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Original Article

Utilization of Postnatal Care Services and Associated Socio-Demographic Factors among Mothers in Sheikhupura

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ABSTRACT

The general state of a population's health system can be seen in the maternal morbidity and mortality rates. Despite the obvious benefits of postnatal healthcare services literature reveal that these services are frequently underused, especially in underdeveloped countries such as Pakistan. **Objective:** To identify the family traits that were thought to be the biggest factor of using the available postnatal health care services. **Methods:** According to the nature of the study quantitative research method was used. 323 females who were not currently pregnant but had given birth to one or more children selected in the sample of the present study. Final sample was chosen using a multistage sampling technique. Binomial logistic regression analysis was performed to examine the association between family traits and the use of postnatal healthcare services. **Results:** Results showed that 76.5% of respondents had their postpartum hemorrhage evaluated. The majority of participants (83.6%) and those who took contraceptives after giving birth (83.1%) got breastfeeding support. Results of the current study showed that the number of postnatal care visits was significantly correlated with the husband's age, education, and family's monthly income. Postnatal care was also connected to the husband's age, education, and family income levels. **Conclusions:** According to the study's conclusions, education should be targeted towards enhancing the significance of postnatal care services. To address the issue of health care service utilization, policy level actions are required to maximize the ratio of the utilization of postnatal care services.

INTRODUCTION

Postnatal care recognizes as the care of delivered female and the newborn for the first six weeks of the birth. The best way to minimize the chances maternal and neonatal mortality is to maximize the ratio of maternal and newborn health through appropriate postnatal care services. In order to maintain the health of the delivered female and the new born postnatal care is considered to play an important role. A number of complication and health related problems which women and newborn suffer mostly occur in postpartum period [1]. A number of elements like personal hygiene of the mother, healthy diet, postnatal menstruation and awareness related to new born immunization is associated with postnatal care services. Postnatal care identifies the risk factor associated with the new born and the mother [1]. First six weeks after delivery is the most crucial time as most of the changes came across by both the new born and the mother [2]. Findings of the study shows that more than half of the total female respondents dies in 24 to 48 hours after delivery. The estimated maternal mortality ratio (MMR) declined between 1900 and 2015 in all MDG regions, while the degree of decline varied significantly by region [3]. According to 2015 data, Sub-Saharan Africa and Oceania have the highest rates of maternal death. When compared to industrialized countries, the rate of maternal mortality in emerging regions was 19 times higher. Sub-Saharan Africa

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has the highest regional maternal death rate (546 per 100,000 live births)[4]. When maternal health services are utilized, maternal and newborn mortality are decreased. Postnatal care is especially effective at preventing the majority of illness and mortality among mothers and children. Medical experts can recognize post-delivery problems and promptly start treatments with the aid of postpartum care[4]. Inattention at this period may result in illness, disabilities, or even fatality. Over 65% of maternal deaths and 75% of neonatal deaths take place in the first seven days after birth, achieving good postnatal care could yearly save up to 60,000 infant deaths. Neonatal mortality could be reduced by 10–27% if all neonates receive the recommended postnatal treatment within the allotted timeframe[5]. In less developed regions, maternal deaths predominate. Over 99% of all maternal deaths occurred due to it in 2015, with Sub-Saharan Africa alone accounting for over 66% of those deaths and southern Asia accounting for 22% [3]. In less developed countries, women and their newborns are not given postpartum care services from a qualified birth attendant in the initial days after giving birth (WHO, 2012). The first two days after delivery are when most mother and infant deaths occur. In order to recognize and address problems that emerge after delivery and to inform the mother about the health of both postnatal visits are essential[6]. In order to detect and treat the complications of females after delivery first two days after delivery is consider important. Postpartum hemorrhage, puerperal sepsis, and eclampsia are some risks associated with the failure to get the postnatal care services. Delivery in any health care center and guidelines from a professional health care provider can maximize the percent of the utilization of the postnatal care services [7]. Women's characteristics such as education and awareness regarding social media platforms directly associated with positive response of postnatal care services [8]. The mother's educational level, socioeconomic situation, and family support are all factors that have a significant favorable impact on the use of postnatal care services. Results reveal than the percent of educated women and living in urban areas is more than the uneducated and living in rural areas [9]. Husbands' participation and their awareness regarding the health of the both mother and new born were associated with the positive response regarding postnatal care services. The major conceren of the male spouse usually observed during pregnnacy but after delivery they have less intrest to utilize the health care services [9]. Spouse involvement observed as the major factor to reduce the maternal stress and depression after delivery. Respondents who reported that their spouse had awareness about the importance of postnatal and were also there with them at the time of delivery more likely to utilize the services than others [10, 11]. Sociodemoghphic factors such as family system relation with mother in law and income status of the family also associated with the utilization of the postnatal care services [12]. Furthermore relationship with the families also impact the utilization of healthcare services during pregnancy and after delive deliry in case the couple has strong association with other family members in joint system the chances to utilize the health services after delivery increase [13]. Family structure and the availability of services for maternal health care are related in Asian nations. Study indicates that the women living in nuclear system tend to be associated to utilize the postnatal care services more than the others [14]. Major barriers faced by the females to utilize the postnatal care services observed as the limited economical resources and stertypical behaviour[15].

METHODS

Research method of the present study was quantitative. The researcher used quantitative research approach which is appropriate to the nature of the current study. The current study was a cross-sectional research of females who had given birth during the previous three years but were not pregnant at the time of data collection. Females older than 18 who resided in Sheikhupura legal residential colonies were selected for data collection. Since women between the ages of 15 and 49 are considered to be in their reproductive years [16]. Therefore, population of the current study comprised of married women above the age of 18. Sheikhupura district in Punjab was chosen for research population because it was found to have the greatest number of the relevant indicator of independent variable. The local government area in Sheikhupura, which has a 59% women literacy rate, is an extremely densely populated residential area, according to the report of Pakistan Bureau of Statistics 2016 [17]. The municipal committee of the district recognized 18 residential colonies in Sheikhupura as being lawful, so the researcher chose 50% of all residential colonies to use as the sample for the current study. With the help of multistage sampling techniques sample size of the present study was selected. Using basic random sampling single block from each colony was chosen in the first stage. Every fifth house in each of the chosen blocks was chosen using a regular interval of systematic sampling. In the final step, purposive sampling was used to further specify the research sample. According to the inclusion criteria of the research females who had given birth during the previous three years but were not pregnant at the time the data were collected were chosen. Females who were pregnant at the time of data collection were excluded from the sample. In the current study, a self-administered survey was carried out to ensure

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the validity and reliability of the data. The whole data of the present study were collected in about 20 days. The study duration was 18 months from July 2021 to December 2022. Including the study duration is important because it helps readers to understand the timeline of the research and provides context for interpreting the results. The predictive relationship between socio-demographic factors and the usage of postnatal care services was examined using a combination of descriptive and binary logistic regression. To find out the predictive relation between variables binary logistic regression was applied because independent variables of the present study were more than two and dependent variable was in dichotomous form. Researcher got the permission from the authority with a proper channel in order to enter in the residential areas and interact with the respondents. At the start of the data collection procedure researcher brief the purpose of the study and make sure the voluntarily participation of the respondents. Researcher also assure the respondents the confidentiality of the data and personal identity.

RESULTS

Table 1 lists the demographic details of the respondents. The data indicates the % distribution of the responders. The respondents' ages ranged from 18 to 42 overall, with the majority (34.7%) lying between 28 and 32. It also provides information on the respondents' educational backgrounds, demonstrating that 25.7% of respondents held a college degree. Matriculates came in second with 22.3% of the responses, followed by bachelor graduates with 21.7%. Housewives made up 78.9% of the respondents, which was more than the 21.1% of working respondents.

Table 1: Demographics of the respondents (N=301)

Characteristics	Categories	F (%)
Age	18-22	21 (6.5%)
	23-27	65 (20.1%)
	28-32	112 (34.7%)
	33-37	101(31.3%0
	38-42	24(7.4%)
Qualification	Matric	132 (40.9%)
	Intermediate	83(25.7%)
	Graduation	70 (21.7%)
	Masters and above	38 (11.8%)
Professional Status	Unemployed	255 (78.9%)
	Employed	68(21.1%)
Family income per month	12-24 thousand	72 (23.9%)
	25-36 thousand	74(24.6%)
	37-48 thousand	155 (51.5%)
Number of children	1-3	192 (59.4%)
	4-6	131(40.6%)

The socio-demographic details of the respondents are listed in Table 2 shows that 60.4% of respondents who were part of joint families lived together, as opposed to 39.6% who did not. The husbands of 35.6% of the respondents were between the ages of 30 and 34. The bulk of the respondents' husbands (30.3% of the total) were bachelors. Men who were married to women and worked made up 70.6% of the total. 41.5% of all households, or the bulk of women's families, made between 30,000 and 49,000 per month.

Table 2: Family Characteristics of the Responds

Family Characteristics	Categories	F (%)
Husband's Age	20-24	8(2.5%)
	25-29	38(11.8%)
	30-34	115(35.6%)
	35-39	49(15.2%)
	40-44	69(21.4%
	45-49	44(13.5%)
Family System	Joint System	195(60.4%)
	Nuclear System	128(39.6%)
Husband's Education	Primary	38(11.8%)
	Matric	64(19.8%)
	Intermediate	55(17.0%)
	Bachelor	98(30.3%)
	Master and above	68(21.1%)
Husband's Employment Status	Employed	15(4.6%)
	Un Employed	228(70.6%)
	Business	80(24.8%)
Family's Monthly Income	15-29 Thousand	134(41.5%)
	30-44 Thousand	87(26.9%)
	45-59 Thousand	48(14.9%)
	60 Thousand or more	54(16.7%)

The majority of respondents (52.3%) did not use the health services after delivery, whereas 47.7% had one or more postnatal care visits. Table 8 lists the health services that respondents got after delivery.

Table 3: Frequency of Postnatal Care Visits

Postnatal Care Visits	F (%)
1-3 Visits	137(42.4)
4 and more visits	186(57.5)

Table 4 shows that 76.5% of respondents had their postpartum hemorrhage evaluated. The majority of participants (83.6%) were those who took contraceptives after giving birth (83.1%) got breastfeeding support. In reality, 85.8% of women used contraception as a family planning strategy. This shows that whereas 86.6% of respondents were free of postpartum hemorrhage, 13.3% of respondents were. Only 13.3% of respondents did not test for anemia after delivering delivery, compared to the

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majority of respondents (86.7%). Only 14.9% of respondents said they had a postpartum infection, compared to 85.1% who did not. In contrast to the 99.1% of respondents who vaccinated their child before birth, just 0.9% of respondents did not.

Table 4: Utilization of postnatal care services by the respondents in postnatal visits

Utilization of Services	Utilized	Unutilized
	F (%)	F (%)
Checkup of Postnatal Bleeding	247(76.5)	76(23.5)
Recommendations for Breast Feeding	270(83.6)	53(16.4)
Advising the use of Contraceptives	268 (83)	55(17)
Used Contraceptives before	277(85.8)	46(14.2)
Postpartum Hemorrhage	280(86.7)	43(13.3)
Anemia Test	280(86.7)	43(13.3)
Postpartum Infection	48(14.9)	275(85.1)
Child Vaccination	320(99.1)	3(0.9)

The results in Table 5 show that the model correctly predicted the number of postnatal care visits, including whether there were one or more visits or not (2 = 121.720; p =.000).

Table 5: Omnibus Tests of Model Coefficients

Step 1	Chi-square	df	Sig.
Step	121.720	11	.000
Block	121.720	11	.000
Model	121.720	11	.000

122 instances were categorized as having one or more postnatal visits, according to Table 6, while 41 cases were categorized as having none. This demonstrates that the model properly classified the cases in 77.4% of the instances.

Table 6: Classification Model

Observed	Predicted		Percentage Correct
Step 1	How many times did you visit the hospital or clinic during your last pregnancy?		
	1-3 visits	4 visits or more	
Visits in last pregnancy, 1-3 visits	-	-	-
4 or more visits	128	41	75.7
Overall Percentage	32	22	79.2

122 instances were categorized as having one or more postnatal visits, according to Table 6, while 41 cases were categorized as having none. This demonstrates that the model properly classified the cases in 77.4% of the instances.

Table 6: Classification Model

Step (Square)	-2 Log likelihood	Cox & Snell R Square	Negelkerke R
1	328.357[a]	.315	.429

Results in Table 5 show that respondents who reported one or more postnatal visits were significantly less likely to have spouses younger than 42 years old (p=.020) than women whose husbands were between 18 and 29 years old. There was no significant relationship between the number of postnatal visits and the husband's age (30-41), sig.>.05. In comparison to women whose husbands had primary and below credentials, women were 15.648 times more likely to report 1 or more postnatal visits, and there was a significant association between husband's education (bachelor and above) and the number of postnatal visits (p=.004). The husband's matriculation and intermediate education were not associated with the number of postnatal visits. p >.05. Compared to women who reported their family's monthly income 15 and 29 thousand (p=.000), women were 9.560 times more likely to report one or more postnatal care visits. The number of visits was significantly correlated with the family income of mothers (60 000 and above). There was a significant correlation between the number of postnatal visits and family income (45-59 thousands) and women were significantly more likely to report one or more visits when compared to women whose family's monthly income was between 15 and 29 thousand (p=.011). Women reported 1 or more postnatal care visits 3.117 times more frequently than women whose family's monthly income was between 30,000 and 49,999 (p=.018). Family income (30-44 thousands) was significantly connected with the frequency of postnatal care visits (p=.018). Spouse's profession and family system were not significantly connected with the quantity of postnatal visits due to their p >.05.

Table 8: Regression Coefficients of Socio-demographic Factors for Number of Postnatal Visits

Variables	Sig.	EXP(B)	95% C.I. for EXP(B)	
			Lower	Upper
Family system (ref = Nuclear system)				
Joint System	.798	1.072	.585	1.958
Family system (ref = Nuclear system)				
30-39-year-old	.010	.329	.139	.857
40-49-year-old	.531	.834	.481	1.494
Husband's education (ref = primary)				
Bachelor and above	.008	13.658	2.57	10.897
Intermediate	.095	4.963	.842	29.60
Matric	.168	3.658	.578	21.45
Husband's employment status (ref unemployed)				
Business	.659	.624	.184	4.394
Employed in public sector	.542	.746	.089	3.70
Family's monthly income (ref = 15-29 thousands)				
60 thousand and more	.000	9.40	3.45	29.58
45-59 thousand	.013	3.948	1.365	12.542
30-44 thousand	.014	3.247	1.419	7.978

DISCUSSION

Results of this cross-sectional study showed a significant relationship between the number of postnatal care visits and the husband's age, educational level, and family's

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monthly income. The researcher used binary logistic regression to ascertain the predictable relationship between socio-demographic factors (family system, spouse's age, qualification, occupation, and family's monthly revenue) and utilization of postnatal care services. According to the findings, 47.7% of respondents had at least one postnatal care visit, compared to 52.3% who had none. The majority of the women in the study, as is customary in traditional Pakistani culture, resided with the families of their husbands. The usage of postpartum care services by women and their living arrangements did not correlate. Two factors might help to clarify this. First off, expectant women who live with their in-laws may get a lot more help with daily chores like cooking, cleaning, and other activities than those who live independently. People feel less stress and weariness as a result of their home responsibilities. In addition, mothers-in-law provide fundamental guidance on the perinatal period, such as nutritional recommendations, child movement, and personal hygiene. There may be a decrease in the use of postnatal care services as a result. Living with in-laws, for example, is a traditional household culture that may encourage a woman's healthy practices [18, 19]. Similar to the earlier study by Tarekegn *et al.*, found that the husband's age had a detrimental effect on the usage of postpartum care services [20]. Those whose spouses were older were less likely to use postpartum care than those whose husbands were younger. The husband's education has a significant favorable impact on the utilization of health services, according to other studies [21]. The likelihood that husbands would use postpartum care services with their spouses increased with education [22]. The study's conclusions cannot be supported because there was no connection between the husband's employment position and postnatal care services. Result of Berhanu study found that the husband's employment is a major predictor of the usage of maternal healthcare services [23]. The ineffectiveness of the employment status may be attributed to the tension between time and money. While husbands without any employment struggle to find the financial resources to meet the mother's needs, spouses with high employment levels frequently struggle to find the time to attend postpartum care programs. The results of earlier studies were also supported by the considerable positive association between a family's monthly revenue and the usage of postnatal care services [24]. Women from higher-income families were more likely to use postpartum care services than were women from lower-income families. The study's conclusions agreed with the bio psychosocial perspective on medicine. The utilization of maternal healthcare services was significantly correlated with family composition, level of education, and socioeconomic status on both a social and an individual level [25]. The number of visits and utilization of postnatal care services was significantly correlated with the family income as similar findings were also observed by [26].

CONCLUSIONS

Findings of the present study conclude that respondents who reported one or more postnatal visits were significantly less likely to have spouses younger than 42 years old. There was no significant relationship between the number of postnatal visits and utilization of postnatal care services with the husband's age. There was a significant association between husband's education (bachelor and above) and the number of postnatal visits. The husband's matriculation and intermediate education were not associated with the number of postnatal visits. Compared to women who reported their family's monthly income 15 and 29 thousand were 9.560 times more likely to report one or more postnatal care visits. There was a significant correlation between the number of postnatal visits and family income (45-59 thousands) and women were significantly more likely to report one or more visits when compared to women whose family's monthly income was between 15 and 29 thousand.

Authors Contribution

Conceptualization: TM, SN
Methodology: SN, RS, TM
Formal analysis: RS
Writing-review and editing: ZM, TM

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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