

RESEARCH PAPER

A study on extent of utilization of maternal health care services through community health workers among rural women in Ruhango district at Rwanda

MUVANDIMWE EMMANUEL* AND J. VIJAYALAKSHMI

Department of Population Studies, Annamalai University, Annamalai Nagar, CHIDAMBARAM (T.N.) INDIA
(Email: vijmi1@gmail.com)

ABSTRACT

The use of community health workers has been identified as one strategy to address the growing shortage of health workers, particularly in low-income countries. Community health workers (CHWs) are widely used to provide care for a broad range of health issues. The study is aimed to assess the extent of utilization of maternal health care services among rural women by CHWs. A sample of 120 respondents was randomly selected from 30 villages. Questionnaire method was used for data collection and analysis was done through frequency and percentage. All the respondents (100 %) were educated about maternal health by CHWs. Majority of respondents (85%) was visited for 3 times by CHWs before delivery. Furthermore, 53 per cent of the respondents undergone check up for 4 times. Majority of respondents (98%) were accompanied by CHWs to the health centre or hospital during delivery period. All those who had experienced complication (68%) during delivery had taken treatment with the help of CHWs. All the respondents (100%) were visited immediately at their homes after delivery by CHWs. In this paper, an attempt has been made to show how CHWs played a vital role in increasing the access to health care services among women and working within a community-based team to educate them on the importance of antenatal care and postnatal care with a skilled professional.

Key Words : Ante natal care, Delivery care, Community health workers, Health care services

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The health worker crisis, especially in sub-Saharan Africa, has triggered a renewed interest in CHWs since they have the potential to take over a number of tasks from the professional health workers, particularly in scaling up maternal health. The African health worker crisis is particularly acute in rural and hard-to-reach areas, in which 80 per cent of the population lives. The use of CHWs has been identified as one strategy to address the growing shortage of health workers, particularly in low-income countries. This occurred in 1980s particularly in the community health worker cadre although in the 1990s many such programs faltered (Schaay and Sanders, 2008). Community health workers (CHWs) are widely used to provide care for a broad range of health issues. However, there is insufficient evidence about the effectiveness of their work in implementing comprehensive primary health care (Lewin *et al.*, 2005). This lack of knowledge makes it difficult for policy makers to decide how CHWs can best improve the

* Author for correspondence

Muvandimwe Emmanuel, Department of Population Studies, Annamalai University, Annamalai Nagar, CHIDAMBARAM (T.N.) INDIA
(Email: muva2013@gmail.com)

effectiveness of primary health care.

Utilization of antenatal care services for the most recent birth among ever married women increased substantially over time. Antenatal care from community health workers is much more common in rural areas of Rwanda. The number of antenatal care visits and timing of the first visit are important for the health of the mother and the outcome of pregnancy. The world health organization recommends that all pregnant women should have at least four antenatal care (ANC) assessments by or under the supervision of a skilled attendant (World Health Organization, 2006). Important elements of antenatal care include the provision of iron supplementation for pregnant mothers, two doses of tetanus toxoid vaccine and a drug to get rid of intestinal worms. Nutritional deficiencies in women are often exacerbated during pregnancy due to the additional nutrient requirements of foetal growth. Iron deficiency anemia is the most common micro nutrient deficiency in the world. It is a major threat to safe motherhood and to the health and survival of infants because it contributes to low birth weight, lowered resistance to infection, impaired cognitive development, and decreased work capacity.

The effectiveness of antenatal care in ensuring safe motherhood depend in part on the tests and measurements done and the advice given as part of antenatal care. All of these measurements and tests are part of essential obstetric care which are required for monitoring high-risk pregnancies notably measuring body weight and blood pressure, taking urine sample and blood sample. During their contacts with community health workers, pregnant women are expected to be told about the signs of pregnancy complications and where they should go if they have pregnancy complications.

Richard Lord, 2012 said "Community Health Workers (CHWs) are being relied upon in countries around the world to address this issue of health worker shortage by improving the provision of basic health services and promoting health in peripheral or underserved communities. CHWs can considerably increase coverage where access to health facilities is difficult and service utilization is already low. They can play a vital role in increasing access to family planning and working within a community-based team to educate women on the importance of attending antenatal, delivery, and postnatal care with a skilled professional."

Chatterjee (1990) attempted to understand the factors that determine women's utilization of health services, posited the role of need, permission, ability and availability. He argued that when permission and ability interact with need, a demand for health services is generated. Actual utilization of health services occurs when this generated demand overlaps with availability. In the Indian context the situation is further complicated by women's perception of illness, which are affected by their cultural conditioning to tolerate suffering. Because of this tolerance of suffering, the perceived

need for health services can be small, even when the actual need is great.

Caldwell *et al.* (1983), Studies conducted in this regard reveals that educated women take more advantage of maternal health services utilization than uneducated women and the degree of utilization will be maximum among the educated than the illiterate. The NFHS-I for the year 1992-93 indicates a very high degree of maternal health care services utilization in rural Kerala (*Das et al.*, 2001) with 98 per cent antenatal check up 91 per cent consumed IFA tablets, 90 per cent had taken tetanus injection and 86 per cent had institutional delivery. It also reveals that as social and economic status rises the proportion of women respondent with 10 years and above education increases and this reflects in better maternal health services utilization.

Need for the study :

With the aim of reducing maternal mortality, CHWs (females) are trained on how to provide care to pregnant mothers through pregnancy, birth and postnatal period. CHWs inform pregnant mothers on safe motherhood when they provide counseling on antenatal care (ANC), birth and post natal care (PNC). CHWs also provide family planning services and are trained on how to educate women on other maternal health issues. Since the implementation of the CHWs program, few studies have published findings on the effectiveness of CHWs. These studies have shown their effectiveness in extending utilization of maternal health services through CHWs. However, none of them investigated the CHWs role in improving utilization of comprehensive maternal health services. This study focuses on the extent to which these specially trained community health workers have contributed to the improvement of utilization of maternal health services by rural women in Rwanda.

Objectives of the study :

- To understand the social, economic and demographic characteristics of the rural women.
- To assess the extent of utilization of health care services by women during ante natal period.
- To understand the health problems of women during pregnancy and after delivery.

RESEARCH METHODOLOGY

The study was conducted in Gitwe district hospital region (Ruhango), composed by six health facilities in rural area in the year 2013. From each health facility, five villages were randomly selected. Thus, a total of 30 villages were chosen. From each selected village, 4 respondents were selected randomly, thus making a sample of 120 respondents. The data on women's utilization of health care services

through community health workers were collected using a well designed and structured questionnaire. The questionnaire was initially developed in english and then translated to the local language, 'Kinyarwanda'. The questionnaire was pre-tested among 20 mothers to assure clarity of concepts for respondents. The data were collected by me and 2 other researchers who had experience in doing questionnaire interviews. Completed questionnaires were checked for completeness and consistency. The information collected was analysed and presented in suitable tables and cross tables to draw meaningful conclusions.

RESULTS AND REMONSTRATION

It has been observed from the Table 1 that 62 per cent of respondents were catholic while 38 of per cent of them were protestants.

Regarding educational status and level, it has been observed that 85 per cent of the respondents had studied up to primary level and 8 per cent of the respondents had studied secondary level, whereas 7 per cent of them were illiterates.

Regarding marital status, it has been observed that majority of the respondents (92%) were married and living with their husband while 3 per cent and 5 per cent were widow and separated, respectively.

Regarding occupation, it has been found that 96 per cent of the respondents were cultivators, while 4 per cent of them were wage earner.

Regarding family income it has been observed that 70 per cent of the respondents belonged to income group of Rs. 3,000-6,000, while 12 per cent and 10 per cent were belonged to the income group of Rs. 12,001-15,000 and Rs. 9,001 to 12,000, respectively and 8 per cent were in the group of Rs. 6,001 to 9,000. The annual mean income is found to be Rs. 6,400.

Regarding current age of women, it has been observed that 34 per cent and 29 per cent of the respondents were in the age group of 30-34 years and 24-29 years, respectively, while 16 per cent and 13 per cent were in the age group of 35-39 years and 40-44 years, respectively. The remaining 8 per cent were in the age group of 20-24 years. The mean age of respondent is found to be 34 years.

Regarding age at marriage it has been observed that 54 per cent and 23 per cent of respondents got married in the age of 20-24 years and 25-29 years, respectively while 13 and 8 per cent of respondents got married in the age group of 15-19 years and 30-34 years, respectively. The remaining 3 per cent got married in the age group of 35-39 years. The mean of age at marriage is found to be 24 years.

Regarding children ever born, 26 and 25 per cent of respondents had borne 2 children and 1 child, respectively. While 21 and 19 per cent of them had borne 4 and 3 children, respectively. The remaining 10 per cent of respondents had

Table 1 : Distribution of respondents by socio-economic and demographic status

	No. of respondents	Per cent
Religion		
Catholic	74	61.7
Protestant	46	38.3
Total	120	100
Educational status/level		
Illiterate	8	6.7
Primary	102	85.0
Secondary	10	8.3
Total	120	100.0
Marital status		
Married	110	91.7
Widow	4	3.3
Separated	6	5.0
Total	120	100.0
Occupation		
Cultivator	115	95.8
Wage earner	5	4.2
Total	120	100.0
Annual income		
3,000-6,000 Rs.	84	70.0
6,001-9,000 Rs.	10	8.3
9,001-12,000 Rs.	12	10.0
12,001-15,000 Rs.	14	11.7
Total	120	100.0
Current age		
20-24	9	7.5
25-29	35	29.2
30-34	41	34.2
35-39	19	15.8
40-44	16	13.3
Total	120	100.0
Age at marriage (in years)		
15-19	15	12.5
20-24	65	54.2
25-29	28	23.3
30-34	9	7.5
35-39	3	2.5
Total	120	100
No. of children		
1	30	24.8
2	31	25.6
3	23	19.0
4	25	20.7
5	6	5.0
6	5	4.9
Total	120	100

Mean income of respondents is Rs. 6,400; Mean of age respondent =34 years; Mean of age at marriage= 24 years; Mean children ever born =3

borne 5 to 6 children. The mean children ever born is found to be 3.

In this study, it has been observed that all the respondents (100%) had registered their pregnancy in the record maintained by community health workers and were better informed about pregnancy complications such as vaginal bleeding, convulsions, prolonged labour and also were given advice on where to go if they experienced pregnancy complications.

From the Table 2, it has been observed that 68 and 15

	No of respondents	Per cent
No. of visit by CHWs at home		
2	18	15.0
3	81	67.5
4	14	11.7
5	4	3.3
6	3	2.5
Total	120	100.0
No. of ANC visit by mothers at health center		
2	11	9.1
3	46	38.3
4	58	48.3
5	5	4.2
Total	120	100.0
Tetanus toxoid injection taken		
Yes	114	95.0
No	6	5.0
Total	120	100
Iron and folic acid taken		
Yes	102	85.0
No	18	15.0
Total	120	100
De-worming drug		
Yes	78	65.0
No	42	35.5
Total	120	100
Test done		
Hiv	62	51.6
Malaria/std	58	48.4
Total	120	100
Problem during pregnancy		
Swelling of hand, feet	32	26.7
Blurred vision	4	3.3
Giddiness	12	10.0
Severe vomiting	36	30.0
Fever	16	13.3
Nil	20	16.7
Total	120	100

per cent of respondents were visited by female community health workers at home for 3 and 2 times, respectively during pregnancy. While 12 and 3 per cent of respondents were visited by female community health workers at home for 4 and 5 times, respectively during pregnancy. The remaining 3 per cent of respondents were visited by female community health workers at home for 6 times during pregnancy.

It is also evident that 48 and 38 per cent of respondents had undergone antenatal check up 4 times and 3 times, respectively at health facility whereas 9 and 2 per cent of respondents had undergone check up for 2 times and 5 times, respectively at health facility.

It has been observed that 95 per cent of respondents had taken Tetanus Toxoid injection, 85 per cent of respondents had consumed Iron and Folic Acid tablets, 65 per cent of respondents had received de-worming tablet, 52 per cent of respondents had undergone HIV test and remaining 48 per cent had undergone both malaria and STD tests. Higher proportion of respondents (83%) had

Assisted by CHWs	No .of respondents	Per cent
Yes	117	97.5
No	3	2.5
Total	120	100
Place of delivery		
Home	3	2.5
Dispensary	74	61.7
Hospital	43	35.8
Total	120	100.0
Type of delivery		
Normal	92	76.6
Cesarean	22	18.4
Normal -forceps	6	5.0
Total	120	100.0
Complications during delivery		
Prolonged labour	37	30.8
Excessive bleeding	24	20.0
Fainted during labour	13	10.8
Fits /convulsion	8	6.6
Nil	38	31.6
Total	120	100.0
Health problems after delivery		
Excessive bleeding	36	30.0
Pain in lower abdomen	22	18.4
Anaemia	38	31.6
Nil	24	20.0
Total	120	100.0

experienced health problems such as Severe vomiting (30%), Swelling of hand and feet (27%), fever (13%), giddiness (10%), Blurred vision (3 %) and only 17 per cent of respondents had not experienced any health problem during pregnancy.

Regarding the services during delivery, 98 per cent of respondents had been accompanied by CHWs to health facility. It has been observed from the table that 62 per cent of respondents had given birth at dispensary and 36 per cent of respondents gave birth at the hospital while the remaining 2 per cent had given birth at home. It is also evident that 77 per cent of the respondents had normal delivery while 18 per cent of them had cesarean delivery and 5 per cent had normal-forceps delivery. It has been observed that 68 per cent of respondents had experienced problems such as prolonged labour (31%), excessive bleeding (20%), fainted during labour for more than 15 minutes (11%) and fits/convulsion (7%) and the remaining 32 per cent had no complications during delivery. All those who had experienced complications (problems) during delivery had taken treatment at hospital.

Regarding post partum health care 100 per cent of respondents had been visited immediately after delivery by CHWs. Majority of the respondents who had experienced health problems after delivery had got treatment at dispensary. It has been observed that nearly 32 per cent of them had anaemia, 30 and 18 per cent had suffered due to excessive bleeding and suffered pain in lower abdomen, respectively, the remaining 20 per cent of respondents had not experienced any problem after delivery. Majority of those who experienced health problems after delivery had got treatment at dispensary. Similar work related to the present investigation was also carried out by Kaur *et al.* (2012); Prinja *et al.* (2012 and 2013 a and b).

Conclusion :

From the above analysis it has been concluded that all the respondents (100%) were educated about maternal health by CHWs. Majority of respondents (85%) were visited for 3 times by CHWs before delivery. Furthermore, 53 per cent of the respondents had undergone for check up for 4 times as per Government target. With the help of CHWs and overwhelming majority of the respondents had received Tetanus Toxoid injection (95%) and Iron and Folic Acid (85%), De-worming (65%).

An overwhelming majority of respondents (98%) were accompanied by Community Health Workers to the health centre or hospital. All those who had experienced complication (68%) during delivery had taken treatment at the hospital with the help of CHWs. All the respondents (100 %) were visited immediately at their homes after delivery by CHWs. 80 per cent of respondents had experienced health

problem after delivery, all of them had received treatment by the follow up of CHWs.

Despite some gaps in service utilization, ante natal and post natal care are viewed positively. CHWs had opportunities to encourage women to undergo ante natal and post natal care, to deliver baby with a skilled attendant in a health facility and to approach maternal care services whenever they get any danger sign. Women received proper antenatal care tend disproportionately to be older women, having children of higher order births, with low education and with low income. These differentials suggest that improving the coverage of antenatal programs requires special efforts to reach old and higher parity women and those who are socio-economically disadvantaged.

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