Factors Associated with Maternal Health Services Utilization Among Lao Adolescents: A Nationwide Retrospective Cross-sectional Study

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Abstract: Addressing the social determinants of health that affect adolescent pregnancy is paramount to eliminating disparities and achieving health equity toward reducing the maternal mortality rate. The Lao People's Democratic Republic has a high adolescent childbearing rate, which can negatively impact maternal and child health. We conducted a retrospective cross-sectional study that used data from the pooled Lao Social Indicator Survey II of 2017 to clarify the social contextual factors associated with the utilization of adolescent antenatal care and facility deliveries. We analyzed data from 663 adolescents aged 10-19 years at delivery and extracted the factors associated with maternal healthcare utilization based on social determinants. Those factors were area and region of residence, educational status, marital status, the ethnolinguistic group of the household head, and economic strata. A multiple logistic regression analysis was performed to determine the factors associated with those factors.

The results showed that social factors strongly associated with the use of antenatal care were higher educational status and higher economic strata. On the other hand, the social factors associated with facility delivery were being in an ethnic majority and having a higher economic status. Thus, it is essential to establish interventions targeting those factors, such as lower educational status, lower socioeconomic status, and being from an ethnic minority, to increase adolescents' antenatal care visits and facility deliveries. This study's results can be used to inform nurses and midwives in their efforts to eliminate socioeconomic disparities. This can be done by enhancing the provision of antenatal care consultations and facility deliveries in Lao, thus helping to achieve better health for adolescent mothers, their infants, and their families.

Pacific Rim Int J Nurs Res 2023; 27(2) 260-271

Keywords: Adolescent health, Antenatal care, Facility delivery, Lao PDR, Maternal health, Maternal health care services

Received 20 September 2022; Revised 12 December 2022; Accepted 15 January 2023

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Introduction

Adolescent birth rates decreased from 64.5 births per 1000 women in 2000 to 42.5 births per 1000 women in 2021 worldwide.[1] However, there are approximately 21 million pregnancies yearly among adolescents aged 15-19 years in low- and middle-income countries (LMICs).[2] The adolescent birth rate was 20.2 births per 1000 women in 2020 in the South-East Asian region, with 83.4 per 1,000 live births in Lao People's Democratic Republic (PDR).[3]

Adolescent pregnancy has several factors that increase the risk of poor outcomes, such as biological

immaturity associated with mortality and morbidity, and stigma from low socioeconomic status.[4,5] Adolescent pregnancy is a significant public health concern, occurring with higher rates of hypertensive disorders of pregnancy, anemia, gestational diabetes, co-morbidities and complications during childbirth than in adult women.[6] Adolescent pregnancy is also associated with the morbidity and mortality of their children, including higher rates of low birth weight, preterm delivery, respiratory diseases.[6] Hence, access to maternal healthcare (MHC) services is one of the few opportunities for women in low-resource settings to seek care for their health. Such services are an important opportunity to help women prepare for childbirth and receive the best-skilled care available for safe delivery.

Literature Review

Previous studies demonstrated that antenatal care improved pregnancy outcomes among pregnant women, especially adolescents.[4,7] The World Health Organization (WHO) recommends a minimum of eight antenatal visits based on a review of the effectiveness of different antenatal care models. Ideally, pregnant women need to start antenatal care visits during the first trimester to prevent and detect conditions that could affect both the mother and child.[7] Timely and appropriate quality antenatal care can save both lives.[4] The WHO *Guidelines on Preventing Early Pregnancy and Poor Reproductive Health Outcomes Among Adolescents in Developing Countries* in 2011 strongly recommended increasing the use of skilled antenatal care and providing information to all pregnant adolescents. The Guidelines also promote childbirth and emergency preparedness, especially concerning preventing early pregnancy and poor reproductive outcomes for adolescents in developing countries.[8]

Moreover, facility delivery is an effective intervention to reduce maternal mortality.[9] Researchers estimate that approximately 16% to 33% of all maternal deaths are avoidable through the prevention of complications by skilled delivery.[10] To promote the utilization of MHC services and reduce financial barriers, the Lao PDR government introduced the Free Maternal Health Services Policy in 2012.[11] All public health facilities (health centers, district hospitals, and provincial hospitals) were provided with at least one skilled birth attendant to promote free delivery.[12] However, the adolescent delivery rate in health facilities was only 64.5 % in 2017, the most recent data available.[13]

Addressing the social determinants of health (SDOH) affecting adolescent pregnancy has been identified as critical to eliminating disparities and achieving health equity.[14] The WHO defines SDOH as the conditions in which people are born, grow, work, live, and age.[15] Social factors, such as poverty and socioeconomic disadvantage in the area of residence, are highly associated with poor teenage pregnancy outcomes and shaping health disparities.[1,16] Previous studies indicated that SDOH among pregnant adolescents was primarily ethnicity, rural residence, inadequate education, and low socioeconomic background.[17]

The Lao topography is three-quarters mountainous and plateau; forests cover 47% of the land. Of note, 63% of the population lives in rural areas.[18] The latest census in 2015 identified 47 district ethnic groups in the Lao PDR, when ethnic Laos comprised 52.5% of the total population and predominated in the lowlands. In contrast, ethnic minorities predominate in the highlands.[19] This ethnic diversity presents a significant challenge to healthcare delivery and education, not only because of transportation barriers such as having or not having roads but also cultural and linguistic barriers. As a result, health disparities between rural and highlands and the lowlands have widened.[19] An SDOH-based approach may identify and alter the factors that contribute to adolescent pregnancy not feasible with individual behavior change interventions.

Although there is a high rate of adolescent childbearing in Lao PDR and underutilization of MHC services, the factors associated with the utilization of

antenatal care and facility delivery among adolescents are not well investigated. Two papers report the results of a qualitative study of factors related to adult women's choice of place of delivery in Lao PDR.[12,20] However, factors related to adolescents' utilization of MHC in the country have yet to be identified. Therefore, the researchers believed a retrospective cross-sectional analysis using national data could shed light on the association between the utilization of MHC services and social determinants of health.

Study Aims

This study used the Lao PDR population-based dataset to determine: 1) the rate of utilization of antenatal care and facility delivery among adolescents and 2) the association of social determinants of health with the utilization of antenatal care and facility delivery among adolescents.

Methods

Study Design: This retrospective cross-sectional study used data from the pooled Lao Social Indicator Survey II (LSISII) of 2017[13] and is reported here using the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guideline. The LSISII dataset, which formed the sample frame, was obtained from a national representative sample from a particular time and a population-based, cross-sectional survey conducted in all regions of Lao PDR.

Sampling Methods and Data Collection: We obtained the raw dataset of LSISII on the UNICEF Multiple Indicator Cluster Survey (MICS) web portal (http://mics.unicef.org/surveys). UNICEF provided permission to access the portal after a review of the submitted brief descriptions of the study. The datasets were treated with the utmost confidentiality. The MICS was used to obtain data from questionnaires and interviews on childbirth with women aged 15-49 years who had given birth in the last two years before the survey. In this current study, age at birth was defined as the participant's age at their interview minus the age of last birth. The inclusion criteria were those who had given birth and were aged between 10-19 years, as per the WHO definition of adolescents at the time of delivery.[21]

Ethical Considerations: The protocol of the Lao Social Indicator Survey II was approved by the Lao Statistics Bureau in May 2016.[13] This protocol included a protection protocol, which outlined the potential risks during the survey and mitigation management strategies. Verbal consent was obtained for each respondent who participated, and adolescents aged 15-17 years who were individually interviewed. Adult consent was obtained in advance of the adolescents' assent. All respondents were informed of their right to refuse to answer all or particular questions, as well as to stop the interview at any time.[13] Since this study used a fully anonymized open dataset, St. Luke's International University Ethics Committee, Tokyo, Japan, determined that ethical approval for this study was not required.

Maternal Health Services Utilization

The received antenatal care and facility delivery were included in the LSISII. The outcome variables were received antenatal care and facility delivery. The definitions of each variable are described as follows:

Received antenatal care was extracted from the number of times the adolescents used the service during pregnancy up to delivery. Although the WHO recommended at least eight antenatal care visits, due to the low rate of antenatal care visits, we defined a case with at least one antenatal care visit as "Yes" and a case without as "No." Antenatal care was defined as care by skilled care providers, such as a medical doctor, nurse/midwife, auxiliary nurse, traditional birth attendant, or community health worker.

Facility delivery was extracted from the data of women's places of delivery. We defined facility delivery as delivery at any health facility in the public sector (government hospital, health center, or other public) and private sector (private hospital, clinic, or

maternity home). Home delivery was defined as delivery at the respondent's home or other homes. Women who delivered at a facility were indicated by a "Yes," and those who delivered at home were indicated by a "No."

Demographic characteristics were obtained by extracting the following data: area and region of residence, educational status, marital status, the ethnolinguistic grouping of the household head, and economic strata.

The area of residence was categorized into three items: urban, rural with roads, or rural without roads. The region of residence was categorized into three items: North, Central, or South Lao PDR. Educational status was categorized into five items: none or early childhood education (ECE); primary school; lower secondary school; upper secondary school; higher education in LSIS II. At the time of the survey in Lao PDR, the educational system was such that students from the age of six attended primary school, lower secondary school, and upper secondary school for five, four, and three years, respectively. The attendance rate in lower secondary schools was high. However, it was low in the upper secondary schools, which resulted in a large difference in attendance rate between lower and upper secondary schools.[13] Hence, we recategorized educational status into two groups: (1) Lower educational status (none or ECE, primary, and lower secondary) and (2) Higher educational status (upper secondary and higher).

Marital status was categorized into three items: currently married/in a union, formerly married/in a union, or never married/in a union.

The ethnolinguistic group of the household head was determined by asking, "To which ethnic group does the household head belong?"[13] Therefore, this variable represented the ethnicity of the participants. We followed and used the response in our analysis. The ethnolinguistic groups were categorized as Lao-Thai, Mon-Khmer, Hmong-Mien, or Chinese-Tibetan.

Economic strata were extracted from the data of the wealth index quintile categorized poorest, secondary, middle, fourth, or most affluent. To reduce bias, we divided the quintiles for the wealth index quintile into two groups: (1) Lower economic strata (poorest, secondary) or (2) Higher economic strata (middle, fourth, most affluent).

Statistical Analysis: Data were statistically analyzed using EZR software (version. 1.4).[17] We examined the social factors associated with the outcome variables of the utilization of antenatal care and facility delivery. Descriptive statistics were calculated for all variables. Univariate analysis was used to assess the relationships between the factors and outcome variables. After all possible interactions among independent variables were evaluated, adjusted odds ratio (AOR) and 95% confidence interval (CI) were calculated using a multiple logistic regression model. The modeling was adjusted for other covariates, such as area and region of residence, education, the household head ethnolinguistic group, marital status, and the quintile wealth index. Logistic regression analysis was used to determine the factors associated with attending antenatal care and facility delivery. Variables with a p-value of less than 0.05 were considered significant. We created an adequate logistic regression model, which confirmed that the model's multicollinearity did not occur.

Results

Regarding the questionnaire from the LSISII dataset, data on 663 participants who met the inclusion criteria were extracted.

Sociodemographic characteristics

Table 1 shows the sociodemographic characteristics of the participants. The mean age ± standard deviation (SD) was 17.8 ± 1.2 years, and the age range at birth was 14-19. The majority, 644 (97.4%), were currently married, and 449 (67.7%) lived in rural areas with roads. Only 210 (31.8%) were classified in the Lao-Thai ethnolinguistic group. Most, 606 (91.4%), were educated up to lower secondary school, and >281 (42.4 %) lived in the Northern region.

Table 1. Women's sociodemographic characteristics

Variables	Received antenatal care		Facility delivery		Overall
	Yes	No	Yes	No	n = 663 (%)
	n = 517 (%)	n = 145 (%)	n = 375 (%)	n = 285 (%)	
Age at first birth (years)	17.8 ±1.2	17.8 ± 1.2	17.8 ± 1.2	17.9 ± 1.1	17.8 ± 1.2
Area					
Rural without road	69 (13.3)	37 (25.5)	41 (11.0)	62 (21.8)	107 (16.1)
Rural with road	351 (67.9)	98 (67.6)	257 (68.7)	192 (67.6)	449 (67.7)
Urban	97 (18.8)	10 (6.9)	76 (20.3)	30 (10.6)	107 (16.1)
Educational status					
Lower educational status	462 (89.4)	143 (98.6)	329 (88.0)	272 (95.8)	606 (91.4)
Higher educational status	55 (10.6)	2 (1.4)	45 (12.0)	12 (4.2)	57 (8.6)
Ethnolinguistic group of the household head					
Hmong-Mien	150 (29.1)	44 (30.6)	105 (28.1)	89 (31.7)	194 (29.4)
Mon-Khmer	169 (32.8)	55 (38.2)	106 (28.3)	114 (40.6)	224 (33.9)
Lao-Thai	189 (36.7)	21 (14.6)	152 (40.6)	57 (20.3)	210 (31.8)
Chinese-Tibetan	7 (1.4)	24 (16.7)	11 (2.9)	21 (7.5)	32 (4.8)
Marital status					
Formerly married/in a union	13 (2.5)	6 (4.1)	8 (2.1)	11 (3.9)	19 (2.9)
Currently married/in a union	504 (97.5)	139 (95.9)	366 (97.9)	273 (96.1)	644 (97.1)
Never married/in a union	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Region					
South	108 (20.9)	44 (30.3)	73 (19.5)	74 (26.1)	152 (22.9)
North	215 (41.6)	65 (44.8)	168 (44.9)	113 (39.8)	281 (42.4)
Central	194 (37.5)	36 (24.8)	133 (35.6)	97 (34.2)	230 (34.7)
Economic strata					
Lower economic strata	309 (59.8)	130 (89.7)	194 (51.9)	242 (85.2)	440 (66.4)
Higher economic strata	208 (40.2)	15 (10.3)	180 (48.1)	42 (14.8)	223 (33.6)
Times received antenatal care					
0 times	-	-	21 (5.6)	122 (42.8)	145 (21.9)
1-3 times	-	-	109 (29.1)	73 (25.6)	182 (27.5)
4-7 times	-	-	205 (54.7)	79 (27.7)	285 (43.0)
at least 8 times	-	-	37 (9.9)	11 (3.9)	48 (7.2)
Facility delivery					
(No) Home delivery	163 (31.5)	122 (84.1)	-	-	285 (43.0)
(Yes) - Public sector	351 (67.9)	20 (13.8)	-	-	371 (56.0)
- Private sector	3 (0.6)	1 (0.7)	-	-	4 (0.6)

Note: Data are expressed as mean ± SD or n (%).

Antenatal care

Of the participants, only 517 (78.0%) received at least one antenatal care. Of these, 284 (43%) had four to seven antenatal care services, and 48 (7.2%) had more than eight services. One participant's answer was invalid. The regression equation and its variables adopted based on multiple logistic regression analysis are shown in **Table 2**.

The multiple logistic regression analysis showed that the following factors were significantly associated with the utilization of antenatal care: area and region of residence, educational status, an ethnolinguistic group of the household head, and economic strata. Participants with higher educational status were 4.38 times more likely to use ANC than those with lower educational status. Moreover, adolescents from the Lao-Thai family were 3.68 times more likely to use ANC than those from the Hmong-Mien family. Additionally, adolescents from families with higher economic strata were 3.04 times more likely to use ANC than those with lower economic strata.

Concerning differences by area of residence, adolescents living in urban areas were 2.84 times more likely to use ANC than those living in rural areas without roads. Furthermore, adolescents living in the South were 2.67 and 2.42 times more likely to use ANC than those living in the North and Central regions.

Table 2. Multiple logistic regression analysis to identify the factors associated with the utilization of antenatal care

Variables	Received antenatal care			
	Adjusted odds ratio	95%CI		p-value
		Lower	Upper	
Area				
Rural without roads	Ref.			
Rural with roads	1.72	1.02	2.88	< 0.05
Urban	2.84	1.21	6.69	< 0.05
Educational status				
Lower educational status	Ref.			
Higher educational status	4.38	1.02	18.8	< 0.05
Ethnolinguistic group of the household head				
Hmong-Mien	Ref.			
Mon-Khmer	1.89	1.09	3.28	< 0.05
Lao-Thai	3.68	1.88	7.21	< 0.01
Chinese-Tibetan	0.16	0.06	0.40	< 0.01
Marital status				
Formerly married/ in a union	Ref.			
Currently married/ in union	1.93	0.57	6.56	.293
Region				
South	Ref.			
North	2.67	1.31	4.74	< 0.01
Central	2.42	1.64	4.47	< 0.01
Economic strata				
Lower economic strata	Ref.			
Higher economic strata	3.04	1.64	5.64	< 0.01

Facility delivery

Of the participants, only 375 (56.6%) gave birth in health facilities. Of these, 371 (56.0%) were delivered in public facilities and four (0.6%) in the private sector. Furthermore, 285 (43.0%) had at home and three adolescents delivered at other places. Table 3 shows the results of the multiple logistic regression models to explain the utilization of facility delivery. The multiple logistic regression analysis showed the following factors were significantly associated with

facility delivery, the ethnolinguistic group of the household head, economic strata, and received ANC. In particular, the adjusted odds ratio was most significant for facility delivery for adolescents who received ANC. Adolescents who received at least one ANC were 8.39 times more likely to have facility delivery than those who did not receive ANC. Moreover, adolescents from families with higher economic strata were 3.14 times more likely to have facility delivery than those with lower economic strata. Additionally, adolescents from a Lao-Thai family were 1.74 times more likely to have facility delivery than those from a Hmong-Mien family.

Table 3. Multiple logistic regression analysis to identify the factors associated with facility delivery

Variables	Facility delivery			
	Adjusted odds ratio	95%CI		p-value
		Lower	Upper	
Area				
Rural without roads	Ref.			
Rural with roads	1.42	0.851	2.36	.180
Urban	1.58	0.782	3.18	.203
Educational status				
Lower educational status	Ref.			
Higher educational status	1.49	0.72	3.08	.286
Ethnolinguistic group of the household head				
Hmong-Mien	Ref.			
Mon-Khmer	1.00	0.62	1.62	.998
Lao-Thai	1.74	1.04	2.90	< 0.05
Chinese-Tibetan	1.85	0.70	4.9	.217
Marital status				
Formerly married/ in a union	Ref.			
Currently married/ in a union	2.31	0.729	7.29	.155
Region				
South	Ref.			
North	1.33	0.79	2.23	.288
Central	0.81	0.47	1.38	.435
Economic strata				
Lower economic strata	Ref.			
Higher economic strata	3.14	2.00	4.92	< 0.01
Received antenatal care				
No	Ref.			
Yes	8.39	4.94	14.20	< 0.01

Discussion

This study identified the factors associated with antenatal care utilization and facility delivery among adolescents in Lao PDR. Social factors associated with antenatal care (ANC) were higher educational status, higher economic strata, ethnic majority, living in urban, and living in the Northern or Central region. The social factors associated with facility delivery were the ethnic majority and higher economic status. Although there were no significant differences in residential areas, the presence or absence of antenatal care was strongly related to the utilization of MHC services among adolescents. However, these results

also indicate the existence of disparities in the utilization of ANC and facility delivery by adolescents whose educational status, economic status, ethnicity, and place of residence are disadvantaged. Previous studies found similar results for pregnant women, with household wealth, educational level of the woman and husband, accessibility to health facilities, birth preparedness, and ethnicities as social determinants related to MHC utilization.[20,22]

In the current study, approximately half of the adolescents chose to deliver at a facility, and most chose a facility in the public sector. Furthermore, urban or rural residence with roads was associated with ANC utilization. The free delivery policy in Lao PDR exempted women from paying for delivery at medical facilities and included non-medical benefits, such as transportation, pick-up, and meals. Nevertheless, many did not receive non-medical benefits.[20] Due to the high cost of transportation, adolescents reportedly choose to give birth at home. In addition, teenage pregnant often live in rural and regional areas due to being from an economically disadvantaged background. They preferred to give birth in public facilities, which pointed out the challenges of access to antenatal care.[23] In the current study, among women who received antenatal care, many who delivered in facilities could be attributed to the fact that they resided in areas with easier access to health centers. Especially for adolescents, who are often not financially independent, access to health facilities is greatly influenced by the support and environment of their surroundings and living in an accessible neighborhood is an essential factor.[24,25]

Pre-preparation for birth in Laos has been primarily related to facility delivery.[20] The higher utilization of MCH care among women with higher educational status could also be attributed to differences due to pre-preparation. The Lao Maternal and Child Health Handbook told women to be prepared for the delivery setting, accompanying companions, transportation, and financial issues.[26] Moreover, timely and appropriate ANC has a life-saving potential for mothers and children, including preventing complications.[27,28] In our study, the association between antenatal care and facility delivery was expected due to the above reasons and the protective effect of preparatory education in antenatal care. This association also explained why women with at least one antenatal care received the required number of checkups. This suggested that their antenatal care provider had educated them regarding the need for antenatal care and facility delivery. For pregnant women, especially adolescents, antenatal care checkups are an essential health education opportunity and an opportunity to obtain information, such as the danger signs in delivery and the need for facility delivery.[29] In our results, the strong positive association between receiving antenatal care and facility deliverers might be enhanced by geographic accessibility to the facility and the ability to obtain the necessary information and prepare for delivery.

A proportion of people of ethnic minorities inhabit the remote and southern areas of Lao PDR.[13] A previous study suggested that maternal knowledge was essential to increase facility delivery in rural and Southern Lao PDR areas where most inhabitants were from ethnic minorities.[29-31] Maternal age, economic background, and educational background are more likely to influence MHC service utilization among adolescent pregnancies in low- and middle-income countries than those of ethnic minorities or geographic backgrounds of residence.[32] In the case of Lao PDR, however, people from ethnic minorities often reside in highlands and rural areas, where disparities in the educational background already exist. These factors are complex.

The perceived advantages of home deliveries included low cost, convenience, closeness to their family, and desirable birthing practices by a traditional birth attendant (TBA).[29] Women and their families expressed great confidence, skills, and knowledge of their TBA. However, it was inferred from our study that the disparities due to sociocultural beliefs occurred because adolescents from urban and ethnic majority

were more likely to use MHC services. A possible explanation for the regional differences observed may be that ethnic minorities tend to reside in rural and southern areas. The relationship between the cultural backgrounds of ethnic minorities and their residential areas should be further examined.

Limitations

This nationwide sample allowed for examining social factors associated with MCH utilization among Lao adolescents on a national scale. However, as with other cross-sectional survey data, the study design limited the interpretation of the causality of factors related to the underutilization of MHC services. Therefore, we interpreted our results with previous qualitative studies. In addition, although the data was limited to the two years before the survey, there is still a possibility of recall bias in the data used as the information collected relied on the adolescents' memories of their pregnancies.

We were unable to reach an analysis of birth outcomes owing to an insufficient sample size. However, a healthy pregnancy process could be a major reason for choosing home delivery. Therefore, health conditions relevant to using MCH services need to be identified. In addition, future studies should analyze how similar factors affect birth outcomes.

Conclusion and Implications for Nursing and Midwifery Practice

We conducted this study to determine the factors associated with the utilization of antenatal care and facility delivery rates in a nationwide sample of Lao PDR. There were disparities between disadvantaged adolescents, with higher education and higher economic status strongly associated with ANC receipt and higher economic and ethnic majority status related to the choice of institutional delivery. The results of this study highlight this current state of inequality. There is a need for policies that bridge the disparities occurring for vulnerable adolescents, such as low-educated and low-income families, women living in rural and southern areas, and ethnic minority women. Such policies will help to ensure that all women have access to safe and necessary ANC and facility deliveries.

Based on the findings of this study, it is essential to establish interventions targeting these important related factors to increase ANC visits and facility deliveries. The results of this study can also be used to help nurses and midwives eliminate socioeconomic disparities in the provision of ANC consultations and facility deliveries in Lao PDR, therefore that no one is left behind. It is also vital for nurses and midwives to provide outreach care to high-risk adolescents and to communicate the importance of ANC and facility delivery, along with the necessary sexual reproductive health education for preventing unwanted pregnancies.

Acknowledgements

We would like to offer our sincere gratitude to Phonexay Sithirajvongsa and other officers at the UNFPA Lao country office for their support. This work was supported by JST Grant Number JPMJPF2108. We also thank Editage (www.editage.com) for English language editing.

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ปัจจัยที่มีความสัมพันธ์กับการใช้บริการดูแลสุขภาพของมารดาวัยรุ่นลาว: การศึกษาย้อนหลังภาคตัดขวาง

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บทคัดย่อ: การกล่าวถึงปัจจัยกำหนดสุขภาพทางสังคมที่มีอิทธิพลต่อการตั้งครรภ์ในวัยรุ่นเป็นสิ่งที่สำคัญยิ่งในการขจัดความเหลื่อมล้ำและการบรรลุความเสมอภาคด้านสุขภาพเพื่อลดอัตราการเสียชีวิตของมารดา สาธารณรัฐประชาธิปไตยประชาชนลาวมีอัตราการคลอดบุตรในวัยรุ่นที่สูง ซึ่งอาจส่งผลด้านลบต่อสุขภาพของมารดาและเด็กได้ ผู้วิจัยได้ทำการศึกษาย้อนหลังภาคตัดขวางโดยใช้ข้อมูลจากแบบสำรวจตัวชี้วัดทางสังคมลาวครั้งที่สองของปี ค.ศ. 2017 เพื่ออธิบายปัจจัยบริบททางสังคมที่เกี่ยวข้องกับการใช้บริการฝากครรภ์และการคลอดของวัยรุ่น ผู้วิจัยวิเคราะห์ข้อมูลจากวัยรุ่นที่มีอายุระหว่าง 10-19 ปี จำนวน 663 ราย และคัดเลือกปัจจัยที่เกี่ยวข้องกับการใช้บริการด้านการดูแลสุขภาพของมารดาตามปัจจัยทางสังคม ได้แก่ พื้นที่และภูมิภาคที่อยู่อาศัย ระดับการศึกษา สถานภาพสมรส กลุ่มภาษาชาติพันธุ์ของหัวหน้าครอบครัว และระดับเศรษฐานะ ทำการวิเคราะห์การถดถอยโลจิสติกพหุคูณเพื่อหาปัจจัยที่เกี่ยวข้องกับการใช้บริการฝากครรภ์และการคลอดของมารดาวัยรุ่น

ผลการวิจัยพบว่าปัจจัยทางสังคมที่มีความสัมพันธ์อย่างมากกับการใช้บริการฝากครรภ์ ได้แก่ ระดับการศึกษาและฐานะทางเศรษฐกิจที่สูง ส่วนปัจจัยทางสังคมที่มีความสัมพันธ์กับการใช้บริการการคลอด ได้แก่ การเป็นกลุ่มชาติพันธุ์หลัก และระดับเศรษฐานะที่สูง ดังนั้น จึงจำเป็นอย่างยิ่งที่จะต้องกำหนดมาตรการที่มุ่งเป้าหมายไปที่ปัจจัยเหล่านี้ เช่น ระดับการศึกษาที่ต่ำกว่า ระดับเศรษฐานะที่ต่ำกว่า และการเป็นชนกลุ่มน้อยทางชาติพันธุ์ ในการส่งเสริมการใช้บริการฝากครรภ์และการคลอดของมารดาวัยรุ่น ผลการศึกษานี้สามารถใช้เพื่อเป็นข้อมูลสำหรับพยาบาลและผดุงครรภ์ในความพยายามที่จะขจัดความเหลื่อมล้ำทางเศรษฐกิจและสังคม ซึ่งสามารถทำได้โดยเพิ่มการให้คำปรึกษาการดูแลฝากครรภ์และการทำคลอดในลาว ซึ่งจะช่วยให้มีสุขภาพที่ดีขึ้นสำหรับมารดาวัยรุ่น ทารก และครอบครัว

Pacific Rim Int J Nurs Res 2023; 27(2) 260-271

คำสำคัญ: สุขภาพวัยรุ่น การฝากครรภ์ การบริการการคลอด สปป.ลาว สุขภาพมารดา การบริการดูแลสุขภาพมารดา

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