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Postpartum Care Utilization among Primigravida: A Study in Rural Punjab, Pakistan

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Abstract

The present paper examined some of the socio-economic factors associated with postpartum care utilization among primigravida (first time mothers) in rural Punjab, Pakistan. Data were collected from 205 primigravida within six weeks following their delivery. Maternal education, husband's education, husband's occupation, monthly household income and exposure to mass media turned out to be some of the important factors in postpartum care utilization. Antenatal care, type of delivery and place of delivery were significantly associated with the postpartum care services utilization. The findings of the present study clearly underscored the importance of educational attainments of both the spouses in determining the postpartum care utilization. This finding implies that education can help reduce maternal morbidity and mortality.

Keywords: Ante-natal care, Postpartum care, Primigravida, Maternal morbidity, Maternal mortality

1. Introduction

Postpartum care refers to support provided to both mother and her child during six weeks after termination of delivery. Postpartum period is considered life threatening for both the primigravida and her infant. Primigravida is usually believed to experience more physical and psychological problems in postpartum period than those of multigravida. Resultantly, she is more likely to face depression and adjustment problems, which in turn could lead to maternal morbidity and mortality. About two third of all maternal mortalities occur in developing countries in the course of postpartum period (Ronsman and Graham, 2006).

About 40 percent of mothers face complications in the postpartum period and probably 15 percent of them experience severe health problems (Danguilan, 1997). Insufficient accessibility and non-utilization of maternal health care services are the main causes of maternal morbidity in the developing countries (Amin et al. 1989). The utilization of health care services is associated with the cost of the services, accessibility, and the quality of the services (Rower and Garcia, 2003). Various factors (such as mothers' decision making autonomy, financial problems, transportation problems, supplies, distance from the health centers, low quality of health services, and lack of trained health care providers) usually inhibit mothers from postpartum care utilization (Safe Motherhood, 1998).

Against this backdrop, the present study was an attempt to ascertain information on postpartum care utilization in rural Punjab, Pakistan. The major objective of the present paper was to examine some of the socio-economic factors associated with postpartum care utilization among primigravida in rural areas of District Sargodha, Punjab, Pakistan.

2. Materials and Methods

A survey was carried out in rural areas of District Sargodah, Punjab in May, 2011. The universe of the present study comprised 205 primigravida (first time mothers). Multistage and purposive sampling procedures were used to select the final sampling units of the present study from the rural areas of Sargodha District, Punjab, Pakistan. Sargodha District comprised five Tehsils: Sargodha, Bhalwal, Shahpur, Sahiwal and Silanwali. One (Tehsil Silanwali) out of five Tehsils of District Sargodha was selected through simple random sampling technique. Fifty percent of the union councils from the total number of union councils in Tehsil Silanwali were selected randomly and one village from each of the selected union councils was selected through simple random procedure. Purposive sampling procedure was used to select the final sampling units (i.e., primigravida) from the selected villages. Primigravida were located with the help of Lady Health Visitors (LHVs) working in their respective villages.

Keeping in view the differential educational attainments of the respondents, Interview schedule was used as a tool for data collection. Apart from descriptive statistics, binary logistic regression was used to assess the importance of various socio-economic factors associated with postpartum care utilization by primigravida.

2.1 Ethical considerations

The respondents were approached through local LHVs working in their respective villages. Informed consent was attained prior the interviews and the respondents were assured about the confidentiality of their responses.

3. Major Findings

3.1 Characteristics of the respondents

The data in Table 1 show that almost two third of respondents (primigravida) were below the age of 24 years. It could be expected in rural areas of Pakistan where females are married at an early age due to patriarchal and traditional culture. The data show that a substantial number of respondents married before the age of 21 years. However, due to overall increase in mean age at marriage, a significant number of respondents married after the age of 21 years. It could partly be attributed to their educational attainments.

Table 1 shows that a significant number of respondents did not attain formal education. A considerable proportion of respondents could attain graduation and above level education. Overall, almost two-third of the respondents had varying levels of educational attainments and a significant number of respondents had matric level educational attainment.

Small percentage of respondents (12.2) was working compared to 87.8 percent women who were housewives. It could partly be attributed to low educational attainments of the respondents, lack of jobs in rural setting of Pakistan and traditional culture that inhibits women from jobs. Respondents' spouses seemed to score better on socio-economic variables (education, occupation and being heads of the households).

Table 1 indicates that nearly two-third of the respondents were living in joint family systems and their monthly household income ranged from Rs 5001-10,000 and above; whereas 37.6 percent respondents had monthly household income less than or equal to 5000 rupees (55 USD) at the time of survey.

3.2 Postpartum care utilization among Primigravida

Table 2 presents data about percent distribution of respondents by postpartum care utilization by pregnancy complications and various health problems. 87.3 percent of the respondents had awareness about pregnancy related complications and of these 87.3 percent respondents, nearly more than two-third (68.2%) respondents utilized the postpartum care. The data show 69.1% of the total 74.1% respondents facing health problem utilized postpartum care; while 54.7% of the total 25.9% respondents who did not face any health problem utilized postpartum care.

With regard to various health problems, 11.8% of the respondents had problem of high blood pressure during pregnancy and most of such respondents (83.3%) utilized postpartum. 9.2% of the respondents had problem of low blood pressure during pregnancy out of which 71.4% had utilized postpartum care. The respondents (2.0%) with placenta previa problem did utilize postpartum care. 25.0% of the respondents had problem of Anemia during pregnancy out of which 68.4% had utilized postpartum care. Less than one-half the respondents with weakness problem during the pregnancy utilized postpartum care. Relatively small proportion of the respondents with swelling, backache, hepatitis, bleeding and dilatation problems also utilized postpartum care.

In response to husbands' concern about pregnancy complications, an overwhelming majority of the respondents (94.1%) reported that their respective husbands were concerned about the pregnancy related complications and a substantial number (66.3%) of the respondents did use postpartum care. In response to antenatal care, 94.6% of the respondents received antenatal care and of these 94.6 percent respondents, 67.0% also utilized postpartum care. With respect to the antenatal care visits, 45.9% of the respondents attended hospital from 1 to 5 times for antenatal care checkup out of which 63.8% had utilized postpartum care and 36.2% had not utilized postpartum care. 34.1% of the respondents attended hospital from 6 to 10 times for antenatal care checkup out of which 71.4% had utilized postpartum care and 28.6% had not utilized postpartum care. In response to the question should pregnant women make antenatal visits, 100.0% of the respondents replied "yes". But only 65.36% respondents could utilize postpartum care, while 34.63% did not utilized postpartum care.

In response to place of delivery, 33.2% of the of the total respondents delivered at home and of these 33.2% primigravida, only 41.2% utilized postpartum care; whereas 41.0% of the total respondents delivered at private hospital and of these (41.0%) respondents, 88.1% utilized postpartum care. It clearly indicates that women who deliver at hospital are more likely to receive postpartum care compared with those who deliver at home.

Table 3 presents percent distribution of respondents by postpartum care utilization by place of delivery, type of delivery and physical health problems after delivery. Table 3 shows that one-half the total respondents delivered at home due to the normal delivery and of these (44.1%) respondents, one-half utilized postpartum care. Nearly one-third of the total respondents (30.9%) delivered at home as they could not afford the cost of medical treatment, out of

which 23.8% utilized postpartum care. 16.2% of the respondents delivered at home because of the unavailability of the pertinent health service, while 2.9% of the respondents delivered at home by reason of the unavailability of transportation to seek proper treatment. Data indicates that 40.6% of the respondents delivered at Basic Health Unit (B.H.U) due to nearness from their residence out of which 38.5% had utilized postpartum care. 12.5% of the respondents delivered at B.H.U because of normal delivery out of which 75.0% utilized postpartum care. 28.1% of the respondents delivered at B.H.U for the reason of low cost of treatment. 18.8% of the respondents delivered at B.H.U on the advice of LHVs. Nearly equal proportion of the respondents (47.6%) delivered at Public and private hospitals and majority of them did utilize postpartum care. Table 3 shows that a substantial number (66.2%) of the respondents had normal delivery, out of which 49.6% had utilized postpartum care. 13.7% of the respondents had delivered with minor surgery and almost all these respondents utilized postpartum care.

In response to physical health problems after delivery, 6.8% of the respondents had problem of postpartum hemorrhage, 41.0% of the respondents had problem of weakness, 15.1% of the respondents had problem of pelvic pain, almost 10.2% of the respondents had blood pressure problem, 2.9% of the respondents had problem of urinary tract infection, 15.6% of the respondents had problem of Anemia, and 3.9% of the respondents had stitches infection. A significant number of respondents being faced with physical health problems did utilize postpartum care.

The data in Table 3 show that 88.8% of the respondents had awareness about postpartum services and among those who were aware 69.8% had utilized postpartum care. In response to the source of information, 39.0% of the respondents got information about postpartum services from the doctor, 60.5% of the respondents' source of information was Lady Health Workers.

4. Results

Table 4 presents information about socio-demographic factors associated with postpartum care utilization among the respondents. The findings emanating from Table 4 indicated that respondents' level of education, monthly household income and their male spouses' educational attainments were significantly associated with postpartum care utilization. Education is considered important in infusing awareness about health problems and seeking proper health care. Mother's education may also demonstrate a woman's higher socio-economic status, consequently, allowing her to seek appropriate medical care when she needed it (Chakraborty et al., 2002). Husband's education showed a significant association with postpartum care utilization, showing the higher utilization of postpartum care services by the respondents having educated husbands. The odds ratio of husband's education showed significant association with postpartum care utilization.

Table 4 shows that housewives used more postpartum care as compared to those who were working women. This is an important finding and not concomitant with the researches on the subject. For instance, Kalmuss and Fennelly (1990) found that employed women, since they are not economically dependents on their male spouse, utilized the postpartum care services more than those who were not employed.

The male spouse's occupation is considered important contributor in household income and has a significant influence on utilization of maternal health care services (Fosu, 1994). The results of this study are in agreement with this finding. The respondents' spousal occupation was significantly associated with their postpartum care utilization. Respondents' monthly household income was significantly associated with postpartum care utilization. The odds ratio of the respondents with income 7000 to 10000 was 3.33 and the 95% confidence limits (1.50~7.41) showed that the respondents with income 7000 to 10000 had 3.33 times more chances to utilize postpartum care in comparison to the respondents with income below or equal to 5000 rupees. Also the odds ratio of the respondents with income greater or equal to 10000 rupees was 3.75 with confidence limit (1.39~10.11) had more chances to utilize postpartum care. The odd ratio of household income 5000 to 7000 was 0.92 and the 95% confidence interval indicated that household income 5000 to 7000 had no association with the postpartum care. The major reasons mentioned by the respondents for not utilizing postpartum care were the financial problems. This finding corroborates with previous researches on the subject. For example, Chakraborty et al. (2002) noted that greater income positively affects the utilization of health care services.

Table 5 presents data about postpartum care utilization by place of delivery, exposure to media, awareness about pregnancy complications and type of delivery. In terms of exposure to mass media, the "Yes" category was found to be independent predictor of postpartum care utilization. The odds of "Yes" was (2.24) greater than one and the 95% confidence limit (1.18~4.51) showed that the respondents having exposure to mass media had 2.24 times more chances to utilize postpartum care as compared to those who had not exposure to mass media. Exposure to mass media had a positive effect on timing and type of providers for postpartum checkup (Rahman, 2009).

In this study, awareness about pregnancy complications was significantly associated with higher probability of postpartum care utilization. As showed by investigation, those having awareness about pregnancy complications had 2.49 times more chances of the postpartum care utilization than those who were not aware about pregnancy complications.

The odds of those who used antenatal care was 3.56 and 95% confidence interval of odd ratio (1.004~12.59) showed that the respondents who used antenatal care were more likely to use postpartum care than those who did not utilize antenatal care. This finding is concomitant with that of Burtz et al. (1993) and Echevarria & Frisbie (2001). Contact with the health care providers (LHVs, Doctors) during antenatal period creates awareness among women about postpartum services and motivates them to attend postpartum services (Stephenson & Tsui, 2002). Antenatal visits are cardinal in postpartum care utilization and pregnant women are recommended four antenatal visits starting from first three months of pregnancy (Ashford, 2004).

Those respondents, who delivered after major/minor surgery, utilized postpartum care more than those who had normal delivery. The chances of utilization of postpartum care for such respondents was 22.7 times more in comparison to those respondents who had normal delivery (OR=22.67; 95%CI=6.79~75.62). The reason was that their interaction with skilled health care workers who might have motivated them to get postpartum checkup, while the respondents with normal delivery might be less motivated to get postpartum checkup.

In terms of place of delivery, those who delivered at hospital were (11.07 times) more likely to utilize postpartum care as compared to those who delivered at home. The odd ratio of delivered at hospital was (11.07) and confidence interval of odds (5.12~23.94) showed that place of delivery was significantly associated with postpartum care utilization.

5. Conclusions

The findings of the present study clearly showed that spousal education, monthly household income, antenatal care utilization turned out important factors in determining the postpartum care utilization among the first-time mothers. Exposure to mass media and interaction with health care providers (i.e., place of delivery and antenatal visits) also affected the postpartum care utilization in the study population. Some of the findings of the present study are in agreement with previous researches (for example, Rower and Garcia, 2003; Safe Motherhood, 1998).

It may safely be concluded from the findings of the present study that educational attainments of both male and female spouses is instrumental in safe motherhood practices. Increased educational opportunities for both males and females in Pakistan can help reduce maternal morbidity and mortality. The findings of the present study clearly warrant policy interventions for provision of adequate health services in rural areas of Pakistan. Media campaigns can enhance antenatal visits, in turn postpartum care utilization.

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Table 1: Characteristics of the study population

Characteristics	**n(%) N=205**	
Mothers' age (in years)	<=21	74(36.1)
	22~24	77(37.6)
	>24	54(26.3)
Age at Marriage	≤ 18	37(18.0)
	18 ~ 21	68(33.2)
	>21	100(48.8)
Respondents' education	Illiterate	74(36.1)
	Primary	47(22.9)
	Middle	19(9.3)
	Matric	50(24.4)
	Intermediate	11 (5.4)
	Graduation and above	2(1.0)
Husbands' education	Illiterate	38(18.5)
	Primary	38(18.5)
	Matric	63 (30.7)
	Intermediate	20 (9.8)
	Graduation and above	4(2.0)
Respondents' occupation	Working	25(12.2)
	Housewife	180(87.8)
Husbands' occupation	Government	31(15.1)
	Private	60(29.3)
	Others	114(55.6)
Monthly Household income	≤ 5000	77(37.6)
	5001~7000	40(19.5)
	7001~10000	55(26.8)
	>10000	33(16.1)
Family system	Joint	128(62.4)
	Nuclear	77(37.6)
Religion	Islam	195(95.1)
	Others	10(4.9)
Relationship with head of the household	Husband	113(55.1)
	Father in Law	73(35.6)
	Others	19(9.3)

Table 2: Percent distribution of respondents by postpartum care utilization by pregnancy complications and various health problems

	Categories		**Postpartum Care Utilization**	
Awareness about pregnancy complications		**n (%)**	**yes (%)**	**no (%)**
	Yes	179(87.3)	122(68.2)	57(31.8)
	No	26(12.7)	12(46.2)	14(53.8)
Health problems during pregnancy	Yes	152(74.1)	105(69.1)	47(30.9)
	No	53(25.9)	29(54.7)	24(45.3)
Type of health problem	High Blood Pressure	18(11.8)	15(83.3)	3(16.7)
	Low Blood Pressure	14(9.2)	10(71.4)	4(28.6)
	Placenta Previa	3(2.0)	3(100.0)	0(.0)
	Anemia	38(25.0)	26(68.4)	12(31.6)
	Weakness	25(16.4)	11(44.0)	14(56.0)
	Temperature	5(3.3)	5(100.0)	0(.0)
	Swelling	9(5.9)	3(33.3)	6(66.7)
	Back pain	15(9.9)	11(73.3)	4(26.7)
	Vomiting	13(8.6)	11(84.6)	2(15.4)
	Hypertension	1(.7)	0(.0)	1(100.0)
	Hepatitus	2(1.3)	2(100.0)	0(.0)
	Dilatation	2(1.3)	2(100.0)	0(.0)
	Bleeding	7(4.6)	6(85.7)	1(14.3)
Husband concerned about pregnancy complications	Yes	193(94.1)	128(66.3)	65(33.7)
	No	12(5.9)	6(50.0)	6(50.0)
Antenatal care	Yes	194(94.6)	130(67.0)	64(33.0)
	No	11(5.4)	4(36.4)	7(63.6)
Antenatal care visits	1-5	94(45.9)	60(63.8)	34(36.2)
	6-10	70(34.1)	50(71.4)	20(28.6)
	11-15	35(17.1)	23(65.7)	12(34.3)
	No checkup	6(2.9)	1(16.7)	5(83.3)
Should pregnant women make antenatal visits	Yes	205(100.0)	134(65.36)	71(34.63)
Place of delivery	At home	68(33.2)	28(41.2)	40(58.8)
	Public hospital	21(10.2)	19(90.5)	2(9.5)
	Private Hospital	84(41.0)	74(88.1)	10(11.9)
	B.H.U	32(15.6)	13(40.6)	19(59.4)

Table 3: Postpartum care utilization by place and type of delivery and physical health problems

	Reasons		**Postpartum Care Utilization**	
Delivered at Home	Due to normal delivery	34(50.0)	15(44.1)	19(55.9)
	Due to unavailability of 24 hour service at B.H.U	11(16.2)	6(54.5)	5(45.5)
	Due to financial problems	21(30.9)	5(23.8)	16(76.2)
	Due to transport problems	2(2.9)	2(100.0)	0(.0)
Delivered at B.H.U	Due to nearness	13(40.6)	5(38.5)	8(61.5)
	Due to normal delivery	4(12.5)	3(75.0)	1(25.0)
	Due to low cost	9(28.1)	2(22.2)	7(77.8)
	L.H.V advised	6(18.8)	3(50.0)	3(50.0)
Public Hospital	Due to surgery	10(47.6)	10(100.0)	0(.0)
	Due to registration	10(47.6)	8(80.0)	2(20.0)
	Due to Emergency	1(4.8)	1(100.0)	0(.0)
Private Hospital	Due to surgery	10(47.6)	10(100.0)	0(.0)
	Due to registration	10(47.6)	8(80.0)	2(20.0)
	Due to Emergency	1(4.8)	1(100.0)	0(.0)
Type of delivery	Normal	135(66.2)	67(49.6)	68(50.4)
	Minor surgery	28(13.7)	26(92.9)	2(7.1)
	Major surgery	41(20.1)	41(100.0)	0(.0)
Physical health problems after delivery	Postpartum Hemorrhage	14(6.8)	13(92.9)	1(7.1)
	Weakness	84(41.0)	45(53.6)	39(46.4)
	Pelvic Pain	31(15.1)	22(71.0)	9(29.0)
	Hypertension	10(4.9)	4(40.0)	6(60.0)
	Urinary Tract Infection	6(2.9)	6(100.0)	0(.0)
	Anemia	32(15.6)	25(78.1)	7(21.9)
	High Blood Pressure	6(2.9)	3(50.0)	3(50.0)
	Low Blood Pressure	5(2.4)	4(80.0)	1(20.0)
	Temperature	9(4.4)	4(44.4)	5(55.6)
	Stitches Infection	8(3.9)	8(100.0)	0(.0)
Awareness about postpartum services	Yes	182(88.8)	127(69.8)	55(30.2)
	No	23(11.2)	7(30.4)	16(69.6)
Source of information	Doctor	80(39.0)	54(67.5)	26(32.5)
	L.H.W	124(60.5)	79(63.7)	45(36.3
	Other	1(0.5)	1(100.0)	0(.0)

Table 4: Odds Ratio for Factors Associated with Postpartum service utilization

Characteristics		Coefficient	P-Value	OR	CI
Mother's Age	<=21			1	Reference
	22~24	-0.58	0.091	0.56	0.28~1.09
	>24	-0.23	0.548	0.79	0.37~1.69
Age at Marriage	≤ 18			1	Reference
	18 ~ 21	0.60	0.156	1.83	0.79~4.21
	>21	0.35	0.377	1.42	0.656~3.05
Mother's Education					
	Illiterate			1	Reference
	Literate	1.24	.003	3.45	1.53~7.80
Husband Education					
	Illiterate			1	Reference
	Literate	0.93	.011	2.53	1.23~5.18
Respondent Occupation					
	Housewife	1.01	.020	2.75	1.17~6.43
	Working			1	Reference
Husband Occupation					
	Government	1.63	.004	5.09	1.67~16.5
	Private	0.56	.096	1.76	0.90~3.42
	Others			1	Reference
Household Income					
	≤ 5000			1	Reference
	5001~7000	-0.082	0.83	0.92	0.43~1.98
	7001~10000	1.20	.003	3.33	1.50~7.41
	>10000	1.32	.009	3.75	1.39~10.11
Family System					
	Joint	0.048	0.110	1.62	0.90~2.93
	Nuclear			1	Reference
Religion					
	Islam	-0.78	0.330	0.457	0.094~2.21
	Others			1	Reference

Table 5: Odds Ratio for Factors Associated with Postpartum service utilization

Characteristics		**Coefficient**	**P-Value**	**OR**	**CI**
Exposure to mass media					
	Yes	0.80	0.025	2.24	1.18~4.51
	No			1	Reference
Awareness about pregnancy complications					
	Yes	0.92	0.031	2.49	1.09~5.74
	No			1	Reference
Husband concerned about pregnancy complications					
	Yes	0.68	0.256	1.969	0.611~6.35
	No			1	Reference
Antenatal care					
	Yes	1.27	0.049	3.56	1.004~12.59
	No			1	Reference
Type of delivery					
	Normal			1	Reference
	Surgery	3.12	0.000	22.67	6.79~75.62
Place of delivery					
	At home			1	Reference
	Hospital	2.40	.000	11.07	5.12~23.94
	B.H.U	-0.023	.958	.977	.416~2.298