


Warm Water Foot Soak Therapy To Reduce Anxiety In Trimester III Pregnant Women At Sikumana Health Centre

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Article Info	ABSTRACT
<p>Keywords: Pregnant women, anxiety, warm water foot bath therapy, III trimester</p>	<p>During the III trimester, most pregnant women experience anxiety. One of the therapies that can be done to reduce anxiety in third trimester pregnant women is warm water foot bath therapy. The purpose of this study was to determine warm water foot bath therapy to reduce anxiety in third trimester pregnant women at Sikumana Health Center. This study used a qualitative approach with a type of case study research with a descriptive case study research design. The subjects of this study were two patients of third trimester pregnant women who were determined based on the inclusion and exclusion criteria. The anxiety instrument used was the Depression Anxiety Stress Scale (DASS) questionnaire. The results obtained, before the warm water foot soak therapy, Mrs. M's anxiety level was very severe anxiety (Score 30), and Mrs. A's anxiety level was severe anxiety (Score 19). After performing warm water foot bath therapy for 3 consecutive days with a duration of 10-20 minutes every day, the results showed a decrease in anxiety levels, in Mrs. M to a severe anxiety level (Value 19), and in Mrs. A to a moderate anxiety level (Value 14). The conclusion of this study, warm water foot soak therapy can reduce anxiety in third trimester pregnant women. It is expected that patients and families can apply warm water footbath therapy to reduce anxiety in third trimester pregnant women.</p>
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INTRODUCTION

Pregnancy can be a happy thing for women, but it can also be scary because of the risk of causing complications for both the mother and the unborn child (Ipi, Djogo & Dion, 2022). According to the International Federation of Obstetrics and Gynecology, pregnancy is fertilization or the union of spermatozoa and ovum and followed by nidation or implantation. If calculated from the time of fertilization to the birth of the baby, a normal pregnancy will last for 40 weeks or 10 months or 9 months according to the international calendar. The pregnancy period is divided into 3 trimesters: trimester I, starting from conception to three months (0-13 weeks), trimester II starting from the fourth month to six months (14-27 weeks), and trimester III from months seven to nine months (28-40 weeks) (Hafid & Hasrul, 2021).

The third trimester is often referred to as the period of waiting, expectation and vigilance. The third trimester is a time of active preparation for the birth of the baby and

changes in the role of being a parent as attention is focused on the birth of the baby. During the third trimester most pregnant women experience anxiety, the cause is that the mother feels worried about the labor process she will face. Hormonal changes that occur due to adaptation of fetal growth and development in the womb result in physical and psychological changes. Physical and psychological changes during pregnancy can be a stressor that causes anxiety in pregnant women. (Sari, Parwati & Indriana, 2023).

Data from the World Health Organization (2012), shows that approximately 5% of non-pregnant women experience anxiety, 8-10% experience anxiety during pregnancy, and increases to 13% during labor. In a study conducted by Barbara in Indonesia in 2014, almost 66.2% of mothers were anxious about the labor process they would face. The incidence of anxiety among pregnant women in Indonesia who experience severe anxiety reaches 57.5%. (Ipi, Djogo & Dion, 2022).

Anxiety and depression among pregnant women in developed countries is around 7-20% and more than 20% in developing countries. The prevalence of anxiety during pregnancy in some countries is 18% in Bangladesh, 20.6% in China and 18% in Pakistan. In Indonesia there are 373,000,000 pregnant women who experience anxiety and in the face of labor there are as many as 107,000,000 people (28.7%) (Puspitasari & Wahyuntari, 2020).

According to the Kupang City Health Office report in 2022, the number of pregnant women in Kupang City was 8,605 pregnant women. The number of third trimester pregnant women in Sikumana Health Center is 1,130 pregnant women, this makes Sikumana Health Center one of the health centers with the highest number of third trimester pregnant women in Kupang City (Kupang City Health Office, 2022).

Anxiety during pregnancy can have a negative impact on the mother and baby from pregnancy to delivery, such as premature delivery and even miscarriage. The restless fetus inhibits its growth, and weakens the contractions of the uterine muscles. Third trimester pregnant women who cannot escape the anxiety and fear of childbirth will release catecholamine hormones (stress hormones) in high concentrations which can cause increased labor pain, prolonged labor, and tension when facing labor. The impact of anxiety for pregnant women is to trigger uterine contractions resulting in premature labor, miscarriage and depression. The result of these conditions can increase blood pressure so that it can trigger preeclampsia and miscarriage. Low birth weight (LBW) is also a negative impact of maternal anxiety during pregnancy (Puspitasari & Wahyuntari, 2020).

According to Malibel et al (2020) in Ipi, Djogo & Dion (2022). anxiety can be reduced with anxiety-reducing therapies, namely pharmacological and non-pharmacological therapies. In the scope of nursing, non-pharmacological therapy was developed as a nurse's independent action, one of which is warm water foot soak therapy, which is a condition where the feet are in direct contact with warm water.

Warm water foot bath therapy is one of the therapies that provides therapeutic effects because warm water has a physiological impact on the body. The impact can affect tissue oxygenation, so as to prevent muscle stiffness, relieve pain, calm the soul and relax the body. Warm water foot bath therapy is very simple and natural because it has an easy and transparent treatment method, harmless, refreshing, calming the mind and body and painless

and treating without side effects so there is no need to worry, does not involve toxic substances or additives and does not require modern medicines, is very cheap and can be done wherever water is available. (Ipi, Djogo & Dion, 2022).

METHODS

This study uses a qualitative approach with a type of case study research (*Case study*) with a descriptive case study research design. This case study research is a study to explore how warm water foot soak therapy to reduce anxiety in third trimester pregnant women at Sikumana Health Center. Observation was carried out for 3 days with a qualitative approach on two patients of third trimester pregnant women who experienced anxiety problems.

The subjects of this study were two patients (Two cases) of third trimester pregnant women (Gestational age 28-40 weeks), determined based on the inclusion and exclusion criteria, namely:

1. Inclusion Criteria
 - a. Third trimester pregnant women who can read and communicate well.
 - b. Cooperative third trimester pregnant women.
 - c. Third trimester pregnant women who are patients at Sikumana Health Center.
 - d. Third trimester pregnant women who are willing to be research subjects and fill out informed consent.
2. Exclusion Criteria
 - a. Third trimester pregnant women who withdrew during or during the study period.
 - b. Third trimester pregnant women who met the criteria but were ill at the time of data collection.

The various research instruments used in this study are: Assessment Format & DASS (*Depression Anxiety Stress Scale*) Questionnaire.

The data collection methods in this study are as follows:

- a. Questionnaire method, this data collection method is done by giving a number of written questions to the research subject to answer. There are two types of questions in the questionnaire, namely, open and closed. The questionnaire used in this research is a closed questionnaire, namely a questionnaire that has provided the answer so that the research subject just chooses the answer.
- b. Interview, obtained through anamnesa containing the identity of the patient and person in charge, chief complaint, patient and family medical history, menstrual history, past history of pregnancy, childbirth and puerperium, current pregnancy history, psychosocial aspects, and daily habit patterns.
- c. Observation, this data collection method is through an observation with the five senses and tools according to the assessment format, the objective data collected includes: examination of general condition, awareness, measurement of vital signs, weight weighing, height measurement, LILA measurement, abdominal circumference measurement, physical examination and supporting examination.
- d. Documentation study in the form of medical records, patient status, and diagnostic examination results.

Data analysis is carried out by stating facts, then comparing with existing theories, then outlined in the discussion opinion. The analysis technique used is by interpreting the results of filling out the questionnaire, narrating the answers obtained from the results of interviews, by means of observation by researchers and documentation studies that produce data to answer the formulation of research problems, and then compared with existing theories as material to provide recommendations in the intervention. Data presentation can be done with tables, pictures, charts, or narrative text. The confidentiality of the research subject is guaranteed by obscuring the identity of the research subject.

RESULTS AND DISCUSSION

Research Results

Characteristics of Research Subjects

The subjects in this study amounted to 2 patients of third trimester pregnant women, who were patients at Sikumana Health Center and conducted examinations at the MCH Clinic. The following is a description of the characteristics of the research subjects obtained in this study:

Table 1. Characteristics of Research Subjects

Characteristics	Research Subject 1	Research Subject 2
Name	Mrs. M	Mrs. A
Age	24 years old	34 years old
Marital Status	Not married	Marry
Religion	Protestant Christianity	Catholic
Tribe/Nation	Malacca	Rote
Last Education	High School / Equivalent	High School / Equivalent
Jobs	Housewife	Private employee
Parity	Primiparous	Primiparous
Pregnancy Age	7 months	7 months

Source: Primary Data

Table 1 above shows that both research subjects have the same level of education, parity and gestational age. Research subject 1 (Mrs. M) is 24 years old, unmarried, Protestant Christian, originally from Malacca, last education SMA / equivalent, currently a housewife, primiparous parity and gestational age of 7 months. Research subject 2 (Mrs. A) is 34 years old, married, Catholic, originally from Rote, last education SMA / equivalent, currently working as a private employee, primiparous parity and gestational age of 7 months.

Anxiety Level of Research Subjects Before and After Warm Water Foot Soak Therapy

Table 2: Anxiety levels of Mrs. M and Mrs. A before the warm water footbath therapy.

No.	Day/Date	Research Subject	Anxiety Level
1.	Tuesday, January 23, 2024	Mrs. M	Severe anxiety (Value 30)
2.	Thursday, January 25, 2024	Mrs. A	Severe anxiety (Rated 19)

Source: Primary Data

Table 2 above shows the anxiety level of the research subjects measured using the DASS questionnaire, before warm water foot bath therapy, Mrs. M's anxiety level was very severe anxiety (Score 30) and Mrs. A's anxiety level was severe anxiety (Score 19).

Table 3 Anxiety Levels of Mrs. M and Mrs. A After Warm Water Foot Soak Therapy

No.	Day/Date	Research Subject	Anxiety Level
1.	Thursday, January 25, 2024	Mrs. M	Severe anxiety (Score 19)
2.	Saturday, January 27, 2024	Mrs. A	Moderate anxiety (Score 14)

Source: Primary Data

Table 3 above shows the level of anxiety of the research subjects measured using the DASS questionnaire, after carrying out warm water foot soak therapy for 3 consecutive days with a duration of 10-20 minutes every day, the results showed a decrease in anxiety levels, in Mrs. M to severe anxiety level (Value 19) and in Mrs. A to moderate anxiety level (Value 14).

Table 4 Differences in Anxiety Levels of Mrs. M and Mrs. A Before and After Warm Water Foot Soak Therapy

No.	Time	Mrs. M		Mrs. A	
		<i>Pre</i>	<i>The post</i>	<i>Pre</i>	<i>The post</i>
1.	Meeting 1	Very severe anxiety (Score 30)	Very severe anxiety (Score 24)	Severe anxiety (Score 19)	Severe anxiety (Score 16)
2.	Meeting 2	Very severe anxiety (Score 27)	Very severe anxiety (Score 22)	Severe anxiety (Score 19)	Severe anxiety (Score 15)
3.	Meeting 3	Very severe anxiety (Score 25)	Severe anxiety (Score 19)	Severe anxiety (Score 19)	Moderate anxiety (Score 14)

Source: Primary Data

Table 4 above shows the difference in anxiety levels of Mrs. M and Mrs. A measured using the DASS questionnaire, before and after warm water foot bath therapy for 3 consecutive days with a duration of 10-20 minutes every day, the results showed a decrease in anxiety levels. In Mrs. M there was a decrease in anxiety level at the 3rd meeting, namely from very severe anxiety level to severe anxiety level. While in Mrs. A, there was a decrease in anxiety level at the 3rd meeting, namely from severe anxiety level to moderate anxiety level.

Discussion

Characteristics of Research Subjects of Third Trimester Pregnant Women

The first characteristic in this study is age. Sulistyawati (2011) in Situmorang, Rossita & Rahmawati. (2020), states that 20-35 years of age is an age that is considered safe for women who plan to become pregnant both for the process of undergoing pregnancy and childbirth because the physical condition is in prime condition. Pregnancy before the age of 20 can be a problem because the physical condition is not 100% ready. Meanwhile,

pregnancy after the age of 35 has a high risk of congenital abnormalities and complications during pregnancy and childbirth later.

The results showed that Mrs. M was 24 years old with a very severe anxiety level, while Mrs. A was 34 years old with a severe anxiety level. Based on the results of this study, the researcher assumes that age does not affect the anxiety level of third trimester pregnant women. Both patients are at the optimal age for pregnancy (20-35 years), but the anxiety level of both patients is very severe anxiety level and severe anxiety level. This means that both third trimester pregnant women who are at the optimal age (20-35 years) and at risk age (< 20 years and > 35 years), can still experience anxiety. A woman's readiness to become pregnant, face labor and become a mother does not depend on age, so age does not affect the anxiety of third trimester pregnant women.

The results of this study are in line with research Halil & Puspitasari (2023) about Factors that Cause Anxiety of Third Trimester Pregnant Women in Facing Childbirth at Depok 2 Health Center, the results showed that there was no significant relationship between age and anxiety levels in pregnant women. Age does not affect the mother's fear of childbirth because the mother's desire to have children does not depend on her age. Age alone does not determine a person's maturity. There are those who are not afraid even though they are young and ready to become a mother. (Halil & Puspitasari, 2023)..

The second characteristic in this study was marital status. Family and marriage are the most important sources of social support. Husband's support will bring joy, security, satisfaction, and a sense of comfort that makes pregnant women feel emotionally supported, which affects their mental well-being. The support that the expectant mother receives from her husband can help her feel calmer, and create a positive attitude towards herself and her pregnancy. Positive support provided by husbands to pregnant wives has a positive impact on fetal growth and development, as well as the mother's physical and psychological health. (Wahyuni, Maimunah & Amalia, 2021).

The results showed that, Mrs. M is not married and currently lives alone because her future husband works in Flores and her family is in Malacca, Mrs. M is always alone to the puskesmas to do ANC checks, Mrs. M's anxiety level is very severe anxiety. Whereas Mrs. A is married and currently lives with her husband and first child, Mrs. A is always escorted by her husband to the puskesmas for ANC checks, Mrs. A's anxiety level is severe anxiety. Based on the results of this study, the researcher assumes that marital status affects the anxiety level of third trimester pregnant women.

During the third trimester, especially before labor, most pregnant women experience anxiety, at this time pregnant women really need support from their families, especially their husbands. The support and presence of the husband will make pregnant women feel comfortable and calm, so that it will reduce the anxiety they feel and affect the mother's readiness to face labor. Forms of husband support such as accompanying pregnant women, providing affection, taking and accompanying pregnant women to do pregnancy checks will have a positive impact on the mother's mood. Whereas in unmarried pregnant women, not getting support from husband and family, or living alone without being accompanied by

husband and family will make the mother feel that she is alone in undergoing her pregnancy so that it will have an impact on the anxiety she feels.

The results of this study are in line with research Wahyuni, Maimunah & Amalia (2021) on the Effect of Husband Support on the Anxiety Level of Trimester III Pregnant Women in Facing Childbirth, the results of this study indicate that there is a significant effect of husband support on the anxiety level of pregnant women. The forms of support provided by husbands can vary, such as taking the wife to control pregnancy, devoting greater affection, paying attention to the condition of the pregnant woman, and so on. This support makes a positive contribution to the mother's psychological atmosphere, especially reducing the level of anxiety that arises in her pregnancy until the time of delivery. The results of this study are supported by Diana's research (2013) on the Effect of Husband Support on Anxiety Levels of Pregnant Women in Trimester III. The results showed that there was an effect of husband's support for wives who experienced anxiety in third trimester pregnancy, where the group of pregnant women who did not live with their husbands had a high-medium anxiety category compared to third trimester pregnant women who lived with their husbands, on average in the medium-low anxiety category. (Wahyuni, Maimunah & Amalia, 2021)..

The third characteristic in this study is the last education. The level of education is a social aspect that affects a person's behavior, where education will influence a person in responding to what comes from outside. (Ipi, Djogo & Dion, 2022).. The results showed that Mrs. M's last education was high school / equivalent with a very severe anxiety level, while Mrs. A's last education was high school / equivalent with a severe anxiety level. Based on the results of this study, researchers assume that education does not affect the anxiety level of third trimester pregnant women. During the third trimester, most pregnant women experience anxiety because of the fear of the labor process that will be faced later. The last education of the two patients is the middle level (SMA / equivalent), while the anxiety level of the two patients is very severe anxiety and severe anxiety, this means that anxiety during trimester III can occur in pregnant women regardless of the mother's education level.

The results of this study are in line with research Apriliani, Audityarini & Marinem (2023) on Factors Associated with Anxiety Levels of Third Trimester Pregnant Women in Facing Childbirth at Budi Kemuliaan Hospital in 2022, the results showed that there was no significant relationship between education and the anxiety level of third trimester pregnant women in facing labor at Budi Kemuliaan Hospital in 2022. In Murdayah's research (2021), found that education cannot be fully said to be one of the things that can affect anxiety levels, in fact anxiety can appear in anyone and anywhere, including pregnant women. Most pregnant women must have experienced anxiety, both in pregnant women who have low education and pregnant women with higher education. (Apriliani, Audityarini & Marinem, 2023)..

The results of this study are also in line with research Halil & Puspitasari (2023) about Factors that Cause Anxiety of Third Trimester Pregnant Women in Facing Childbirth at Depok 2 Health Center, the results showed that there was no relationship between maternal education and anxiety level. The level of maternal education in secondary education (SMP and

SMA / SMK) and higher education (S1) has no significant effect on the anxiety level of pregnant women. (Halil & Puspitasari, 2023).

The fourth characteristic in this study is occupation. Notoatmodjo (2010) in Apriliani, Audityarini & Marinem (2023) Notoatmodjo (2010) in Apriliani, Audityarini & Marinem (2023) states that work is generally a time-consuming activity so that pregnant women who work experience less anxiety than mothers who do not work, because working can divert the mother's feelings of anxiety. The results showed that Mrs. M did not work with a very severe anxiety level, while Mrs. A worked as a private employee with a severe anxiety level. Based on the results of this study, researchers assume that work affects the anxiety level of third trimester pregnant women. Third trimester pregnant women who work will require the mother to meet and interact with other people so that it can distract the mother from the anxiety she feels. Meanwhile, third trimester pregnant women who do not work will have more time to think about pregnancy and the labor process they will face, so that it can cause anxiety in the mother.

The results of this study are in line with research Halil & Puspitasari (2023) about Factors that Cause Anxiety of Third Trimester Pregnant Women in Facing Childbirth at Depok 2 Health Center, the results showed that there was a significant relationship between work and anxiety levels. Working mothers have more social interaction and thus have lower anxiety levels. The study found that 83.3% of pregnant women who experienced anxiety were housewives. Working respondents obtained information and experiences regarding pregnancy from others. As more information is received, more is known. Mothers who spend most of their time at home experience higher levels of anxiety than working mothers. Pregnant women who often work outside can expand their knowledge so that they feel calmer. (Halil & Puspitasari, 2023).

The last characteristic in this study is parity. Laili Arifin (2007) in Yanuarini, Rahayu & Hardiati. (2013) Laili Arifin (2007) in Yanuarini, Rahayu & Hardiati (2013) states that when viewed from the experience of childbirth, there are two groups of mothers who feel fear and anxiety in facing labor. The first group is mothers who have already given birth, but have unpleasant experiences in previous pregnancies and childbirth. The second group is first-time pregnant women who have never had previous childbirth experience, but have heard many frightening stories and experiences from others about the labor process.

The results showed that, Mrs. M had been pregnant in 2023, but her baby died when she was 9 months old, Mrs. M's anxiety level was very severe anxiety. While Mrs. A had previously been pregnant and gave birth in 2013, her childbirth experience was 10 years ago, Mrs. A's anxiety level was severe anxiety. Based on the results of this study, researchers assume that parity affects the anxiety level of third trimester pregnant women. Mrs. M had previously been pregnant in 2023, but when she was 9 months pregnant, the baby she was carrying died, this became one of the causes of Mrs. M experiencing anxiety in her current pregnancy, for fear of it happening again. Previous unpleasant pregnancy and childbirth experiences can trigger anxiety in the mother's current pregnancy.

The results of this study are in line with research Yanuarini, Rahayu & Hardiati (2013) on the Relationship between Parity and Anxiety Level of Third Trimester Pregnant Women

in Facing Childbirth.) on the Relationship between Parity and Anxiety Level of Trimester III Pregnant Women in Facing Childbirth, the results of the study showed that there was a relationship between parity and the anxiety level of trimester III pregnant women in facing labor. Maternal anxiety in the face of labor can be caused by fear and anxiety of experiencing pain and pain, especially for prospective mothers who have never given birth before (Nullipara). For the first labor, the onset of anxiety is very natural because everything is a new experience. This is one of the reasons most of those who experience severe anxiety are nulliparous and mild anxiety is mostly experienced by multiparous. However, it does not rule out the possibility for mothers who have had previous childbirth experience to also experience anxiety, this can be caused by bad experiences in previous childbirth, thus making the mother feel traumatized to face the next delivery. (Yanuarini, Rahayu & Hardiati, 2013)..

Anxiety Level of Third Trimester Pregnant Women at Sikumana Health Center Before Performing Warm Water Foot Soak Therapy

The third trimester of pregnancy is often referred to as the phase of vigilant waiting. In this period, pregnant women begin to realize the presence of the baby as a separate being, making the mother impatient with the presence of her baby. (Astuti, Hasbiah & Rahmawati, 2022).. During the third trimester, pregnant women often feel anxious about various things such as whether the baby will be born in normal conditions or not, the pain that will be felt during labor and so on. (Fety, Mawarni & Rangki, 2023)..

Anxiety during pregnancy is an unavoidable feeling, almost all pregnant women are overshadowed by anxiety, and is part of a natural adaptation process to psychological changes during pregnancy. High anxiety in pregnant women, especially during the third trimester, occurs because every pregnant woman must experience a variety of feelings such as fear of death, trauma during childbirth, feelings of guilt and sin and real fears such as fear if the baby is born with defects and the shadow of a painful and uneasy labor process. (Wahyuni, Maimunah & Amalia, 2021)..

Every pregnant woman has a different level of anxiety, this is very dependent on the pregnant woman's perception of her pregnancy. (Astuti, Hasbiah & Rahmawati, 2022).. Pregnant women who experience anxiety will show symptoms such as restlessness, trembling, sweating, difficulty breathing, fast heartbeat, weakness, cold heat, and irritability. (Sari, Parwati & Indriana, 2023)..

The results showed that, the anxiety level of the research subjects measured using the DASS questionnaire, before the warm water foot bath therapy, Mrs. M's anxiety level was very severe anxiety (Score 30) and Mrs. A's anxiety level was severe anxiety (Score 19). Patient 1 (Mrs. M) said that during the third trimester she often felt anxious related to the labor process that she would face later, she was afraid that something would happen to her baby, because previously she had been pregnant in 2023 but the baby she was carrying died when she was 9 months old. Currently, Mrs. M lives alone because her future husband works in Flores, and her family is in Malacca. While patient 2 (Mrs. A) said that during pregnancy she often felt anxious, especially as the time of delivery approached, she felt anxious about the labor process she would face later, because the patient's last childbirth experience was 10 years ago. Mrs. A felt anxious whether her baby would be born normally or not, she was

anxious and afraid if something happened to the baby she was carrying. Based on the results of this study, the researcher assumes that most pregnant women experience anxiety during the third trimester and the difference is the level of anxiety.

Every pregnant woman has different levels of anxiety, depending on the factors that cause anxiety and how the mother adapts to physical and psychological changes during the third trimester. Patient 1 (Mrs. M) has a higher level of anxiety than patient 2 (Mrs. A), because Mrs. M has lost her baby and is currently alone in undergoing her pregnancy. This can be the cause of high anxiety levels in Mrs. M.

The results of this study are in line with research Ulya & Purnaningrum (2019) about the Effect of Foot Soak with Warm Water on Anxiety Levels in Pregnant Women, the results of the study showed that before the foot soak with warm water was obtained the average anxiety level was 61.75 including severe anxiety level. The results of the researcher's analysis of the level of anxiety in pregnant women can appear especially in the third trimester of pregnancy until the time of delivery, where in that period pregnant women feel anxious about various things such as whether the baby will be born normal or not, the pain that will be felt, the condition of the pregnant woman, the delivery process, and others (Ulya & Purnaningrum, 2019).

Anxiety Level of Third Trimester Pregnant Women at Sikumana Health Center After Warm Water Foot Soak Therapy

Malibel et al. (2020) in Ipi, Djogo & Dion (2022) stated that anxiety can be reduced with anxiety-reducing therapies, namely pharmacological and non-pharmacological therapies. In the scope of nursing, non-pharmacological therapy was developed as a nurse's independent action, one of which is warm water foot soak therapy, which is a condition where the feet are in direct contact with warm water.

Warm water foot bath therapy is a therapy by immersing the feet up to a limit of 10-15 cm above the ankles using warm water. Scientifically, warm water foot bath therapy can improve blood vessel microcirculation and vasodilation. Soaking the feet using warm water produces heat energy that dilates blood vessels and blood circulation also stimulates the nerves in the legs to activate parasympathetic nerves, thus causing changes in blood pressure. Warm water foot soak therapy can cause a sense of comfort in the muscles because muscle tension is reduced due to dilation of blood vessels and stretching of cells in the muscles and can cause a sense of relaxation in the body. The heat from warm water is used to improve circulation in the skin, by dilating blood vessels so as to increase the supply of oxygen and nutrients to the tissues. (Sari & Aisah, 2022).

The results showed that, the anxiety level of the research subjects measured using the DASS questionnaire, after warm water foot soak therapy for 3 consecutive days with a duration of 10-20 minutes every day, the results showed a decrease in anxiety levels, in Mrs. M to severe anxiety level (Value 19) and in Mrs. A to moderate anxiety level (Value 14). Patient 1 (Mrs. M) said that after the warm water foot bath therapy she felt very relaxed and calm, and the fatigue she felt was reduced. While patient 2 (Mrs. A) said that after the warm water foot bath therapy she felt relaxed, comfortable, and the aches she felt were reduced. Based on the results of this study, the researcher assumes that there is an effect of water foot soak

therapy on the anxiety level of third trimester pregnant women. Warm water has many benefits for the body, so soaking your feet in warm water can warm the body, relax, improve blood circulation, reduce stress, anxiety and fatigue.

The results of this study are in line with research Ipi, Djogo & Dion (2022) The results showed that after receiving hydrotherapy treatment (warm water foot soak) 7 times in 1 week, all respondents in the experimental group experienced a decrease in anxiety levels, of the 15 respondents in the experimental group, 60.0% (9 people) of respondents experienced moderate anxiety, and the least amounted to 6.7% (1 person) respondents experienced mild anxiety. There were no respondents who experienced severe anxiety (Ipi, Djogo & Dion, 2022)..

Overview of the Effect of Warm Water Foot Soak Therapy to Reduce Anxiety in Trimester III Pregnant Women at Sikumana Health Center

The working principle of warm water foot bath therapy is by conduction where there is heat transfer from warm water into the body which can dilate blood vessels and reduce muscle tension so that it can improve blood circulation. (Putri, Ludiana & Ayabbana, 2023). The results showed that, the level of anxiety of Mrs. M and Mrs. A measured using the DASS questionnaire, before and after warm water foot bath therapy for 3 consecutive days with a duration of 10-20 minutes every day, the results showed a decrease in anxiety levels. In Mrs. M there was a decrease in anxiety at the 3rd meeting, namely from a very severe anxiety level to a severe anxiety level. While in Mrs. A, there was a decrease in anxiety level at the 3rd meeting, namely from severe anxiety level to moderate anxiety level. Based on the results of this study, the researcher assumes that warm water foot bath therapy can reduce anxiety in third trimester pregnant women. Warm water has a physiological impact on the body, such as improving blood circulation, relaxing muscles, reducing stress and fatigue, and providing warmth to the body. By soaking your feet in warm water with a temperature of 38°-40°C for 10-20 minutes can provide comfort and relaxation to the body so that it can reduce a person's anxiety level.

The results of this study are in line with research Ipi, Djogo & Dion (2022) about the Effect of Hydrotherapy on Anxiety of Third Trimester Pregnant Women in the Working Area of the Oesapa Health Center, Kupang City, the results showed that hydrotherapy treatment had an influence on the anxiety level of third trimester pregnant women. (Ipi, Djogo & Dion, 2022).. The results of this study are also in line with research Ulya & Purnaningrum (2019) about the effect of foot soak with warm water on anxiety levels in pregnant women, the results showed that there was an effect of foot soak with warm water on anxiety levels in third trimester pregnant women in the Jati Health Center area. Soaking feet with warm water has long been known to relax the body, get rid of aches and stiffness in the muscles and help to sleep better. The results showed that soaking feet in warm water can improve blood circulation, reduce edema, increase muscle relaxation, nourish the heart, relax muscles, relieve stress and anxiety, relieve pain, increase capillary permeability, and provide warmth to the body. (Ulya & Purnaningrum, 2019).

CONCLUSION

The research conclusion shows 1) Characteristics of Trimester III Pregnant Women: Research subject 1 (Mrs. M) is 24 years old, unmarried, Protestant Christian, originally from Malacca, last education SMA / equivalent, currently a housewife, primiparous parity and 7 months gestation. Research subject 2 (Mrs. A) is 34 years old, married, Catholic, originally from Rote, last education SMA / equivalent, currently working as a private employee, primiparous parity and gestational age of 7 months. 2) Anxiety Level of Third Trimester Pregnant Women at Sikumana Health Center Before Warm Water Foot Soak Therapy: The anxiety level of the research subjects before the warm water foot bath therapy, which was measured using the DASS questionnaire, Mrs. M's anxiety level was very severe anxiety (Score 30) and Mrs. A's anxiety level was severe anxiety (Score 19). 3) Anxiety Level of Third Trimester Pregnant Women at Sikumana Health Center After Warm Water Foot Soak Therapy: The anxiety level of the research subjects after performing warm water footbath therapy for 3 consecutive days with a duration of 10-20 minutes every day, which was measured using the DASS questionnaire, the results showed a decrease in anxiety level, in Mrs. M to severe anxiety level (Value 19) and in Mrs. A to moderate anxiety level (Value 14). 4) Overview of the Effect of Warm Water Foot Soak Therapy to Reduce Anxiety in Trimester III Pregnant Women at Sikumana Health Center: After performing warm water foot bath therapy for 3 consecutive days with a duration of 10-20 minutes every day, the results were obtained, in Mrs. M there was a decrease in anxiety at the 3rd meeting, namely from a very severe anxiety level to a severe anxiety level. While in Mrs. A, there was a decrease in anxiety level at the 3rd meeting, namely from severe anxiety level to moderate anxiety level. Based on the results of this study, the researcher assumes that warm water foot bath therapy can reduce anxiety in third trimester pregnant women. Warm water has a physiological impact on the body, such as improving blood circulation, relaxing muscles, reducing stress and fatigue, and providing warmth to the body. By soaking the feet in warm water with a temperature of 38°-40°C for 10-20 minutes can provide comfort and relaxation to the body so that it can reduce a person's anxiety level.

REFERENCE

- Apriliani, Desya; Evi Audityarini & Marinem. (2023). Faktor-Faktor Yang Berhubungan Dengan Tingkat Kecemasan Ibu Hamil Trimester III Dalam Menghadapi Persalinan Di RSUD Budi Kemuliaan Tahun 2022. *Jurnal Kebidanan Dan Kesehatan Reproduksi*, 1(2), 16–27. <https://ejournal.stikbudikemuliaan.ac.id/index.php/jkkr/article/view/10/8>
- Astuti, Listia Diana; Hasbiah & Eka Rahmawati. (2022). Faktor-Faktor Yang Mempengaruhi Tingkat Kecemasan Ibu Hamil Trimester III Di Puskesmas Mekarsari. *PREPOTIF : Jurnal Kesehatan Masyarakat*, 6(1), 755–761. <https://journal.universitaspahlawan.ac.id/index.php/prepotif/article/view/3214/2705>
- Dinas Kesehatan Kota Kupang. (2022). Cakupan Pelayanan Kesehatan Pada Ibu Hamil, Ibu Bersalin, dan Ibu Nifas Menurut Kecamatan Dan Puskesmas Kota Kupang Tahun 2022.
- Darmini, Mk., Prastanti, A. D., MSi, S. D., & MKes, A. H. (2023). Accuracy of bleeding volumetric measurement on head CT scan with sequence and helical techniques using

- manual and automatic methods: A phantom study. *Med J Malaysia*, 78(7), 865.
- Fety, Yulli; Itri Mawarni & La Rangki. (2023). Hubungan Dukungan Suami Terhadap Tingkat Kecemasan Ibu Hamil Primigravida Trimester III Menghadapi Persalinan di Puskesmas Benu-Benu Kendari Barat. *Professional Health Journal*, 5(1), 179–190. <https://www.ojsstikesbanyuwangi.com/index.php/PHJ/article/view/416/290>
- Hafid, Aslinda & Hasrul. (2021). Hubungan Kejadian Pandemi Covid 19 Dengan Kecemasan Ibu Hamil Trimester Ketiga. *Jurnal Keperawatan Muhammadiyah*, 6(2), 151–155. <https://doi.org/10.30651/jkm.v6i2.8252>
- Halil, Asni & Erika Puspitasari. (2023). Faktor yang Menyebabkan Kecemasan Ibu Hamil Trimester III dalam Menghadapi Persalinan di Puskesmas Depok 2. *Jurnal Kesehatan*, 12(1), 78–83. <https://jurnalkesehatanstikesnw.ac.id/index.php/stikesnw/article/view/126/82>
- Ipi, Deasy Anastasia Labu; Herliana Monika Azi Djogo & Yohanes Dion. (2022). Pengaruh Hidroterapi Terhadap Kecemasan Ibu Hamil Trimester III Di Wilayah Kerja Puskesmas Oesapa Kota Kupang. *CHMK Applied Scientific Journal*, 5(1), 15–25. <https://www.neliti.com/id/publications/367137/pengaruh-hidroterapi-rendam-kaki-air-hangat-terhadap-kecemasan-ibu-hamil-trimester>
- Puspitasari, Ika & Evi Wahyuntari. (2020). Gambaran Kecemasan Ibu Hamil Trimester III. *Proceeding of The 11th University Research Colloquium 2020: Bidang MIPA Dan Kesehatan*, 116–120. <https://repository.urecol.org/index.php/proceeding/article/view/1034/1003>
- Prastanti, A. D., Abimanyu, B., Kurniawan, A. N., & Nurbaiti, S. (2022). CR Image Optimization and Radiation Dose Limitation With Collimation Adjusting on Cervical Radiography. *Jurnal Imejing Diagnostik (JImeD)*, 8(1), 35–39.
- Putri, Ajeng Anisa; Ludiana & Sapti Ayubbana. (2023). Penerapan Rendam Kaki Air Hangat Terhadap Tekanan Darah Pada Pasien Hipertensi Di Wilayah Kerja UPTD Puskesmas Rawat Inap Banjarsari Kota Metro. *Jurnal Cendikia Muda*, 3(1), 23–31. <https://jurnal.akperdharmawacana.ac.id/index.php/JWC/article/view/435>
- Sari, Ni Luh Putu Maenra Ratna; Ni Wayan Manik Parwati; & Ni Putu Riza Kurnia Indriana. (2023). Hubungan Antara Tingkat Pengetahuan Ibu Dan Dukungan Suami Dengan Tingkat Kecemasan Ibu Hamil Trimester III Dalam Menghadapi Persalinan. *Jurnal Riset Kesehatan Nasional*, 7(1), 35–44. <https://ejournal.itekesbali.ac.id/jrkn/article/view/469/226>
- Sari, Shinta Mayang & Siti Aisah. (2022). Terapi Rendam Kaki Air Hangat Pada Penderita Hipertensi. *Ners Muda*, 3(2). <https://doi.org/10.26714/nm.v3i2.8262>
- Setiawan, A. N., Da Onney, N., Jannah, M., & Prastanti, A. D. (2021). The Profile of Delay Erasure Time and Imaging Plate Sizes to Dark Noise Evaluation in Carestream Computed Radiography System. *Journal of Physics: Conference Series*, 1783(1), 12005.
- Situmorang, Ronalen Br; Taufianie Rossita & Diyah Tepi Rahmawati. (2020). Hubungan Umur Dan Pendidikan Terhadap Tingkat Kecemasan Pada Ibu Hamil Trimester III Dalam Menghadapi Persalinan Di Kabupaten Mukomuko Provinsi Bengkulu. *Encyclopedia of Pain*, 494–494. <https://jurnal.una.ac.id/index.php/semnasmudi/article/view/1652>

- Ulya, Fitria Hikmatul & Yuniarti Purnaningrum. (2019). Pengaruh Rendam Kaki Dengan Air Hangat Terhadap Tingkat Kecemasan Pada Ibu Hamil. *Embrio*, 11(2), 80–86. <https://jurnal.unipasby.ac.id/index.php/embrio/article/view/2044/1846>
- Wahyuni, Andi Tenri Lestari Dwi; Siti Maimunah & Sofa Amalia. (2021). Pengaruh Dukungan Suami Terhadap Tingkat Kecemasan Ibu Hamil Trimester III Dalam Menghadapi Persalinan. *Jurnal Insight Fakultas Psikologi Universitas Muhammadiyah Jember*, 17(1), 112–130. <http://jurnal.unmuhjember.ac.id/index.php/INSIGHT/article/view/WMA/3407>
- WMS, O. A., Murniati, E., & Prastanti, A. D. (2024). THE ROLE OF ARTIFICIAL INTELLIGENCE (AI) ON MRI BRAIN EXAMINATION WITH CLINICAL ISCHEMIC STROKE. *Journal of Vocational Health Studies*, 7(3), 206–217.
- Yanuarini, Triatmi Andri; Dwi Estuning Rahayu & Hanna Salehtra Hardiati. (2013). Hubungan Paritas dengan Tingkat Kecemasan Ibu Hamil Trimester III dalam Menghadapi Persalinan. *Ilmu Kesehatan*, 2, 2003–2008. <https://ejurnaladhkdr.com/index.php/jik/article/view/28/20>