

Factors affecting utilization of antenatal health care services among pregnant women in public hospitals of Multan, Pakistan

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ABSTRACT

This descriptive cross sectional survey was conducted to measure the factors affecting utilization of antenatal health care services among pregnant women in public hospitals of Multan, Pakistan. The results of the analysis divulged that high education level, being employed, having high monthly income and less number of children becomes the provoking factors towards utilization of antenatal health care services among pregnant women. Moreover, the pregnant women who occasionally take advice from doctor about routine vaccination and face complications during the period of pregnancy utilized better antenatal health care services. It is concluded that utilization of antenatal health care services are fluctuated by education, employment, monthly income, number of children, vaccination provision, utilization of new biomedical methods and complications during pregnancy. The results suggested that persistent provision of health care visits to pregnant women and availability of biomedical technologies can improve the level of AHC services among pregnant women.

Keywords: Healthcare services, Pregnant, Antenatal, Factors, Outcomes, Public hospitals

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INTRODUCTION

Antenatal Health Care (AHC) refers to medical treatment and well-being provision to women during their period of pregnancy^{1,2}. According to WHO report, everyday 830 women lost their lives due to inadequate utilization to AHC^{3,4}. These recommended health guidelines endorsed that a pregnant women should have 4 visits to skilled birth attendant during their pregnancy duration. Unfortunately, only 40% women from low-income countries follow these recommended guidelines of WHO⁵. According to recent statistical facts, 99%

maternal deaths occur in South Asian regions and Sub-Saharan Africa due to sever medical complications. These medical hitches comprised of placental bleeding, vaginal infections, genital sore, chronic anemic conditions and high blood pressures (both pre-eclampsia and eclampsia)⁶.

In Pakistan, 73% pregnant women use one visit and 37% pregnant women utilize four visits to skilled health care center during their antenatal period. Resultantly, Infant Mortality Rate (IMR) is 66/1000 live births while Maternal Mortality Rate (MMR) is 350/100,000 live births. Accordingly, the risk of maternal deaths is 1/80 in Pakistani context in comparison with 1/4,085 in developed countries⁷⁻⁹. These maternal health complications comprised of prolonged labor pains, puerperal sepsis, fetus hemorrhage, pre-eclampsia, severe anemia, placental abruption, ruptured uterus and even abortion^{10,11}.

The above said justifications for conducting this research are imperative for medical well-being of mother and child. There is dearth literature and little empirical evidences about the underlying dynamics affecting AHC services among pregnant women in public hospitals of Multan, Pakistan. Thus the objective of present study was to measure the factors affecting utilization of AHC services among pregnant women in public sector hospitals of Multan, Pakistan.

METHODOLOGY

The descriptive cross sectional survey was carried out in Nishtar hospital, Multan during 15th March 2016-28th November, 2016. The ever married pregnant women (N=345) who were utilizing

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AHC services from more than one month or more were interviewed. Besides this, vaccination during pregnancy, provision of balanced diet, awareness about imminent nutritional equilibrium, prescribed medicine consumptions, routine visits (1-4) to hospital and intake of vitamin supplements were taken as medical indicators for inclusion of respondents' in the present study. Moreover, the women who face complications during antepartum period (such as vaginal bleeding, fetal hemorrhage, foul smelling vaginal discharge, swelling of body, continuous abdominal pain, being anemic) were also interviewed. Conversely, the women whose pregnancy is not yet confirmed/or they visit the hospital to get pregnant/or to acquire spacing in their children were excluded from the targeted sample.

After segregation, the women were sampled out through multistage sampling technique. Firstly, Nishtar hospital was selected randomly from three renowned public sector hospitals of Multan city i.e. Nishtar Hospital, Civil Hospital and Fatima Jinnah Women Hospital. Secondly, the wards providing maternal and child health care services were targeted. Thirdly, the women were selected randomly through de-facto approach method in these wards. In this method, the women who were present on the day of data collection were approached and interviewed after their consent to participate in the research. The study instrument comprised of two detailed sections in which factors for utilization of AHC services were targeted.

Afterwards, the statistical analysis was conducted in SPSS (version-21). As the dependent variable was categorical (utilization of AHC) and dichotomous (0=No utilization of AHC 1=Utilization of AHC), therefore, Binary Logistic Regression analysis was applied on the coded data¹².

RESULTS

A total of N=345 pregnant women were sampled out during the study period. The results of the table shows that n=81 (23.5%) respondents utilized more than two and a half times more AHC services i.e. OR's=2.611* (95% CI: 1.804-3.652) in comparison with illiterate women. In addition, n=215 (62.3%) pregnant women utilized almost double AHC services during their period of pregnancy (i.e. 1.938 p<0.01, 95% CI) in comparison with the unemployed pregnant women i.e. n=130 (37.7%). The income variable also influences AHC utilization as the sampled respondents whose monthly household income was >30,000 PKR/month (n=118, 34.2%) utilized almost two and a half times more AHC services (OR's=2.597 p<0.01, 95% CI: 1.689-2.998) in comparison with women who have <10,000PKR/month (n=188, 54.5%). In spite of this, the pregnant women who have 4-6 children (n=178, 51.6%) utilized less than half AHC services (i.e. 0.353 p<0.05, 95% CI: 0.215-1.918) as compared to the respondents who have <3 children (n=137, 39.7%).

Table-I: Frequencies of the factors affecting the utilization of Antenatal Health Care (AHC) services among pregnant women in public hospital (N=345)

| Factors affecting utilization of AHC in public hospitals | Categories | Frequency (%) | OR's (Unadjusted) 95% CI [^] | Lower Limit | Upper Limit |
|--|---------------------------------|---------------|---------------------------------------|-------------|-------------|
| Education of respondent | Illiterate | 185 (53.6%) | 1 (RC) [#] | | |
| | Primary | 79 (22.9%) | 1.798* | 1.311 | 2.423 |
| | Secondary/>Secondary | 81 (23.5%) | 2.611* | 1.804 | 3.652 |
| Occupation of respondent | Unemployed | 130 (37.7%) | 1 (RC) | | |
| | Employed | 215 (62.3%) | 1.938** | 1.570 | 2.483 |
| Household monthly income | <10,000 PKR [§] /month | 188 (54.5%) | 1 (RC) | | |
| | 10,000-20,000 PKR/month | 39 (11.3%) | 2.382* | 1.793 | 3.336 |
| | >30,000 PKR/month | 118 (34.2%) | 2.597** | 1.689 | 2.998 |
| Number of children already have | <3 children | 137 (39.7%) | 1 (RC) | | |
| | 4-6 children | 178 (51.6%) | 0.353* | 0.215 | 1.918 |
| | >6 children | 30 (8.7%) | 0.866* | 0.694 | 1.523 |
| Frequency to take doctor advice about routine vaccination | Never | 109 (31.6%) | 1 (RC) | | |
| | Rarely | 132 (38.3%) | 1.594** | 1.484 | 1.603 |
| | Occasionally | 104 (30.1%) | 1.614** | 1.466 | 1.710 |
| Complications reported by the respondents during pregnancy | Usual swelling of body | 86 (24.9%) | 1 (RC) | | |
| | Abdominal pain | 43 (12.5%) | 1.674 ns | 1.757 | 2.415 |
| | Foul smelling vaginal discharge | 25 (7.2%) | 1.866* | 1.189 | 2.303 |
| | Irritation in vaginal area | 57 (16.5%) | 1.372* | 1.215 | 2.339 |
| | Genital sore | 09 (2.7%) | 3.215** | 2.674 | 4.336 |
| | Anemic with anomalous swelling | 125 (36.2%) | 0.982* | 0.801 | 1.523 |

*means that the results are significant at <0.05 level of significance

**means that the results are significant at <0.01 level of significance

§PKR means that the income is measured in Pakistani value of Rupees

[#]RC means reference category. All the other categories are measured in comparison with this category

[^]CI stands for confidence interval i.e. 95% for the present statistical analysis

The statistical analysis shows that the pregnant women who occasionally take advice from the doctor about routine vaccination (n=104, 30.1%) utilized more than one and a half times (OR=1.614 p<0.01, 95% CI) more AHC services as compared to the pregnant women who never take advice from the doctor during their period of pregnancy (n=109, 31.6%). The empirical evidences in statistical analysis revealed that the respondents who have genital sore as the medical complication during pregnancy (n=09, 2.7%) utilize more than three times more AHC services 3.215** from state based hospitals of the study vicinity (Table-I).

DISCUSSION

In consistence with the present study findings, South Asian context revealed that highly educated women, being employed, having high socio-economic status and better obstetric services utilized better AHC services during their pregnancy duration¹³⁻¹⁶. Previous studies also endorsed that in South Asian and Pakistani culture, women suffering from severe medical complications mostly go untreated that becomes threatening for the life of mother and fetus¹⁷⁻¹⁹. Countersigning the medical complications, previous literature also validated that women suffers from various complications during their period of pregnancy i.e. fetal haemorrhage, sepsis, pre-eclampsia and eclampsia, prolonged labor pains, foul smelling vagina, bleeding during pregnancy, anemic problems and even abortions. These pregnancy complications fluctuates the utilization of AHC services among pregnant women²⁰⁻²³. It is observed that the high education, high socio-economic status, having less number of children, being employed, having occasional visits to doctor about routine vaccination and previous medical histories of birth complications are the major factors associated with utilization of AHC among married females.

Strengths and Limitations: The present research was subjected to various limitations such as cross sectional, lack of comparison between various skilled health care centers (such as hospitals whether public/private, clinics and laboratories), limited time, issues of generalization and absence of funding resources. However, large sample size, usage of primary data collection and sophisticated statistical techniques were the major strengths of the study.

CONCLUSION

The results suggested that persistent provision of health care visits to pregnant women and availability of biomedical technologies can improve the utilization level of AHC services among pregnant women.

AUTHOR'S CONTRIBUTION

Sattar T: Conceived idea, Designed research methodology, Data collection, Manuscript writing

Zakar R: Statistical analysis, Manuscript final approval, Manuscript proof reading

Saleem U: Data collection, Data interpretation, Manuscript proof reading

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