

## Socioeconomic Relations with the Utilization of Maternal Health Services in Marginalized Communities

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### Abstract

*This study aims to see the description of the utilization of maternal health services in marginalized communities in Makassar City and its relationship with socioeconomic characteristics. The total respondents who returned the complete questionnaire were 560 people or 79.6% of the 783 total questionnaires distributed. The study was conducted cross-sectionally. To describe socioeconomic and utilization of health services using frequency distribution. We set using cross-tabulations to see the relationship between the two variables. The results showed that socioeconomic characteristics have a significant relationship with the utilization of maternal and child health services. This study shows that the low utilization of maternal health services in vulnerable groups such as women can be caused by factors such as low levels of education, income, and accessibility of health services.*

**Keywords:** *Socio-Economic, Maternal Health, Marginalized Communities.*

### Introduction

Urban marginal groups are vulnerable to various main access to social, economic, educational and cultural life. Social inequality that occurs in a region specifically reduces access to health services (Sevelius et al., 2020). Progress in health care has not been evenly distributed. Minority people of low socioeconomic status have the highest burden of chronic disease (Barr et al., 2015). As long as there is still a part of the population that does not receive health service benefits, population health is not achieved (Havranek et al., 2015a). These services are part of the improvement, prevention and treatment of a disease (Li et al., 2020).

Empowering vulnerable groups such as marginalized communities and women is part of the 2030 Transforming Our World: The 2030 Agenda for Sustainable Development | Department of Economic and Social Affairs, 2015). This is a testament to our commitment to reducing inequality and ensuring a healthy life for all. Low utilization of health services is due to lack of contact with health workers and marginalization (Singh et al., 2019). vulnerable groups such as women underutilizing health services are influenced by educational factors, household living standards, socio-economic, service provider environment, (Agarwal et al., 2019; Hamal et al., 2020; Singh et al., 2019)

The use of health services plays an important role in improving population health. In other words, to achieve a good level of health, every resident must be able to access health services (Mulyanto et al., 2019a). Socio-economic is an important factor that determines health care equity. those with adequate socioeconomic status guarantee access to health services without being burdened by costs (Mumtaz et al., 2013). People in developing countries, including Indonesia, are still vulnerable to underutilization of health services

Disparities that occur in marginalized communities will add to health problems (Burström & Tao, 2020). The deterioration of public health will threaten the nation's resilience (DeWit et al., 2020). The realization of sustainable development challenges will be hampered when the distribution of health services is limited

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access (Syaekhu et al., 2022). Underutilized health services are caused by potential access, inequality of real access to health services, uneven access to health services horizontally and vertically and mismatch between potential access and utilization (Gandhi et al., 2022; Garnelo et al., 2020; Vitale Brovarone & Cotella, 2020). The mismatch between potential access and its utilization is related to education, socioeconomic conditions and residence (Ghasemianpour et al., 2019; Shibre & Mekonnen, 2019)

Indonesia is a developing country with a large population of 262 million people spread across 17,000 islands. Indonesians can enjoy a mix of government and private health care systems. Since 1999 the government has provided National Health Insurance (JKN) to assist people in accessing basic health services without financial barriers (Mahendradhata et al., 2017). Although the policy of expanding JKN coverage has been implemented, the reality is that the equitable distribution of health services is still not considered. Socioeconomic conditions that vary in each region in Indonesia affect the distribution of health services which results in gaps in community groups (Bump et al., 2016). This eventually triggers distrust of marginalized groups to the government (Mboi, 2015). It can be seen in the stagnant maternal mortality rate of 300 deaths per 100,000 live births (Agustina et al., 2019; Widjaja, 2014). This gap is caused by the lack of health service utilization.

Marginalized communities that do not utilize health services have the potential to increase disease prevalence rates (Gamboa et al., 2020). Adolescents who underutilize health services are more vulnerable to sexual and reproductive health problems (Adokiya et al., 2022). Furthermore, the implementation of health services is influenced by environmental conditions such as the COVID-19 pandemic. Changes in maternal health services have resulted in decreased contraceptive coverage, untimely vaccination and an increase in unplanned pregnancies (Tefera et al., 2022)

Mother and child services in marginalized communities are still lacking (Biswas et al., 2018). The reason they do not seek care services is because of their low socioeconomic status. As a result, maternal and child mortality rates in marginalized groups continue to increase (Anderson et al., 2016). A study from Porter & O'Halloran, (2012a) found that strengthening the health system and equitable distribution of services encourage the safety of maternal lives. In line with the results of research from Havranek et al., (2015b) which revealed that less stranded community groups are disproportionately burdened with poor health due to inequality of health services

The inequality of health services has the potential to hinder their utilization (Mulyanto et al., (2019). Marginalized communities who feel the impact of inequality put a poor stamp on health services (Martínez-Martínez & Rodríguez-Brito, 2020). Inhomogeneous social capital results in the services they receive are not optimal. This condition is further exacerbated by complex referral system procedures and national preventive treatment programs that are not running smoothly.

Studies from Kruk et al., (2018) found that factors such as limited access, complicated bureaucracy, and ineffective coordination between providers can make it difficult for patients to get the right care and the time needed. To address this, revolutionary health system changes to achieve the Sustainable Development Goals need to be undertaken. In addition, increasing health awareness and literacy is one of the right solutions to encourage the use of health services in marginalized communities (Glenton et al., 2013). Extensive information and education campaigns need to be conducted to provide an understanding of the importance of maternal health services. This campaign must be tailored to the needs and characteristics of marginalized communities, taking into account social, cultural, and economic factors that affect the use of maternal health services. In this effort, effective and evidence-based communication approaches should be applied, using easy-to-understand language and communication methods relevant to marginalized communities. Therefore, this study aims to see the socioeconomic relationship to the use of maternal health services in marginalized communities.

The urgent need to understand and address disparities in access and utilization of health services in vulnerable groups encourages researchers to look at the relationship between economic social and health service utilization. This research can help identify social and economic barriers that affect marginalized communities in utilizing maternal health services. Factors such as financial limitations, low education levels,

unstable employment, and limited physical access can be significant barriers for marginalized communities in accessing appropriate and quality maternal health services. By understanding the socioeconomic factors that influence the utilization of maternal health services, measures aimed at addressing health disparities can help reduce disparities in access and quality of health services in marginalized communities. This will contribute to the achievement of global health goals, including the Sustainable Development Goals (SDGs) which target improving maternal and child health.

## Method

This study focused on three sub-district areas selected based on the percentage of the population that did not make good use of maternal health services. The identification of marginalized communities is based on two criteria, namely a low level of education and a monthly income below the Regional Minimum Wage (UMR). This study used a cross-sectional study design by utilizing Indonesian Family Life survey data in 2014. Makassar City was chosen as the research area to accommodate the diversity of socioeconomic and cultural backgrounds of the population.

In sub-district selection, we consider the percentage of the population who do not use maternal health services by combining indicators of education level and monthly income. Low levels of education indicate that people in the region may have limited knowledge about the benefits and importance of maternal health services. In addition, monthly income under the UMR indicates economic constraints that can affect the accessibility and utilization of these health services.

To collect the data, we used data from the Indonesian Family Life survey conducted in 2014. This data contains important information about the social, economic, and cultural characteristics of people in South Sulawesi. By selecting data from the provincial level, we were able to capture the diversity that exists within the socioeconomic and cultural backgrounds of residents in Makassar City.

The study included 783 respondents aged 17 years or older. The research was conducted in three sub-districts in Makassar City, namely Tallo, Tamalate, and Panakukkang. The respondents' education levels are classified according to the International Education Classification Standards issued by UNESCO. The level of education that has been completed by respondents is grouped into several categories, namely pre-school, elementary school (SD), junior high school (SMP), high school (SMA), and diploma / bachelor. The focus of research in the three sub-districts provides a more specific picture of the situation at the local level and allows for a deeper understanding of the factors influencing health care utilization. By combining the variables of education level and individual income as indicators of socioeconomic status, this study can provide a more comprehensive understanding of the role of these factors in influencing access and utilization of maternal health services. The results of this study are expected to provide new insights for policies and programs aimed at increasing the utilization of maternal health services in the region.

The study measured income levels based on several indicators, including type of work, monthly wage, homeownership, and means of transportation. This indicator is calculated for each household involved in the study. The utilization of health service access is measured by considering factors such as distance to health care centers, availability of maternal services, medical costs, and frequency of health socialization. Each indicator was calculated separately for each household involved in the study. This allows us to obtain a more comprehensive picture of the respondents' socioeconomic situation.

Respondents in this study are individuals from marginal communities in the city, who are randomly selected as research samples. They were invited to fill out questionnaires voluntarily and sign consent to participation in the study. Of the total questionnaires distributed, 560 respondents, or about 79.6%, returned complete and analyzable questionnaires. To describe the socioeconomic characteristics and utilization of health services, we use the frequency distribution method. In addition, we also use cross-tabulation to analyze the relationship between the two variables. Data analysis was performed using IBM SPSS Statistic v.24 statistical software.

The utilization of access to health services is also the main focus in this study. The utilization of access is measured through several variables, including distance to health care centers, availability of maternal services, medical costs, and frequency of health socialization. Information about the distance between the respondent's residence and health care facilities, the availability of maternal services in the area, and the medical costs that must be incurred by respondents are the indicators measured. In addition, the frequency of health socialization is also a consideration in analyzing the use of health services by respondents.

## Results and Discussion

The sample minority in this study included women over the age of 45 compared to other age groups (Table 1). 5 out of 10 respondents aged 31-45 years (45.18%). The majority of women have 2 children (52.50%). Only a few have more than one child (18.04%). Married status ranks highest (94.82%) compared to other statuses. In the marginal group of Makassar city, only 10 people are Javanese (1.8%). The head of the family mostly (80.40%) provides for the family by being a laborer. However, they live in their own homes (39.20%). The means of transportation they use activities in the form of motorcycles / bicycles (87.50%)

Table 1. Basic Characteristics of the Study Population

Variable	Total	
	n	%
<b>Age Group (In Years)</b>		
17-30 tahun	247	44.11
31-45 tahun	253	45.18
>45 tahun	60	10.71
<b>Paritas</b>		
1 anak	101	18.04
2 anak	294	52.50
>2 anak	165	29.46
<b>Status pernikahan</b>		
Lajang	12	2.13
Menikah	531	94.82
Janda/Duda	17	3.05
<b>Suku</b>		
Makassar	280	50.00
Bugis	270	48.20
jawa	10	1.80
<b>Pekerjaan Suami</b>		
Buruh	410	80.40
Pegawai kontrak	130	14.30
pegawai negeri/swasta/wirausaha	20	5.40
<b>Status Kepemilikan Rumah</b>		
sewa/kos	130	23.20
milik orang tua	210	37.50
milik sendiri/pasangan	220	39.30
<b>Alat Transportasi</b>		
berjalan kaki/pete-pete	50	8.90
sepeda motor/sepeda	490	87.50
mobil pribadi/mobil kantor	20	3.60

The data above shows that population characteristics have several variables that include age range, parity, marital status, ethnicity, husband's occupation, home ownership status, and means of transportation. Here is the interpretation of the data from each variable:

### *Age Range*

In the population studied, three age groups were identified. The age group of 17-30 years has the highest number of respondents (44.11%), followed by the age group of 31-45 years (45.18%), and the age group over 45 years (10.71%). These results suggest that the study population consisted mostly of individuals who were in the age group of young adulthood to middle adulthood.

The data are relevant to early adult development theory which asserts that the age group of 17-30 years represents a significant transition period from adolescence to young adulthood (Syed, 2016). In this phase, individuals experience cognitive, emotional, and social changes that impact personal identity, educational development, and increased independence (Arnett, 2014; Schwartz, 2016). Research focused on this age group provides in-depth insights into the characteristics, challenges, and developmental processes experienced by individuals in this crucial period.

During early adulthood, individuals are searching for their personal identity, exploring the values, interests, and life goals that will form the basis of their adult identity (Ponterotto, 2015). This process is often accompanied by experimentation and changes in education, work, and social relationships. The data, which show that the study population consisted of individuals in the age group of young adulthood to middle adulthood, provide a better understanding of the developmental characteristics of this period. In addition, it is also important to consider the development of education and independence in early adulthood. At this age, individuals often take on greater responsibilities in their lives, including entering higher education or starting a professional career (Syed, 2016). These changes can have a long-lasting impact on an individual's personal and professional development.

In this study, a focus on the 17-30 age group provided a deeper understanding of the dynamics of early adult development. This can help researchers, practitioners, and policymakers to develop appropriate intervention programs and support individuals at this crucial period. Taking into account changes in identity, education, and independence in this age group, efforts can be made to promote positive development and minimize the risks associated with this stage of transition.

### *Parity*

Parity refers to the number of children owned by respondents. In the study population, most respondents had two children (52.50%), followed by respondents with more than two children (29.46%). Respondents with one child were the group with the smallest number of respondents (18.04%). This shows that the majority of respondents have two children and have different experiences as parents.

The findings are relevant to previous research showing a trend of small families in many countries. Declining birth rates and smaller family preferences have become common trends in modern society (Bongaarts, 2020; Gu et al., 2021; Mehri et al., 2020). The presence of more respondents who had two children in this study population may reflect changes in family patterns and reproductive preferences related to demographic, social, and economic factors. In addition, it is also important to consider that the number of children can affect family dynamics and overall family well-being. Research has shown that having fewer children can provide benefits such as better financial arrangements, easier access to resources and education, and flexibility in managing parental roles (Bein et al., 2021; Koops et al., 2021; Van Winkle & Monden, 2022). On the other hand, having more than two children can bring additional challenges, including greater financial burdens and a more complex division of time and attention between children (Nomaguchi & Milkie, 2020; Shaekhu et al., 2022).

The issue of parity in the research population plays an important role in program design and seeding regarding family welfare, family planning and the support needed by parents. By understanding parents'

reproductive preferences and experiences within families, interventions can be designed to provide appropriate support for families with two or more children, as well as ensure that necessary resources and services are available to meet the needs of families with different numbers of children.

### *Marital Status*

The marital status of respondents in this study includes three categories, namely single, married, and widowed/widower. The majority of respondents were married (94.82%), while the single group had the smallest number of respondents (2.13%). Respondents who are widows/widowers are also a relatively small group (3.05%). These data show that the majority of the study population consisted of married individuals.

The findings are in line with marriage patterns in many societies where marriage is still the dominant social norm. Marriage is considered an important institution in many cultures and can provide social, economic, and emotional benefits to individuals (Stier & Kaplan, 2020; Thornton et al., 2022). Previous research has also shown that the majority of adults of a certain age are likely to be married or have been married at the time of observation (Cherlin, 2020). Therefore, these data paint a general picture that the majority of respondents in the population of this study have established marital ties.

The difference in the number of respondents among marital status categories, such as single groups and widows/widowers who have smaller numbers, may reflect social and demographic dynamics in the study population. Factors such as changes in marital habits, divorce rates, and differences in individual life stages can affect the composition of marital status (Furstenberg, 2019; Kim & Jung, 2023; Luppi et al., 2023). Further research can explore the factors underlying these differences and their implications for individual and family well-being.

An understanding of marital status in the population of this study provided insight into respondents' relationships and social interactions. In health research, marital status can affect social access and support, including support from spouses in terms of health and use of health services (Gyasi et al., 2020). Marital status can also be related to other factors such as economic stability, family support, and the division of roles in the family.

### *Tribe*

The ethnic variable highlights the ethnic background of the study respondents. In the context of this study, the majority of respondents came from the Makassar tribe (50%), followed by the Bugis tribe (48.20%), and Javanese tribe (1.80%). These findings reflect the ethnic diversity in the populations studied, with Makassarese and Bugis predominant.

This data is in line with the demographic situation of Makassar, Indonesia, where the Makassarese and Bugis tribes constitute significant ethnic groups in the region (Abdullah et al., 2023; Nirwan et al., 2021). Ethnic diversity in this study shows cultural complexity and social diversity in the context of the population studied.

Factors such as cultural values, social norms, and health practices may vary between ethnic groups (Lu et al., 2020; Nkimbeng & Parker, 2021). Therefore, understanding respondents' ethnic backgrounds can help identify differences in experiences, perceptions, and needs that might influence participation in research and understanding of specific health issues. In addition, previous research has shown that ethnic diversity can affect access and utilization of health services, as well as individual health outcomes (Kelahe et al., 2014; Talamaivao et al., 2020). In health research, considering ethnic and cultural factors can help design more effective interventions and ensure services that are responsive to the needs of ethnically diverse communities.

In this study, the presence of Javanese as a minority can provide additional views on migration and cultural diversity in the city of Makassar. Further research can delve deeper into the influence of ethnic diversity on people's health and well-being in broader social and cultural contexts. The understanding of ethnic variables

in this study provides an overview of ethnic diversity in the population studied, with the dominance of Makassar and Bugis tribes. Acknowledging and considering this ethnic diversity is important in designing and implementing health interventions that are responsive to the needs and cultural context of the study population.

#### *Husband's Work*

This variable describes the husband's occupation of the respondent which is an indicator of the family's employment rate. The majority of respondents' husbands work as laborers (80.40%), followed by contract employees (14.30%), and public/private/entrepreneurial employees (5.40%). These data show that the majority of husbands from the study population had jobs as laborers.

This finding is in accordance with the employment landscape in marginalized communities dominated by the labor sector. Work as a laborer can include different types of manual work or jobs that require a lower level of skill. Factors such as education level, employment opportunities, and economic conditions can influence an individual's choice of employment (Kurer, 2020; Meoli et al., 2020) .

The husband's work affects the family's financial stability, access to resources, and the level of family welfare (Alemayehu et al., 2020; Dewitt et al., 2022; Roy et al., 2021). Different occupations can impact income levels, education levels, and resource availability that might affect access to healthcare, education, and other aspects of life. In addition, the husband's work role in the family also affects the roles and responsibilities carried by the husband, interaction with spouse and children, and the division of duties in the household (Nawaz et al., 2022; Wulansari & Krisnatuti, 2023). These factors can have an impact on family dynamics and individual well-being in the context of social relationships and gender roles.

The information obtained provides insight into the working conditions of husbands in this study population. This can help design programs and policies that better suit the needs of families, including necessary support for families with different levels of employment. Furthermore, a more in-depth analysis of the factors influencing the distribution of husbands' employment in this population can provide greater insight into the dynamics of employment and family well-being.

#### *Home Ownership Status*

Home ownership status describes the respondent's living conditions. Most respondents live in rent/boarding houses (23.20%), followed by those who live in houses owned by parents (37.50%), and respondents who own their own/couple houses (39.30%). This shows that the majority of respondents own a house owned by their parents or themselves/their spouse.

These results are in line with patterns of homeownership in society, where homeownership status can be influenced by economic, social, and cultural factors (Churchwell et al., 2020; Fikse & Aalbers, 2021; Lavy & Hananel, 2022). Homeownership rates can reflect different levels of housing stability and access to resources within a society. In this study, the majority of respondents had homeownership status related to parents or own/spouse ownership, reflecting a number of factors such as the level of economic dependence, readiness to enter self-ownership of one's own home, and ability of access to housing.

Home ownership status impacts residence stability, security, and access to public services such as health and education (Fang & Zhang, 2016; Suglia et al., 2015; Yousefi-Rizi et al., 2021). Therefore, considering homeownership status can be helpful in planning programs and policies that consider the needs and challenges associated with housing in this study population. In addition, it is also important to note that home ownership can be related to other social and cultural factors such as family stability, gender roles, and migration patterns (Darrah-Okike et al., 2018; Rita et al., 2023). Further analysis of the factors affecting homeownership status provides deeper insight into housing dynamics and family well-being.

*Transportation Tools*

This variable shows the type of transportation used by respondents in this study. It was found that the majority of respondents used motorcycles/bicycles (87.50%), followed by walking/pete-pete (8.90%), and private cars/office cars (3.60%). These findings indicate that motorcycles were the most common means of transportation used by the study population.

This data is in line with transportation trends in many communities where motorcycles/bicycles are the dominant means of transportation, especially in urban areas (Daroncho et al., 2023; Tembe et al., 2020). The use of motorcycles/bicycles as the most common means of transportation reflects mobility trends and transportation preferences present in the study population.

The choice of means of transportation can have an impact on the availability and accessibility of daily activities such as traveling to work, education, and access to public services (Golub et al., 2016; Mokhtarian & Cao, 2008). In addition, transportation preferences are also related to social, economic, and environmental factors such as transportation costs, sustainability, and quality of transportation infrastructure (Friman et al., 2020; Tian et al., 2020).

These data provide an idea of the characteristics of the population studied. The majority of respondents were women between the ages of 17 and 45, had two children, were married, came from the Makassar or Bugis tribe, with husbands who worked as laborers, lived in houses rented or owned by parents, and used motorcycles/bicycles as a means of transportation. This information is important for understanding the context of the study population and can provide insight into factors that might influence access and utilization of health and daily life-related services in that population.

This research is limited to one research location, namely Makassar, Indonesia. As a result, direct generalization of the study's findings to a broader population outside the study area is not possible. Limited generalizations are caused by various factors. First, differences in demographic, social, cultural, and economic characteristics between study sites and other populations can impact differences in responses and observed behavior patterns. In addition, variations in policy, infrastructure, and resource accessibility across different locations also affect the validity of generalizations of research findings. Similar studies can be conducted in other locations to expand the scope of research and verify the consistency of the findings obtained. By conducting cross-regional research, it will allow for stronger generalizations and a more comprehensive understanding of the observed phenomena. In order to increase the external validity and generalization of research findings, follow-up research involving more representative samples and diversification of research locations will be an important step to expand the generalization of the results of this study.

This research is also limited in the variables studied. Although the data presented in this study included several relevant variables, such as age, parity, marital status, ethnicity, husband's occupation, homeownership status, and means of transportation, it is possible that other variables that also had the potential to influence the population of this study were not included in the analysis. These limitations may undermine a comprehensive understanding of the factors affecting the health or characteristics of the population under study. The variables observed did not cover the entire spectrum of factors affecting the health or characteristics of the study population. There may be other factors, such as income level, access to health care, and cultural factors that play an important role in understanding the populations studied but were not included in the analysis. In addition, the use of limited data collection methods or limited resources may have limited research in collecting additional, more comprehensive data.

**Table 2. Cross-Tabulation Between Healthcare Maternal Utilization and Socioeconomic Status**

Variabel	Antenatal care		Perawatan Nifas	
	%	p	%	p
SD	23.11	0.001	17.03	0.001



SMP	41.31		23.11	
SMA	83.47		55.32	
D3/S1	91.09		69.85	
Income*				
1st quintile (<500)	11.71	0,001	1.37	0.001
2sd quintile(500-1500 juta)	13.37		1.44	
3rd quintile (1500 -32 00)	15.5		2.33	
4th quintile (>3200)	71.01		2.93	
<b>*income in thousands indonesian rupiah</b>				

Women with low levels of education exhibit low utilization rates of maternal health services (see Table 2). Only 23.11% of respondents who graduated from elementary school used antenatal care services, while only 17.03% used postpartum care at the puskesmas. However, there has been a significant increase in the use of maternal services along with an increase in the education level of women in populations that are at low socioeconomic levels. Respondents with a higher level of education (D3/S1) showed a higher level of service usage, namely 91.09% for antenatal care and 69.85% for postpartum care in community health centers.

These results indicate that education plays an important role in the utilization of maternal health services. Women with higher levels of education tend to be more likely to take advantage of antenatal care and postpartum care services. This can be due to increased awareness of the importance of maternal health care, a better understanding of the process of pregnancy and childbirth, as well as the ability to access health information and services.

These findings have important implications for improving access and utilization of maternal health services among women with low levels of education. Intervention measures aimed at improving women's education and health awareness in marginalized communities can help increase the use of maternal services. In addition, efforts directed at improving physical and financial accessibility to maternal health services also need to be made to ensure that all women, regardless of education level, have equal opportunities to receive the care they need during pregnancy and after childbirth.

People with low income levels tend to be less motivated to get screened during pregnancy. Only 11.71% of respondents with an income of less than 500 thousand rupiah perform antenatal care services, while only 1.37% use postpartum care at puskesmas. Meanwhile, the majority (71.01%) of respondents with high incomes, namely more than 3200 thousand rupiah, use antenatal care services. For postpartum care, the vast majority (2.93%) of respondents chose to do it at home or in a larger clinic.

This finding indicates that low participation in antenatal care and postpartum care services is related to people's income levels. People with low incomes tend to have limited accessibility and availability of the resources needed to obtain appropriate care during pregnancy and after childbirth. Financial limitations and lack of information and knowledge about the importance of antenatal and postpartum care services can be factors contributing to low participation in such services. It is important to raise public awareness about the benefits and importance of antenatal care and postpartum care, especially among low-income communities. Information and education campaigns tailored to literacy and income levels can be an effective strategy in increasing participation in maternal health services. In addition, measures to overcome barriers to access such as the provision of affordable services, financial support, and increased availability of health facilities also need to be considered.

Collaborative efforts between health care providers, policy makers, and society as a whole are needed to increase participation in antenatal care and postpartum care among low-income communities. By increasing accessibility, awareness, and understanding of the importance of maternal care, it is hoped that there can be improvements in the health and well-being of mothers and babies in the wider community.

This study shows a significant relationship between education level and income to maternal services. This is felt directly by marginalized communities, especially women. Both education level and income have an influence on the utilization of maternal services ( $p = 0.001$ ). This supports previous research by Mulyanto et al., (2019), the use of health services in Indonesia is still very vulnerable. The problem of socioeconomic inequality results in the utilization of health services among the adult population is low (Ilinca et al., 2019). Elite people are proven to use more health services both in private hospitals and government hospitals. Government-owned hospitals are disproportionately used by low-income individuals (Adedini et al., 2014; Yang et al., 2015). As a result, their level of satisfaction is less and service utilization again decreases.

Our findings on the impact of socioeconomic factors on maternal health service utilization are relevant to a previous study by Zhang et al., (2017) which stated that health service utilization among internal migrants (marginalized groups) was less than 40%. Utilization rates in developed areas are much higher than in developing areas (Liu et al., 2016). This is also in accordance with the economic level of the community (Rosano et al., 2017). This shows that the use of maternal services requires active community participation.

In socioeconomic factors, respondents with high levels of education and income pay health insurance (BPJS) more regularly. To take advantage of these health services, they are more free. Relevant to the results of Yu's previous research, (2015) although health insurance coverage has been evenly distributed, certain groups of people have not maximally utilized it. High income levels provide the ability to maximize the utilization of health services. Socioeconomic issues significantly affect health utilization and costs (Wang et al., 2018). Women with low socioeconomic status rarely use health services (Hansen et al., 2012). This shows that women with low socioeconomic status are less able to afford health insurance. As a result, they rarely use maternal services for their own well-being.

Pregnant women with low education do not pay much attention to medical examinations. Marginal communities who were respondents grew up in seafront areas. Their husbands who worked as fishermen worked at night. Wives lack support from their husbands for prenatal checks. The reason is that their husbands are too tired during the day so they don't have time to drive them to the health center. Relevant to this, research by Anyanwu et al., (2020) suggests that family dynamics have an impact on women's reproductive well-being. Women who lack family support do not comply with routine prenatal check-ups (Jihad et al., 2022). Family can influence a woman's health-seeking behavior. The decision of the head of household encourages women to carry out antenatal care examinations at puskesmas (Olufemi Olayinka et al., 2022; Xiao et al., 2011).

Our study found that the utilization of nipas care services at all income levels is very low. Even high-earning families are few (2.93%) who do. Postpartum care services help prevent disability due to childbirth. This treatment includes a systematic examination of the mother and baby. Mothers will get the right advice about their health during the puerperium (Dutta, 2014). The World Health Organization confirms that the puerperium phase is the most critical phase of the life of mothers and babies. Ironically, this phase is most largely ignored until most deaths occur in this period. The postnatal period is calculated from the first day of birth to the first six weeks (Timilsina & Dhakal, 2015). This needs special attention from to encourage understanding and use of the service. The goal is that postpartum maternal and child mortality rates can be reduced.

## Discussion

This research makes an important contribution to the general understanding of the use of maternal health services and the factors that influence it. By analyzing the relationship between socioeconomic variables (education and income) and the use of antenatal care and postpartum care, the study provides valuable insights into disparities in maternal health care access and utilization among different populations.

The results of this study support pre-existing theories. In the context of education, this study supports the theory that higher levels of education are associated with increased use of antenatal care and postpartum care services. These findings are consistent with the understanding that education can increase women's knowledge and awareness of the importance of maternal health care and provide better access to health

information and services. In addition, this study also supports the theory that socioeconomic status, represented by income level, plays an important role in the use of maternal health services. These findings suggest that women with higher incomes have higher levels of service use compared to those with lower incomes. This is in accordance with the theory that financial limitations can be barriers to access and utilization of health services, including in the context of maternal health care.

The results of this study can provide a basis for the development of more effective interventions in improving access and utilization of maternal health services in the community. Based on these findings, steps can be taken to increase women's awareness and knowledge of the importance of maternal health care through information and education campaigns tailored to literacy and education levels. In addition, efforts can be made to overcome barriers to access, such as by providing financially affordable services and increasing the availability of health facilities.

In a real context, the findings of this study can be used to shape policies and programs that are more effective in improving access and utilization of maternal health services in various regions. For example, governments can allocate resources to improve the accessibility and quality of maternal health services in areas with low levels of education and income. In addition, health care providers can use these findings as guidelines to develop more specific and targeted interventions to increase women's participation in maternal health care.

## Conclusion

Research on marginalized communities shows a significant relationship between socioeconomic characteristics and the use of maternal health services. The results showed that the low utilization of maternal health services in vulnerable groups such as women can be caused by low levels of education, income, and accessibility of health services. Empowering vulnerable groups through programs that consider these factors can increase the utilization of maternal health services in marginalized communities. However, this study has limitations in the inclusion of variables and needs to consider the implications for a comprehensive picture. In understanding the factors affecting population health and characteristics, more extensive and thorough research is needed, which considers holistic and multidimensional factors.

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