

## **EXPLORING THE RELATIONSHIP BETWEEN SLEEP RELATED MYTHS AMONG PREGNANT WOMEN AND STUNTING: LITERATUR REVIEW**

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### **ABSTRACT**

Stunting remains a major public health problem in Indonesia, with its incidence largely influenced by the first 1,000 days of life. Such traditions, including taboos and unsafe practices like home delivery, can increase the risk of complications for both mothers and newborns 1. Cultural beliefs and practices related to the care of pregnant and postpartum women are still widely found within communities2. In the third trimester, many pregnant women experience sleep difficulties due to physical discomfort or frequent urination at night, making daytime naps important. This study aims to examine the cultural myth of prohibiting daytime naps during pregnancy and its potential impact on maternal sleep quality, birth outcomes, and stunting prevention. The study employed a comprehensive literature review. Data were collected from Scopus, Google Scholar, and media articles, using specific inclusion and exclusion criteria to ensure relevance and quality. Findings indicate that myths discouraging daytime naps in pregnancy, particularly in Javanese culture, may exacerbate maternal sleep deprivation, affect fetal growth, and increase the risk of low birth weight a known contributor to stunting. While these cultural beliefs have been passed down through generations, they can hinder the promotion of healthy sleep practices in pregnancy. This research provides evidence to dispel unfounded cultural myths and highlights the importance of adequate maternal sleep, including daytime naps, for healthy pregnancy outcomes and stunting prevention. Continuous education from healthcare providers, community leaders, and families is essential to correct misconceptions and promote maternal well-being.

Keywords: pregnant women; sleep myths; stunting

### **INTRODUCTION**

Cultural traditions and belief systems shape and reinforce women's behaviors throughout pregnancy and childbirth across various regions of the world (Ramulondi et al., 2021). The Javanese are one of Indonesia's largest ethnic groups, and their culture shapes daily life, including maternal care (Zulkifli et al., 2023). Many still follow traditional myths and practices during pregnancy, which can sometimes put the pregnancy at risk (Cukarso & Herbawani, 2020). A major factor contributing to Indonesia's high maternal mortality rate is limited knowledge about prenatal care, along with cultural traditions passed down through generations (Murniasih et al., 2016). Across different cultures, similar practices were observed, including structured support for mothers, designated rest periods, dietary prescriptions and restrictions, hygiene-related routines, as well as customs concerning infant care and breastfeeding (Dennis et al., 2007). Although interventions have reduced maternal and neonatal illness and death, progress remains slow, particularly in remote indigenous populations. In these communities, sociocultural beliefs strongly shape health-related behaviors during pregnancy, delivery, and the postpartum period (Felisian et al., 2023).

In Javanese society, pregnancy is often viewed as a vulnerable and risky period, surrounded by numerous traditional beliefs and practices throughout its stages (Austiyana, 2021). Pregnant women must prepare for pregnancy, especially in the first 1000 days of life (Agushybana et al., 2022). Sleep is an essential function, particularly for pregnant women, as it plays a crucial role in

maintaining maternal health during pregnancy. The quality of the next generation will be determined by the mother's condition before pregnancy and during pregnancy (Alfarisi et al., 2019). Therefore, recognizing and addressing sleep patterns during pregnancy and their impact on maternal and child health outcomes should be a public health priority (Cassidy et al., 2023). The five main factors that cause stunting are poverty, social and cultural factors, increased exposure to infectious diseases, food insecurity and community access to health services (Artika, 2018). A qualitative study exploring the experiences of Javanese women during their first pregnancy; it reports various pregnancy traditions and myths that are still practiced, including behavioral restrictions such as avoiding daytime naps (Gayatri et al., 2023). Research on myths in the Javanese tribe found that pregnant women were prohibited from napping. Pregnant women who live with their parents still follow this belief (Regina Putri & Noviani Fadilah, 2023). Sleep disturbances not only affect the physical and mental health of pregnant women but can also have consequences for fetal development. Therefore, maintaining maternal well-being during pregnancy is crucial (Karami et al., 2022). Maternal circadian preference is related to several sleep difficulties in early childhood, and it may be considered a potential risk factor for the onset of early sleeping problems. Parental circadian preference can influence a baby's or child's sleep patterns, especially in the early stages of life. If parents have sleep patterns that are irregular or different from the baby's needs, this can be a risk factor for children's sleep disorders, which in turn can impact their growth and development (Morales-Muñoz et al., 2019).

Maternal sleep duration of 9.0 to 9.9 hours is significantly associated with a reduced incidence of low birth weight and small-for-gestational-age infants, particularly among women who gain an appropriate amount of weight during pregnancy, compared to those who sleep for 6.0 to 7.9 hours. (Murata et al., 2021) Moreover, there is a significant relationship between maternal age, parity, and the incidence of anemia. Public Health Centers can enhance health promotion programs targeting mothers approaching at-risk ages and parity levels to help prevent anemia in third-trimester pregnancies. (Vionalita & Permata, 2020) Additionally, addressing maternal depression due to lack of sleep may play a crucial role in reducing stunting rates. Overall, focusing on psychosocial factors in perinatal women can have a significant impact on child growth and well-being, especially in developing countries. (Smith Fawzi et al., 2019)

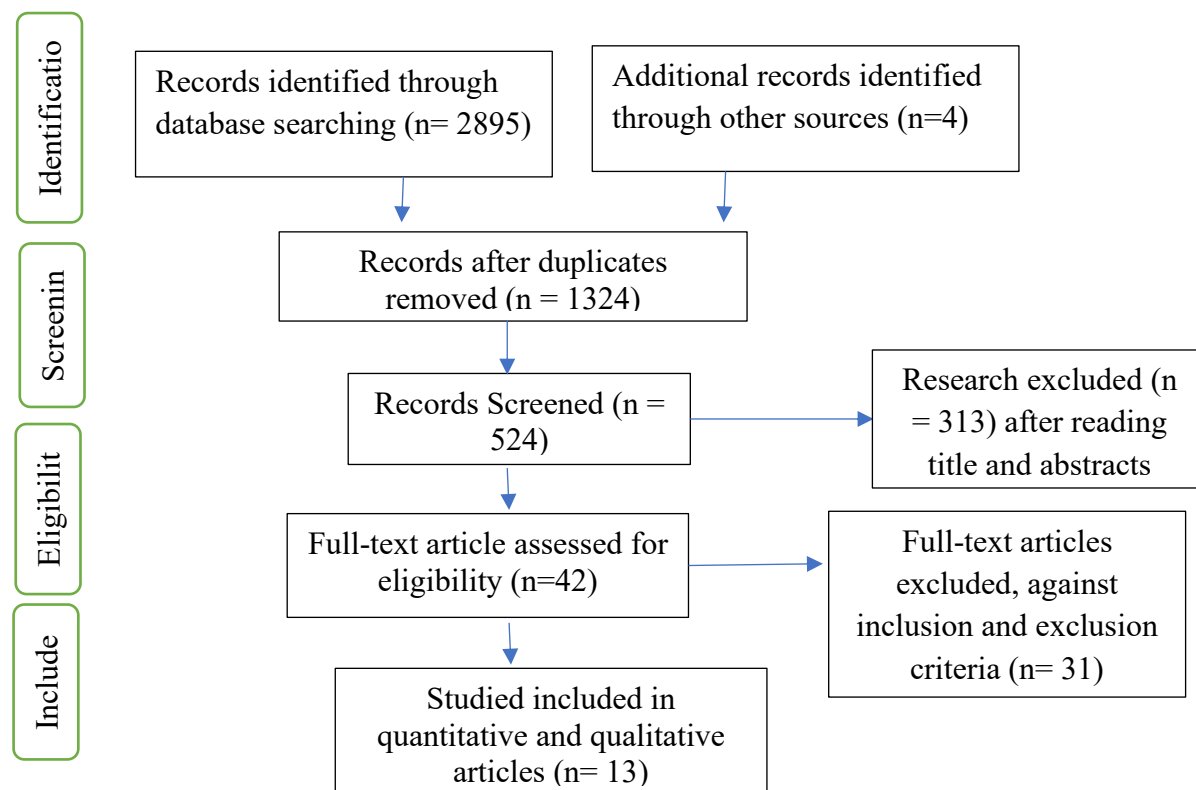
## **METHOD**

This study employed a literature review design aimed at comprehensively examining the myth prohibiting daytime napping among pregnant women and its association with maternal sleep quality, pregnancy outcomes, and the risk of stunting in children. The literature search was conducted systematically by the authors following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure rigorous identification, screening, and selection of relevant articles. Article searches were carried out using several indexed databases, namely Google Scholar and PubMed, selected for their accessibility and relevance to maternal and child health research. The literature search utilized combinations of keywords in both English and Indonesian, including “*pregnant women*” and/or “*pregnant female*”, “*sleep quality*”, “*daytime napping*”, and “*stunting*”. These keywords were combined using Boolean operators (AND/OR) to refine and optimize search results.

The inclusion criteria comprised: (1) quantitative studies, qualitative studies, systematic reviews, and literature reviews; (2) studies addressing maternal sleep quality, daytime napping, cultural beliefs or myths related to pregnancy, and their associations with low birth weight, prematurity, or

stunting; (3) articles published within the last five years (2019–2023); and (4) publications written in English or Indonesian. The exclusion criteria included studies focusing on sleep quality among men, elderly individuals, adolescents, or non-pregnant populations, as well as articles that did not provide information relevant to the objectives of this review. The article selection process was conducted in several stages. Initially, all articles retrieved from the database searches were identified and compiled. This was followed by title and abstract screening to assess relevance to the study focus. Articles containing the three primary keywords (*pregnant women*, *sleep quality*, and *stunting*) were briefly reviewed to confirm relevance. Eligible articles were then examined in full text to evaluate content suitability and contribution to the study objectives. From an initial total of 2895 identified articles, 10 studies (including quantitative, qualitative, and literature review studies) met the inclusion criteria and were included in the final analysis after the screening and selection process. The flow of article identification, screening, eligibility assessment, and inclusion is presented in the PRISMA flow diagram (Figure 1). Data analysis was conducted using a narrative thematic approach, grouping key findings into the main theme of maternal sleep quality, with subthemes including: (1) myths and cultural beliefs related to daytime napping among pregnant women; (2) the effects of insufficient sleep on maternal and fetal health; (3) the relationship between maternal sleep and low birth weight and prematurity; and (4) the implications of maternal sleep quality for the risk of stunting.

#### Data Abstraction



## RESULT AND DISCUSSION

Sleep disturbances are a significant global public health issue. Both insufficient and excessive sleep have been linked to negative pregnancy outcomes (R. Wang et al., 2022). Therefore, routine sleep screening is recommended for pregnant women. In today's society, with modernization, migration

and globalization, individuals may be unable to carry out the rituals or, conversely, feel pressured to carry out activities in which they no longer believe (Ramulondi et al., 2021). If pregnant women do not get sufficient quality sleep, it can negatively impact fetal health. They require approximately eight hours of sleep at night, along with additional rest during the day. The belief that pregnant women should avoid napping is a harmful myth that can be detrimental to their well-being. The myth about prohibiting naps for pregnant women is still widely believed by the public. Regular daytime napping is associated with shorter labor and a lower risk of obstetric interventions (Tsai et al., 2013). Moderate-duration napping (30–60 minutes) during pregnancy is associated with a reduced risk of low birth weight. This finding highlights the importance of healthy sleep patterns as a lifestyle factor that can support maternal and fetal health. Moderate-duration daytime napping in the late trimester is associated with a reduced risk of low birth weight (LBW) (Song et al., 2018) which subsequently increases the risk of stunting.

Throughout pregnancy, maternal estrogen and progesterone levels increase to support fetal development. These hormonal changes affect sleep quality. Poor sleep can cause the accumulation of harmful substances, including free radicals and neurotoxic waste, in the brain. It is essential to educate pregnant women about the effects of poor sleep quality, as it can lead to anemia and interfere with the production of growth hormones in the fetus, potentially contributing to stunting. Inadequate maternal sleep during pregnancy also impacts the development of the newborn's hippocampus. Ensuring sufficient rest during the first 1,000 days of life (HPK) can help prevent stunting. Daytime napping plays an important role in compensating for insufficient nighttime sleep. Studies assessing 24-hour sleep patterns have found that mothers who are not accustomed to napping are more likely to experience overall sleep deprivation and have a higher risk of preterm birth (L. Wang & Jin, 2020). Counseling about the myth of napping in pregnant women is very important considering the positive impact of sleep on pregnant women which can prevent anemia and optimize fetal development. A comprehensive solution is needed, including a cross-sector approach, women's empowerment, policies and programs that provide an understanding of the myth of prohibiting naps among pregnant women. Adequate sleep in pregnant women is very important for fetal growth and can prevent stunting, as well as targeted and sensitive interventions.

Table 1.

Analysis Article

Author (years)	Title	Types of Research	Instrumen	Sample/ Object	Result
Yulianti I (2024)	Pregnancy Through a Cultural Lens: Addressing Myths and Facts in the Beliefs of the Javanese Community in Tarakan City	Qualitative	Interview	Post Partum Women	Cultural beliefs and practices related to the care of pregnant and postpartum women are still widely found within communities.
Aynalem BY, Melesse MF, Bitewa YB (2023)	Cultural Beliefs and Traditional Practices During Pregnancy, Child Birth, and the Postpartum Period in East Gojjam Zone, Northwest Ethiopia	Qualitative	in-depth interviews and focused group discussions until	Pregnant Women	There are still cultural practices and myths related to pregnancy that may negatively affect maternal and infant health, including restrictions on daytime napping, which can increase the risk of maternal fatigue and adverse pregnancy outcomes.

Author (years)	Title	Types of Research	Instrumen	Sample/ Object	Result
Zulkifli Z, Yenni, Dila Yulinda Sari, et al. (2023)	Pregnancy Tradition Ceremony in Javanese Society	literature review	literature review	academic journals, books, conference proceedings, and other pertinent sources	Javanese traditions include certain prohibitions for pregnant women, including restrictions on daytime napping. This may hinder healthy sleep patterns that are essential for fetal growth and development.
Felisian S, Mushy SE, Tarimo EAM, et al. (2023)	Sociocultural Practices and Beliefs During Pregnancy in Manyara, Tanzania	Qualitative	In-depth interviews	Women with experienced pregnancy	Cultural practices that restrict rest for pregnant women affect both maternal and neonatal health. This condition may increase the risk of babies being born small and vulnerable to stunting.
Gayatri M, Silvani Y, Pirade RA, et al. (2023)	Javanese Women's Experiences During the First Pregnancy	Qualitative	In-depth interviews with phenomenological approach	pregnant women	The experiences of Javanese mothers show that cultural pressures regarding daytime napping still exist. Sleep deprivation is associated with fatigue, pregnancy complications, and the risk of small-for-gestational-age infants.
Wang R, Xu M, Yang W, et al. (2022)	Maternal Sleep During Pregnancy and Adverse Pregnancy Outcomes: A Systematic Review and Meta-Analysis	literature review	literature review	PubMed, Embase and the Cochrane Central Register of Controlled Trials databases	Inadequate sleep duration during pregnancy is associated with low birth weight (LBW) and preterm birth. Daytime napping helps compensate for nighttime sleep deficits.
Murata T, Kyojuka H, Fukuda T, et al. (2021)	Maternal Sleep Duration and Neonatal Birth Weight: Japan Environment and Children's Study	Quantitative	questionnaire	pregnant women	Short sleep duration (<6 hours) is associated with an increased risk of low birth weight (LBW). Daytime napping can serve as an important compensation to help reduce this risk.
Austiyana M (2021)	Tingkeban: Javanese Ritual During Pregnancy in Kalisari	Qualitative	Interview	Dukun bayi	Javanese traditional rituals include rules for pregnant women, including prohibitions on daytime napping. This may potentially reduce the fulfillment of maternal sleep needs.
Cukarso SNA, Herbawani CK (2020)	Traditional Beliefs and Practices Among Pregnant Women in Javanese Communities: A Systematic Review	Literature review	Literature review	Google Scholar with a publication period between 2010-2020. Result:	the myth of daytime napping still persists in Javanese society, potentially leading to sleep deprivation and an increased risk of pregnancy complications.
Wang L, Jin F (2020)	Association Between Maternal Sleep Duration and Quality, and the Risk of Preterm Birth: A Systematic Review and Meta-Analysis	Systematic review	Systematic review	Google Scholar with a publication period between 2010-2020	Pregnant women with short sleep duration and no daytime naps are at higher risk of preterm birth. Napping serves as a compensatory factor to help prevent prematurity.
Song L, Shen L, Li H, et al. (2018)	Afternoon Napping During Pregnancy and Low Birth Weight: The Healthy Baby Cohort Study	Quantitative	Quantitative	Pregnant women	Daytime napping of moderate duration (30–90 minutes) significantly reduces the risk of low birth weight (LBW).
Murniasih NP, Masfiah	Prenatal Care Practices from the	Qualitative	Interview	Pregnant women	Javanese culture influences prenatal care behaviors, including the

Author (years)	Title	Types of Research	Instrumen	Sample/ Object	Result
S, Hariyadi B, et al. (2016)	Perspective of Javanese Culture in Kaliori Village				prohibition of daytime napping. This may have implications for the risk of low birth weight (LBW) and stunting due to suboptimal maternal sleep quality.
Tsai SY, Lin JW, Kuo LT, et al. (2013)	Nighttime Sleep, Daytime Napping, and Labor Outcomes in Healthy Pregnant Women in Taiwan	Qualitative	Interview	Postpartum mother	Daytime napping is associated with smoother labor. Mothers without the habit of napping are at higher risk of fatigue and labor complications.

Stunting is a multifactorial phenomenon (prenatal and postnatal nutrition, infections, sanitation, breastfeeding, and socioeconomic factors), with maternal sleep being one of many factors that influence the final risk (R. Wang et al., 2022). Delivering nutrition and reproductive health education in small groups using interactive methods enhances pregnant women's knowledge, attitudes, and behaviors. This approach has the potential to be expanded and applied on a larger scale by strengthening collaboration among government agencies, non-governmental organizations, and maternal and child health service providers(Permatasari et al., 2021). Counseling material can be added about the benefits of naps for fetal development, provides useful information to dispel unfounded myths and increase public understanding of the importance of naps for pregnant women. Pregnant women are advised to have a good sleep pattern. Pregnant women are encouraged to enhance sleep quality by incorporating pregnancy exercises into their routine, like yoga(Mongi, 2022). It is recommended that apart from having regular visits during pregnancy, pregnant women should also continue to monitor their sleep-related disorders.

## CONCLUSION

Sleep patterns during pregnancy play an important role in maternal and fetal health. Sleep disturbances or suboptimal sleep duration are often associated with pregnancy complications. Healthy sleep patterns during pregnancy (including adequate nighttime sleep and regular short naps) are associated with better labor outcomes (e.g., more optimal birth weight, shorter labor, and fewer interventions). Since low birth weight and prematurity increase the risk of stunting, improving maternal sleep habits represents a potential strategy for stunting prevention. The myth prohibiting pregnant women from taking daytime naps, which still persists in Indonesian society, particularly within Javanese culture, may negatively affect maternal and fetal health. In fact, various studies have shown that napping of reasonable duration contributes to healthier pregnancies, supports optimal birth weight, and may reduce the risk of stunting later in life. Therefore, continuous education from stakeholders including healthcare providers, community cadres, cultural leaders, and families is needed to correct this misconception. Such education is expected to encourage pregnant women to adopt healthy sleep patterns, including daytime napping, as part of a comprehensive effort to prevent stunting in Indonesia.

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