

Utilization of Postnatal Care among Rural Women in Punjab

Niharika Mahajan, Baljit Kaur

Punjab School of Economics, Guru Nanak Dev University, Amritsar, Punjab, India

Abstract

Background: The postchildbirth period presents considerable challenges in the form of health risks for the mother and the newborn, yet postnatal care (PNC) remains seldom utilized maternal and newborn health intervention. **Objectives:** The present study aims to study the coverage of PNC among rural women in Punjab and understand the factors that determine the utilization of PNC services. **Materials and Methods:** From rural areas of seven districts of Punjab, a total of 420 respondents were questioned using semi-structured interview schedule. Binary logistic regression is employed to understand the factors that influence the utilization of complete PNC. **Results:** The utilization of complete PNC has remained mere 25.9% in the present study. The results of multivariate logistic regression reveal that variables district, caste, birth order, and type of delivery significantly influence the utilization of complete PNC. **Conclusion:** The utilization of PNC component is found to be abysmal as compared to antenatal component and institutional delivery among the study group. There is a need to create awareness regarding the necessity of PNC among the women.

Keywords: Antenatal care, facility-based delivery, logistic regression, postnatal care, postnatal care utilization, Punjab

INTRODUCTION

Achieving improvement in maternal, neonatal, and child health through “continuum of care” has been a rallying call of the research community.^[1-3] However, this continuity of care drops drastically during the postchildbirth period. Globally, postnatal care (PNC) remains seldom utilized maternal and newborn health intervention and India is no exception.^[2-4] The policies adopted in India have slurred over the crucial component of PNC with the result that its coverage stands incongruously with that of antenatal care and institutional care at birth.^[4] The fourth round of the National Family Health Survey in India reports that 79% of the women during their last pregnancy had received antenatal care from a skilled health provider at least once and about the same percentage of women had facility-based delivery. At the same time, 30% of the women surveyed did not have any postnatal checkup for their last birth.^[5] A larger proportion of deaths of mothers immediately after childbirth could be avoided through the provision of appropriate care during the initial hours and days after birthing.^[6] The World Health Organization recommends that mother and newborn should receive PNC within the first 24 h after delivery as medical supervision during this time can help in identifying and addressing the problems that may occur. “At least three additional postnatal contacts are recommended for all mothers

and newborns, on day 3 (48–72 h), between days 7 and 14 after birth, and 6 weeks after birth.”^[7]

The present study attempts to assess the magnitude of utilization of postnatal services among the study participants and examine the determinants of PNC utilization in the study area.

MATERIALS AND METHODS

This was a community-based cross-sectional study conducted in rural areas of Punjab from January 2018 to April 2018. The study participants were women in the age group of 15–49 years having delivered in 1 year preceding the date of survey. To have a wider coverage, a sample size of 420 was decided, to be collected from seven districts of Punjab, namely Amritsar, Gurdaspur, Hoshiarpur, Jalandhar, Ludhiana, Patiala, and Tarn Taran. These seven districts account for 50% of the rural female population in the reproductive age of the state.

Address for correspondence: Ms. Niharika Mahajan,
Punjab School of Economics, Guru Nanak Dev University, Amritsar,
Punjab, India.
E-mail: niharikaeco.rsh@gndu.ac.in

Access this article online

Quick Response Code:



Website:
www.ijcm.org.in

DOI:
10.4103/ijcm.IJCM_121_20

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Mahajan N, Kaur B. Utilization of postnatal care among rural women in Punjab. Indian J Community Med 2021;46:126-9.

Received: 26-02-20, **Accepted:** 29-08-20, **Published:** 01-03-21

Sampling method

Using multistage sampling, two blocks were randomly selected from each district at the first stage. At the second stage, 2 villages from each block and at the final stage, 15 respondents having delivered in 1 year preceding the survey from each village were randomly selected.

Methods of data collection

Each participant was clearly informed about the purpose of the study and written consent was obtained. Using semi-structured interview schedule, questions pertaining to socioeconomic characteristics and care received during prenatal, intranatal, and postnatal periods were put to 420 respondents.

Statistical analysis

A socioeconomic index based on data on asset ownership has been constructed using principal component analysis which divides the respondents into five wealth quintiles, where the first quintile represents the most poor and the fifth quintile represents the least poor.^[8] Binary logistic regression has been employed to understand the factors that determine the usage of PNC. The analysis has been performed using STATA version 12 (StataCorp LLC 4905 Lakeway Drive College Station, Texas 77845-4512 USA).

Ethical clearance for the study was obtained from the Institutional Ethical Committee of the university.

RESULTS

The sociodemographic and obstetric characteristics of the study participants are presented in Table 1. Among the 420 respondents, 84.3% were in the age group of 20–30 years. Majority of the respondents were reported to be following Sikhism (66.2%) and 59.5% of the respondents belonged to scheduled caste. About 17% of the respondents had no education and the maximum 40.5% had education up to secondary level. Other than 11 respondents, none was engaged in any occupation. Majority of the respondents (54%) were with the birth order of 2–4 and more than 96% of the respondents had received at least four antenatal checkups. Full antenatal coverage which consists of at least 4 antenatal checkups, 100 iron and folic tablets, and at least 1 tetanus toxoid injection in the study was 68.8%. About 96% of the respondents opted for facility-based delivery (271 delivered in public hospitals and 132 delivered in private health facilities). The cesarean section delivery rate in the study was 37.6%, and for 97.1% of the respondents, the outcome of delivery was a live birth.

Postnatal care utilization

Although 95.5% of the respondents received the postnatal checkup within the first 24 h after delivery, the percentage plummets for complete PNC; only about one-fourth of the participants (25.9%) utilized the complete PNC services. For the remaining 311 participants, the most common reason that prevented them from utilizing the PNC has been the belief that such care is not necessary. It was also observed in the study that for the study participants, community health workers

Table 1: Percent distributions of sociodemographic and obstetric characteristics of respondents (n=420)

Variables	Percentage
Age (years)	
<20	4.3
20-30	84.3
≥30	11.4
Education	
Nil	16.9
Up to primary	15.2
Up to secondary	40.5
Senior secondary and above	27.4
Birth order	
<2	39.3
2-4	54.0
≥4	6.7
Antenatal care (visits)	
4 or more	96.4
Full ANC	68.8
Place of delivery	
Public hospital	64.5
Private hospital	31.4
Home delivery	4.1
Type of delivery	
Normal	62.4
Cesarean	37.6

Source: Primary data. ANC: Antenatal care

have remained the main source of information on postnatal components such as breastfeeding, family planning, and baby care.

Factors determining complete postnatal care

The results of binary logistic are presented in Table 2 where the second column shows the results of bivariate logistic regressions (unadjusted odds ratio) and the third column shows the results of multivariate logistic regression (adjusted odds ratio [AOR]).

The results of bivariate logistic regressions show that variables district, caste, education, birth order, socioeconomic quintile, and type of delivery significantly affect the utilization of complete PNC services.

The results of multivariate logistic regression show that while variables district, caste, birth order, and type of delivery are statistically significant, variables education and socioeconomic quintile lose their significance in explaining PNC utilization. Compared to women in Ludhiana district, women in Jalandhar district are 3.04 times more likely and women in Hoshiarpur district are 4.73 times more likely to receive complete PNC. The odds are higher for respondents belonging to general category to utilize PNC than respondents belonging to scheduled caste (AOR = 1.96). Women with the birth order of 2–4 are less likely than women with the birth order of <2 to utilize these services (AOR = 0.43). Further, the odds are higher for women who had delivered via cesarean section to avail care during postnatal period than women who had normal deliveries.

Table 2: Results of logistic regression

Variables	UOR	AOR
District ^a		
Amritsar	1.70	1.20
Jalandhar	5.41***	3.04*
Patiala	2.30*	1.66
Gurdaspur	3.79***	2.51
Tarn Taran	1.51	2.35
Hoshiarpur	4.38***	4.73**
Caste ^b		
General	1.88**	1.96*
OBC	1.02	1.04
Religion ^c		
Sikhism	0.73	1.14
Other	0.56	0.35
Maternal age (years) ^d		
20-30	1.14	1.11
≥30	2.10	1.90
Education ^e		
Up to primary	1.27	0.63
Up to secondary	2.20**	0.73
Senior secondary and above	3.64***	0.84
Birth order ^f		
2-4	0.52***	0.43***
≥4	0.23**	0.39
Wealth quintiles ^g		
2 nd	2.78**	1.64
3 rd	3.88***	1.81
4 th	2.96**	1.38
5 th	4.72***	1.28
Type of delivery ^h		
Cesarean	14.43***	13.39***

^aLudhiana: Reference group, ^bSC: Reference group, ^cHinduism: Reference group, ^d<20: Reference group, ^eNil: Reference group, ^f<2: Reference group, ^g1st: Reference group, ^hNormal: Reference group, ***Significant at 1%, **Significant at 5%, *Significant at 10%. Source: Primary data. UOR: Unadjusted odds ratio, AOR: Adjusted odds ratio

DISCUSSION

Postpartum visits to health facility provide the mothers an opportunity to receive assessment, care, and most important counseling. The study reveals that the utilization of complete PNC services in the study group has been abysmal, with only 25.9% of the respondents making the use of these services. Contrary to this, about 69% of the respondents had received full antenatal care and about 96% of the respondents had facility-based deliveries. The limited utilization of PNC arising out of unawareness somewhere supports the argument that in the process of improving maternal and newborn health, the need to strengthen PNC component has been overlooked. The findings are consistent with the studies conducted for rural Khammouane in Lao PDR and India.^[3-4] Whether a mother delivers at home or at health facility significantly affects the uptake of postnatal services. Mothers who deliver at health facility are more likely to receive PNC.^[9,10] The variable place of delivery has not been incorporated in our analysis primarily

because all 17 respondents who delivered at home did not avail any postnatal checkup.

Among the variables considered for the possible influence on the utilization of postnatal services, the results of multivariate logistic regression reveal district, caste, birth order, and type of delivery to be significant. Variations at district level are observed where mothers in Jalandhar and Hoshiarpur have more odds to receive complete PNC compared to mothers in Ludhiana. The multivariate analysis reveals that women belonging to scheduled castes are less likely to receive PNC compared to their counterparts from general category. Caste system, though abolished, continues to remain deep rooted and gets reflected in low usage of health-care services and resulting poor maternal health outcomes for women belonging to the lower castes.^[11] According to the present study, the odds of receiving complete PNC are less for women with birth order of 2-4 compared to women with first-order births, implying that women are less likely to make investments in maternal health for higher-order births. The multivariate analysis also revealed that women who had delivered via cesarean section have 13.39 times higher odds of receiving complete PNC than the women who had delivered vaginally. Women with cesarean section deliveries stay at hospital for longer duration than women with normal deliveries. In the present study, women with cesarean section deliveries on an average stayed at health facility for 6.1 days while women with normal deliveries on an average stayed at health facility for 1.8 days. Longer stay at hospital means more checkups, and even after discharge from the facility, such women visit skilled health personnel to get their stitches checked. Women tend to receive PNC when their deliveries are conducted by cesarean section.^[4,12-15]

A number of studies have pointed out marked variations in the utilization of postnatal services based on the education level and socioeconomic status of the mothers. Compared to women with no formal education, women with formal education are found to have higher prospects to access postnatal services.^[14,16-18] Education by increasing the knowledge of the mother about the available health services enables her to achieve improved health outcomes.^[19] Similarly, women belonging to wealthy families are expected to have a higher utilization of postnatal services than women belonging to poorer families.^[12,20-22] In the present study, education and socioeconomic status though significant in bivariate analysis lose their significance in multivariate analysis. One of the probable reasons for such a finding could be that in contrast to the mentioned studies, the present study has considered complete PNC comprising four postnatal checkups. When all the variables were considered in multivariate analysis, the variables education and socioeconomic status did not significantly explain the differences in PNC utilization.

CONCLUSION

The present study has tried to analyze the factors affecting the utilization of complete PNC. The study revealed that compared to ante- and intrapartum care, a smaller number of

women had availed PNC for their last pregnancy. The results of multivariate analysis reveal that district, caste, birth order, and type of delivery are significant in explaining the utilization of postnatal services. The results have remained inconclusive regarding the influence of education and socioeconomic status. Given that most of the maternal deaths happen during postpregnancy period, there is a need to create significant awareness regarding the importance of accessing PNC.

Limitations

The role of community health workers in the provision of PNC has not been explored in the present study.

Financial support and sponsorship

This study was financially supported by UGC NET JRF Grant.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Tinker A, Ten Hoope-Bender P, Azfar S, Bustreo F, Bell R. A continuum of care to save newborn lives. *Lancet* 2005;365:822-5.
2. Kerber KJ, de Graft-Johnson JE, Bhutta ZA, Okong P, Starrs A, Lawn JE. Continuum of care for maternal, newborn, and child health: From slogan to service delivery. *Lancet* 2007;370:1358-69.
3. Sakuma S, Yasuoka J, Phongluxa K, Jimba M. Determinants of continuum of care for maternal, newborn, and child health services in rural Khammouane, Lao PDR. *PLoS One* 2019;14:e0215636.
4. Singh A, Padmadas SS, Mishra US, Pallikadavath S, Johnson FA, Matthews Z. Socio-economic inequalities in the use of postnatal care in India. *PLoS One* 2012;7:e37037.
5. International Institute for Population Sciences, ICF. National Family Health Survey-4 (2015-16): State Fact Sheet Punjab. Mumbai, India: International Institute for Population Sciences; 2017.
6. World Health Organization. WHO Technical Consultation on Postpartum and Postnatal Care. Geneva: World Health Organization; 2010.
7. World Health Organization. WHO Recommendations on Postnatal Care of the Mother and Newborn. Geneva: World Health Organization; 2014.
8. Filmer D, Pritchett LH. Estimating wealth effects without expenditure data-or tears: An application to educational enrollments in states of India. *Demography* 2001;38:115-32.
9. Angore BN, Tufa EG, Bisetegen FS. Determinants of postnatal care utilization in urban community among women in Debre Birhan Town, Northern Shewa, Ethiopia. *J Health Popul Nutr* 2018;37:10.
10. Wudineh KG, Nigusie AA, Gesese SS, Tesfu AA, Beyene FY. Postnatal care service utilization and associated factors among women who gave birth in Debreabour town, North West Ethiopia: A community-based cross-sectional study. *BMC Pregnancy Childbirth* 2018;18:508.
11. Patel P, Das M, Das U. The perceptions, health-seeking behaviours and access of scheduled caste women to maternal health services in Bihar, India. *Reprod Health Matters* 2018;26:114-25.
12. Dhaher E, Mikolajczyk RT, Maxwell AE, Krämer A. Factors associated with lack of postnatal care among palestinian women: A cross-sectional study of three clinics in the west bank. *BMC Pregnancy Childbirth* 2008;8:26.
13. Matijasevich A, Santos IS, Silveira MF, Domingues MR, Barros AJ, Marco PL, *et al.* Inequities in maternal postnatal visits among public and private patients: 2004 pelotas cohort study. *BMC Public Health* 2009;9:335.
14. Izudi J, Amongin D. Use of early postnatal care among postpartum women in Eastern Uganda. *Int J Gynaecol Obstet* 2015;129:161-4.
15. Khaki JJ, Sithole L. Factors associated with the utilization of postnatal care services among Malawian women. *Malawi Med J* 2019;31:2-11.
16. Dhakal S, Chapman GN, Simkhada PP, van Teijlingen ER, Stephens J, Raja AE. Utilisation of postnatal care among rural women in Nepal. *BMC pregnancy childbirth* 2007;7:19.
17. Mohan D, Gupta S, LeFevre A, Bazant E, Killewo J, Baqui AH. Determinants of postnatal care use at health facilities in rural Tanzania: Multilevel analysis of a household survey. *BMC Pregnancy Childbirth* 2015;15:282.
18. Titaley CR, Dibley MJ, Roberts CL. Factors associated with non-utilisation of postnatal care services in Indonesia. *J Epidemiol Community Health* 2009;63:827-31.
19. Chakraborty N, Islam MA, Chowdhury RI, Bari W. Utilisation of postnatal care in Bangladesh: Evidence from a longitudinal study. *Health Soc Care Community* 2002;10:492-502.
20. Amin R, Shah NM, Becker S. Socioeconomic factors differentiating maternal and child health-seeking behavior in rural Bangladesh: A cross-sectional analysis. *Int J Equity Health* 2010;9:9.
21. Jat TR, Ng N, San Sebastian M. Factors affecting the use of maternal health services in Madhya Pradesh state of India: A multilevel analysis. *Int J Equity Health* 2011;10:59.
22. Singh PK, Rai RK, Alagarajan M, Singh L. Determinants of maternity care services utilization among married adolescents in rural India. *PLoS One* 2012;7:e31666.