



Decision Making Behavior in Seeking Help and Utilizing Health Services in Maternal Death Cases in Berau Regency: Application of Andersen's Behavior Model and Pass Model

Heni Sudiastiningsih¹, Iwan Muhammad Ramdan², Annisa Nurrahmawati³, Nur Rohmah³, Jasmawati⁴, Dini Indo Virawati⁴, Ratna Wati⁴, Muhammad Arifin⁵

¹Dinas Pemberdayaan Masyarakat dan Kampung, Kabupaten Berau, Kalimantan Timur, Indonesia

²Department of Occupational Safety and Health, Faculty of Public Health, Universitas Mulawarman

³Department of Health Promotion, Faculty of Public Health, Universitas Mulawarman

⁴Midwifery Department, Politeknik Kesehatan Kementerian Kesehatan Kalimantan Timur, Indonesia

⁵Social Development Study Program, Faculty of Social and Political Sciences, Universitas Mulawarman

Email coresspondence: henisudiastin1976@gmail.com

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INTRODUCTION

According to the World Health Organization (WHO), every two minutes a woman dies related to pregnancy or childbirth; a total of around 287,000 maternal deaths in 2020 (WHO, 2025). In Indonesia, the 2022 MMR was 189/100,000 live births, still above the 2024 RPJMN target of 183/100,000; Indonesia ranks third highest in ASEAN after Cambodia and Myanmar (Kemenkes RI, 2022).

Globally, maternal mortality rates, besides being a health indicator, also reflect the welfare of society and the quality of human development; the lower the maternal mortality rate, the higher the level of welfare. In line with the Sustainable Development Goals, the global target is to reduce the maternal mortality ratio to <70 per 100.000 live births by 2030, and ensure that no country has a rate of >140 per 100.000 live births (WHO, 2019; Bappenas) BPPN, 2020).

The results of the 2013–2018 Riskesdas showed improvements in maternal service coverage: K4 rose from 70.0% (2013) to 74.1% (2018), and deliveries in health facilities from 66.7% (2013) to 79.3% (2018) (Kemenkes RI, 2013; Kemenkes RI, 2018). However, the increase in coverage has not been directly proportional to the decrease in maternal mortality rates. In Berau Regency, the achievement of Minimum Service Standards for maternal health shows an improving trend. The rate of at least four antenatal care services (1–1–2 per trimester) by midwives/doctors/obstetricians/gynecologists reached 75.75% in 2020 and increased to 84.07% in 2021. The coverage of deliveries attended by health workers was recorded at 96.96% in 2020 and 95.96% in 2021. This increase in coverage indicates improved access to and utilization of essential pregnancy and childbirth services (Dinkes Berau, 2021).

Despite improvements in maternal health services, the maternal mortality rate has not yet been reduced. Nationally and regionally (Berau Regency), the high maternal mortality rate reflects suboptimal service quality. In Berau, 8 maternal deaths were recorded in 2020 (the third highest in East Kalimantan), increasing to 16 in 2021. By mid-2024, there had been 7 deaths, placing Berau in first place in East Kalimantan (Dinas Kesehatan Provinsi Kalimantan Timur, 2024).

The pattern of maternal deaths in Berau from 2020 to 2022 shows a predominance of incidents at referral facilities (downstream), indicating delayed escalation/referral. In 2020 (8 cases), 5 died at the referral hospital, 2 en route to referral, and 1 at home. In 2021 (16 cases), 15 died at the hospital. In 2022 (8 cases), 6 died at the referral hospital, 1 at the community health center, and 1 en route. The highest mortality rate occurred during pregnancy, with gestational hypertension being the most common cause. These findings underscore the importance of early detection and timely referral before conditions worsen downstream (Dinkes Berau, 2022).

According to the Ministry of Health of the Republic of Indonesia, apart from the suboptimal quality of maternal health services, the high maternal mortality rate is due to the phenomenon of three delays, namely delay in making the decision to be referred to the appropriate health service facility, delay in arriving at the referral location, and delay in receiving appropriate treatment (Kemenkes RI, 2021). Delays in making decisions to seek help will result in further delays, namely delays in arriving at health facilities and subsequently resulting in delays in receiving appropriate and adequate services (Thaddeus & Maine, 1994; Yulian et al., 2024).

The Partners for Applied Social Sciences Model, commonly known as the PASS Model, is a behavioral model that describes the steps when someone seeks care (Health Seeking

Behavior). It presents a comprehensive framework related to health-seeking behavior and access to health services. This model focuses on factors that influence decisions, hinder or facilitate a decision to use care. The PASS Model concludes that there are four main categories in the decision to seek care. A person's perception of the severity of the disease, perception of vulnerability, knowledge related to the disease will influence the interpretation of a disease. Access to treatment and resource seeking include availability, accessibility, accommodation, affordability, acceptance and resource seeking, social values (social values and stigma, social pressure and support, and therapy management groups), and medical pluralism (various types and systems of medical services) (Hausmann-muela et al., 2012).

In the process of seeking health care, there are many possibilities for a person to choose to use health care or other methods to resolve their health problems. According to the Health System Model, three factors influence the behavior of individuals and communities in using health services as a means of solving health problems. The Health System Model, or Andersen's theory, provides a framework for understanding and explaining how and why individuals use health services. Factors influencing the utilization of health services include demographics, social structure and individual beliefs (predisposing characteristics), economic factors, infrastructure, health worker capabilities (enabling characteristics), and perceived level of pain and severity (need characteristics) (Andersen, 1995).

By understanding the factors that influence the process of seeking health care and the factors that influence the utilization of health services, it is hoped that this will become a step to prevent delays in health-related decision-making, particularly in the decision to seek care and utilize health services for pregnant women. By preventing delays in decision-making, there will be no delays in seeking care and no delays in comprehensive treatment at health facilities, thus preventing maternal mortality.

METHODS

This study was qualitative, employing a phenomenological approach, in accordance with its objective of exploring informants' experiences regarding factors influencing their decision-making in seeking help for maternal health issues. This study was conducted in Berau Regency, East Kalimantan Province, from August to September 2024.

The informants in this study were 11, consisting of four husbands of pregnant women, two parents of pregnant women, four midwives, and one nurse. In this study, the researcher served as the primary instrument, while the primary data source used interviews with informants and observations from secondary data.

The sampling technique used was purposive sampling, which is sampling with certain considerations and characteristics. The criteria for research informants that researchers consider to play a role in decision-making regarding pregnant women are the husband of the pregnant woman; one of the pregnant woman's parents; and the midwife who is at the location where the pregnant woman is located. The data collection technique in this study used in-depth interviews with informants, observation, and documentation. Data analysis in the study using Miles & Huberman that data analysis consists of three activity flows that occur simultaneously, namely: data collection, data reduction, data presentation, drawing conclusions/verification.

RESULTS

The research category focused on factors influencing help-seeking behavior and health service utilization in cases of maternal death in Berau Regency. The data reduction and categorization process revealed factors influencing help-seeking behavior and health service utilization in cases of maternal death.

In accordance with the formulation of the research problem, namely what factors influence the behavior of decision-making in seeking help by utilizing health services in cases of maternal death in Berau Regency, from the results of data reduction, researchers found several things that influence seeking help and researchers categorized them as follows :

Health Care Seeking Behavior

Accessibility / Affordability

"The mother came on foot because it was close... she complained of difficulty eating, vomiting, nausea, and weakness." (YAS)

"I have BPJS (Social Security) coverage, so I asked the village officials for help... I've had an ultrasound with the doctor." (YAS)

"I went to Tirta Clinic for an examination, an ultrasound, two nights in the hospital, and an IV drip... I recovered." (WELL)

"The distance to the referral center is about 20-30 km, paved road, and takes about 15-30 minutes." (Researcher's observations, summarized from YAS/AHW)

Economic access is also relatively secure in the case of plantation/company workers: "In the palm oil sector, they say... BPJS is covered by the company, and his wife's is covered as well." (FIT/AHW)

From the results of interviews with YAS, AHW, FIT, SSL, TNJ, and WELL, it was stated that the accessibility of health services is relatively close, namely walking distance because it is still in the same neighborhood, some are neighbors with midwives, and some use motorbikes. Supported by the results of researchers' observations during the field, the distance between the homes of pregnant women and the village health center or assistant community health center is on average 1-2 kilometers. Meanwhile, the distance between the homes of pregnant women and the referral hospital is the furthest 20 kilometers with paved roads.

Availability

Availability here refers to the availability of health facilities, including health care facilities, competent health workers, supporting medical equipment, medicines, and other supporting tools used in comprehensive health care, including promotive, preventive, curative, and rehabilitative services.

"I took her to the midwife for a checkup. The midwife told her to go to the community health center, and from the community health center, she told me to go to the hospital. From the hospital, she told me to get medicine from the Labanan community health center here..." (AHW)

"There's a nurse and a midwife at the community health center here. They gave her an IV drip to help her recover, as she was weak and vomiting." (YAS)

"I took her to the doctor in Tanjung... she had an ultrasound and was examined by the doctor." (DMG)

"I took her to the community health center and they told me she was positive for TB... I gave her medication while she was at home, and she took it regularly... she felt a little better... Her grandmother used to take the medication for nine months without stopping, and she was cured." (DN)

"I myself use birth control injections... after having my third child... I haven't gotten pregnant yet." (LBM)

"The midwife's advice was: don't get pregnant yet... if you can cure the disease first... so I told her to go on birth control first." (DN)

"Oh, that was at home... I put her on an IV drip, and she was given medication for four days... the nurse at my place was really attentive." (WEL)

"That was from a friend... I borrowed an oxygen tank for my wife." (SSL)

Based on statements gathered from seven informants and the researcher's observations, facilities, including medicines, medical devices, and other health services for pregnant women, are readily available and accessible. This includes a referral system accessible to pregnant women.

The availability of village health posts (Polindes) and village health posts (Poskesdes) in every village is equipped with equipment, medicines, and a referral system. Midwives and nurses are available 24/7 in the village where pregnant women live. This allows pregnant women easy access to emergency services if they need to be referred to a more competent facility. Obstetrician specialists and type B hospitals are available.

Pluralism of Health Services

"At the Tirta clinic, she was examined... had an ultrasound... stayed for two nights, given an IV; she recovered and went home." (WEL)

"I took her to the midwife... from the midwife to the community health center, then to the hospital, then got medicine at the Labanan community health center." (AHW)

"I took her to the doctor in Tanjung... had an ultrasound, and was examined by the doctor." (DMG)

"In the third month, she attended the integrated health post (Posyandu)... she came again the following month." (FIT)

"I've been on birth control injections... since my last child." (LBM)

"I once took her to a massage therapist... they told me to 'just massage her.'" (DMG)

"Before she was admitted to the ICU... we brought medicine from the village; I made turmeric and tamarind tea." (WEL/LBM)

Thus, the pluralism or diversity of health services in Berau Regency that were visited by informants included midwives, nurses, general practitioners, specialists, medical clinics, hospitals offering a variety of services, including medical treatment, obstetrics, ultrasounds, family planning services, and emergency obstetrics, integrated health posts (Posyandu), massage therapists, and traditional medicine using herbal medicine or homemade concoctions.

Researchers also obtained information based on field observations that pluralism or diversity of health services in Berau Regency is already available. One type B hospital in the capital of Berau Regency, specifically in Tanjung Redeb, offers a variety of specialist services and other health services, including promotive, preventive, curative, rehabilitation, emergency, and other services.

There are also 21 community health centers (Puskesmas) spread across 13 sub-districts, offering services ranging from maternal and child health, medical treatment, dental health, mental health screenings, reproductive health, and other health services, both in-house and off-site. In every village throughout Berau Regency, there is a community health center (Puskesmas) with nurses providing health services, and a village maternity center (Polindes) with a midwife who provides 24-hour care for pregnant women.

There are also traditional healing services provided by health workers at the Labanan Community Health Center, which offers acupressure. Several independent midwives offer baby spas and massages. Traditional services under the supervision of the Berau Regency Health Office include independent care utilizing family medicinal plants (ASMAN TOGA) in every village, as stated by midwife Ilmi, who works within the Labanan Community Health Center.

Observations based on accountability reports from the Berau Regency Health Office indicate that the delivery rate with skilled birth attendants has reached 97.77%. This suggests that birth attendants are no longer assisting with births, but rather are partnering with local midwives. Traditional midwives focus more on infant care, bathing, and postpartum care with massage and other treatments under the supervision of local midwives.

Based on the results of information from informants and the results of field observations and document observations, the diversity of health services in Berau district is quite diverse and adequate, thus providing more choices for pregnant women when seeking maternal health assistance and for the community planning a healthy pregnancy.

Social values

The social values referred to in this research are things that exist in a community environment that are carried out by that community which indirectly become guidelines or guidance in that community.

"Her mother's family... were half-hearted... her husband wasn't supportive either, and they kept bringing up her past... so it felt like she was suffering alone." (FIT)

"She was probably tired, annoyed with taking medication all the time: 'I'd rather just die, Mom'... I said: 'Well, if you want to die...'" (DN)

"People here call it a seizure... they told her to take a shower/take fresh water. When she had shortness of breath, I thought it was just fatigue or obesity." (SSL)

"It's not that we don't trust doctors, but people told us not to rush to the hospital. That's normal for pregnant women, you know." (DMG)

"Newlyweds... they told us not to use birth control, or the pregnancy would dry up. People told us it would be hard to have children later." (LBM)

From the statements of LBM, DMG, SSL and FIT informants, it can be said that the social norms prevailing in society influence the search for help for health problems of pregnant women.

Knowledge

Knowledge in this study is the extent to which individuals know about the health of pregnant women, recognize, understand and apply it in maternal health care which influences the search for help for pregnant women.

"She was pregnant for the third time, and her sister took her to the midwife... when she talked to her, she didn't understand, as if she was slow to receive information." — YAS

"Most pregnant women are rarely accompanied by their husbands... they walk alone or are accompanied by family... their husbands work in the fields." — YAS

"The midwife suggested another checkup... I had a problem with my foot... I thought it was healthy, it was a pregnancy symptom, I'd had that before and it got better... so I'd just leave it at home." — DMG

"Midwife Atin had suggested giving birth at the hospital... but my wife didn't want to... all her previous children were born with Midwife Atin and they all went smoothly." — SSL

"I thought it was just normal shortness of breath, like fatigue... I borrowed a friend's oxygen tank... I didn't tell the midwife when my wife was short of breath." — SSL

"I'd already written a referral to an internist, but the family said the ultrasound was fine, and they just told me to massage her." — YAS

"She didn't get her phlegm... she said she was in a hurry to work." — FIT

"I'm tired of taking medication all the time, I'd rather die, Mom." — DN

"He was asked to recite incantations... it was like he was possessed... his speech was incoherent." — AHW

From the statements of several informants above, it is clear that the knowledge of pregnant women and their families is still limited, and some are even unaware. This knowledge is gained from past experiences or previous pregnancy histories, such as the cases of pregnant women RR and Wid, who immediately sought help because they felt their condition would be fine, like their previous pregnancies. Therefore, they felt they would be fine like their previous pregnancies. When informed of a problem in the current pregnancy, they assumed it was

normal, just like their previous pregnancies that had passed smoothly. Pregnant woman End, who already knew she had TB and had to take TB medication, did not feel motivated to seek treatment. Instead, she felt hopeless about the long TB treatment and felt that her illness would not improve. Furthermore, AHW's ignorance about his wife's condition, who was pregnant and experiencing an infectious disease, was considered to be disturbed by things outside of medicine, which led AHW and AHW's family to seek help from someone who was not a professional.

Perception of Severity

Perception in this study refers to informants' responses or understanding of the severity of a pregnant woman's condition. Each individual's perception of severity will influence their actions, attitudes, and perceptions of a diagnosis or the results of a health examination.

"It was similar to my second pregnancy... I thought it would heal like before... When the midwife suggested a referral, I told her to stay home for now." — DMG

"Pregnant women have a lot of problems... here, there was something bothering me." — AHW

"I thought it was just normal shortness of breath... I borrowed a friend's oxygen tank; I didn't tell the midwife." — SSL

"The nurse said she didn't dare get an IV because she was pregnant... I was told to go to the midwife, then to the hospital because she was dehydrated." — WEL

"The family said the ultrasound was fine, but they only told me to massage... even though it was written to refer me to an internist." — YAS

Perceptions changed after the informant received new information from the nurse. By not forcing the nurse (the paramedic) to administer an IV to the informant's wife. It could be said that perceptions were formed due to ignorance. This was due to ignorance of pregnancy danger signs, as reported by SSL, WEL's ignorance regarding the division of duties between nurses and midwives, and the perceptions were formed due to SSL's experience that his wife's shortness of breath subsided after being given oxygen, leading SSL to continue administering oxygen to his wife without reporting her condition to the midwife. Similarly, the pregnant woman's husband's perception of his wife's illness, as conveyed by YAS, was based on his experience or history of previous pregnancies. This perception also influenced the pregnant woman's husband's assessment of advice or the results of health examinations.

Utilization of Health Services

Researchers identified several influencing factors in health service utilization behavior. Based on interviews and observations, they identified factors related to informant demographics, social structure, and other factors that influence health service utilization. These factors include:

Gender

Researchers found that gender influences the decision to seek help.

"The average pregnant woman... is rarely accompanied by her husband. They walk alone or are accompanied by family." — YAS

"The mother came on foot because it's close to the village health post." — YAS

"Fever, cough... she went to the doctor at the clinic... took her to the Samburakat midwife." — DN

"Her first child has all been with me... she trusts me so much, even when her husband forces her, she still wants to be with me." — TNJ

"My wife really trusts midwife Atin... she goes to midwife Atin for anything." — SSL

"The midwife suggested a referral... I think she's healthy... she should stay at home for now." — DMG

"As labor approaches, she's having shortness of breath... I borrowed a friend's oxygen tank; if it doesn't improve, I'll go to the hospital." — SSL

From the informant's statements above, it can be said that pregnant women have the initiative to use or utilize health services by visiting a midwife for pregnancy check-ups, visiting health workers when experiencing problems, such as pregnant women MAR, DN, End who immediately contacted health workers when experiencing problems.

Marital Status

In addition to gender, researchers also found that marital status influences health care utilization behavior. Several informants reported that married individuals tended to have advantages over newlyweds, including increased information and experience regarding pregnancy.

"The second time was handled by a midwife... my wife couldn't walk after giving birth, but she recovered. So I thought it would be the same as before, no need to take her to the hospital." — DMG

"Midwife Atin suggested giving birth in a hospital (I'm over 40, have many children), but my wife didn't want to... her previous four children had a smooth experience with Midwife Atin." — SSL

"If you have trouble eating, don't be picky; think about your baby. I had three children... I ate anything (Dremban)." — LBM

"The elders say there are many problems with pregnancy... here there are problems." — AHW

"If you've been treated by a doctor and it doesn't get better, I try other methods... I've taken her to a shaman." — AHW

It can be said that a person's marital status will provide life experiences, gaining additional information and knowledge as the marriage ages. These experiences will impact their perspectives, perceptions, attitudes, and knowledge regarding maternal health, as well as their decision-making process when seeking help or utilizing health services.

Job

Researchers also found that a person's job has an influence on decisions, including decisions about seeking help or utilizing health services.

"I was told to have another sputum test... it wasn't delivered; my husband was in a hurry to work. So the sputum wasn't sent to the community health center." — FIT

"If I go to the hospital, who will take care of the children and the garden? Even though I have BPJS, I still need money for food and other necessities while I'm on duty there." — DMG

"I work at the Health Department... I borrowed oxygen from a coworker." — SSL

In this study, researchers found that occupation influenced the behavior of SSL, DMG, and End's husband in responding to and addressing the health problems of pregnant women. Meanwhile, DMG, due to his work, was unable to refer his wife. He said he had no one to care for the garden and no one to help with work to earn money for living expenses while accompanying his wife in the hospital.

Despite having BPJS (Social Security) coverage, his wife's medical expenses, medications, and medical procedures were covered by BPJS. However, he had to work hard to cover his own living expenses while caring for his wife, which were not covered by insurance. Furthermore, the pregnant woman's work as a housewife hindered her independence in seeking help or utilizing health services.

Religion or Belief

From the results of interviews and observations by researchers, in this study researchers also found that religion and beliefs influence the attitudes and behavior of informants.

"We've taken her twice [to a religious leader/shaman]... we've tried, Ma'am, the important thing is to get well..." — LBM

"Before she was admitted to the ICU, we brought medicine from the village." — WEL

"Muslims have demons... for safety, you have to be smart about protecting yourself in foreign lands." — LBM

"Here, there are nuisances when pregnant... there are still invisible creatures that bother you." — AHW

"People here are said to have had a seizure... they're told to take a bath and ask for fresh water." — SSL

From information from WELL, AHW, SSL and DMG, it can be said that a person's religion and beliefs can influence a person in determining decisions when seeking help or utilizing health services.

Ethnicity or tribe

In this study, a person's ethnicity or tribe also had an influence on the decision to seek help and utilize health services.

"They always say they go to Grandma's place to ask for magic water... they don't go to the health center... they say they're possessed by spirits." — DN

"We try... some even bring traditional medicine." — WEL

"They don't drink it... they put it on their stomach/chest—the part that hurts." — WEL

It can be said that ethnicity or tribe still influences informants in resolving health issues in their environment, including the treatment or resolution of health problems in pregnant women. This influences the utilization of health services.

Belief or confidence in health services

Belief is the extent to which informants believe that health services will resolve the health problems they are facing. From interviews and observations, researchers found statements from informants regarding the trust and confidence of informants and pregnant women in health services. The informant's reason for not wanting to refer his wife was due to confidence in her condition and the capabilities of the health workers.

"I don't want to be taken to the hospital... I'll treat it at home first. I'll give you an IV drip from the nurse... I'll be at home for four days... I'll be fine." — WEL

"My wife wants to go to midwife Atin... I've had four previous children with good health... when I have shortness of breath, I don't want to be referred." — SSL

"I'm tired of taking medication all the time... I'd rather die, Mom." — DN (about End)

"I'm tired of taking medication... it's not getting better." — AHW

"The ultrasound doctor said it was fine... just massage it." — DMG

"The family said the ultrasound was good... even though it was written to refer me to an internist." — YAS

From the statements above, it can be seen that previous experiences, whether in the form of pregnancy experiences or previous medical histories, will provide information and knowledge for informants. These experiences and knowledge will become beliefs about the ability of health services to resolve health problems. In this study, informants' beliefs about health services influenced the utilization of health services. DMG belief that without being taken to the hospital, she would recover as in her previous pregnancies, SSL belief in the midwife's abilities led to her refusal to be referred, END lack of confidence in the efficacy of medication led to her stopping taking medication, and WEL belief in the nurse in the village led to her refusal when referred to a midwife due to her lack of confidence in the midwife's abilities.

Perception of Examination Results

An individual's perception of the examination results and diagnosis from a health care professional, as well as the outcome of the examination, will influence whether or not they will utilize health services. The examination results will also influence their perception of the severity of the health problem.

"Her feet are different sizes, she can't eat, she's not gaining weight—this isn't normal... she needs to go to the hospital to find the cause." — YAS

"It's been like that before... she recovered without going to the hospital... so she's been left at home for now." — DMG

"I told her at the beginning of the pregnancy to give birth in the hospital (risk age/weight)... but she still wants to stay at home." — TJL (midwife)

"Her previous four children had smooth sailing with midwife Atin... she didn't want to be referred." — SSL

"Pregnancy isn't the responsibility of the midwife—she needs to go to the midwife." — (summarized from WEL)

“Just let the midwife handle it... the midwife never visits.” — WEL

“My guideline is Mbah—9 months of continuous medication, and then the test is negative—you can recover.” — DN

“Newlyweds shouldn't use birth control, it'll cause a dry womb... bring a gaman when you go out.” — LBM

From the results of interviews with DN, WEL, SSL, DMG and LMB, it can be concluded that perceptions of the results of medical examinations or diagnoses influence informants in utilizing health services.

Social and family support

From the results of interviews conducted in the field, researchers found that there was low support for pregnant women from families and the community in utilizing health services.

"Midwife Atin suggested giving birth at the hospital... but my wife refused. She wanted Midwife Atin; her previous four children had smooth sailing." — SS

"Let's just stay home for now... who knows, maybe she'll recover like yesterday." — DMG

"People here say she's having a seizure... they're told to take a shower/drink fresh water." — SSL

"The phlegm hasn't gone... her husband's in a hurry to work." — FIT

"The doctor's medication is prescribed, and alternative medicine is also prescribed... if something doesn't work, she uses non-medical treatment." — LBM

"Poor thing, she's depressed, there's no support... every time she asks, she cries." — FIT

"Tired of taking medication all the time, she'd rather die." — DN (regarding End)

Information from DN, FIT, DMG, LBM, SSL, AHW shows that there is a lack of family and community support for pregnant women in utilizing health services.

DISCUSSION

Of the various factors influencing healthcare decision-making and utilization in Berau Regency, researchers also found a correlation or mutual influence between these factors. These include:

Perception Factor

Researchers found that previous experiences with illness or pregnancy influenced informants' perceptions of pregnancy. For example, a pregnant woman (DMG) perceived her wife's feet as normal, as in her previous pregnancies. This perception stemmed from her lack of knowledge regarding the signs of kidney disease and danger signs in pregnancy. Similarly, a pregnant woman (WEL) perceived nurses as healthcare workers capable of handling pregnancy issues. This perception stemmed from her lack of knowledge about the duties and functions of nurses and midwives.

According to Krech and Crutchfield in the book *Psychology of Communication* by Jalaluddin Rakhmad, perception is influenced by past experiences (Putriana et al., 2021). According to Josep Hospers in his book, *An Introduction to Philosophical Analysis*, there are six tools for acquiring knowledge, one of which is sensory experience. Similarly, according to

Walgito, a person's perception of an object can be influenced by knowledge, beliefs, learning processes, and experience (Walgito, 2023).

Belief

Researchers found that beliefs are influenced by knowledge. Such as the beliefs of SSL, DMG, who did not immediately refer his wife, and pregnant woman RR who refused to be referred, and END who refused to take TB medication, due to a lack of knowledge about pregnancy danger signs. This lack of knowledge led informants to maintain the belief that the pregnancy would proceed normally, as in previous pregnancies. However, the mother's age and medical conditions influence subsequent pregnancies. Previous pregnancies proceeded normally because the mother did not have any illnesses like the current pregnancy. In the book "Behavioral Science" by Notoatmojo (2014), beliefs are formed by several factors, one of which is knowledge (Notoadmojo, 2018; Zuidah, 2021).

Family support

Likewise with family support, researchers found that there was low family support in making decisions to seek help or utilize health services, one of the reasons being the family's ignorance regarding the pregnancy condition of the informant's wife or child. Informants SSL, DMG, AHW, LBM, DN, who are husbands and families of pregnant women, were late in making decisions to seek help from health services due to their lack of knowledge regarding pregnancy danger signs and knowledge of healthy pregnancy preparation (Sumailan et al., 2021). They still delayed referring because their knowledge of pregnancy danger signs was still low. In the book Family Support family support for other family members is influenced by several factors, including knowledge, emotions, education levels of family members and external factors including economics, habits and culture that apply in the family (Rehing et al., 2021).

Knowledge

Meanwhile, the knowledge itself that researchers found in this study is influenced by local customs. For example, LBM obtained knowledge based on local customs that using a 3-monthly birth control injection will make it difficult to have children. When experiencing pregnancy problems, the community is not only accustomed to using health facilities but also seeks non-medical help such as traditional medicine and religious figures who are believed to be able to resolve problems for pregnant women.

Likewise, according to Notoatmojo, perception is influenced by knowledge, and knowledge itself is influenced by culture and customs. Customs or culture are shaped by the

authority of figures, religious leaders, traditional leaders, and government regulations, which ultimately become norms in a given region (Notoatmodjo, 2012).

This study also found that knowledge is influenced by gender, where women's knowledge about healthy pregnancies is better than men's, including marital status, which shows that knowledge about maternal health is better among informants who have been married for a long time compared to those who have only been married for a few months. SSL informants who work in health settings have better knowledge about health. This can be interpreted as meaning that unmarried or newly married individuals do not have experience in maternal health issues, including a person's job, which influences that person's knowledge. Demographic factors and a person's social structure, including gender, age, education level, religion, ethnicity, occupation, and marital status, have an influence on a person's knowledge (Madiuw et al., 2022).

Social Values

In this study, the form of social values that researchers found was the form of support from the community around pregnant women, including community acceptance of pregnant women and community customs regarding pregnancy. Negative stigma regarding pregnant women's pasts influenced support for End, who had a bad past record in the eyes of society, thus affecting End's mental state. Social norms prevailing in the LBM environment assume that postponing pregnancy for married couples who have never had children will make it difficult to have children.

The culture in the DMG environment considers swelling in the feet of pregnant women to be normal and the environment in the SSL environment considers shortness of breath during pregnancy approaching delivery to be normal, especially for pregnant women who are overweight.

Social norms are a psychological framework that explains how people's behavior is influenced by their perceptions of what others do and approve of. The journal "Shifting Values in Sociocultural Life" states that social values themselves are influenced by knowledge within society, the influence of external cultural changes that influence local culture, and the influence of those in authority (Yusuf, 2024). So it can be concluded that the social values adopted by the community in the area where the pregnant woman lives are influenced by the level of knowledge of the community in that area.

Previous research also found that social support, including prevailing values in society, is influenced by the knowledge or information obtained and the level of interaction or interaction network in society (Kennedy et al., 2025). As found in a conceptual analysis by

Langford et al., (1997), there are four attributes that determine social support most frequently: emotional, instrumental, informational, and appraisal. Social networks, social attachment or closeness, and social climate are identified as antecedents of social support.

From the discussion above, it can be concluded that in this study of maternal mortality cases in Berau Regency, the factors influencing health-seeking behavior are knowledge, social values, and perceived severity. Meanwhile, health service utilization is influenced by beliefs, demographics, social structure, and social and family support.

In this study, researchers found that there is a mutual influence between factors related to seeking help and utilizing health services. Therefore, it can be said that the end result of a person's help-seeking process is a choice between utilizing available health services or utilizing services other than health services.

A person will seek help when experiencing a problem. Likewise, if someone feels they have a health problem, they will seek help to address it. The choice of seeking health care is between utilizing health services or utilizing non-health services.

In this study, the availability and affordability of health services were quite good, but there were still delays in addressing maternal health issues, which led to maternal deaths. Based on information gathered from informants, the most influential factor in this study was knowledge.

Knowledge will change perceptions, and when knowledge changes, it changes. When someone is given or acquires new knowledge, it will change their perception. The perceptions of a pregnant woman's husband and family regarding pregnancy issues are shaped by their previous experiences.

Knowledge and social norms or values influence each other. Prevailing social values become a person's knowledge, and knowledge also influences prevailing social values. For example, a social value or stigma in society holds that someone who has never been pregnant and uses contraception is considered unfit for marriage. The normal practice of marriage is to marry, conceive, and have children. If a newlywed couple delays pregnancy by using contraception, this is considered unfit and becomes the subject of gossip in that community. Therefore, the prevailing social values in that community become the knowledge that newlyweds must adhere to the prevailing values in that area if they want to be accepted into that community.

Social norms are also influenced by the knowledge that develops in society. Increasing education levels will, to some extent, alter prevailing values. Furthermore, social change, such

as the rapid flow of information and globalization, will, to some extent, alter prevailing social values.

Knowledge also influences a person's beliefs. Belief is a summary or conclusion, compiled and formed by the conscious mind, regarding an experience from a past event. The collection of experiences and past events is the source of knowledge. The process of belief formation begins when a person experiences an event. Every event is essentially neutral and has no meaning. After experiencing an event, the mind assigns meaning to that experience. It is the mind that assigns meaning. The meaning given can be positive, negative, or neutral. And this meaning is always true for each individual.

Likewise, a person's beliefs are influenced by both internal and external factors. Internal influences include experiences, past events, and external influences from the surrounding environment. Therefore, providing new information is one way to increase knowledge with the hope of changing beliefs from negative to positive.

The availability and accessibility of good healthcare services are not a measure of community utilization. This is due to the community's low level of knowledge regarding maternal health. This low level of knowledge influences the perception of the severity of maternal problems and also influences prevailing social values. These values are still based on local culture and customs, as well as the authority of local traditional leaders. Therefore, to change social values in a community, one key is to increase public awareness and community leaders, as they hold authority in the area.

CONCLUSIONS

The study results show that care-seeking behavior and utilization of health services in maternal deaths are primarily influenced by perceived severity, knowledge, and social values, mediated by factors such as gender, occupation, religion/belief, ethnicity, marital status, trust in the provider, family support, and interpretation of test results, thus triggering the "three late signs."

There is a need to strengthen education on danger signs (red-flag messages and teach-back), a risk-based escalation algorithm/"referral contract" within the midwifery line, couple-based counseling, indirect cost support (transportation/escort/specimen collection), and a cultural approach through traditional/religious leaders who serve as role models and policymakers in the group or region.

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