

# Factors Influencing Mothers' Utilization of Maternal and Child Care (MCC) Services

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**Asia Pacific Journal of  
Multidisciplinary Research**  
Vol. 3 No.5, 16-28  
December 2015 Part III  
P-ISSN 2350-7756  
E-ISSN 2350-8442  
[www.apjmr.com](http://www.apjmr.com)

*Date Received: October 27, 2015; Date Revised: December 17, 2015*

**Abstract** - *The Rapid Reduction of Maternal and Neonatal Mortality is a health system responsive to the needs of all mothers and children. While various efforts are being undertaken to improve the implementation of maternal health program among pregnant women and immunization for children, there is a slow take up of these services. Factors influencing the slow demand for MCC services among mothers and children are not fully known. Factors hindering the delivery of these services need to be probed. This study used the descriptive method of research to describe the responses of mothers about the factors influencing slow availment of Maternal and Child Care Services. There were 396 mothers in Region 1 who willingly participated during focused group discussion. The highly availed services by mothers were: 1. pre-natal service, 2. Immunization, and 3. Family planning. Health services availed by the respondents' children were: 1. Management of childhood illness, 2. Immunization, and 3. Infant and young feeding. The mothers' deep concern for her baby's safety and health; free but limited medical services from competent health workers; inadequate supplies and equipment; distance to the nearest health facility, family income, mothers' education and dialect for communication influenced delivery of the program. To increase the utilization of MCC services, government hospitals should give free complete MCC services to the poor, the mothers should be informed about the benefits of complete maternal services for her baby and herself, enhance dissemination campaign through leaflets, flyers, pamphlets, and seminars.*

*Keywords: mother and child care, availment, pre-natal, natal, post-natal*

## INTRODUCTION

Health is a primary concern of the government, particularly for those who cannot afford medical care, those who live in communities that lack even the most basic health services. The Philippines is among the countries which contribute to the high rate of maternal and neonatal deaths worldwide. According to the 2006 Family Planning Survey published by the Department of Health [1], the maternal mortality [2] ratio was pegged at 162 maternal deaths per 100,000 live births. In this regard, three United Nations agencies-the United Nations Population Fund (NPF), United Nations Children's Fund (UNCF), and the World Health Organization (WHO) have joined forces and resources to undertake a joint program on reducing maternal and newborn deaths in the country that will meet the Millennium Development Goals (MDGs). The MDG of the Philippines placed high importance on the total improvement of maternal and child health by aiming 75% reduction of under-five mortality rate

by 2015 and a reduction of maternal mortality rate (MMR) by two thirds by 2015 [1].

The Department of Health expediting the achievement of the maternal and child health services as one of the centerpiece of action and reforms in the last three years. It has tasked all healthcare facilities to operationalize Article 23 Section 3 of the United Nations Declaration of Rights which states that every mother and child has the right to high quality comprehensive care regardless of social status, political affiliation, religion, area of residence or economic status. Lancet noted that there is a wide variation in the coverage of interventions between the rich and the poor and between urban and rural settings particularly on access to antenatal, natal, post natal, neonatal and child health services.

In a speech delivered by Health Secretary Ona during the 2010 Women Parliamentarian Forum, he mentioned that the DOH in 2008 had began with its emergency effort to save mother and newborn lives through access of critical health services particularly

during childbirth. This builds on two decades of experience with the Safe Motherhood Initiative, which showed that across countries and across settings, safe professional care before, during and after delivery offers the greatest opportunity to save lives. Statistics also point to around 10-11 mothers dying daily from pregnancy and childbirth related causes that are largely preventable.

In response to this, the DOH Health Reforms for the Rapid Reduction of Maternal and Neonatal Mortality is committed to put in place a health system responsive to the needs of all mothers, newborns and children. It will continue to strive to make life saving health services available and accessible to all women and children. Public health workers in the municipal and barangay levels are the front-liners for implementing this program of the DOH. They are expected to strengthen primary health care so that they can address the root causes of maternal and newborn mortality.

While various efforts are being undertaken to improve the implementation of maternal health program among pregnant women and expanded program on immunization for children respectively, there is a dearth of information on the slow take up of these services. Factors influencing the low demand for said services among mothers and children are not fully known. Factors hindering the delivery and provision of these services need to be probed as well; hence this study determined the factors influencing availment of Maternal and Child Care (MCC) services in Region 1.

To improve the coverage of maternal and child care program there should be a wide dissemination of the services among the mothers and responsible attendants of health particularly in the Rural Health Units and other health care facilities. However, there is a dearth of information on the low take up of these services thus this study identified the factors hindering the delivery of the services. Information on this if obtained, will be useful basis on the design and development of a more responsive maternal and child care program. Its main goal is to reduce morbidity and mortality rates among mothers and children 0-5 years old.

#### **OBJECTIVES OF THE STUDY**

This study determined the factors influencing low utilization/availment of MCC program in Region 1 particularly, the Profile of mothers; factors or current practices of mothers influencing utilization/availment

of maternal and child health care services; reasons/concerns and problems of mothers about availment of MCC services; and culturally appropriate communication strategies. This study can help suggest enhancement of MCC program utilization in the region.

#### **METHODS**

##### **Site Selection**

Selection of study sites included RHUs and barangays in Pangasinan and La Union in Region 1. The study included two cities and 12 towns. In Pangasinan there were six districts. One town was randomly selected per district and the classification was noted. For La Union there were two districts. The towns were composed of first class town and third class town which was randomly selected per district.

Selection of study sites in the barangay level used selected municipalities according to district and classification. The purposive sampling on the barangays with respect to geographical distance was used. For every town that was drawn, one barangay nearest to the RHU and another barangay farthest from the RHU of the town were selected. For every town that was drawn, one barangay nearest to the RHU and another barangay farthest from the RHU of the town were selected. Pangasinan and La Union urban barangays nearest to RHU were all located within the town or city proper while farthest barangays included Sn Jose, Mapolopolo, Pugo, Pantol, Sn Antonio, Apunit, Nandacan, Bacnotan, Bangas, Pugo, Sn Juan, Sn Fermin, and Bangas.

##### **Respondents**

The respondents were mothers of children who availed and/or did not avail of the services at the time of the study. There were focused group discussions conducted among mothers. Mothers were pre-selected by the BHWs upon their availability. The preselected mothers have at least a child from 0 to 5 years old during the conduct of the study. In this study, mothers have at least or never utilized maternal services which include, prenatal, natal, and post natal care while childhood services zeroed in only to vaccination services and new born screening.

##### **Data Collection Method and Instrument**

The questions on services during the focused group discussion was based on the DOH (BEmONC)

and (CEmONC) services for maternal and child care [3]. The Interview Guide included the variables identified in the conceptual framework and the identified services of the maternal and child care program of the DOH. Interview with the mother was conducted after their signed consent was submitted. The interview guide included the practices of mothers in the availment of MCC services during pre-natal, natal and post natal care. The questionnaire/interview guide also included: External factors: -geographical distance; and transport, demographic profile, concerns of mothers about maternal and child care availment and family resources, availment of the general services, and problems and concerns of mothers. In order to come up with the factors affecting the usability of the program, responses from open ended questionnaire of the mothers were coded, analyzed and counted to come out with concrete facts.

### Data Analysis

Frequency count and percentage was used to determine the profile and extent of utilization /availment of the MCC major programs, for factors, problems and concerns frequency count and percentage was also used. ANOVA and Scheffe were employed to test the significant difference in level of availment of MCC services.

## RESULTS AND DISCUSSION

### Profile of Mothers or Beneficiaries of the Services

The profile of Mothers according to age, monthly family income, educational attainment, place of residence, obstetrical history is presented in Table 1.

Table 1 shows, that mothers are usually between the age range of 26 to 30 years old (106 or 27%). Some are over and below this age range, such as 21 to 25 years old (93 or 23.5 %) and 31 to 35 years old (87 or 22%). The mothers are in their mid fifties who are in their reproductive stage, optimal age of childbearing with low risk for complications compared to those who are 40 years and above [4]. Eighty percent of the mothers have a monthly income below P10, 000 having a bracket within the range of poverty or poorest decile (Family Income and Expenditure Survey, NSO, 2012). The respondents are usually high school graduate (232 or 59%) or elementary graduate (72 or 18%). Majority of the interviewed mothers are from the rural (242 or 61%)

area. Obstetrical history of the mothers also reveals that they have an average number of three pregnancies, deliveries and children. They usually have three to four times of prenatal checkups and very few instances of premature deliveries and miscarriage.

Table 1. Profile of the Mother (n=396)

Items	F	%
<b>Age</b>		
15-20	28	7.1
21-25	93	23.5
26-30	106	26.7
31-35	87	22.0
36-40	53	13.4
41 above	29	7.3
<b>Monthly income</b>		
Below P 10,000.00	316	79.8
P10,000 – P20,999	66	16.7
P21,000 – P30.999	9	2.3
P31,000 – and above	5	1.2
<b>Educational attainment</b>		
Elementary graduate	72	18.2
High School graduate	232	58.6
College graduate	50	12.6
Post graduate	42	10.6
<b>Place of Residence</b>		
Rural	242	61.1
Urban	154	38.9
<b>Obstetrical History</b>		<b>MEAN</b>
Average of Number of Pregnancies		3
Average Number of deliveries		3
Average Number of children		3
Average Prenatal check up		3-4
Average Number of Premature delivery		(Not equivalent to 1)
Average Number of Miscarriage		(Not equivalent to 1)

The data implies that mothers have regular/quarterly check up that resulted to at least very rare case of miscarriage and premature delivery and which resulted to almost all live births.

### Availment of Existing Maternal and Child Care Services

It was noted by DOH Philippine Health Statistics that the maternal mortality rate in 2011 was 221 per 1000 live births. Based from the data last 2006

(162/1000live births) there was 36 percent increase in maternal mortality from 2006 and 2011. And the number one cause of maternal death is due to complications related to pregnancy occurring in the course of labor, delivery and puerperium [1].

It is this reason that the DOH has to strictly implement Maternal and Child Care Program to minimize mortality for both mother and child. Table 2 shows, the respondents' availment or utilization of major programs of Maternal and Child care services.

Table 2. Summary of Programs Availed by the Mother and Child

A. Mothers' Care Services Availed	F	%
Prenatal service	362	91.4
Tetanus immunization or immunization	315	79.5
Family Planning	290	73.2
Micronutrients supplementation	270	68.2
Post natal services	261	65.9
Clean and safe delivery	254	64.1
Natal service	231	58.3
Treatment of disease and other conditions	189	47.7
C. Child's Care Services Availed		
Management of childhood illness	377	95.2
Expanded program on Immunization (complete)	352	88.9
Infant and young feeding	297	75.0
Micronutrient supplementation	277	69.9
Nutritional assessment	214	54.0
Early childhood development	179	45.2
Newborn Screening	178	44.9
Disability detection	113	28.5

The commonly availed services by the mothers are arranged in order from common to the least, 1. Pre-natal, 2. Immunization, 3. Family planning, 4. Micronutrients supplementation, 5. Post natal, 6. Clean and safe delivery and 7. Natal services. The treatment for disease and other condition is the least service that they avail of. This data reveals that most mothers submitted themselves for pre natal check up. Discussions with them reveal that they care so much for safe or normal delivery of the baby. It is also evident that there is a decrease in the number of mothers who went back to the clinic/health center for natal service and check up for post natal service. Natal service utilization is just more than half (58%) since some mothers preferred to give birth at home or other

places besides the hospital. There is low rate of utilization (48%) of the treatment of disease and other conditions. The data suggests common practice of mothers not to submit themselves for monitoring of health status and treatment of disease for prevention and control after delivery.

The common health services that were availed by the respondents' children include, 1. Management of childhood illness, 2. (Complete) Immunization, 3. Infant and young feeding, 4. Micronutrient supplementation and 5. nutritional assessment. Other services like, early childhood development, newborn screening and disability detection have low rate of utilization. Less than half of the children availed of the services because they are not completely free. A minimal fee is collected for complete newborn screening, complete immunization and disability detection for infant. Focused group discussions revealed that the mothers could not afford additional fees. They also added that their children sometimes have incomplete immunization because 1) they forget the schedule of immunization despite reminders from the BHW and 2) minimal fee (or donation). Thus, other listed services for children were not completely availed.

### Factors Influencing the Availment of Maternal and Child Care Services

Current Practices of Mothers related to MCC program utilization

Table 3. Mothers' Place of Health Care Provider

Items	F	%
Place of Health Care Provider		
District Hospital	94	23.7
Barangay Health Station	75	18.9
City Health Unit/ Rural Health Unit	74	24.5
At Home (paramedics)	62	8.1
Tertiary Private Hospital	60	15.1
Lying-in Clinic	26	6.6
Birthing Home	5	3.0
Total	396	100.0
Place of last delivery		
Hospital (District Hospital/Tertiary Hospital)	172	43.4
Home	161	40.7
City Health Unit/Rural Health Unit	36	9.1
Lying in clinic and Birthing Home	18	4.5
Barangay Health Station	9	2.3

Table 3 shows the mothers' practices in choosing the place for health care provider. Health care providers are usually confined in the hospitals, rural health units, birthing clinics, and barangay health unit/facilities.

The top three places for health care providers for mothers to avail of BEmONC and CEmONC services are the district/provincial hospital (94 or 23.7%), city/rural health unit (74 Or 24.5%), and at the barangay health station (75 or 18.9). Others went to the tertiary private hospital for consultation (60 or 15.1%) while some (8.1%) mothers still consulted paramedics (hilots) at home.

The practice of mothers was to the government/public health unit for their BEmONC and CEmONC services. These are the following reasons why mothers go to government health facilities to avail of the services: they went to the government health hospital/unit because *1) the payment is minimal or no pay at all, 2) sometimes medicine and vitamins are for free, and 3) they trusted the medical practitioners.*

Almost half of the (172 or 43.4%) mothers delivered their last baby in the hospital (district/tertiary hospitals), in the city/rural health units (36 or 9.1), and lying in clinics (18 or 4.5) however, 161 or 40.7% of the mothers still gave birth at home. There are more mothers who delivered their last babies in the hospitals, city/rural health center and lying in clinics than at home.

The majority of the interviewed mothers who delivered their last baby at home revealed these reasons; *1) less expenses at home, 2) they delivered their baby at home because they are unmindful of the exact date and time of their deliver, 3) upon knowing from the last checkup that they can have normal delivery condition they chose to have home setting, 4). it was an emergency delivery at home. Though they intended to deliver at the hospital the delivery came too early; 5) they felt very comfortable and safe at home since their husband or any member of the family was beside them, and 6) presence of less viewers at home.*

Several mothers whose last delivery was at home said, *"Naabotan ako sa bahay. Manganganak talaga ako sa hospital pero lumalabas na baby. Pomotok narin pati panobigan ko. Natakot na ako kaya tumawag na ako ng kumadrona at hilot.*

(I had an unexpected delivery at home. I really intended to deliver in the hospital/rural health center but I started to labor, the ammonic bag burst and I'm afraid the baby will come out so I asked for a midwife and manghihilot).

Some mothers quoted, *"noong nalaman ko na normal ang baby at normal din ang delivery ko, mas gusto ko na sa bahay kasi walang masyadong gastos at kapiling ko pa mga anak ko."* (when I learned that my baby was normal and the delivery of the baby was normal, I prefer to give birth at home since there will be less expenses and I could still be with my other children)

The quoted statements above imply that, the number one reason for home delivery was less expenses, followed by the assurance of normal delivery with less risk factor as last diagnosed by doctors during pre natal service. These are two factors that convinced the mothers to give birth at home. Another convincing factor for home delivery was the safety of other children who will be left alone at home. The mothers always pose safety of the baby and her children first before themselves.

DOH mandates that mothers should seek health consultations before and after their delivery in order to safeguard their health and the health of the baby [3]. In order to safeguard their safety mothers' practices were to visit health facilities and health care givers. Table 8 presented the places or health facilities where the mothers went to seek for their health care. The mothers usually went to the nearest city/rural health units to avail of the MCC prenatal services however; they went to the district hospital and tertiary hospital for delivery. The number one cause of maternal mortality rate is complications related to pregnancy occurring in the course of labor, delivery and puerperium [1], thus it is proper for mothers to give birth in the hospital. However, it has to be noted that other mothers still want to deliver their babies at home whether intentional or unintentionally done.

Table 4 presents the mothers' choice of attending medical/paramedical practitioner during pregnancy, during delivery, after delivery for the mother and for the infant.

It is but proper to consult proper health care practitioner before, during and after child delivery [3]. Data above reveals that majority of the mothers' attending health practitioner are the midwives from the barangay centers during pregnancy, during delivery of the baby and after giving birth. The

midwife usually attended during delivery together with an attending physician or a nurse.

Table 4. Mothers' Attending Health Care Practitioner

Medical Practitioner	F	Rank
<b>A. Attending Medical/Paramedical practitioner during pregnancy/</b>		
Midwife	214	1
Doctor	150	2
Nurse	77	3
Hilot	76	4
<b>B. Attending Medical/Paramedical Practitioner during delivery</b>		
Midwife	238	1
Hilot	161	2
Doctor	125	3
Nurse	72	4
<b>C. Attending medical/paramedical practitioner of the mother after delivery</b>		
Midwife	238	1
Hilot	101	2
Nurse	27	3
Doctor	16	4
<b>D. Attending medical practitioner of the infant</b>		
Midwife	219	1
Doctor	76	2
Hilot	70	3
Nurse	38	4

\*Multiple response

The midwives were the favorite health care practitioner or MCC consultants not only for the mothers but also for the babies. The midwives are the most available health care giver in the Rural and Barangay Health Units. The nurses and doctors often visit the barangays on scheduled basis only. It is noted that the role of the midwives is very evident in the maternal and child care program implementation. It is also apparent that the "*manghihilots*" play the least alternative paramedical practitioner for the mothers and babies.

According to the interviewed mothers, the midwives and barangay health workers (BHWs) are diligent in the performance of their duties. They go around the barangay to disseminate schedules of vaccination, visit of the doctor, free medical checkup and distribution of medicine if there is any. The midwives are also conscientious in the newborn babies health monitoring thus they are best attendants for the maternal and child health care services. In the Philippine Medical Association [1] the midwives are

usually the medical practitioner for child delivery, maternal and child care.

Table 5. Factors Influencing Utilization of the Maternal and Child Care Program

Factors	F	%
Mothers' concern for the welfare of the baby	349	88.13
Periodic visit of the midwives and BHWs for reminders of schedules in the BHC/RHU/CHU	193	48.73
Encouragement of the mothers and other relatives	192	48.48
Presence of Health cards	182	46.00
Mothers' concern for her own welfare	93	23.48
Influence from media	108	27.27
Proximity of the hospital/RHU/CTU/BHU	25	6.3

\*Multiple responses

Pregnancy and child delivery is greatly influenced by several concerns of the mother and her family [5]. The data on Table 10 shows the common responses of the mothers on the different factors influencing availment or access to the program.

The mothers' concern for the welfare of the baby (88.13%) compelled them to avail MCC services. Other factors mentioned during the interview dealt with periodic visit and reminders of the midwives and Barangay Health Workers about the pre-natal check-up (193 or 48.73), encouragement from relatives and presence of health cards convinced them to avail of the program. The least mentioned reason for the availment of the services is proximity of the hospital or RHU. The data suggest that distance is not an influencing factor for the availment of MCC services. The concern for baby's welfare supports the mothers' perspective why they wanted to give birth in the hospital and at the same time be attended by midwife. Previous discussions concerning prenatal services availment was always due to infant safety. This implies that, mothers' regular pre natal check up was for the safety and deep concern for the welfare of the baby while proximity of the hospital or RHU was least mentioned.

Deep concern of the baby's safety strongly influences mothers' decision of MCC services availment. Mothers are very concerned about their infants well-being and whether or not they have sufficient skills and ability to care [6]. Mothers also wanted the best for their infants, ensuring their health and normal development [7]. At present distance to

the hospital/RHU become the least convincing factor that could influence availment of the MCC services due to accessibility of transportation in any area.

Mothers who gave birth at home have top three common reasons of mothers that contributed to her decision for home delivery were; (1) Less medical expenses, (2) Knowledge that the delivery is normal make mothers decide to deliver at home, and (3) husband or family comfort and moral support during delivery. Those who delivered in the hospital have also reasons. The top three coded common reasons of mothers that contributed to her decision for hospital/RHU delivery dealt with; (1) deep concern for baby's safety and health, (2) presence of competent professionals, and (3) safety delivery.

It was noted in the previous discussion that almost all mothers avail of pre-pregnancy services while there was a decrease of availment in the natal, and post natal services when subjected to significant difference in the level of availment of the services.

Testing for the Significance of the difference in the Level of Availment of Maternal and Child Care

Services across Place of Residence of mothers, whether rural (farthest barangay from the RHU) or urban (nearest barangay to the RHU is shown in Table 6.

The t-test table above shows that the null hypothesis of no significant difference in the level of availment of maternal and child care services across place of residence is accepted as indicated by t value (394) = - .340 and p = .734 which is greater than .05 level of significance. This implies that mothers coming from both rural and urban areas have the same level of availment of maternal and child care services. However, in terms of pre-natal, mothers coming from rural areas had higher level of availment than mothers coming from urban (3.175),  $t(271) = 2.776$ ,  $p = .006$ . This implies that there are more mothers from the rural areas (barangays) who avail of the pre-natal services. This may also suggest that mothers from the urban areas may have availed their pre-natal service in some other private hospitals.

Table 6. Summary Table of t-Test for MCC Services across Place of Residence of,

		Mean	Mean	t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
			Difference				Lower	Upper
Pre-natal	Rural	3.5020	.32661	2.776	271	<b>.006</b>	.09498	.55824
	Urban	3.1754						
Natal	Rural	3.5988	-.05298	-.754	394	.452	-.19120	.08524
	Urban	3.6518						
Post-partum	Rural	3.8370	-.05642	-.953	394	.341	-.17278	.05994
	Urban	3.8934						
Overall	Rural	3.6453	-.01980	<b>-.340</b>	394	<b>.734</b>	-.13428	.09468
	Urban	3.6650						

Table 7. Summary Table of ANOVA for the Level of Availment of MCC Services across Monthly Income

		Sum of Squares	df	Mean Square	F	Sig.
Pre-natal	Between Groups	8.867	2	4.434	5.202	.006
	Within Groups	230.106	270	.852		
	Total	238.973	272			
Natal	Between Groups	4.842	2	2.421	5.324	.005
	Within Groups	178.701	393	.455		
	Total	183.543	395			
Post-partum	Between Groups	11.592	2	5.796	19.206	.000
	Within Groups	118.596	393	.302		
	Total	130.188	395			
Overall	Between Groups	6.751	2	3.376	<b>11.147</b>	<b>.000</b>
	Within Groups	119.009	393	.303		
	Total	125.761	395			

Testing for the Significance of the Difference in the Level of Availment of Maternal and Child Care Services across Monthly Income of the family is shown in Table 7. The ANOVA result reveals that the monthly income obtained an overall F-ratio = 11.147 and has a significance value of .000 which is lower than .05. Therefore, the null hypothesis which states that there is no significant difference in the level of availment of MCC services across monthly income is rejected. This means that the level of availment of maternal and child care services when grouped according to monthly income is significantly different from each other. Pair-wise comparison using Scheffe Test (Appendix A) shows that those mothers with average (10,000 – 20,999) and high monthly income (21,000 and above) can afford more maternal and child care services than those with low monthly income (below 10,000). But those mothers with average and high monthly income have comparable level of availment of maternal and child care services. These are all true in the pre-natal, natal and post-natal service. This suggests that family income is one factor in the utilization or availment of MCC. Mothers living in the well off suburbs and families are more vigilant in ensuring that they conformed to guidelines concerning child care [6], thus more mothers with high income avail more MCC services than low income families. The data confirms the report of UNICEF that poor families in Asia have little availment of health services. Increased maternal and neonatal mortality can be due to poverty [8].

Testing for the Significance of the Difference in the Level of Availment of Maternal and Child Care Services across Educational Attainment of the mother is shown in Table 8.

ANOVA table result reveals a significant difference in the level of availment of maternal and child care services when classified into their educational attainment,  $F(3,392) = 6.842$ .  $p = .000$ . The computed significant p-value lower than .05 level of significance, therefore the null hypothesis is rejected.

Pairwise comparison using Scheffe Test (Appendix B) shows that mothers who are high school graduates and above have higher level of availment of maternal and child care services compared to those who are elementary graduates. Likewise, college graduate mothers had higher level of availment of maternal and child care services compared to those who are high school graduates.

The data implies that mothers with higher education have greater knowledge and understanding about maternal and child safety thus more educated mother avail of the MCC services. College educated mothers also have better health seeking behavior than elementary graduate mothers.

Table 9 shows that the place of giving birth obtained an F-ratio = 3.793 and has a significant value of .005 which is lower than .05 level of significance. Therefore, the null hypothesis is rejected. This means that the level of availment of MCC services when classified as to their place of giving birth varies significantly.

Table 8. Summary Table of ANOVA across Educational Attainment

		Sum of Squares	df	Mean Square	F	Sig.
Pre-natal	Between Groups	10.194	3	3.398	3.995	.008
	Within Groups	228.779	269	.850		
	Total	238.973	272			
Natal	Between Groups	8.846	3	2.949	6.616	.000
	Within Groups	174.697	392	.446		
	Total	183.543	395			
Post-partum and Post-Natal	Between Groups	5.511	3	1.837	5.775	.001
	Within Groups	124.677	392	.318		
	Total	130.188	395			
Overall	Between Groups	6.258	3	2.086	<b>6.842</b>	<b>.000</b>
	Within Groups	119.503	392	.305		
	Total	125.761	395			

Table 9. Summary Table of ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Pre-natal	Between Groups	10.093	4	2.523	2.955	.021
	Within Groups	228.880	268	.854		
	Total	238.973	272			
Natal	Between Groups	7.815	4	1.954	4.347	.002
	Within Groups	175.728	391	.449		
	Total	183.543	395			
Post-Natal	Between Groups	7.693	4	1.923	6.139	.000
	Within Groups	122.495	391	.313		
	Total	130.188	395			
Overall	Between Groups	4.698	4	1.174	<b>3.793</b>	<b>.005</b>
	Within Groups	121.063	391	.310		
	Total	125.761	395			

Pairwise comparison using Scheffe Test (Appendix) shows that mothers who gave birth in the hospital and RHU availed more MCC care services compared to mothers who gave birth at home. Mothers who had their pre-natal, natal, and post natal services in the hospital availed more MCC services than those in RHU or at home. Observations show that private and government district hospitals have more bed capacities and facilities than RHUs, thus convinced more mothers to give birth in the hospital and availed more MCC services in the hospitals than at home or in the RHU.

To summarize the factors affecting MCC utilization particularly pre-natal, natal and post natal services, the following factors greatly influenced mothers MCC utilization or availment: (1) Deep concern for the safety and health of the infant convinced the mothers to avail MCC services, (2) Family income- Family with average to high income availed/utilized more of the MCC services. Poor families with less income availed less MCC service because they gave birth at home, (3) Educational Attainment- mothers with high school and college degree availed more MCC services because they have better understanding of the importance of MCC services. (4) Place of delivery and residence- mothers who gave birth in the hospital availed more MCC services than those who gave birth at home. Mothers from the rural areas availed more pre-natal services than urban mothers.

### Concerns and Problems of Mothers in the Availment of MCC

The problems and concerns of mothers in the utilization of MCC service as discussed by mothers and arranged according to decreasing frequency were;

(1) Lack of financial resources as moderately serious problem, (2) No caregiver of other children to be left at home as not so serious problem but a concern, and (3) Distance of the RHU or hospital from the house as not so serious.

The data suggests that finances or income influenced the utilization or availment of MCC services. It was evident in the ANOVA test that mothers with low family income have less availment of MCC service. Interviewed mothers agreed that they prepared an amount of money but was not enough for all the expenses incurred in order to avail all the MCC services since some services requires minimal fees. The data reveals that utilization of MCC varies with family income and status. Lack of financial resources could also affect infant care services availment [5]. He also confirmed that rich families show improvement in child immunization availment at 84% while 57% for the poor. This suggests that despite the government subsidy there remains a gap in the delivery of immunization and MCC services for the rich and poor family.

Distance of the RHU or hospital is “Not a Serious” problem because of the availability of tricycle around the community. No caregiver of other children to be left at home, busy with the household chores, inadequate health care facilities in the RHU and Barangay Health Center are problems but were not so serious. Most responses among mothers were not problems but were just concerns. It was evident in discussion, that most of the concerns encountered by mothers dealt with family matters rather than hospital/RHU related factors. And the serious problem of the mothers was about financial matter.

**Culturally Appropriate Communication Strategies**

According to Pilliteri [9] one concern or problems met by mothers in the hospital is miscommunication or inappropriate use of culturally appropriate words by health workers. Miscommunication can be sometimes caused by wrong choice of words due to differences in language spoken, use of courteous words, and violation of ethics. Focused group discussions with the mothers, revealed that the health workers used courteous and respectful words when talking to them in the clinic, hospital, and other health facilities.

Majority of the mothers said,

*“The nurses and midwives always made us feel comfortable during consultation, they are friendly, they usually asked permission at any examination or procedure done, they encouraged us to ask questions at the end of the consultation period.”*

Another observation made by some mothers were: *their assurance that there was always a private place for examination, assurance that the records and discussions were private. And when the doctors prescribed medicines or treatments, the health workers explained well the treatment, they give helpful advice on how to take the medicine, the medical practitioners explained the side effects of the medicine for the baby, they advise us to return and made schedule for next treatment, and lastly health workers explained the importance of buying and taking the prescribed amount of medicine for the mother and the baby.*

These common responses and observations of mothers shows that the health practitioners of health workers used culturally appropriate communication during their availment of MCC services in the hospitals, clinics, and other health facilities. The health workers “Always” used culturally appropriate communication strategies along courtesy and respect, privacy and confidentiality during prescribing and recommending treatments and preventive measures for the mother and her baby. Specifically the HW used simple words understandable by mothers and made verifications if the explanations were well understood, and explained.

Better understanding of two parties starts when there is a common dialect by both parties. Table 10 shows the preferred dialect for communication by mothers with health workers.

Table 10. Preferred Dialect of Communication of Mothers with Health Workers

Dialect	F	%
Ilocano	217	54.8
Pangasinense	80	20.2
Filipino/Tagalog	96	24.2
English	3	0.8
Total	396	100.0

Table 10 reveals that the preferred dialect spoken as a means of communication of mothers with health workers is Ilocano. Comments from majority of mothers stated that, the health workers talk in Tagalog/Filipino. Yes, they are courteous however; the doctors, nurses and midwives usually talk in Tagalog. The response suggests that here was a difference in the preferred dialect between mothers and health workers during the utilization of MCC services.

**CONCLUSION AND RECOMMENDATION**

The mothers in the rural areas were in their right reproductive age during their last baby birth; they have low family income and are usually on the poverty line; are usually high school graduate, and with an average of three pregnancies, deliveries and children.

Rural mothers availed more pre-natal MCC services than urban mothers. Mothers with higher educational attainment and higher monthly family income availed more MCC services than elementary graduate mothers and poor families respectively. Mothers have greater availment on Child care services than Maternal care services due to their deep concern of their baby’s health and safety. Mothers who gave birth in the hospital and RHU availed more MCC services than those who gave birth at home. Mothers from the rural areas availed more pre-natal services than natal and post natal services. Factors that influence the low utilization of the program were: lack of financial resources, low family income, educational attainment of the mother and common dialect for communication between mother and health worker and place of giving birth. The health workers used culturally appropriate communication during consultations however the mothers prefer Ilocano as spoken dialect during the availment of the services.

For the better implementation of Maternal and Child Care Program this study further suggest that:

Educating the mothers on the importance of MCC services not only for the child's safety but for herself. Information dissemination about the program should be implemented immediately to increase the uptake of the services. Information campaign on free services on MCC should be widely disseminated to all mothers.

To increase the level of availment of the Maternal and Child care services like newborn screening and detection for disabilities, immunization for infants, medicines and laboratories should be given free particularly to poorest mothers and infants. RHU and government hospitals should give free complete MCC services to avoid home delivery.

The mothers should be informed about the benefits of availing the complete MCC services not only for her deep concern of her baby but for herself and family as well. Dissemination campaign could be enhanced through leaflets, flyers, pamphlets, tarpaulin and seminars.

And for better understanding a common dialect like Ilocano should be used as means of communication between mothers and health workers in Region 1. Flyers, leaflets and pamphlets should be written in Ilocano for dissemination and for consultations.

#### **Acknowledgement**

Thank you to DOH-PCHRD Reg.1, Dr. Myrna Miguel, Dr. Ophelia Cardenas, Dr. Joselito Barcelo, All health workers who accompanied the researchers and the mothers who participated during the focused group discussion from Pangasinan and La Union.

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Appendix A

Multiple Comparisons (Scheffe) Test for Monthly Income in different stages of Pregnancy

Dependent Variable	(I) income	(J) income	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Pre-Natal	below 10,000	10,000 - 20,999	-.37063*	.14114	.009	-.6485	-.0928
		21,000 and above	-.56840*	.26400	.032	-1.0882	-.0486
	10,000 - 20,999	below 10,000	.37063*	.14114	.009	.0928	.6485
		21,000 and above	-.19777	.28520	.489	-.7593	.3637
	21,000 and above	below 10,000	.56840*	.26400	.032	.0486	1.0882
		10,000 - 20,999	.19777	.28520	.489	-.3637	.7593
Natal	below 10,000	10,000 - 20,999	-.25600*	.09126	.005	-.4354	-.0766
		21,000 and above	-.35016	.18417	.058	-.7122	.0119
	10,000 - 20,999	below 10,000	.25600*	.09126	.005	.0766	.4354
		21,000 and above	-.09416	.19842	.635	-.4843	.2959
	21,000 and above	below 10,000	.35016	.18417	.058	-.0119	.7122
		10,000 - 20,999	.09416	.19842	.635	-.2959	.4843
Post-partum	below 10,000	10,000 - 20,999	-.42591*	.07435	.000	-.5721	-.2797
		21,000 and above	-.42712*	.15003	.005	-.7221	-.1322
	10,000 - 20,999	below 10,000	.42591*	.07435	.000	.2797	.5721
		21,000 and above	-.00121	.16164	.994	-.3190	.3166
	21,000 and above	below 10,000	.42712*	.15003	.005	.1322	.7221
		10,000 - 20,999	.00121	.16164	.994	-.3166	.3190
Overall	below 10,000	10,000 - 20,999	-.30822*	.07447	.000	-.4546	-.1618
		21,000 and above	-.39365*	.15029	.009	-.6891	-.0982
	10,000 - 20,999	below 10,000	.30822*	.07447	.000	.1618	.4546
		21,000 and above	-.08543	.16192	.598	-.4038	.2329
	21,000 and above	below 10,000	.39365*	.15029	.009	.0982	.6891
		10,000 - 20,999	.08543	.16192	.598	-.2329	.4038

\*. The mean difference is significant at the 0.05 level.

Appendix B

Multiple Comparisons (Scheffe) Test for Educational Attainment of Mothers and stages of pregnancy

Dependent Variable	(I) educ	(J) educ	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Pre-Natal	Elementary Grad.	College Graduate	-.63654*	.19461	.001	-1.0197	-.2534
	Elementary Grad.	Post Graduate	-.48874*	.21338	.023	-.9088	-.0686
	High School Grad.	College Graduate	-.35289*	.15929	.028	-.6665	-.0393
	Post Grad.	College Graduate	-.14780	.21729	.497	-.5756	.2800
Natal	Elementary Grad.	High School Grad.	-.26116*	.09006	.004	-.4382	-.0841
	Elementary Grad.	College Graduate	-.50983*	.12289	.000	-.7514	-.2682
	Elementary Grad.	Post Graduate	-.40290*	.12962	.002	-.6577	-.1481
	High School Grad.	College Graduate	-.24867*	.10409	.017	-.4533	-.0440
Post-partum	Elementary Grad.	High School Grad.	-.19192*	.07608	.012	-.3415	-.0423
	Elementary Grad.	College Graduate	-.42637*	.10382	.000	-.6305	-.2223
	Elementary Grad.	Post Graduate	-.12883	.10950	.240	-.3441	.0865
	High School Grad.	College Graduate	-.23445*	.08793	.008	-.4073	-.0616
	College Graduate	Post Graduate	.29754*	.11804	.012	.0655	.5296
Overall	Elementary Grad.	High School Grad.	-.21395*	.07449	.004	-.3604	-.0675
	Elementary Grad.	College Graduate	-.44642*	.10164	.000	-.6462	-.2466
	Elementary Grad.	Post Graduate	-.29270*	.10720	.007	-.5035	-.0819
	High School Grad.	College Graduate	-.23246*	.08609	.007	-.4017	-.0632

Appendix C

Multiple Comparisons (Scheffe) Test (Across place of giving birth)

Dependent Variable	(I) place	(J) place	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Pre-natal	Hospital	BHS	.66621*	.31614	.036	.0438	1.2886
	Hospital	Home	.33417*	.15784	.035	.0234	.6449
	CHO/RHU	BHS	.75033*	.34643	.031	.0683	1.4324
	CHO/RHU	Home	.41829*	.21208	.050	.0007	.8358
	BHS	CHO/RHU	-.75033*	.34643	.031	-1.4324	-.0683
	BHS	Lying-in Clinic	-.96402*	.37728	.011	-1.7068	-.2212
	Home	Lying-in Clinic	-.63198*	.25944	.016	-1.1428	-.1212
Natal	Hospital	Home	.27903*	.07352	.000	.1345	.4236
	Home	Hospital	-.27903*	.07352	.000	-.4236	-.1345
Post-partum	Hospital	BHS	.45565*	.19139	.018	.0794	.8319
	Hospital	Home	.25044*	.06138	.000	.1298	.3711
	CHO/RHU	BHS	.51528*	.20860	.014	.1052	.9254
	CHO/RHU	Home	.31007*	.10319	.003	.1072	.5129
	BHS	Home	-.20521	.19172	.285	-.5821	.1717
	BHS	Lying-in Clinic	-.48167*	.22850	.036	-.9309	-.0324
	Home	Lying-in Clinic	-.27646*	.13911	.048	-.5499	-.0030
Overall	Hospital	BHC	.51721*	.19027	.007	.1431	.8913
	Hospital	Home	.15167*	.06102	.013	.0317	.2716
	BHC	Hospital	-.51721*	.19027	.007	-.8913	-.1431
	BHC	Home	-.36554	.19059	.056	-.7403	.0092
	BHC	Lying-in Clinic	-.63702*	.22717	.005	-1.0836	-.1904