KAP STUDY

Hospital and Domiciliary Services Outcome: A Cross-Sectional Study on Married Women of Peshawar Khyber Pakhtunkhwa

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ABSTRACT

Background: Antenatal care and effective services are the hallmarks of effective pregnancy outcome. Thus, practices by community care providers throughout labor and childbirth might affect health outcomes of newborns. There is a need for proper antenatal checkups in hospital and domiciliary care by community health workers and importance of antenatal care on pregnancy outcomes. Since, every woman has a right to safe delivery that must include proper labor management protocols. Therefore, the purpose of this study was to compare and assess the antenatal care of hospital based and domiciliary services on the outcome of delivery.

Methods: This cross-sectional study was conducted from November 2018-April 2019. A sample size of about 300 married females was selected from different towns of Peshawar through non-probability convenient sampling technique. Data was collected using semi structured questionnaire after taking informed consent from the women. Data were analyzed by using SPSS. Chi square test was applied for associations between hospital and domiciliary services and antenatal outcomes in both setups. *p*-value < 0.05 was considered significant.

Results: The comparison of hospital and domiciliary services on the outcome of newborn and mother, showed better services of hospital. Domiciliary care services showed increased number of complications in females during delivery (*p*-value<0.05) and in newborn (*p*-value< 0.05) compared to hospital services.

Conclusion: Hospital services provide antenatal care by trained person majority of deliveries were normal, while in cases of domiciliary-based services majority faced complications during pregnancy and delivery. Awareness of community is important step to improve mother and child health.

Keywords: Antenatal Care; Domiciliary Service; Hospital Services.

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INTRODUCTION

Antenatal care (ANC) refers to the care taken by women during pregnancy by health care professionals in order to diagnose and treat maternal illnesses[1]. Conditions that account for most neonatal deaths are preterm birth complications intrapartum related events. Other causes sepsis, meningitis, pneumonia and diarrhea[2]. A large proportion of these deaths occur at home, hence high-quality facility based (hospital) services are needed to make a difference[3]. Pregnancy is not a disease and pregnancy related mortality is usually preventable. Yet more than half a million women die each year due to pregnancy related complications and literature suggest that these complications can best be prevented by hospital based antenatal care. Although domiciliary care (home based antenatal care by woman health

workers or community midwives) has a role in detecting anemia, high blood pressure (BP) but early detection of major complication is possible only in specialized hospital based antenatal care[4].

Hospital based antenatal care in developed countries, are considered best in certain countries such as France, Sweden and Germany[5]. The result of this high standard antenatal care in these countries has led to highly improved state of mother and child health. In these countries both hospital and domiciliary services works together for better health outcome of mother and children. The community health workers are trained to the extent that they detect many conditions early and referred them to hospital for further confirmation and treatment of high-risk mothers[6].

In developing countries including Pakistan, proper antenatal checkups are lacking. A lot of factors involved including family cooperation especially husband. In such countries, domiciliary care should be of high quality and community health workers should be trained enough to refer the patient timely to highly specialized hospital-based care. An estimated 30,000 women die each year due to pregnancy related causes[4]. It is estimated that about the 500 maternal deaths occur per hundred thousand live births each year in Pakistan[8]. The Measles, Mumps, and Rubella (MMR) in India and Bangladesh is 130 and 176 respectively while in Pakistan as mentioned above as of 2015 is 340/100,000 [9,10]. These three countries account for 46% of the worlds MMR[11,12].

Pakistan has failed to achieve its millennium development goal. One possible reason for this failure is the low rate of skilled birth attendants, which is an acknowledged strategy that is the key to save childbirth, particularly in rural areas[13]. According to Demographic health survey of Pakistan 2017-2018, skilled birth attendants attended only 63% of births in rural areas of Pakistan. This value is 84% in urban areas and shows that many of the deliveries are taking place at home, majority of them being conducted by untrained birth attendants. Therefore, domiciliary services should be improved by proper training of the health workers and timely referral to hospital based care[14].

According to WHO, both domiciliary and hospital based antenatal care can prevent mortality and morbidity in mothers and newborn[15]. Since most deliveries occur at skilled birth attendants to attend to such cases[16] should place homes in developing countries, emphasized on antenatal care[17]. Total Body Analysis (TBAs) however, could perform the role of the skilled attendant, when required, with some training, as they may be the only source of care for some women[18]. The present study aimed to address the outcomes of deliveries in women who used to do proper antenatal checkups in hospital and domiciliary care by community health workers and importance of antenatal care on pregnancy outcomes.

METHODS

A cross-sectional study was conducted from November 2018-April 2019 in Peshawar Khyber Pakhtunkhwa. Ethical approval of study was obtained from Institutional Review and Ethical Board of Khyber Medical College Peshawar. A sample size of about 300 women were taken using WHO sample size calculator by taking 95% confidence interval and estimated margin of error 5%, through multi-stage probability sampling technique. In first stage, Peshawar was divided into four towns, and two towns were selected randomly. In the second stage, out of total twenty-two union councils, five (5) each was selected from each town through simple random sampling technique. Finally, from each 5 union councils, 30 married females were selected leading to 150 women from town 2 and 150 women from town 3 leading to a total sample size of 300. Half sample of women included women who have done antenatal care or delivery in hospital and half including women who have done antenatal care or delivery at home by lady health workers (LHW) or birth attendants. Those women were included who underwent delivery in past 3 months. Women having infertility issue and have not conceived throughout their marital life were excluded. Different variables like no of antenatal checkups and hospital or home-based antenatal checkups and delivery outcomes were confirmed through birth record and antenatal card. Those women having no proof of their antenatal visits were considered as dropouts.

Data was collected after taking informed consent from women on a pretested questionnaire. For minimizing chance of errors and comprehension issues, the data collectors themselves interviewed the women in their local language. Data was analyzed using SPSS (statistical package for social sciences) version 21. Chi square test was applied for associations between hospital and domiciliary services and p-value < 0.05 was considered significant.

RESULTS

The mean age of study participants was 25.46±5.461. The half of the study participants was from rural areas of Peshawar and half from urban. Most of the women were educated. In rural areas majority of women (Figure 1) received domiciliary care and mostly women has antenatal visits.

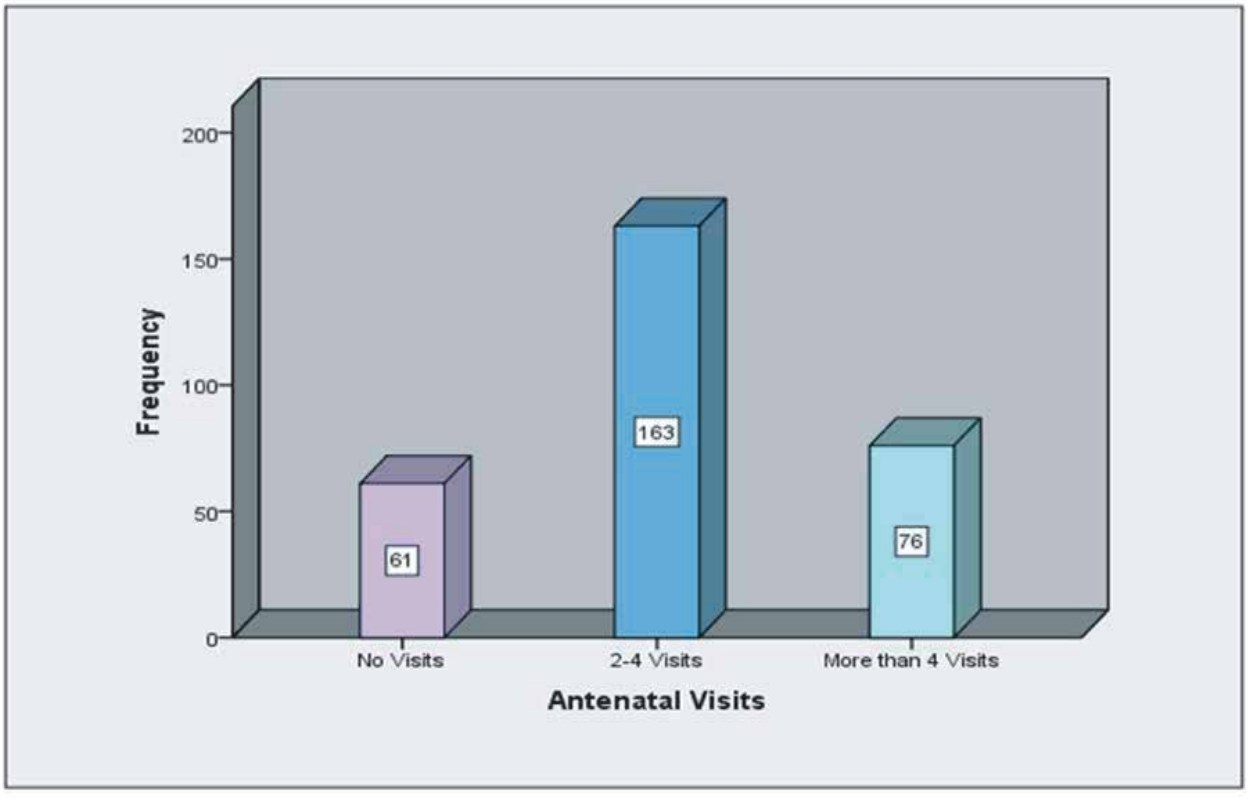

Figure 1: Number of antenatal visits by women.

Regarding comparison of hospital and domiciliary services on the outcome of newborn domiciliary services showed more complications (Table 1) in newborns. Chi square test applied shows significant differences (*p*-value < 0.05) in hospital and domiciliary services. It means that hospital care is better than home based (domiciliary) care.

Table 1: Hospital and domiciliary services outcome in newborn.

Outcome of Baby	Services Received		Total	Chi square Value	*p*-Value
	Hospital	Domiciliary			
Normal	117	93	210	16.98	0.002
Baby died	3	9	12		
Neonatal injury	10	21	31		
Birth defects	4	15	19		
Birth asphyxia	11	17	28		
Total	**145**	**155**	**300**		

The comparison of both types of services on the outcome of mother and domiciliary care (Table 2) showed increased number of complications in females during delivery (*p*-value <0.05). Education has significant effect on antenatal care, as educated women are aware of its importance. Since majority of educated (Figure 2) women had received any of two antenatal care (hospital or domiciliary).

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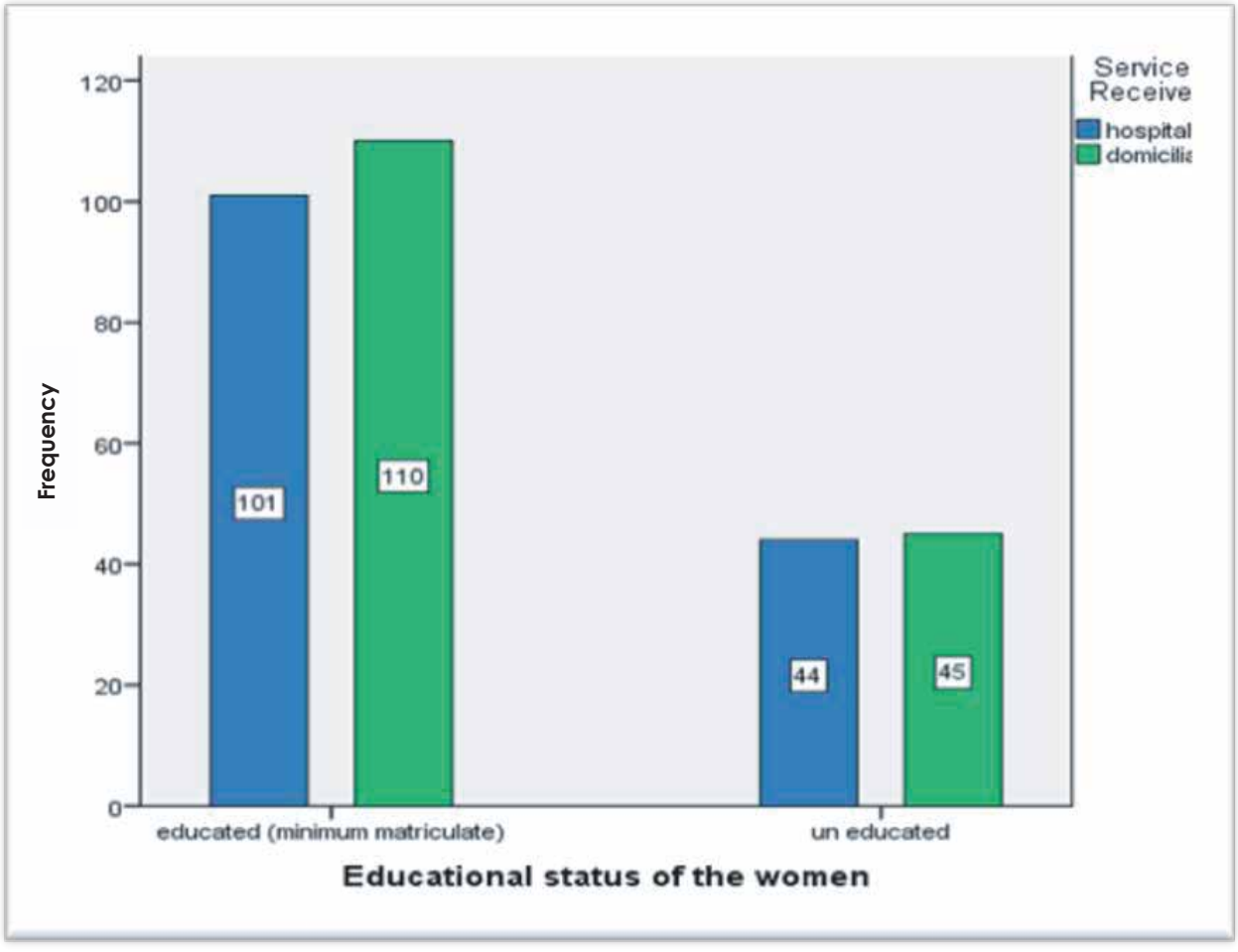

Figure 2: Educational status of women with services received.

Table 2: Hospital and domiciliary services outcome in women.

Outcome of Women	Services Received		Total	Chi square Value	*p*-Value
	Hospital	Domiciliary			
Normal	118	92	210	18.461	0.001
Anemia	14	29	43		
Post-partum Hemorrhage	7	24	31		
Infections	6	10	16		
Total	**145**	**155**	**300**		

DISCUSSION

Antenatal care is very important regarding maternal and fetal outcome. Studies done in past showed that women receiving regular antenatal checkups before pregnancy have improved delivery outcomes. Hospital based antenatal care is considered as more beneficial compared to home based care about dealing with complications[19]. In the present study, it is observed that delivery conducted by doctors in hospitals has better outcomes compared to home.

In a study, conducted in United States of America showed that hospital based antenatal care or group care leads to much more awareness about complications of deliver, satisfaction by mothers and early breastfeeding initiation as compared to individual care. The study also found that there were no differences in the cost of group ANC as compared to the usual care[20]. A nearly similar result is depicted in

present study. Similarly, another randomized study showed that women who contacted hospital visits as compared to home based antenatal care [21] did visits that are more antenatal. In another study done in United States also showed improved delivery outcomes in hospital setup[22]. In our research, we also studied the outcome of deliveries about 54% of the mothers delivers the normal and healthy babies. While other faced different outcome like stillbirth, development defects low birth weight (LBW), sudden infant death and ill health.

In a cluster-randomized trial data was collected from 14 different health facility showed that those women receiving group care were resulted in decrease in preterm births[23]. Women who received group care were reported as having good outcomes because of taking multivitamins and iron supplements and more satisfaction shown by health care providers.

According to our research, most of the women had the knowledge of antenatal care and they knew the consequences of not following it but very few did not opt for antenatal care and felt it unnecessary, as they had no knowledge of the consequences of its absence. Most of them visited doctors more than four times and about the same number of women visited twice and thrice. Most of the women that visited the doctor were educated and working women while those that had not undergone antenatal care visits were uneducated and homemakers. Therefore, this mean majority of educated woman had the knowledge and awareness of the antenatal care visits. Most of the women who undergone antenatal care visits were having normal vaginal deliveries. In addition, most of the women who received antenatal care from trained birth attendants were satisfied with the results while most of those that were not satisfied had antenatal care from untrained attendant and a number of complications occurred in them. Asim et al.[24] also reported the similar results in their study within our research context. Therefore, we may suggest that this study can help to identify the difference between hospital and domiciliary services and antenatal checkups in both setups.

CONCLUSION

Significant differences were observed in hospital and domiciliary services regarding outcomes of mother and baby. It may be perceived that hospital based antenatal care and delivery is better as complications are detected early. Furthermore, awareness of women about danger signs and importance of good antenatal care should be emphasized through community-based health education.

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CONFLICT OF INTEREST

The authors declare no conflict of interest among them.

ETHICS APPROVAL

The institutional review board of Khyber Medical College, Peshawar approved the study with a reference number 614/ADR/KMC.

PATIENT CONSENT

The authors obtained written consent from all the participants of the research study.

AUTHORS' CONTRIBUTION

BI conceived the idea, did bench work, and wrote the manuscript. LM worked on critical review and methodology. KK had done the statistical analysis. In addition, FH, NS, SB, SS, IK and AH helped in the collection of data of research.

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