother to use a complementary Birthing Ball using a Pilates ball by performing movements such as sitting on the ball and rocking back and forth, making labor progress, providing a sense of comfort and reducing pain.

Rationalization: Birthing ball is an active birth method using a pilates ball which helps mothers in the first stage of birth. Using a pilates ball by doing movements such as sitting on the ball and rocking back and forth, makes labor progress, provides a feeling of comfort and, and increases endoprin secretion due to flexibility and The curvature of the ball stimulates receptors in the pelvis. "Mother is willing to follow the recommendations given"

d) Explain the basic needs of mothers during childbirth

e) Carry out supervision using a partograph, including measuring the mother's vital signs, counting the fetal heart rate, counting uterine contractions, carrying out internal examinations.

## 5. CONCLUSIONS

After the author carried out midwifery care for childbirth, through reviewing subjective and objective data on Mrs. S at the UPTD Pahandut Community Health Center, the conclusion was obtained. During maternity care, Mrs S came to the VK UPTD Pahandut Community Health Center delivery room on May 28 2024. The mother said that her stomach was getting more and more bloated and felt tight since 03.30 WIB and was emitting mucus mixed with blood from the road. born since 07.30 WIB. Objective Data Results, TTV within normal limits, strong HIS, frequency 4x/10 minutes, duration 42 seconds, FHR 139x/minute, cervical dilatation 4 cm, with soft cervical flattening, intact membranes, cephalic presentation, Mrs. S complained of contraction pain, management advised the mother to inhale and exhale through her mouth if contractions occurred, and advised the mother to use a complementary Birthing Ball using a Pilates ball by doing movements such as sitting on the ball and rocking, and the mother felt the pain felt comfortable. In the development records, the baby was born at 14.55 WIB, the baby was born spontaneously, there was no umbilical cord entanglement, immediately cried, regular spontaneous breathing, reddish skin, active movements, Sex: Male, Weight: 2800 grams, Height: 49 cm, Head circumference: 32 cm, chest circumference: 33 cm,

Stage III, at 15.05 WIT. Placenta was born complete, and monitoring Stage IV was safely under control, there were no problems.

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