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Experience of mothers with a history of preeclampsia in pregnancy: Scoping review

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***Abstract*---**Pre-eclampsia is a disease that can occur in pregnancy, and is one of the causes of death in large numbers in childbirth. One indicator of a country's health status is the low maternal mortality rate, where preeclampsia is one of the main causes of maternal death. Objective this Scoping Review is to review and map research on mother's life experience with a history of preeclampsia in pregnancy. Scoping Review it uses framework PRISMA-ScR with search of articles through relevant databases Pubmed, ScienceDirect, and Willey then do Critical Appraisal use The Joanna Briggs Institute (JBI). Based on the search results of the selected 921 articles, there were 10 articles that met the inclusion criteria, and then the review process was continued to identify keywords that resulted in 3 themes, namely Mother's Experience with a history of preeclampsia in pregnancy Impacts related to preeclampsia in pregnant women and Outlook Society believes that preeclampsia is a disorder of evil spirits. History of preeclampsia in pregnancy still really need attention from families and health workers, especially from the aspect of vigilance for the symptoms that are felt and the importance of information about preeclampsia in pregnancy.

***Keywords*---**preeclampsia, women's, experience, pregnancy.

Introduction

Pre-eclampsia is a pregnancy disorder characterized by hypertension, edema and proteinuria. It usually occurs in the third trimester, but it can happen earlier. The

incidence of pre-eclampsia is one of the main causes of maternal death in Indonesia. Preeclampsia causes fetal growth to be stunted due to unbalanced nutrition (Amalina et al., 2022).

According to (Hansson et al., 2022) preeclampsia can be preventekad by 3 things, the first is carrying out regular and quality antenatal checks carefully, you must always be alert to the possibility of preeclampsia if you have predisposing factors, and provide information regarding the benefits of rest and sleep, calm, and important in managing low-salt, low-fat, carbohydrate, and protein consumption and preventing excess weight gain. In addition, the management of patients who experience preeclampsia or hypertension during pregnancy needs to be managed optimally, namely by observing to detect any symptoms or signs so that they can be diagnosed immediately and given appropriate management. One of the management that can be done is by administering magnesium sulfate (MgSO4). The benefits of magnesium sulfate (MgSO4), namely as a calcium antagonist that acts on the smooth muscle of blood vessels which can cause a decrease in intracellular calcium resulting in arterial relaxation, relieve vasospasm, and reduce arterial blood pressure (Apriyana, 2021).

Pregnancy at a young age under 20 years and pregnancy at the age of over 35 years can be a factor causing preeclampsia and is considered a risky pregnancy, a safe age for women to get pregnant is around the age of 23-35 years (Maisarah et al., 2021). Pregnant women who have a history of hypertension are more at risk of preeclampsia, obesity is also a risk factor for preeclampsia in pregnant women, and diabetes mellitus is also a factor causing preeclampsia, this is due to excessive consumption of sugar, salt and the composition of fat in the body can trigger the development of degenerative diseases (Sripad et al., 2019). Preeclampsia itself can interfere with fetal growth and pose a risk to both the fetus and the mother. This condition is very risky. This occurs due to decreased utero-placental perfusion, hypovolemia or excess fluid in the body, vasospasm, and damage to the vascular endothelium as a result of preeclampsia in pregnancy (Sudarman et al., 2021). Based on the background above, it is necessary to do topic scoping using the Scoping Review Protocol which specifically addresses the experiences of mothers with a history of preeclampsia in pregnancy. Purpose of scoping review To map research regarding Mother's experience with a history of preeclampsia in pregnancy.

Method

The method used in this review is to use scoping review using a prism-ScR. Scoping review is an ideal study approach to determine the scope or coverage of a collection of literature on a particular theme, so that it can provide a broad overview of the researcher (Amalina et al., 2022). Scoping review aims to map the literature and gather information about related research activities. particular topic (Hansson et al., 2022), besides that scoping review can be used to synthesize research evidence (Nielsen et al., 2022). The author applies the PEOS framework in compiling review review questions. This framework is used to help identify the key concepts of questions to be developed and managed (Duffy et al., 2019).

Tabel 1
Framework PEOS

P (Population)	E (Exposure)	O (Result)	S (Studies)
Women	Pre eclampsia	Experience	Any article that discusses the mother's experience with a history of preeclampsia in pregnancy

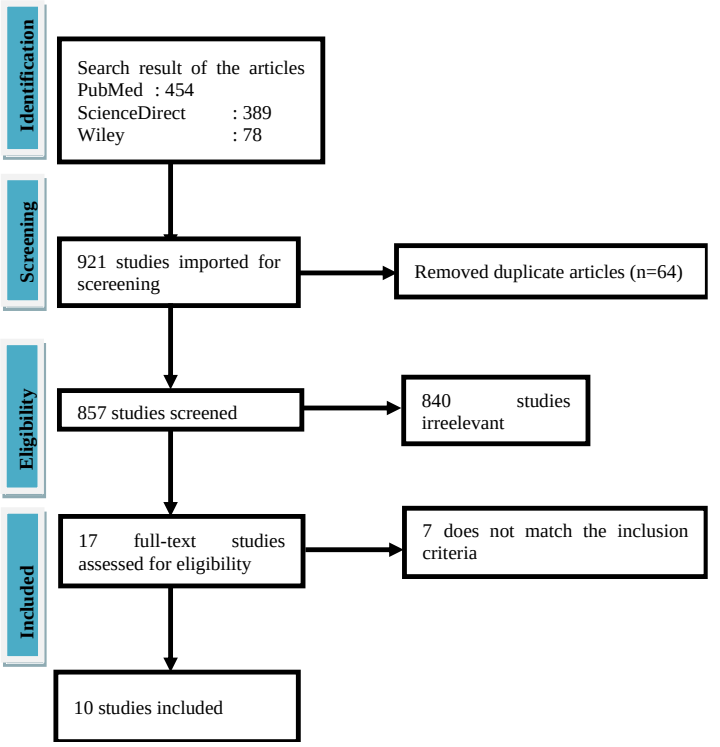

Figure 1. PRISMA *Flow Diagram*

Results and Discussion

Selection of Sources of Evidence

Based on search results from three databases using the keyword through *framwork* PICO.The stages of article screening are described in the form of prisms*Flow Chart* and 8 articles were obtained which were considered to meet the inclusion criteria and were suitable for use in conducting an assessment *Critical Appraisal* using The Joanna Briggs Institute (JBI) (Akbar & Putri, 2016).

Characteristics of Sources of Evidence

There are several characteristics of the 8 articles that have been selected including the characteristics of country names and research methods.

Characteristics of Articles by Country

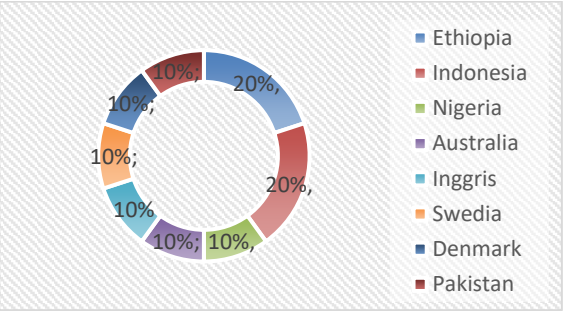

Figure 2. Characteristics of Country Names

Based on the diagram above, it explains the characteristics of articles from several developing countries including [2] articles from Ethiopia, [2], Indonesia, [1] Nigeria, [1] articles from Sweden, [1] Australia, [1] from England,[1]] Denmark and [1] Pakistan.

Characteristics of Articles Based on Research Design

Based on the articles assessed using the JBI instrument, the results were 10 articles 100 % Qualitative research.

Thematic analysis

Based on the review of 10 articles that have been conducted, two main themes emerged from the results*Scoping Review* regarding the experience of mothers with a history of preeclampsia in pregnancy.

Mapping/Theme Grouping

Tabel 2
Theme & Sub-Theme

HIM	UNDER THEME
Mother's experience with history of preeclampsia in pregnancy	1. It's hard to know the signs of preeclampsia 2. Continuous use of antihypertensive drugs during pregnancy 3. The Importance of Husband and Family Support
Impact related to preeclampsia on pregnant women Society's view that eclampsia is a disturbance of evil spirits	1. Mother's anxiety 2. Preeclampsia can threaten the safety of the mother and fetus 3. Low Birth Weight (LBW).

Theme 1: Mother's experience with a history of preeclampsia in pregnancy
It's hard to know the signs of preeclampsia

Preeclampsia is a disease with signs of hypertension, edema, and proteinuria arising from pregnancy. This disease generally occurs in the 3rd trimester of pregnancy, but can occur earlier, for example in hydatidiform moles. Hypertension usually appears earlier than other signs. To make the diagnosis of preeclampsia, the increase in systolic blood pressure must be 30 mm Hg or more above the pressure that is usually found, or reach 140 mm Hg or more. The increase in diastolic pressure is actually more reliable if the diastolic pressure rises by 15 mmHg or more, or becomes 90 mmHg or more, then the diagnosis of hypertension can be made. Determination of blood pressure is carried out at least 2 times 6 hours apart at rest. Recognizing pre-eclampsia/eclampsia is very important so that there is no danger to the mother and fetus. Pregnant women must have regular and quality antenatal checks carefully, recognize the signs as early as possible (mild pre-eclampsia), provide adequate treatment so that the disease does not get worse, must always be aware of the possibility of pre-eclampsia if there are factors predisposition, providing information about the benefits of rest and sleep, tranquility, and the importance of managing a diet low in salt, fat, carbohydrates and high in protein, as well as preventing excessive weight gain (Kusumawati & Wijayanti, 2019). The results of the review state that the main complication of pregnancy under the age of 35 is the occurrence of preeclampsia. The mother will experience hypertension accompanied by swollen feet and protein found in the urine. The basic cause of preeclampsia is thought to be a disturbance in the function of the blood vessel endothelium (cells lining the inside of the blood vessels) which causes vasospasm of blood vessels (contraction of the blood vessel muscles which causes the lumen diameter of the blood vessels to shrink/shrink). Endothelial damage not only causes obstruction of the placental vessels which causes the placenta to develop abnormally or is damaged, but also causes disturbances in the function of various organs of the body and leakage of capillaries which manifests in the mother with rapid maternal weight gain, swelling (sudden worsening of swelling in both legs) , swelling of the hands and face), pulmonary edema, and/or hemoconcentration (hemoglobin/Hb level of more than 13 g/dL) (Sumarni, 2017).

Use of antihypertensive drugs during pregnancy

Treatment of hypertension during pregnancy is very important, because severe hypertension can be associated with an increased risk of preeclampsia. Antihypertensive drugs that are commonly used in preeclamptic patients are methyldopa, labetalol, and nifedipine because they are considered safe for use during pregnancy (van de Vusse et al., 2022). The administration of antihypertensive drugs in preeclampsia that is often used by pregnant women is nifedipine. Hypertension therapy in pregnancy must have special attention because it can affect both the mother and the fetus, if you don't get treatment it can develop into eclampsia. The choice of drug used must be safe because during pregnancy it requires special attention because of the threat of drug teratogenic effects and physiological changes in the mother in response to pregnancy. Drugs can cross the placental barrier and enter the fetal circulation. The choice of drugs

during pregnancy must consider the ratio of benefits and risks for the mother. The drugs used must be safe (Maisarah, 2020).

The importance of husband and family support

Husband's support can encourage mothers to stop bad behavior or habits such as eating unhealthy food, improve the mother's mental health and reduce anxiety and morbidity during childbirth. Husbands who pay attention to the health of their partners can motivate mothers to carry out examinations at health services (Agushybana, 2016). In recent years, support for pregnant women has diminished. This is due to the addition of family members. Therefore, support from husbands is becoming increasingly important for pregnant women (Nakajima et al., 2020). Family support plays a large role in maternal health. If pregnant women get support from all family members, it will make pregnant women more confident, happier carrying out pregnancy and childbirth and postpartum. This situation will be able to reduce maternal anxiety in the delivery process. Continuous support for pregnant women can provide a sense of security and comfort for the mother during labor (Rinata & Andayani, 2018).

Theme 2: Preeclampsia-related impacts on pregnant women
Mother's anxiety

Anxiety that occurs in pregnant women is a psychological disorder that can lead to an increase in blood pressure. Anxiety in pregnant women occurs after knowing the diagnosis of preeclampsia delivered by health workers. This triggers fear in pregnant women, causing anxiety. Anxiety that occurs in pregnant women can worsen or increase blood pressure. Increasing education about routine ANC for pregnant women as an effort to raise awareness of the importance of knowing as early as possible the danger signs in pregnant women needs to be done. It is hoped that with quality education, pregnant women will want to do ANC and anxiety can be overcome so that increased blood pressure can be overcome (Noviyana et al., 2015).

Anxiety is a risk factor for preeclampsia in pregnant women. This statement is supported by several studies that mothers with anxiety disorders are associated with an increased risk of experiencing preeclampsia. Antenatal depression or anxiety increases the excretion of other vasoactive or neuroendocrine hormones which can increase the risk of hypertension, besides that it also triggers blood vessel changes and increases uterine artery resistance which will be found in cases of preeclampsia, pregnant women with anxiety have a 6.5 times the risk of preeclampsia greater than pregnant women who do not experience anxiety (Noviyana & Purwati, 2020).

Preeclampsia can threaten the safety of the mother and fetus

Preeclampsia for pregnant women can cause a decrease in consciousness. Severe preeclampsia usually causes seizures called eclampsia. This condition can result in impaired uteroplacental circulation. This situation can have an impact on fetal distress to fetal death. This can lead to maternal death. Uteroplacental circulation disorders that occur in preeclampsia during pregnancy can cause LBW and

premature birth. Premature babies are at risk of learning disabilities, epilepsy, hearing and vision problems l (Iltaf et al., 2017). The results of the review stated that preeclampsia generally occurs in the first pregnancy, pregnancy in adolescence and pregnancy in women over 40 years. Preeclampsia is a major cause of maternal and fetal death. This is an urgency in maternal health, especially in developing countries like Indonesia. Patients with severe preeclampsia who are in critical condition and are hospitalized*intensive care unit* to get more intensive care (Firmanto et al., 2022). Article 3 there was a case of a mother who lost consciousness when she arrived at the health center, blood pressure was 170/105 mmHg and experienced swelling, blurred vision and severe headaches. History of previous normal delivery at 37 weeks' gestation.

Low birth weight (LBW)

The results of the review Mothers with preeclampsia are four times more at risk of giving birth to babies with LBW. The more severe the preeclampsia suffered by the mother, the lower the birth weight of the baby and vice versa, the lighter the preeclampsia suffered by the mother, the lower the birth weight of the baby [7]. Based on*Preeclampsia Foundation in the American Pregnancy Association (2018)* said that preeclampsia would cause insufficient blood to reach the placenta so that the intake of nutrients and oxygen to the fetus would be reduced and would affect the weight of the fetus. The results of his research (Iltaf et al., 2017) concluded that 70% of hypertension in pregnancy is a causative factor that affects the growth of the placenta which will lead to the birth of babies with low birth weight.

Theme 3 Society's view that preeclampsia is a disturbance of evil spirits

The results of the review stated that in Ethiopia there are some people who still think preeclampsia is a common thing. They associate the incidence of preeclampsia with evil spirits. Seizures and unconsciousness due to the occurrence of eclampsia they think that the spirits of their ancestors are coming to visit. Therefore most of them trust traditional healers to treat women who experience eclampsia rather than getting help from medical personnel. If the traditional treatment fails or is not successful, then the mother is taken to a health care facility. This can cause the mother to be in a critical condition and to the point of death (Tolera et al., 2018).

Conclusion

Based on a review of 10 articles that have been done using Qualitative Study experience of women with preeclampsia express their opinion about preeclampsia which threatens the life of the mother and baby in the womb. The long-term psychological impact must also be considered because getting support from the family will reduce stress, anxiety, worry and fear which can affect the safety and health of mothers and babies who being conceived.

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