

Maternal Age and Risk of Pregnancy Complications: A Qualitative Study

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ABSTRACT

Purpose: This study aims to explore the relationship between advanced maternal age (≥ 35 years) and the risk of pregnancy complications through a qualitative perspective, emphasizing women's perceptions, experiences, and coping strategies.

Research Method: A systematic literature review methodology was employed to synthesize qualitative research findings related to advanced maternal age and pregnancy complications. Relevant studies were reviewed to identify recurring themes, contradictions, and contextual gaps.

Results and Discussion: The findings reveal that advanced maternal age is associated with heightened risks of complications such as preeclampsia, gestational diabetes, hypertension, preterm birth, and postpartum hemorrhage. Personal experiences, cultural beliefs, and access to healthcare influence perceptions of these risks. Women with higher perceived susceptibility are more likely to seek medical intervention, while those facing socio-economic barriers or cultural stigma exhibit lower health-seeking behaviors.

Implications: The study underscores the importance of developing culturally sensitive maternal health programs tailored to the needs of older pregnant women. Healthcare providers should adopt empathetic communication strategies and accessible education programs. Future research should address this study's limitations by employing mixed-methods approaches and considering broader social determinants of health.

Keywords: advanced maternal age; pregnancy complications; health belief model; maternal health risks.

Introduction

Maternal health constitutes a fundamental pillar of public health and a critical benchmark in assessing the quality and responsiveness of healthcare systems globally. Biological, behavioral, and socio-environmental factors influence pregnancy outcomes, particularly those related to maternal and neonatal well-being. Maternal age has emerged as a central variable of interest due to its complex and evolving role in shaping reproductive health (Sauer, 2015). Over the past two decades, demographic trends have increasingly shown a rise in delayed childbearing, primarily driven by factors such as prolonged education, career prioritization, economic considerations, and greater autonomy in reproductive choices. In high-income countries, the average age of first-time mothers has steadily increased, with countries like the United Kingdom reporting an average maternal age of 30.9 years in 2021, up from 28.8 years in 2000. In Indonesia, data from the Ministry of Health, (2022) shows that approximately 20% of pregnancies occurred in women over the age of 35, indicating that the trend of



advanced maternal age is also prevalent in developing contexts. This shift has profound implications, as advanced maternal age is clinically associated with increased risks of pregnancy-related complications. Despite this, much of the literature focuses predominantly on biomedical outcomes, often overlooking the broader psychosocial and contextual factors contributing to these risks. Consequently, maternal age has become a complex and pressing issue that demands critical inquiry from medical, sociocultural, and policy perspectives.

In line with these global and national trends, this study focuses on examining the specific effects of advanced maternal age, defined as pregnancy at 35 years and above, on the risk of pregnancy complications through a qualitative and contextual lens. The Indonesian Demographic and Health Survey (IDHS) 2017 revealed that maternal mortality remains high at 305 deaths per 100,000 live births, with a notable proportion attributed to complications such as preeclampsia, postpartum hemorrhage, and obstructed labor—all of which show increased prevalence among older mothers. The Central Statistics Agency (BPS) also noted a rising trend in cesarean deliveries, now accounting for over 17% of births in Indonesia, with higher rates observed in women over 35. These figures highlight the pressing need to understand not only the medical risks associated with maternal age but also the subjective experiences, access to care, and coping mechanisms of women in this demographic. However, a significant gap persists in the literature regarding the lived realities of women facing these risks, particularly in contexts characterized by healthcare disparities, social stigma, or limited support systems. The underlying phenomenon of this study, therefore, is the complex interplay between maternal age and pregnancy complications, not merely as a clinical concern but as a socially embedded and personally experienced challenge.

Recent studies have underscored the significant association between advanced maternal age and heightened risks of pregnancy complications. Specifically, research has demonstrated that advanced maternal age is associated with increased risks of various pregnancy complications. Studies have found higher rates of gestational diabetes, preeclampsia, and gestational hypertension in older mothers, with nonlinear increasing trends for both nulliparas and multiparas (Li *et al.*, 2023). Cesarean delivery rates also rise with maternal age, exceeding 20% for women aged 43 and above (Hochler *et al.*, 2023). Other complications more prevalent in older mothers include placenta previa, preterm delivery, and postpartum hemorrhage (Anusuya *et al.*, 2024). The risk of adverse outcomes generally increases after age 35, with some complications peaking between 40 and 44 years and others at 45 years or older (Zhou *et al.*, 2023). Notably, nulliparous women face higher risks than multiparous women (Zhou *et al.*, 2023). These findings highlight the importance of counseling women about the potential risks of delaying childbirth and providing appropriate care for older pregnant women (Anusuya *et al.*, 2023; Li *et al.*, 2023).

Moreover, recent investigations have emphasized the complexity of the relationship between maternal age and pregnancy outcomes. While some studies have affirmed the increased risks of complications such as cesarean sections, gestational diabetes, and hypertensive disorders among older mothers (Sidik & Suharyo, 2024), other research has introduced alternative perspectives. For instance, some scholars have identified potential psychological benefits among older mothers, suggesting that greater emotional maturity and preparedness for parenthood may result in improved behavioral and emotional outcomes for their children (Ahmad *et al.*, 2024). Nevertheless, the findings across studies are not consistent. One investigation, for example, found no significant associations between advanced maternal age and adverse outcomes such as preterm delivery or low birth weight after adjusting for confounding variables (Shan *et al.*, 2018). In addition, socioeconomic factors have been reported to

exacerbate risks for older mothers, particularly those from marginalized communities (Sidik & Suharyo, 2024). The prevalence of pregnancies in women of advanced maternal age is not negligible either, with one study reporting an incidence of 25.1% (Shan *et al.*, 2018). These findings collectively illustrate the multidimensional nature of delayed childbearing and its complex interplay with health, psychology, and social structures.

Despite the growing volume of research on the relationship between maternal age and pregnancy complications, a significant gap remains in integrating empirical evidence with theoretical understanding, particularly from a qualitative perspective. Most studies have centered on biomedical and epidemiological data that establish associations between advanced maternal age and increased risks of gestational diabetes, preeclampsia, cesarean delivery, and preterm birth (Li *et al.*, 2023; Zhou *et al.*, 2023; Hochler *et al.*, 2023). While these studies offer valuable insights into the clinical implications, they often exclude the psychosocial and experiential dimensions of pregnancy in older women, limiting the holistic understanding of this phenomenon. Furthermore, existing findings are often conflicting; for instance, some studies report no significant adverse outcomes after adjusting for confounding variables (Awoyesuku *et al.*, 2024), while others emphasize the compounded risks for marginalized populations (Sidik & Suharyo, 2024). Research on maternal age tends to adopt a risk-based medical model without sufficiently incorporating perspectives from social science or behavioral health frameworks. This creates a disconnect between statistical risk assessments and the lived experiences of pregnant women. Additionally, few studies have systematically synthesized qualitative research to explore how emotional readiness, healthcare access, and societal perceptions influence outcomes for older mothers. This gap underscores the need for a comprehensive systematic literature review that captures both the empirical patterns and the nuanced realities embedded in advanced maternal-age pregnancies.

This study offers a novel and timely contribution by systematically reviewing qualitative literature to gain a deeper understanding of the effect of maternal age on the risk of pregnancy complications, primarily through the lens of women's lived experiences and social contexts. While prior research has primarily emphasized biomedical risks associated with advanced maternal age, such as gestational diabetes, preeclampsia, and preterm birth, there remains a lack of synthesis regarding how these risks are perceived, managed, and shaped by women's psychological, cultural, and socioeconomic environments. The uniqueness of this study lies in its methodological approach, which employs a Systematic Literature Review (SLR), enabling a structured and comprehensive analysis of existing qualitative findings. Through this lens, the study does not aim to quantify risk but to explore how maternal age is constructed as a risk factor within different lived realities, healthcare systems, and cultural expectations. By critically analyzing qualitative studies, this research aims to identify common themes, contradictions, and underexplored contextual gaps in mainstream maternal health research. The central research question guiding this review is: How does maternal age influence the risk of pregnancy complications from a qualitative perspective? The objective is to draw meaningful insights from existing literature that can inform more responsive, inclusive, and empathetic maternal healthcare practices and policies, particularly as delayed childbearing becomes increasingly prevalent across diverse global contexts.

Literature Review and Hypothesis Development

The Health Belief Model (HBM)

The Health Belief Model (HBM), initially developed in the 1950s by social psychologists at the U.S. Public Health Service, remains one of the most influential theoretical frameworks for understanding health-related behaviors. Its initial purpose was to explain why people failed to participate in disease prevention and screening programs despite the availability of free services (Chien *et al.*, 2020). The model comprises six key constructs: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy. Each component reflects an individual's internal reasoning when deciding whether to adopt or refrain from a health-related behavior. For instance, an individual may recognize a health threat but not take preventive action if the perceived barriers outweigh the perceived benefits (Orji *et al.*, 2012). Over the years, this model has evolved to accommodate complex health decisions in varying cultural and psychological contexts. Studies have continued to refine its applicability, showing its robustness across diseases and health behaviors, including vaccination uptake, chronic illness management, and preventive screening (Shmueli, 2021).

In recent years, the relevance of HBM in qualitative health behavior research has become increasingly apparent. Unlike purely statistical approaches, qualitative applications of the Health Belief Model (HBM) offer more profound insights into how individuals interpret and emotionally respond to health information. For example, Jones *et al.*, (2015) emphasized that the model allows researchers to uncover parallel and moderated mediation processes in health communication by examining how people process threat-based messages. This is particularly valuable in low-resource or high-stigma environments, where cultural narratives or misinformation can influence individuals' perceptions of their susceptibility or the severity of the condition. Studies by Tong *et al.*, (2020) and Wong *et al.*, (2021) demonstrated how HBM components can serve as interpretive tools in understanding behavioral intentions during public health crises, such as COVID-19, highlighting how perceived risk and social cues drive precautionary action. Moreover, when individuals face conflicting sources of information, such as during a pandemic or pregnancy at advanced maternal age, self-efficacy and perceived barriers play crucial roles in determining whether individuals pursue or avoid healthcare interventions (Ahadzadeh *et al.*, 2015). Therefore, using HBM in qualitative research facilitates the categorization of beliefs and motivations, allowing for a more nuanced exploration of the sociocultural forces that shape those beliefs.

The application of HBM in the context of advanced maternal age and pregnancy complications offers an important lens to examine health decisions through a psychosocial and contextual framework. For example, Carico *et al.*, (2021) found that women's engagement with prenatal care services is often shaped by their perceived risk, confidence in the medical system, and access to social support. A 38-year-old woman may understand the clinical implications of pregnancy at her age. However, her health behavior will be guided by how she internalizes these risks, whether as manageable challenges or as sources of anxiety. Tao *et al.*, (2021) observed that perceived benefits, such as ensuring fetal health, may be overshadowed by barriers like fear of stigma or distrust in providers, especially in older pregnant women from marginalized backgrounds. These insights align with findings by Yuan *et al.*, (2021), who reported that social stigma can significantly interfere with health-seeking behavior, particularly when individuals fear judgment due to age, marital status, or prior health history. Furthermore, cues to

action—whether through health professionals, community education, or personal experiences—can play a decisive role in transforming perception into action.

Maternal Age

Maternal age is widely recognized as a critical demographic factor influencing pregnancy outcomes and maternal health status. Contemporary literature categorizes maternal age into three principal groups: adolescent mothers (under 20 years), women of ideal reproductive age (20–34 years), and those classified as being of advanced maternal age (AMA), which refers to pregnancies occurring at or beyond 35 years of age (Pinheiro *et al.*, 2019). This classification framework is derived from empirical observations and clinical benchmarks demonstrating a rising trajectory of obstetric risks beyond age 35. As Aguilar-Cordero *et al.*, (2020) noted, the AMA threshold reflects consistent evidence associating increasing age with heightened maternal and neonatal complications. While some older women may enter pregnancy with improved socioeconomic resources and emotional stability, biological constraints remain a significant concern. Nelson *et al.*, (2013) emphasized that ovarian reserve, follicular responsiveness, and endometrial receptivity decline progressively after age 30 and more sharply after age 35, contributing to the challenges of conception, implantation, and fetal development.

Biological implications associated with AMA have been rigorously examined in numerous population-based studies. Cleary-Goldman *et al.* (2005) reported that maternal age above 35 years correlates strongly with an elevated risk of gestational diabetes, preeclampsia, preterm birth, and operative deliveries, even after controlling for other health variables. Furthermore, Lin *et al.* (2019), in a large-scale retrospective cohort study, confirmed that AMA is associated with increased maternal morbidity and a higher incidence of neonatal intensive care unit (NICU) admissions. These findings are not geographically restricted; a multicountry analysis by Laopaiboon *et al.* (2014) revealed that adverse pregnancy outcomes related to AMA persist across diverse health systems, indicating a global pattern. However, it is important to note that age-related risk is not monolithic. Goisis *et al.*, (2017) argued that while older maternal age carries biological risks, it may also confer psychological and social advantages, such as improved parenting capacity and cognitive outcomes for children. This complexity necessitates a more nuanced understanding of maternal age, extending beyond clinical statistics to encompass women's subjective interpretations and experiences of risk. Integrating these insights is especially valuable in qualitative research, which explores how older pregnant women perceive and respond to medical advice, societal expectations, and institutional practices.

Psychosocial implications further compound the medical dimensions of maternal age. Age-related stigma, societal expectations, and mental health stressors can significantly influence women's reproductive experiences. Kenny *et al.*, (2013) highlighted that women of advanced maternal age often face social scrutiny, mainly when deviating from perceived reproductive norms. This social pressure can affect engagement with antenatal services, trust in healthcare providers, and self-efficacy in navigating pregnancy-related decisions. In contrast, younger mothers are frequently subject to stereotypes regarding immaturity and lack of preparedness, creating barriers to psychosocial support. Lean *et al.*, (2017) emphasized that women of AMA typically hold higher expectations for positive birth outcomes, which may lead to more significant psychological distress when complications occur. Provider attitudes toward older pregnant women vary, sometimes resulting in overt medicalization or neglect of psychosocial needs (Bessett, 2019). These dynamics underscore the importance of examining maternal age as a biological indicator and a multifaceted construct shaped by emotional, social, and structural

influences. Future research must prioritize interdisciplinary approaches that bridge clinical risk assessments with women's lived experiences across different age groups.

Pregnancy Complications

Pregnancy complications encompass a wide array of clinical conditions that may endanger the health of both the mother and the fetus during gestation, labor, or the postpartum period. These complications range from mild issues, such as gestational nausea, to severe conditions, including preeclampsia, gestational diabetes, preterm labor, and postpartum hemorrhage. According to Pinheiro et al. (2019), these complications not only increase maternal morbidity but also contribute significantly to adverse neonatal outcomes, including low birth weight and stillbirth. McCauley *et al.*, (2022) emphasize that identifying and classifying these conditions is essential for planning effective antenatal care interventions. Gestational hypertension and intrauterine growth restriction (IUGR), for example, require early detection and monitoring to avoid long-term damage. Sparić *et al.*, (2024) further emphasize that the biological processes of the uterus and ovaries change with age, increasing susceptibility to complications even in otherwise healthy pregnancies. Such insights underscore the clinical significance of recognizing the various complications as isolated pathologies and complex, interacting outcomes influenced by physiological and systemic variables.

Numerous risk factors have been identified as contributing to the onset and severity of pregnancy complications. Maternal age is one of the most widely documented variables, with both adolescent and advanced maternal-age pregnancies showing increased vulnerability to adverse outcomes. Correa-de-Araujo & Yoon, (2020) observed that women aged 35 and older were at significantly higher risk for preeclampsia, placental abruption, and severe maternal morbidity. Similarly, McClure et al. (2020) conducted a multicountry assessment, confirming the association between maternal age and complications across diverse healthcare systems. In addition to age, pre-existing health conditions such as obesity, diabetes, and anemia are identified as potent biological risk factors (Bosschieter *et al.*, 2024). Le *et al.*, (2022), for example, explored the link between periodontitis and preeclampsia, indicating how even non-reproductive health conditions can influence pregnancy outcomes. Moreover, Goisis *et al.*, (2017) noted that while advanced maternal age carries medical risks, it may also align with higher health literacy and better access to care, which could mitigate some adverse outcomes. These studies demonstrate that pregnancy complications are not simply caused by one factor but are shaped by an intersection of health history, biological age, and even oral health, supporting the need for an integrative approach to prenatal care.

From a psychosocial perspective, it is equally important to understand how women perceive and experience pregnancy complications within their social, cultural, and emotional contexts. Sun et al. (2023) argue that while complications such as gestational diabetes or preterm birth are medically significant, they also evoke emotional distress, guilt, and social stigma. This is particularly evident in populations with limited health education and antenatal services. Women facing such conditions often encounter fragmented healthcare responses, with their concerns either minimized or medicalized without psychological support. Furthermore, Harrison *et al.*, (2015) note that health professionals sometimes rely solely on clinical risk scores without considering patient narratives, thereby missing opportunities for preventive care. In many qualitative accounts, women describe their experiences with complications as overwhelming and isolating, particularly when healthcare systems fail to address both the medical and emotional aspects of pregnancy.

Research Method

Study Design

This research employed a qualitative systematic literature review (SLR) design to examine and synthesize existing evidence on pregnancy complications and their associated risk factors. The qualitative systematic literature review (SLR) approach was chosen to capture the richness and complexity of maternal health experiences by integrating findings from multiple studies. This design enables a critical and interpretive analysis of qualitative evidence, focusing on how pregnancy complications are perceived, experienced, and influenced by various medical, psychological, and social factors.

Sample Population or Subject of Research

The subject of analysis in this study consisted of published articles containing qualitative evidence related to pregnancy complications. The review targeted studies published between 2015 and 2025 and retrieved from reputable academic databases, including Elsevier, Springer, Wiley, Emerald, and SINTA. Articles were included if they employed qualitative methodologies, such as in-depth interviews, focus group discussions, or content analysis. They addressed issues related to the causes, consequences, or lived experiences of pregnancy complications across different maternal age groups and socioeconomic backgrounds.

Data Collection Techniques and Instrument Development

Data collection involved a comprehensive and systematic search using relevant keyword combinations, including "pregnancy complications," "maternal age," "qualitative evidence," and "risk factors." A search protocol was developed to ensure consistency, including steps for identifying, screening, and selecting articles based on inclusion and exclusion criteria. An article review checklist was used to assess methodological quality, relevance to the topic, and clarity of thematic findings.

Data Analysis Techniques

Thematic synthesis was used as the primary method of data analysis. This involved identifying recurring codes within the selected literature, grouping similar concepts into descriptive categories, and generating analytical themes that explain the contextual and experiential dimensions of pregnancy complications.

Results and Discussion

Analysis Result

Perceptions of Pregnancy Risk Based on Maternal Age

Understanding how women perceive pregnancy risks related to advanced maternal age is essential in uncovering the complexity of maternal health experiences. Women over 35 years old are often aware of the heightened risk of complications such as preeclampsia, gestational diabetes, and preterm birth. Aguilar-Cordero *et al.*, (2020) assert that advanced maternal age is significantly associated with the prevalence of preeclampsia and premature birth, suggesting a biological vulnerability that many women recognize. However, perceptions of risk are not always aligned with medical assessments.

According to Ahmad *et al.*, (2024), many older women tend to attribute their perceived risks not merely to chronological age but also lifestyle factors, overall health status, and previous pregnancy experiences. For instance, women who maintain a healthy lifestyle or have experienced successful pregnancies in the past may underestimate their risk despite clinical evidence indicating otherwise. Cultural narratives and personal beliefs play a crucial role in shaping risk perceptions. As Anusuya *et al.*, (2024) noted, older maternal age is often normalized and perceived positively in specific communities, which may reduce perceived vulnerability to complications. Contrarily, societal discourses emphasizing the dangers of late motherhood can amplify anxiety and perceived susceptibility. Such perceptions are further compounded by discrepancies in the information provided by healthcare professionals. Bessett, (2019) highlights that when medical guidance is overly medicalized and detached from patients' subjective realities, women often form their risk assessments based on anecdotal experiences or cultural beliefs. Consequently, these varying perceptions of risk underscore the importance of contextualizing medical advice within the lived realities of women and understanding how advanced maternal age is socially constructed as a risk factor.

Experience of Dealing with Pregnancy Complications

Women's experiences in dealing with pregnancy complications related to advanced maternal age are influenced by both clinical encounters and socio-cultural contexts. According to Correa-de-Araujo & Yoon, (2020), women of advanced maternal age are more likely to experience complications such as gestational diabetes, hypertension, and cesarean deliveries. However, how these complications are perceived and managed is heavily influenced by the interactions between patients and healthcare providers and the broader social environment. Anusuya *et al.*, (2024) emphasize that while medical professionals may prioritize biomedical risk factors, women often view their health through a more holistic lens, including emotional and social well-being. When complications arise, some women report feelings of guilt, fear, and isolation, particularly when healthcare providers fail to address their concerns adequately or when communication is limited to clinical risk assessments (Bessett, 2019). Moreover, the accessibility and quality of healthcare services significantly influence women's experiences. As Hochler *et al.*, (2023) indicate, disparities in healthcare systems can exacerbate negative experiences, mainly when women feel stigmatized or dismissed due to their age. The emotional toll of experiencing pregnancy complications is further intensified when women are confronted with social stigma or unsupportive relationships. Ahmad *et al.*, (2024) note that older mothers often experience societal pressures and judgment, especially when complications are perceived as a consequence of delayed childbearing. These findings suggest that pregnancy complications must be understood not only through clinical parameters but also through the emotional, social, and cultural dimensions that shape women's experiences. Addressing these complexities requires a patient-centered approach that acknowledges maternal health's biomedical and psychosocial aspects.

Coping Strategies and Adaptation Mechanisms

Women employ a variety of coping strategies to manage the perceived risks and complications associated with advanced maternal age. While some women actively seek to mitigate risks through healthier lifestyles, increased prenatal care, or adherence to medical recommendations, others may avoid or delay care due to fear, mistrust, or perceived stigma. Ahmad *et al.*, (2024) found that many older mothers attempt to exercise greater control over their pregnancies by seeking more information,

engaging in self-care practices, and adhering to medical advice. However, coping mechanisms are not universally adaptive or effective. In some cases, avoidance behaviors manifest as reluctance to engage with healthcare providers or to seek timely intervention. Such avoidance is often rooted in cultural beliefs or negative prior experiences with the healthcare system (Harrison *et al.*, 2015). Women's coping strategies are influenced by their social support networks. Anusuya *et al.*, (2024) argue that the presence of supportive family members and friends can significantly enhance women's resilience and capacity to cope with pregnancy-related stress. Conversely, the absence of social support or experiences of stigmatization can exacerbate negative emotional responses and lead to detrimental coping behaviors. Furthermore, the intersection of advanced maternal age and cultural norms shapes how women navigate their pregnancies. In some communities, advanced maternal age is regarded positively, providing psychological strength, whereas in others, it is stigmatized, leading to isolation and anxiety (Bessett, 2019). The ability to adapt effectively to perceived risks and complications thus hinges on a complex interplay of individual, social, and cultural factors. By understanding these coping mechanisms, healthcare providers can better tailor their approaches to meet the unique needs of older mothers.

Contextual Factors Influencing Pregnancy Experiences

The influence of contextual factors such as socioeconomic status, education, healthcare access, and cultural beliefs is paramount in understanding how women experience pregnancy complications. Ahmad *et al.*, (2024) note that advanced maternal age is not solely a medical issue but one that intersects with broader social determinants of health. Women from higher socioeconomic backgrounds often report more positive experiences due to better access to quality healthcare, enhanced health literacy, and greater autonomy in decision-making. In contrast, women from marginalized communities face structural barriers that hinder their ability to receive adequate care. Anusuya *et al.*, (2024) emphasize that economic constraints and limited healthcare access disproportionately affect older mothers, particularly those living in rural or low-resource settings. Cultural perceptions of advanced maternal age significantly shape women's experiences. Older motherhood is celebrated in some societies as a sign of resilience or fulfillment; in others, it is stigmatized or regarded as irresponsible (Bessett, 2019). These cultural narratives shape how women perceive health risks, seek medical care, and respond to medical advice. Furthermore, structural disparities within healthcare systems can exacerbate negative experiences, particularly when services are not culturally sensitive or responsive to the unique needs of older mothers. Understanding how contextual factors interact with biological and psychological aspects of pregnancy is essential for developing equitable and culturally appropriate healthcare policies and interventions.

Discussion

The findings of this study reveal that advanced maternal age (≥ 35 years) is significantly associated with increased risks of various pregnancy complications, including preeclampsia, gestational diabetes, pregnancy-induced hypertension, preterm birth, and postpartum hemorrhage. This observation aligns well with fundamental maternal health concepts, emphasizing that maternal age is a critical determinant influencing the physiological capacity to effectively manage pregnancy, childbirth, and postpartum recovery. Biological aging, which naturally progresses as women age, can lead to diminished ovarian quality, hormonal changes, and reduced elasticity of bodily tissues essential for successful childbirth (Correa-de-Araujo & Yoon, 2020). As a result, these physiological alterations are

likely to increase the likelihood of adverse pregnancy outcomes among older mothers. Moreover, older women are generally more prone to preexisting health conditions such as hypertension and diabetes, which further complicate the pregnancy process. Understanding the physiological implications of advanced maternal age is essential for developing more comprehensive healthcare guidelines and strategies aimed at minimizing pregnancy-related complications and improving maternal and neonatal outcomes. Therefore, this study highlights the need for a more nuanced approach that considers biological risk factors and addresses other factors influencing maternal health outcomes.

The study demonstrates that a combination of factors, including medical knowledge, personal experiences, and socio-cultural beliefs, often influences perceived risk among older mothers. Not all women categorize their age as a predominant risk factor, and their perceptions often vary according to how they interpret medical information, past experiences, and culturally derived notions about motherhood. Some women with better access to healthcare information or previous positive pregnancy experiences tend to be more cautious and vigilant regarding potential complications. In contrast, others who perceive advanced maternal age as a common occurrence within their communities may exhibit a lower perceived risk despite documented medical evidence suggesting otherwise. Such variation in risk perception underscores the complexity of individual beliefs and their impact on health-seeking behaviors. The Health Belief Model (HBM) offers a relevant theoretical framework for explaining these variations by identifying how perceptions of susceptibility, severity, the benefits of preventive actions, and perceived barriers contribute to healthcare decision-making processes (Ahadzadeh *et al.*, 2015; Carico *et al.*, 2021). It becomes evident that a standardized approach to maternal health that disregards the lived experiences and culturally embedded beliefs of these women may be insufficient to address their specific needs.

This study finds that women's experiences in dealing with pregnancy complications related to advanced maternal age are shaped by a complex interplay of medical and social factors. Medical conditions such as preeclampsia or gestational diabetes often cause women to experience heightened emotional distress, including fear, anxiety, guilt, and even frustration, when their condition is not adequately addressed or explained by healthcare providers. Such emotional responses are further compounded by social factors, including stigma, lack of social support, or perceived judgment from healthcare practitioners. According to Bessett (2019), women who feel misunderstood or stigmatized by healthcare providers due to their age are more likely to experience psychological distress, which may negatively affect their willingness to seek care. Furthermore, stigma related to advanced maternal age is not limited to healthcare interactions; it can also manifest within family or community settings where older pregnant women are seen as deviating from normative reproductive expectations. These findings illustrate that addressing maternal health issues requires a holistic approach that recognizes the social and emotional dimensions of healthcare experiences rather than solely focusing on biomedical indicators of risk.

The coping strategies employed by women experiencing pregnancy complications at advanced maternal age also vary considerably, depending on their knowledge, social support networks, and cultural beliefs. Women with greater access to high-quality information and supportive resources are generally better equipped to manage pregnancy-related risks through preventive actions such as regular medical check-ups, lifestyle modifications, and adherence to healthcare recommendations. However, disparities in access to healthcare and economic constraints can hinder some women's ability to engage in optimal health-seeking behaviors. For example, Anusuya *et al.* (2024) highlight that women from marginalized or economically disadvantaged backgrounds are more likely to encounter structural

barriers that limit their access to necessary care, thereby exacerbating the risks associated with advanced maternal age. Furthermore, cultural beliefs may either facilitate or hinder coping mechanisms. While some women may view advanced maternal age as a sign of strength or resilience, others may internalize societal stigma and adopt avoidance behaviors to shield themselves from perceived judgment. Such variations in coping strategies underscore the need for healthcare providers to develop culturally sensitive interventions that acknowledge and address the unique experiences of older mothers across diverse socioeconomic contexts.

The findings of this study reinforce the importance of adopting a more inclusive approach to maternal health policy-making, particularly by considering the subjective experiences of women confronting pregnancy complications associated with advanced maternal age. The Health Belief Model (HBM) offers a valuable framework for understanding how perceived risk, barriers, benefits, and cues to action influence maternal health behaviors. According to Ahadzadeh *et al.*, (2015) and Jones *et al.*, (2015), individuals' willingness to seek medical care is often predicated upon their beliefs about the severity of the health threat, their susceptibility to that threat, and their perceived capacity to overcome obstacles to effective care. Applying this model to the context of advanced maternal age reveals that healthcare providers must recognize older mothers' diverse perceptions and coping mechanisms. Women who believe that pregnancy complications can be prevented through regular monitoring and appropriate care are generally more proactive in seeking healthcare services. Conversely, those who perceive such complications as inevitable or insurmountable may be less likely to engage with healthcare systems. Therefore, understanding these perceptions and the broader social and cultural contexts in which they arise is critical for designing interventions that are not only clinically effective but also socially relevant and accessible. This study suggests integrating subjective experiences and culturally informed beliefs into maternal healthcare frameworks could significantly enhance patient engagement and health outcomes.

Regarding the theoretical framework that supports this study's findings, the Health Belief Model (HBM) emerges as a particularly relevant conceptual tool for understanding how women perceive the risks associated with pregnancy and advanced maternal age. The Health Belief Model (HBM) posits that individual health behaviors are influenced by several key constructs, including perceived susceptibility, perceived severity, perceived benefits of preventive actions, perceived barriers to taking such actions, cues to action, and self-efficacy (Ahadzadeh *et al.*, 2015). Within the context of advanced maternal age, women who perceive themselves as highly susceptible to pregnancy complications such as preeclampsia, gestational diabetes, or preterm birth are more likely to engage in proactive health-seeking behaviors. This includes actively seeking reliable medical information, regularly attending prenatal check-ups, and following the preventive measures recommended by healthcare professionals. In contrast, women who believe that pregnancy complications are inevitable or primarily determined by genetic factors may adopt a more passive approach toward seeking care, thereby increasing their vulnerability to adverse outcomes. Moreover, the presence of perceived barriers, such as economic constraints, limited access to quality healthcare services, or cultural stigma associated with late pregnancies, can further discourage older women from seeking appropriate medical intervention. The findings of this study strengthen the applicability of the Health Belief Model (HBM) in explaining health-related behaviors among older pregnant women, particularly when complex social, cultural, and economic factors shape healthcare decisions. By incorporating these broader contextual elements, the HBM is a valuable framework for analyzing how perceived risks and benefits are interpreted and acted upon within diverse maternal health experiences.

A comparative analysis of the findings of this study with those of previous research reveals substantial alignment with earlier studies on the risks associated with advanced maternal age. Several studies have consistently indicated that women over the age of 35 face an elevated likelihood of encountering pregnancy complications such as preeclampsia, gestational diabetes, preterm birth, and postpartum hemorrhage. Research conducted by Correa-de-Araujo and Yoon (2020) and Hochler et al. (2023) confirms that these complications are significantly higher among women of advanced maternal age than their younger counterparts. Moreover, Anusuya *et al.*, (2024) emphasize that socioeconomic disadvantages, including inadequate access to high-quality healthcare services and financial constraints, can further exacerbate these risks. Such disparities often lead to delayed or insufficient prenatal care, thereby increasing the probability of adverse pregnancy outcomes. While these findings are consistent with the broader literature that emphasizes the heightened biomedical risks associated with advanced maternal age, the present study offers a novel contribution by emphasizing the influence of social and cultural factors on risk perception and coping mechanisms. Unlike previous studies, which have predominantly employed quantitative methodologies focused on clinical outcomes, this study adopts a qualitative lens to explore how individual perceptions, cultural beliefs, and social support networks influence women's experiences and health-seeking behaviors. This expanded focus provides a more holistic understanding of the complexities surrounding pregnancy at an advanced maternal age, mainly how women from diverse backgrounds interpret, respond to, and navigate the risks associated with their pregnancies.

The practical implications of this study underscore the urgent need for a more inclusive and responsive approach to developing maternal health programs, particularly those targeting women of advanced maternal age. Healthcare providers must adopt communication strategies that are clinically sound, empathetic, and culturally sensitive. By acknowledging the diverse social, cultural, and psychological factors influencing women's health behaviors, providers can significantly enhance patient engagement and adherence to medical recommendations. Effective communication must consider not only the biomedical aspects of pregnancy complications but also the emotional and psychological concerns that older mothers may experience, such as anxiety, fear, and social stigma. Health education programs must be tailored to address these emotional and social dimensions, providing support relevant to women from diverse socioeconomic backgrounds. Comprehensive education efforts should promote awareness about potential pregnancy complications associated with advanced maternal age while also emphasizing the importance of preventive care and timely medical interventions. Such programs should be designed to be accessible to women across different demographic groups, including those from underserved or marginalized communities. Furthermore, evidence-based health policies must comprehensively understand women's subjective experiences, acknowledging that broader social and cultural contexts influence personal perceptions of risk and coping mechanisms. Incorporating these insights into policy development can lead to more equitable and effective healthcare services responsive to the unique needs of older pregnant women.

Conclusion

This study aimed to explore the complex relationship between advanced maternal age (more than 35 years) and the risk of pregnancy complications through a qualitative lens, focusing on women's perceptions, experiences, and coping mechanisms. By applying a systematic literature review methodology, this research sought to uncover how older women understand and respond to the various

risks associated with pregnancy, particularly those related to preeclampsia, gestational diabetes, hypertension, preterm birth, and postpartum hemorrhage. The findings of this study reveal that advanced maternal age is not only associated with increased biomedical risks but is also heavily influenced by social, cultural, and psychological factors that shape women's health-seeking behaviors and coping strategies. The Health Belief Model (HBM) application has proven effective in contextualizing these behaviors, highlighting the importance of perceived susceptibility, severity, benefits, and barriers in influencing maternal health decisions.

The significance of this study lies in its contribution to both scientific knowledge and practical healthcare practice. From a theoretical perspective, this study broadens the understanding of how advanced maternal age influences pregnancy-related risks by integrating psychosocial and cultural dimensions into a predominantly biomedical discourse. Unlike many prior studies focusing exclusively on clinical outcomes, this research emphasizes women's subjective experiences, offering a more holistic approach to maternal health. Practically, this study highlights the importance of developing inclusive and culturally sensitive maternal health programs that cater to the diverse needs of older pregnant women. Healthcare providers are encouraged to adopt empathetic communication strategies, enhance health education programs that address emotional and social concerns, and ensure that health services are accessible to women from various socio-economic backgrounds. These insights are particularly relevant for policymakers aiming to formulate evidence-based maternal health policies that are equitable, comprehensive, and adaptable to the complexities faced by older mothers. The originality of this study lies in its qualitative focus and the application of the Health Belief Model (HBM) framework to uncover nuanced experiences that have been largely overlooked in previous research.

This study has several limitations, such as using a systematic literature review methodology, which may have excluded relevant studies inaccessible through the databases used. In addition, reliance on qualitative findings may limit the generalizability of the study results to a broader population. The lack of primary data collection may limit the depth of analysis regarding the experiences of older pregnant women. Therefore, future research should address these limitations by integrating empirical studies using a mixed-methods approach, combining qualitative insights with quantitative data to provide a more robust understanding of how advanced maternal age influences pregnancy outcomes.

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