

The perceptions of safe delivery among married women of reproductive age between 20 and 49 years old in Parkgneum district, Vientiane Capital, Lao PDR

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ABSTRACT

A cross-sectional study was conducted to determine the perceptions of safe delivery and their related factors among married women of reproductive age (MWRA) between 20 and 49 years old living in Parkgneum district, Vientiane Capital, Lao PDR. The data were collected from January 9 to 30, 2009 by interviewing 160 MWRA between 20 and 49 years old using a structured questionnaire. Data analysis was performed by using Descriptive Statistics, Chi-square test and Multiple Logistic Regression.

The study found that 53.1% of MWRA were aged between 20 and 34 years old, 70% of them were farmers. Most MWRA had good knowledge about safe delivery, only 27% of them had poor knowledge about safe delivery. 46% of respondents were difficult access to health services, 49.4% were difficult access to safe delivery information and 57.5% of them received good support from their husbands. Half of respondents had negative perceptions about safe delivery and the other half had positive perceptions.

The study revealed that MWRA of old age, poor access to safe delivery information and less husband support were associated with negative perceptions of safe delivery, OR= 2.2 (95% CI =1.1-4.3), 2.4 (95% CI =1.2-4.6) and 2.4 (95%CI =1.2-4.8) respectively.

The findings recommended that increasing accessibility to information and promoting husband's support are critical to encourage women to access safe delivery services.

Keyword Perception Safe delivery Married women of reproductive age

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การรับรู้เกี่ยวกับการคลอดที่ปลอดภัยของสตรีอายุ 20-49 ปีที่แต่งงานแล้ว ในอำเภอปากงึม นครเวียงจันทร์ ประเทศสาธารณรัฐประชาธิปไตยประชาชนลาว

ขันทอง สีหราช ศิริกุล อิศรานุรักษ์ จิราพร ชมพิกุล

บทคัดย่อ

การศึกษาภาคตัดขวางนี้มีวัตถุประสงค์ เพื่อศึกษาการรับรู้เกี่ยวกับการคลอดที่ปลอดภัย และปัจจัยที่มีผลต่อการรับรู้เกี่ยวกับการคลอดที่ปลอดภัยของสตรีอายุ 20-49 ปีที่แต่งงานแล้ว จำนวน 160 คน อาศัยอยู่ในอำเภอปากงึม นครเวียงจันทร์ ประเทศสาธารณรัฐประชาธิปไตยประชาชนลาว เก็บข้อมูลระหว่างวันที่ 9-30 มกราคม 2552 โดยการสัมภาษณ์แบบสอบถามที่สร้างขึ้น วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนาการทดสอบไค สแคว์ และ Multiple Logistic Regression

ผลการศึกษาพบว่า กลุ่มเป้าหมาย ร้อยละ 53.1 มีอายุระหว่าง 20-34 ปี ร้อยละ 70 เป็นเกษตรกร ส่วนใหญ่มีความรู้เกี่ยวกับการคลอดที่ปลอดภัยในเกณฑ์ดี มีเพียงร้อยละ 27 ที่มีความรู้เกี่ยวกับเรื่องนี้ ร้อยละ 46 มีความยากลำบากในการเข้าถึงบริการ ร้อยละ 49.4 มีความยากลำบากในการเข้าถึงข้อมูลข่าวสารเรื่องการคลอดที่ปลอดภัยและร้อยละ 57.5 ได้รับการสนับสนุนที่ดีจากสามี ในเรื่องการคลอดที่ปลอดภัย กลุ่มเป้าหมายครึ่งหนึ่งมีการรับรู้เชิงบวกต่อการคลอดที่ปลอดภัย ส่วนอีกครึ่งหนึ่งมีการรับรู้เชิงลบ

พบว่ากลุ่มเป้าหมายที่อายุมาก มีความลำบากในการเข้าถึงแหล่งข้อมูลข่าวสารด้านการคลอดที่ปลอดภัย และได้รับการสนับสนุนจากสามีน้อย มีความสัมพันธ์กับการรับรู้เกี่ยวกับการคลอดที่ปลอดภัยเชิงลบ โดยมีค่า OR = 2.2 (95% CI = 1.1 – 4.3), 2.4 (95% CI = 1.2 – 4.6) และ 2.4 (95% CI = 1.2 - 4.8) ตามลำดับ

ดังนั้น การเพิ่มการเข้าถึงข้อมูลข่าวสารด้านการคลอดที่ปลอดภัยและส่งเสริมการได้รับการสนับสนุนจากสามี เป็นสิ่งสำคัญในการกระตุ้นให้สตรีเข้าถึงการคลอดที่ปลอดภัย

คำสำคัญ การรับรู้ การคลอดที่ปลอดภัย หญิงวัยเจริญพันธุ์ที่แต่งงานแล้ว

INTRODUCTION

In 2005 the World Health Organization (WHO) estimated there were 536,000 maternal deaths worldwide. Approximately 99% of global maternal deaths, however, occurred in developing countries [1]. About 80 % of all maternal deaths are related to specific disorders during pregnancy, childbirth, or the post-partum period, such as severe bleeding, infections, hypertensive disorders in pregnancy, obstructed labor, and complications associated with unsafe abortion [2]. Only 60 % of all deliveries are attended or assisted by skilled birth attendants. This means that 50 million home deliveries take place without any assistance from skilled health personnel. There are many reasons why women do not receive care before, during, and after childbirth. This includes the unavailability of professional care, the low quality of health services, the lack of access to health facilities, and culture beliefs [3]. The cultural belief might effect perceptions of women and their families on hospital delivery.

The maternal mortality ratio in Lao Peoples Democratic Republic (Lao PDR) was still quite high in 2005, when a National Lao Population Census indicated that the MMR was 405 per 100,000 live births [4]. This figure is higher than that of neighboring countries: Thailand (44), Vietnam (130), Myanmar (360), and China (56). Everyday in Laos at least 3 women die during pregnancy. This means 1,300 women die each year. In Laos a woman's lifetime risk of maternal death is 1 in 25, which

is the highest for Southeast Asia [2]. The vast majority of children (84.8%) are born at home, while only 12.8% of deliveries take place at a health facility. Relatives (63.4%) or Traditional Birth Attendants (12.1%) assist with most deliveries [5].

Parkgneum district is 1 of 9 districts that comprise the Vientiane Municipality. It is located 60 kilometers from the nation's capital. The total population is 45,684, of which 22,597 are females. The district contains 53 villages with 8,144 households, with an average household size of 5-6 people. Seventy percent of the Parkgneum's population lives in rural areas. In 2007 only 31.2% of the married women of reproductive age were using any contraceptive method. Only 44.2% of pregnant women received antenatal care during their pregnancy. More than half (58%) of these women delivered at home, and 6.8% of them did not receive any assistance at the time of their delivery [6].

As one known, perception influenced acceptability and utilization of services. To increase the percentage of safe deliveries a proactive approach should be implemented before women get pregnant. That means the appropriate target group is MWRA. There have been some studies about MWRA perceptions about safe delivery. However, there has been no such research in Parkgneum district. Therefore the main purpose of this study was to assess the perceptions of MWRA about safe delivery as well as to identify the factors relating to the perceptions of safe delivery which could potentially impact on or contribute to improving the health status of women and children in the target area and eventually throughout the country as a whole.

METHODOLOGY

A cross-sectional study was carried out from January 9 to 30, 2009 to determine the factors that related to women's perceptions of safe delivery. The data was conducted in Parkgneum district, in the Vientiane capital area, of Lao PDR. The study population consisted of married women between 20 and 49 years of age.

The sample sized was calculated based upon the prevalence of home delivery was 0.6 [6], and the required sample population size was at least 142 women to ensure that the data could be analyzed properly. An additional 10% was added to the sample size. Thus, a total of 160 married women between 20 and 49 years of age were interviewed.

A three-stage cluster sampling technique was utilized to select the study population. The first stage was to randomly select, by simple random sampling method, 2 of the district's 6 catchment areas. The second stage was to randomly select, by simple random sampling method, 5 villages from each of the 2 catchment areas identified during the first stage. Thus the study site comprised a total of 10 villages. The third stage was to randomly select 16 married women between 20 and 49 years of age from a name list of household members in each of these 10 villages. This simple random sampling was obtained by using a random numbers' table.

The study variables were perceptions of safe delivery as an outcome variable and socio-demographic and economic factors, knowledge about safe

delivery, accessibility to safe delivery service, sources of information and husband support.

Perception of safe delivery in this study refers to women's thinking and opinions about safe delivery to possible problems that may occur during labor and delivery. It is measured by 14 questions with three choices of answer: agree, not sure, and disagree. For a positive statement, "Agree" was given a score of 3, "Not sure" was given a score of 2, and "Disagree" was given a score of 1, and vice versa for a negative statement. Total score varied from 14 to 42. The perceptions of safe delivery were classified into negative and positive by the median score.

Socio-demographic and economic factors was consisted of 8 questions, included age, educational level, occupation, family income, and the number of living children.

Knowledge about safe delivery composed of 12 questions. The correct answer was given score of "1" and an incorrect answer was given a score of "0". The level of knowledge was classified into poor (less than 60 % of total), moderate (60 % to 80 % of total) and good (more than 80%).

Accessibility to safe delivery services consisted of distance from a respondent's home to a health facility, the type of transportation used and the convenience, and cost of transportation. The distance was classified into three groups: less than 5 kms was given a score of 3, from 5-10 kms was given a score of 2, and more than 10 kms was

given a score of 1. Type of transportation was classified into two categories: “their own car” was given a score of 2, while using a “public or rented vehicle” was given a score of 1. Convenience of transportation was classified into 2 categories. “Convenient” was given a score of 2, and “Not Convenient” was given a score of 1. Cost of transportation was classified into two categories: “Expensive” was given a score of 1, while “Inexpensive” was given a score of 2. The total score of accessibility to safe delivery service ranged from 4 to 9. The accessibility to safe delivery was classified into easy to access (score > mean score) and difficult to access (score \leq mean score).

The sources of information consisted of 7 questions. If the respondent answered “Yes” she was given a score of 1, and score of 0 for the answered “No”. The total score of sources of information ranged from 0 to 7. The accessibility to sources of information was classified into easy to access (score > mean score) and difficult to access (score \leq mean score). The husbands’ support consisted of 7 questions. If the respondent answered “Yes” she was given a score of 1, and score of 0 for the answered “No”. The total score of husband’s support ranged from 0 to 7. The support was classified into good support (score > mean score) and poor support (score \leq mean score).

The questionnaire was initially pretested, among 30 women living in rural communities in Parkneum district for reliability by using Kuder-Richardson to measure the knowledge part, and by

using the Cronbach’s alpha to measure the perception part. The results were 0.89 on Kuder-Richardson test and 0.60 on the Cronbach’s alpha.

The Mahidol University Ethics Committee provided “ethical clearance” to proceed with the study (MU-IRB 2008/394.0212), while the Provincial Health Office of the Vientiane Capital issued permission for the researcher to conduct the study in the proposed “intervention area”. Prior to conducting any interviews, the research assistants explained the purpose and procedures for the study and requested that each villager invited to participate in the study first read a participant’s information sheet as well as sign an informed voluntary consent form if they agreed to participate in the study. The participants were assured that their responses would be confidential and that they could withdraw from the study at any time.

Descriptive statistical analysis was used to describe the study variables. Chi-square test was used to identify the relationship between perception and each independent factor. Multiple Logistic Regression used to determine the association between perception and independent factors simultaneously, and Forward Wald procedure selected significant predictors of perceptions of safe delivery.

RESULTS

The results obtained from of 160 respondents. 53.1% were young women between 20 and 34 years of age, with a

mean age of 33.3, and the rest was 35 – 49 years old. The majority (70%) of MWRA

was farmers and 67% of them had only a primary education school education as shown in the Table 1.

Table 1 Number and percentage of MWRA by socio-economic factors.

Factors	Number	Percent
Age of respondents		
20-34 years	85	53.1
35-49 years	75	46.9
Min. = 20 Max. = 49 Mean = 33.3 SD = 7.9		
Education of respondents		
No schooling	20	12.5
Primary	107	66.9
Junior high school	29	18.1
High school	4	2.5
Occupation of respondents		
Unemployed	11	6.9
Farmer	112	70.0
Trader	29	18.1
Laborer/worker	5	3.1
Government officer	3	1.9
Age of husbands		
21-35 years	61	38.1
36-50 years	83	51.9
50+ years	16	10.0
Education of husbands		
No schooling	8	5.0
Primary	75	46.9
Junior high school	47	29.4
High school	23	14.4
College/University	7	4.3
Occupation of husbands		
Unemployed	2	1.3
Farmer	92	57.5
Trader	8	5.0
Laborer/worker	37	23.1
Government officer	21	13.1
No. of living children in family		
No child	6	3.8
1 -3 children	108	67.5
3+ children	46	28.7
Family income		
Low income (< 300,000 kip)	48	30.0
Moderate income (300,000-600,000 kip)	66	41.3
High income (> 600,000 kip)	46	28.7

The average score of knowledge was 8.5. High proportion of MWRA had a relatively moderate knowledge about safe delivery (41.2 %), 32 % had good knowledge and 27% had poor knowledge. The poor knowledge was about convulsions after delivery and prolonged labor. See Table 2.

Table 2 also showed an average score of accessibility to health facility was 5.9, 54.4% of the respondents had easy to access and 45.6 % declared that they had difficulty accessing safe delivery services. The average score of accessibility to information was 2.59. Almost half of women (49.4%) mentioned that they experienced difficulty accessing information, while the remaining half (50.6%) indicated that they had easy to access to

information concerning the safe delivery. The majority of women (85%) received information from health personnel, while 45.6% of them obtained information from their husbands and printed materials. The study findings illustrated that the support provided by husbands during pregnancy, delivery and post partum period had an average score equal to 2.74. The findings revealed that 57.5 % of women received good support from their husbands while the remaining 42.5 % received poor support from their husbands.

The study also indicated that the median score of the perception was 34.5 and an equal number and percentage of women (50%) had “negative” as well as “positive” perceptions of safe delivery as shown in Table 2.

Table 2 Number and percentage of MWRA by their level of knowledge, accessibility to health services, accessibility to information, husband’s support and perceptions of safe delivery.

Variables	Number	Percent
Knowledge of safe delivery		
Poor knowledge (<60 %)	43	26.9
Moderate knowledge (60 % - 80 %)	66	41.2
Good knowledge (> 80 %)	51	31.9
Min. = 2 Max. = 11 Mean = 8.5 SD = 1.6		
Accessibility to safe delivery services		
Difficult access to service (score ≤ Mean)	73	45.6
Easy access to service (score > Mean)	87	54.4
Min. = 4 Max. = 9 Mean = 5.89 SD = 1.46		
Accessibility to safe delivery information		
Difficult access to information (score ≤ Mean)	79	49.4
Easy access to information (score > Mean)	81	50.6
Min. = 0 Max. = 7 Mean = 2.59 SD = 1.51		
Husband support		
Poor support (score ≤ Mean)	68	42.5
Good support (score > Mean)	92	57.5
Min. = 0 Max. = 5 Mean = 2.74 SD = 1.45		
Perception of safe delivery		
Positive perception (> median)	80	50.0
Negative perception (≤ median)	80	50.0
Min = 21 Max = 41 Median = 34.5 QD = 5.7 Q1 = 32 Q2 = 37.7		

By Chi Square test, there was an association between age, education, and perceptions of safe delivery. Women between 20 and 34 years of age had more positive perceptions of safe delivery than those who were between 35 and 49 years of age (P-value= 0.039). Women with a high education level similarly tended to have more positive perceptions of safe delivery than those with a low education level (P-value = 0.024). There was not any significant association between other socio-demographic and economic factors and perceptions of safe delivery. The study also illustrated an association between participants' knowledge about safe delivery and their perceptions of safe delivery. Almost two-thirds (65.1%) of the women demonstrating poor know-

ledge about safe delivery had negative perceptions of safe delivery (P-value= 0.042). There was not any association between accessibility to safe delivery services and perceptions of safe delivery. With regard to accessibility to information about safe delivery and husbands' support, the study findings illustrated that there were associations between these two variables and perceptions of safe delivery. Women who had difficulty accessibility information about safe delivery (61%) had negative perceptions of safe delivery (P-value=0.007). Similarly women who received poor support from their husbands during pregnancy, delivery, and the post-partum period (68%) had negative perceptions regarding safe delivery (P-value= 0.001). (Table 3)

Table 3 Association between study factors and perceptions of safe delivery

Factors	n	Perception of safe delivery		Chi-square P-value
		Negative (%)	Positive (%)	
Age				0.039*
20-34 years	85	42.3	57.7	
35-49 years	75	58.6	41.4	
Education of respondents				0.024*
No schooling	20	75.0	25.0	
Primary school	107	49.5	50.5	
Junior/High school	33	36.4	63.6	
Occupation of respondents				0.730
Non farmer	48	52.1	47.9	
Farmer	112	49.1	50.9	
Age of husbands				0.008*
21-35 years	61	34.3	65.7	
36- 50 years	83	60.2	39.8	
50+ years	16	56.3	43.7	

Table 3 Association between study factors and perceptions of safe delivery (cont.)

Factors	n	Perception of safe delivery		Chi-square P-value
		Negative (%)	Positive (%)	
Education of husbands				0.975
No schooling	8	50.0	50.0	
Primary school	75	49.3	50.7	
Junior/high school	70	51.4	48.6	
College/University	7	42.9	57.1	
Occupation of husbands				1.000
Non farmer	68	50.0	50.0	
Farmer	92	50.0	50.0	
No. of living children				
0-1 child	6	50.0	50.0	
2-3 children	108	49.0	51.0	
3+children	46	52.2	47.8	
Family income				0.711
Low income (< 300,000 kip)	48	54.2	45.8	
Moderate income (300,000- 600,000 kip)	66	50.0	50.0	
High income (>600,000 kip)	46	45.7	54.3	
Knowledge about safe delivery				0.042*
Poor (<60%)	43	65.1	34.9	
Moderate (60% - 80%)	66	48.5	51.5	
Good (> 80 %)	51	39.2	60.8	
Accessibility to health service				0.874
Difficult to access (\leq mean)				
Easy to access ($>$ mean)				
Accessibility to information on safe delivery				
Difficult to access (\leq mean)	73	49.3	50.7	
Easy to access ($>$ mean)	87	50.6	49.4	
Support provided by husbands				0.007*
Poor support (\leq mean)	68	67.7	35.3	
Good support ($>$ mean)	92	39.0	60.9	

*Significance at P-value < 0.05

Multiple Logistic Regression analysis and Forwards Wald selection identified stati-stically significant predictors of negative perception of safe delivery. The findings indicated that only age, accessibility to information about safe delivery, and the level of husband's support

and encouragement were associated with negative perceptions of safe delivery, OR= 2.2 (95% CI =1.1-4.3), 2.4 (95% CI =1.2-4.6) and 2.4 (95%CI =1.2-4.8) respectively. Married women between 35 to 49 years of age were 2.2 times more likely to have negative perceptions of safe delivery

than married women 20 to 34 years old. Married women with poor access to information about safe delivery were 2.4 times more likely to have negative perceptions of safe delivery than women who had easy access to information. Similarly

married women who received poor support from their husbands were 2.4 times more likely to have negative perceptions of safe delivery than women with good support from their husbands. (Table 4)

Table 4 The Multiple Logistic Regression analysis and Forward selection identified significant predictors of negative perceptions of safe delivery.

Factors	Negative perception of safe delivery		
	Adj. odd ratios	95 % CI	P-value
Age of respondents(years)			
20-34	1.0		.019*
35-49	2.2	1.1 - 4.3	
Accessibility to safe delivery information			
Difficult access	2.4	1.2- 4.6	.021*
Easy access	1.0		
Husband support			
Poor support	2.4	1.2 - 4.8	.014*
Good support	1.0		

*Significance at P-value < 0.05

DISCUSSION

This community based cross-sectional study was designed to envision possible ways to prevent maternal and newborn infant morbidity and mortality by identifying significant factors that related to safe delivery for women living in Parkgneum district, Vientiane capital, Lao PDR.

The study revealed that the respondents had high median score of perceptions of safe delivery (34.5 of 42 score). Thus, most of them personally tended to have positive perception of safe delivery. There was a statistically significant association between the support provided by husbands and their respective wife's

perceptions of safe delivery. When testing the association for four predictors included in model, it was found that there was a strong association between the level of support provided by husbands and women's perceptions about safe delivery. Husbands can play an important role in encouraging their wives to access appropriate obstetrics services during pregnancy, child birth, and the post partum period. This is similar to the findings reported by Nejad VM in the Republic of Iran, in which 88.4% of husbands with a positive attitude about safe delivery encouraged their wives to obtain safe delivery services [7]. The findings also

corresponded to that found in Sweden by Ny P et al. that indicated the positive attitudes, on the part of husbands, resulted in improved women's health care during pregnancy [8].

Accessibility to information about safe delivery was a statistically significant association with women's perceptions of safe delivery, as shown in Table 3. When testing the association for final predictors, included in the model, it was found that there was a strong association between accessibility to information about safe delivery and perceptions about safe delivery, as shown in Table 4. Access to adequate and correct information about safe delivery helps women better understand as well as have a greater awareness about the importance of safe delivery services. The similar finding from Lao Reproductive Health Survey 2005 demonstrated that women in rural areas have limited to access to information concerning obstetrics complications, and as a result 85% of all pregnant women continue to give birth at home [5]. Kabir MA [9], and Nigussies M et al. [10] was illustrated that the high percentage of home deliveries were due to women's limited access to information about safe delivery services.

The study found that a women's age was directly associated with perceptions of safe delivery, younger women, who were 20-34 years of age, had more positive perceptions of safe delivery than older women. When testing the association using Multiple Logistic Regression it was found that there still was a significant association with perception of safe delivery. This finding illustrates that a women's age is a determinant

factor of their perceptions of safe delivery. It was similar finding reported by Kabir MA [9] and Lao Reproductive Health Survey 2005 were showed that women of reproductive age between 20-34 years had greater access to safe delivery services than older women group[5].

The women's knowledge about safe delivery was a statistically significant association with their respective perceptions of safe delivery. When testing this association using Multiple Logistic Regression analysis, however, it was found that knowledge about safe delivery was not associated with perceptions about safe delivery. It might be the other study factors could be affected to the association between knowledge about safe delivery and perceptions of safe delivery. This finding was contrary to that reported by Khanum PA et al. in Bangladesh that focused on women's knowledge and practices with respect to complications of pregnancy and childbirth. Khanum PA et al. found that poor knowledge caused women to delay seeking appropriate care [11]. Nasreen H et al. in Bangladesh also found that good knowledge about obstetrics complications could influence women to become aware about safe delivery [12].

RECOMMENDATIONS

Many married women of reproductive age in the Lao PDR still continue to have negative perceptions of safe delivery. These perceptions obviously affect the high level of maternal and infant mortalities that take place every year. The study findings clearly illustrate that senior level policy makers, health planners, health

managers and health workers need to work closely with one another to design and disseminate appropriate health education and specific information about safe delivery services to women, community leaders, and husbands/family members. The Ministry of Health, working with its partners from international assistance organizations, needs to emphasize the importance of increasing efforts at providing health education for maternal and child health services, especially with respect to that of safe delivery services for women and males in rural areas. The Ministry of Health must also work to simultaneously strengthen and encourage community participation, through the use of a multi-sectoral approach, to upgrade the quality as well as the accessibility of safe delivery programs in rural areas in an effort to improve the health status of mothers and

children. Greater support and involvement from the private sector, mass organizations, and local agencies are needed to ensure that women make greater use of safe delivery services. Promoting husbands to be active responsibility and providing support women to access quality of health care services during pregnancy, childbirth and post partum periods is crucial.

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