

# The Correlation Between Health Care Access and Pregnancy Checkup with Choice of Birth Attendants

La correlación entre el acceso a la atención médica y el control del embarazo con elección de asistentes de parto

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## SUMMARY

**Introduction:** An ideal place for childbirth is a health facility with adequate equipment and personnel ready to help at any time of labor complications. This study aimed to analyze the correlation between health care access and pregnancy check-up with a selection of birth attendants.

**Methods:** This study was correlational analytic with a retrospective study. The independent variable was health care access and pregnancy check-ups, and the dependent variable was the selection of birth attendants. The sample consisted of 34 mothers with babies ages 0-12 months. The sampling technique used in this study was simple random sampling. The instruments used were questionnaires and maternal and child health books. The Statistical test used was the Chi-Square test with a significance value of  $< 0,05$ .

**Results:** The results showed that health care access

was largely reachable (61.8 %), whereas most routine pregnancies (67.6 %) and selection of birth attendants mostly chose paramedics (90.5 %). Chi-Square test results showed that healthcare access obtained a p-value of 0.04, indicating the correlation between healthcare access and selection of birth attendants. At the same time, the Chi-Square examination of pregnancy test results has obtained a p-value of 0.01, which indicates a correlation between pregnancy check-ups and the selection of birth attendants.

**Conclusion:** This study expected mothers can obtain knowledge and support to deliver to health workers, so it is expected that traditional birth attendants will assist no more birth assistance. The distribution of midwives and improvement in the collaboration strategy between midwives and traditional birth attendants have contributed to a decrease in the choice of delivery by non-health workers and delivery without assistance, and this effort needs to be increased.

**Keywords:** Choice of birth with health workers, health services, pregnancy test.

DOI: <https://doi.org/10.47307/GMC.2022.130.s1.38>

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Recibido: 1 de mayo 2022

Aceptado: 9 de mayo 2022

## RESUMEN

**Introducción:** Un lugar ideal para el parto es un establecimiento de salud con equipo adecuado y personal dispuesto a auxiliar en cualquier momento de complicaciones del parto. Este estudio tuvo como objetivo analizar la correlación entre el acceso a la atención de salud y el control del embarazo con una selección de parteras.

**Métodos:** Este estudio fue analítico correlacional con un estudio retrospectivo. La variable independiente fue el acceso a la atención de salud y los controles de

*embarazo, y la variable dependiente fue la selección de las parteras. La muestra estuvo conformada por 34 madres con bebés de 0 a 12 meses de edad. La técnica de muestreo utilizada en este estudio fue el muestreo aleatorio simple. Los instrumentos utilizados fueron cuestionarios y libros de salud materno infantil. La prueba estadística utilizada fue la prueba Chi-cuadrado con un valor de significación  $< 0,05$ .*

**Resultados:** *Los resultados mostraron que el acceso a la atención de la salud era en gran medida alcanzable (61,8 %), mientras que la mayoría de los embarazos de rutina (67,6 %) y la selección de parteras eligieron principalmente paramédicos (90,5 %). Los resultados de la prueba Chi-cuadrado mostraron que el acceso a la atención médica obtuvo un valor de  $p=0,04$ , lo que indica la correlación entre el acceso a la atención médica y la selección de las parteras. Al mismo tiempo, el examen Chi-cuadrado de los resultados de las pruebas de embarazo ha obtenido un valor de  $p=0,01$ , lo que indica una correlación entre los controles de embarazo y la selección de las parteras.*

**Conclusión:** *En este estudio las futuras madres pueden obtener conocimientos y apoyo para dar a luz a los trabajadores de la salud, por lo que se espera que las parteras tradicionales no asistan más asistencia al parto. La distribución de matronas y la mejora en la estrategia de colaboración entre matronas y parteras tradicionales han contribuido a una disminución en la elección del parto por personal no sanitario y el parto sin asistencia, y este esfuerzo debe incrementarse.*

**Palabras clave:** *Elección del parto con trabajadores de la salud, Servicios de salud, Prueba de embarazo*

## INTRODUCTION

Indonesia's public health status has improved, although it is not following what is expected. Based on the Central Statistics Agency, the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) are still relatively high. The current MMR is 305 per 100 000 live births from the MDGs target of 102 per 100 000 live births in 2015. Meanwhile, the IMR is 34 per 1 000 live births from the Millennium Development Goals (MDGs) target of 23 per 1 000 live births (1). High maternal and infant mortality rates in Indonesia are caused by cultural problems in accessing health services and determining the selection of birth attendants who, for time immemorial, have played an important role in childbirth services, namely traditional birth attendants, and shaman, which is not from a health worker (2-5).

Traditional birth attendants have minimal knowledge about physiology and pathology in pregnancy, childbirth, and postpartum. Therefore, they cannot deal with complications and are unaware of the consequences when they arise. As a result, various cases often happen to a mother or baby to the death of the mother and child. However, in reality, many mothers still ask for the help of a traditional birth attendant in assisting childbirth (6-10).

According to World Health Organization (WHO), many mothers give birth at home and are assisted by traditional birth attendants (non-health workers). Therefore, the ideal place for delivery is a health facility with adequate equipment and professional health personnel (11). In 2000, the MDGs declaration, adopted by 189 countries and signed by 147 heads of government (including Indonesia) and heads of state at the Millennium Summit in New York, agreed that deliveries assisted by trained health are one of the indicators of success in improving maternal health (12). In East Java, health workers' target for delivery assistance in 2020 is 100 %, while the achievement is still 95.02 %, the rest giving birth to non-health workers (shamans) (1). Based on a preliminary study conducted in the village midwife clinic area in one of regency in Madura, East Java, from January to October 2020, 80 % of 20 mothers gave birth to midwives, and both still assisted 15 % to traditional healers, and the remaining 5 %. Of the deliveries that were still assisted by traditional birth attendants, some experienced problems, including 3.3 % prolonged labor, 3.3 % infection, and 3.3 % newborn mortality.

The cause of mothers prefer to give birth to be assisted by non-health workers (shamans) is because it is faster. Several predisposing factors that influence include socio-economic, access to health services, environment, community culture, husband's support, knowledge, and pregnancy check-ups (13-15). The consequences of assisted by non-health workers (shamans) caused maternal death during childbirth (20 %), bleeding or infection cases (55 %), and the labor is stuck (12 %). Shaman is considered unprofessional and only based on experience (13).

This can be addressed by the public health center immediately providing health education

about the importance of giving birth with health workers to reduce the incidence of giving birth using non-health workers (shamans). It is hoped that health workers will often involve themselves in community activities and be active in existing organizations in the community, such as family welfare empowerment, social gathering, and study. Forming a partnership is by coaching traditional birth attendants to improve the status of conventional birth attendants in decision making. There are efforts to train traditional birth attendants. Therefore, they have new knowledge and ideas that community members can convey and accept. Several training programs for traditional birth attendants have enlarged the role of traditional birth attendants in family planning programs and health education in various aspects of reproductive health and activities that have been carried out by traditional birth attendants, such as providing advice that may arise during delivery so that maternal and infant mortality rates can be reduced or prevented as early as possible (16-19). This study aimed to analyze the correlation between access to health services and antenatal care with the choice of birth attendants.

## METHODS

The research used was an analytic observational design. In addition, it used a correlational approach (Retrospective) (20). The sample in the study was mothers who had babies aged 0-12 months at the integrated Service Post in the Bangkalan sub-district, as many as 34. Independent variables were access to health services and antenatal care, and the dependent variable was the choice of birth attendant.

This study used a simple random sampling technique. The instruments used in data collection were questionnaires and Maternal and Child Health (KIA) Books. Data were analyzed using the Chi Square-Test with a significance level of 0.05, with the data scale used being nominal. In addition, this research conducted an ethical feasibility test at the Health Research Ethics Commission, Ngudia Husada Madura High School of Health Sciences with No: 729/KEPK/STIKES-NHM/EC/XI/2020.

## RESULTS

Table 1 showed that almost half of the respondents aged 26-35 years were 15 (44.1 %), infants aged 7-9 months were 14 (41.2 %), and the number of parity mothers, namely the second child, was 12 (35.3 %). Based on the education level of mothers, most of them have a high school education (41.1 %), and almost half of them work as traders (44.1 %). Access to health services mainly was reachable to as many as 21 (61.8 %), routine pregnancy check-ups were 67.6 %, and 73.5 % of respondents chose delivery assisted by health workers (73.5 %).

Table 1

Frequency Distribution of Research Respondents (n=34)

Characteristics of Respondents	n	(%)
Age (years)		
17-58	10	29.4
26-35	15	44.1
36-45	9	26.5
Infants' age (months)		
0 - 3	7	20.6
4 - 6	6	17.6
7 - 9	14	41.2
10 - 12	7	20.6
Total child		
First child	11	32.4
Second child	12	35.3
Third child	7	20.6
Fourth child	4	11.8
Mothers' education		
Elementary School	11	32.4
Junior High School	9	26.5
Senior High School	14	41.1
Mothers' occupation		
Farmer	12	35.3
Housemaid	7	20.6
Trader	15	44.1
Health Service Access		
Reachable	21	61.8
Unreachable	13	38.2
Pregnancy Test		
Routine	23	67.6
Not a routine	11	32.4
Selection of		
Delivery Assistants	25	73.5
Health workers	9	26.5
Non-health workers		
Total of Parity	34	100.0

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Table 2 showed that access to Reachable health services chose 19 (90.5 %) health workers to select birth assistants. Access to Unreachable health services chose non-health workers as many as 7 (53.8 %) as the selection of birth assistants. Based on the results of statistical tests used Chi-

Square with a significance level of  $\alpha = 0.05$ , we got  $q = 0.04$ . The value of  $q = 0.04 < \alpha = 0.05$  ( $q < \alpha$ ). It can be concluded that there was a relationship between access to health services and the selection of birth assistants for mothers who have babies aged 0-1 year.

Table 2  
Cross Tabulation Result of Access to Health Services and Antenatal Care for the Selection of Birth Attendants

Variables	Selection of Birth Attendant						X <sup>2</sup>
	Health workers		Non-health workers		Total		
	n	%	N	%	n	%	
<b>Health Service Access</b>							
Reachable	19	90.5	2	9.5	21	100	0.04
Unreachable	6	46.2	7	53.8	13	100	
Total	25	73.5	9	26.5	34	100	
<b>Pregnancy Test</b>							
Routine	18	78.3	5	21.7	23	100	0.01
Not a routine	3	27.3	8	72.7	11	100	
Total	21	61.7	13	38.3	34	100	

Table 2 also showed that most routine pregnancy check-ups chose 18 (78.3 %) health workers and 8 (72.7 %) non-routine pregnancy examinations chose non-health workers as the birth assistant. The statistical tests used Chi-Square with a significance level of  $\alpha = 0.05$  were obtained  $q = 0.01$ . The value of  $q = 0.01 < \alpha = 0.05$  ( $q < \alpha$ ). It can be concluded that there was a relationship between antenatal care and the selection of birth assistants for mothers who have babies aged 0-1 years.

**DISCUSSION**

The study results showed a relationship between access to health services and the selection of birth attendants for mothers who have babies aged 0-12 months. Based on the data obtained from the questionnaire, it was found that mothers who answered completely correctly about reachable health services. The distance between the mother's house and health care facilities could

be reached by two-wheeled and four-wheeled vehicles for 15 minutes. While the distance to the service center health less than 6 – 8 hours. This is the following criteria for accessing health services in health are reachable as an adequate transportation system with a travel time of no more than 6-8 hours, terrain conditions are not steep, safe conditions (distance between residents' houses 10-15 meters), participation residents about health problems (health counseling and integrated service post). They were located in an area that is easily accessible/not far from health services (21). Mothers whose homes are close to access to health services will be more reachable with a health service center.

The study indicate that of the 34 respondents indicating access to reachable health services, a small portion chose non-health workers. This happens because of the education factor of the mother, almost half of whom have an elementary school education. People with higher education will give a more rational response to the information and the reasons for thinking

about the extent of the benefits they might get from the idea. Women who still believe in or maintain their traditional ideas usually still have a low level of education. This is in line with the previous theory (22). Highly educated people will give a more rational response to incoming information and reason to think about the extent of the benefits they might get from the idea. Women who still believe in or maintain their traditional ideas usually still have a low level of education. They find it more challenging to adopt information about health from midwives or the print media and electronic media because they still hold fast to the belief that giving birth to a non-health worker is much better than a midwife. After all, childbirth uses safe and modern tools.

The research results also showed that access to health was unreachable. A small portion chose health workers as the selection of birth attendants. This is in line with the previous theory (23). Meanwhile, those who assess health services as not easily accessible but choose health workers as birth attendants are mothers with jobs and working husbands who have high incomes to choose midwives as birth attendants. Even though health services are not easily accessible, mothers have private vehicles to reach the health services. When transportation is needed, it is always there.

The results demonstrated a relationship between antenatal care and the selection of birth attendants for mothers who had babies aged 0-12 months. This is in line with the previous study that mothers who frequently perform prenatal check-ups tend to choose health workers (23). Regular check-ups aim to manage health and avoid events such as bleeding and complications in the mother and fetus that often occurs at the time of delivery. Delivery must be assisted by professional and authorized personnel to ensure safe delivery (23). In addition, the regularity of mothers in conducting pregnancy checks will open their minds to the dangers of bleeding risk and complications that have been conveyed by the midwife so that they assume that the midwife understands more about the dangers of childbirth.

The study results showed that only a small percentage (21.8%) carried out routine pregnancy check-ups and chose non-health workers as birth attendants. The mother's age factor influences

this. The older mother desire to choose a place of delivery. This is in line with the previous study that the older mother describes a mother's experience in giving birth before (23). Mothers who previously had good experiences during childbirth with non-health workers will return to non-health workers assuming that non-health workers are better than midwives. Even though they carry out pregnancy checks-up with midwives, they think that traditional birth attendants are more experienced in avoiding unwanted situations occur.

The results showed that only a small percentage chose health workers. Unroutinely carrying out pregnancy checks is influenced by occupational factors. This is in line with the previous theory that having a job status or other activities as a housewife can make pregnant women feel tired and affect the lack of time to check their pregnancy (24). However, this job provides better access to various information because working mothers have a source of income and can interact with other people so that they can gain better knowledge about health or social issues.

## CONCLUSION

It can be concluded that most mothers who have babies aged 0-12 months have access to reachable health services. Therefore, perform routine pregnancy check-ups, and choose health workers to select birth attendants. Moreover, there is a relationship between access to health services and antenatal care with the selection of birth attendants.

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