

**Research Article****HOUSEHOLD COPING STRATEGIES FOR DELIVERY CARE COSTS:
FINDINGS FROM A RURAL DISTRICT OF PAKISTAN*****^{1,2}Sohail Akhtar | ³Muhammad Kamran Khalid**

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ABSTRACT:

Aim: Objective of the existing study is to find out the associated factor of which play significant role in financing OOPE in choice of delivery by households in district Rajanpur, Punjab, Pakistan.

Background: In Pakistan health expenditure is a main issue when it comes to Out-of-pocket expenditure is considered as major challenge. Housholds resort to different coping strategies with the increase in OOPE on health care, including maternal care.

Material and Methods: Nature of the data was cross-sectional and study setting and location was in district Rajanpur, a predominantly rural district in Pakistan. Data was collected in time period of october 2020 to december 2020 from 368 mothers using multi-stage random sampling, in the selected Basic Health Unit areas were included in the study. Data were collected through a pretested interview schedule translated in Urdu language.

Results: Savings or current income were the primary sources of financing OOPE on delivery care by 90% of respondents, followed by borrowing reported by 35% of respondents who borrowed money from friends and relatives to cope with the current expenditure on delivery. Low-income families used multiple sources to meet the burden of OOPE, and a significant proportion of them had resorted to borrowing (41.5%) and sale of household assets (23%) to meet OOPE on delivery care. The study concludes that despite various government initiatives to improve maternal healthcare services in Pakistan, most rural families have incurred OOPE in seeking delivery care.

KEYWORDS

Delivey Care, Coping Strategy, Maternal Care, Out-of-Pocket Expenditure, Pakistan

1 | INTRODUCTION

Out-of-pocket Expenditures (OOPE) absorbs a significant proportion of family income in countries where public-funded health services are inadequate or limited access to such services. A major share of OOPE, particularly in Asia, has been on the purchase of medicines and supplies¹. Households also incur a significant share of indirect costs such as the time spent on traveling and receiving maternal care, as well as restriction of productive activity caused by the care of the family member. Sometimes, households use their savings and sell off family assets to pay for delivery care and also borrow at high-interest rates from money lenders. In many Asian countries, borrowing to pay for health care often leads families to reduced food consumption and even education of children .

OOPE is the main challenge for developing countries. With the continuous increase in OOPE on health care, a significant share of the population in these countries are impoverished, leading to indebtedness and poverty^{2,3,4}. Approximately eight hundred and eight million in one hundred and thirty three countries have faced such catastrophic health spending⁵. Evidence from many countries has shown that families resort to different coping strategies with the increase in OOPE on health care, such as current household income, household savings, borrowing from money lenders, selling of assets, and reducing expenditure on household consumption^{6,7,8}. Studies have also shown that people sell their livestock and harvest crops to finance their health expenditures^{9,10,11}.

In Pakistan, few studies attempted to collect information related OOPE on maternal health care, however, none of the studies have examined how families meet maternal health services expenses. Coping strategies are defined as "measures used by households to alleviate the out-of-pocket expenses that could not be managed from their regular income or savings"¹². Borrow, sale of assets, saving, getting loan with interest are the means of financing OOPE. Some families pay their health expenses through their current income if cost is low. Using current income to pay health expenses comes at cost of sacrificing education and social events but not at cost of basic needs like food, shelter cloth. Worth form of paying health expenses is sale of asset¹³. The present study was conducted with an objective of identifying the significant sources of financing OOPE on utilizing delivery care services by families in public and private healthcare facilities in district Rajanpur, Punjab, Pakistan.

2 | LITERATURE REVIEW

A study in Bangladesh¹⁴ measured the economic costs of maternal complications and to understand household coping strategies for financing maternal healthcare in Bangladesh found that one-third of households spent more than 20% of their annual household expenditure on maternal health care and managed to pay through informal credit, donations from relatives and selling assets. Another study of care-seeking of under-five children in Bangladesh¹⁵ found that different financing mechanisms were adopted to meet OOPE, which includes loans with interest (6%), a loan without interest (9%), and financial help from relatives (6%). A similar type of findings was also reported in African countries.¹⁶ Studies conducted in India have shown that the high OOPE during complicated and cesarean deliveries force low income families to opt other source of financing delivery. A national-level study in India¹⁷ showed that a higher proportion between 23% -29% of mothers who incurred OOPE on institutional delivery care in the public and private sector, met the OOPE through borrowing or selling assets. Findings revealed that one mother out of seven borrow money or sold assets, 1/5 sell property and borrow money, two fifth use savings to meet the OOPE on institutional delivery.

In a study in 15 African countries, ¹⁸ showed that borrowing and selling assets were the major strategy followed by households in meeting OOPE in delivery care which ranged from 23% in Zambia to 68% in Burkino Faso. The study also found that households with higher OOPE during hospitalization were significantly more likely to borrow and deplete assets compared to those paying OOPE as outpatients. A study in northern Ghana¹⁹ showed that 75% of the women used savings, but 19% had to sell assets to finance the OOPE maternal care. A community-based study in India showed that 3/4th of mothers benefited from both central and state schemes to cover OOPE partially or completely. At the same time, 28.7% of mothers incurred OOPE for using maternal and neonatal care, which were met by borrowings and household savings²⁰.

3 | MATERIAL AND METHODS

Nature of this study is cross-sectional and study location and setting includes district Rajanpur, Pakistan. Data was collected from 368 mothers from basic health units. The time of data collection includes October 2020 to December 2020. Sample was selected using multi stage random sampling. Formula $n = z^2pq/d^2$ where confidence interval $p = 0.59$ (proportion of institutional delivery in rural areas as per Pakistan Demographic and Health Survey 2017-2018), $z = 1.96$ at 95%. Three basic health units (BHU) were selected from one rural health centre. All mothers having age of 15 years to 49 included in the study and data was obtained from district head quarter. From the list of mothers, 22 respondents were selected through simple random sampling technique; so as to reach the desired number. Questionnaire was translated in Urdu language. Questionnaire first part consists of demographic information, second consist of information of household, third section includes details of delivery, OOPE, direct medical and non-medical expenses. Final section consists of sources of financing delivery. All ethical considerations were taken into account. All respondents were assured that this data would be used only for academic purpose and identity of the respondents would be kept confidential. SPSS was used to analyze the data. Medical Ethics Committee FMHS, UNIMAS (Ref. UNIMAS/NC-21.02/03-02 Jld.4 (35) approved the study.

4 | RESULTS

Majority of the mothers were having age of 26-35 years 174(47.2%) followed by those mother less than 25 years of age 141(38.3%) and only 53(14.4%) mother were above 36 years of age. Regarding mothers' education most of the mother were not educated they identify they did not had any schooling 219(59.55) followed by those mothers who had primary education 59 (16%) and 90 (24.4% mothers have secondary and above education. Regarding mothers' occupation 315(85.6%) were housewives, 25 work in public sector and 28(7.6%) have other jobs. In addition income level of household was also investigated and it was revealed from the findings that 200 (54.35) have less than 10 thousand PKR income, followed by 119(32.35) have income between 10 to 30 thousand PKR, 37 (10%) have income between 30 thousand to 50 thousand and only 12 (3.2%) household have income above 50 thousand PKR. See Table 1

Table 1 Socio-economic and demographic characteristics of mothers (n=368).

Variables	Characteristics	No	%
Age of mothers	< 25 years	141	38.3
	26-35 years	174	47.2
	> 36 years	53	14.4
Mothers' Education	Secondary & above	90	24.4
	Primary (1-5 years)	59	16.0
	No schooling	219	59.5
Occupation of mothers	Housewife	315	85.6
	Working in government	25	6.8
	Other jobs	28	7.6
Household monthly income	below 10000	200	54.3
	10001 – 30000	119	32.3
	30001 – 50000	37	10.0
	Above 50001	12	3.2

The analysis revealed that 366 mothers (99.45%) out of 368 included in the study incurred OOPE on delivery care, which includes both direct medical and non-medical expenditures. Two mothers who did not incur any expense on delivery care sought delivery care in public healthcare facilities.

Fig 1 shows the results of the analysis on source of financing OOPE. The figure shows that families used multiple sources of financing delivery care. While savings and current incomes were the major source of financing OOPE for about 90% of families (329), 35% of these families (128) also borrowed from friends and relatives to meet the expenses, 20.5% families sold their assets to meet OOPE, 9.6% of families received some money as gift from friends and relatives and 5.2% had to borrow money from others on interest to meet expenses related to delivery care.

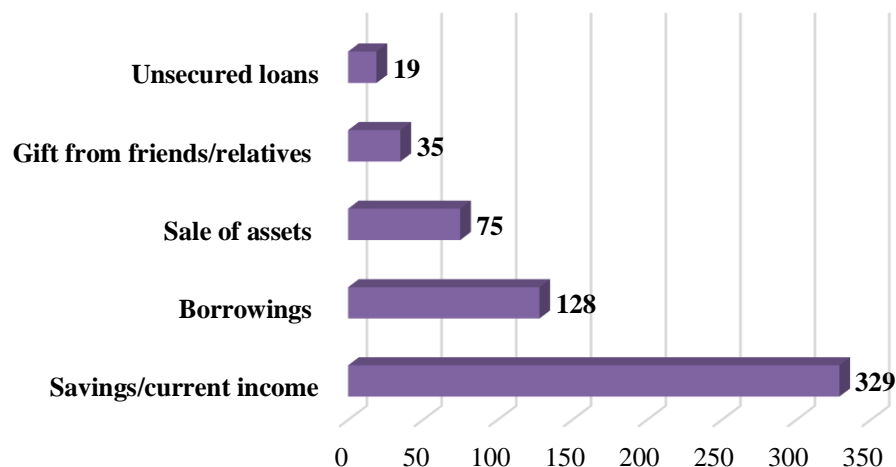


Figure 1: Source of Finance to Meet OOPE on Delivery Care.

Table 2 shows the details of sources used to finance OOPE by families who utilized public and private healthcare facilities by type of delivery. The analysis reveals that mothers who had normal deliveries in public health facilities used savings and current incomes as major source of financing OOPE (95.5% of families), while 25.2% families also borrowed from friends and relatives to meet the expenses, 10.4% families had to sell their assets to meet OOPE, 3.2 % of families received some money as gift from friends and relatives to meet the expenses. For mothers who had cesarean deliveries the sources of finance were savings and current income (65.2%), borrowings (47.8%), sales of assets (56.5%), gifts (39%) and unsecured loans (26%).

Table 2 Source of financing OOPE on delivery

OOPE financing	Public sector (N= 245)		Private sector (N=121)	
	Normal Delivery (N= 222)	Caesarean delivery (N= 23)	Normal Delivery (N= 68)	Caesarean delivery (N= 53)
Savings/current income	212 (95.5%)	15(65.2%)	59(86.7%)	43(81.1%)
Borrowings	56 (25.2%)	11(47.8%)	29(42.6%)	32(60.4%)
Sale of assets	23 (10.4%)	13 (56.5%)	18 (26.4%)	21(39.6%)
Gift from friends/relatives	07 (3.2%)	09 (39.1%)	04 (5.9%)	15(28.3%)
Unsecured loans	02 (0.9%)	06 (26%)	02 (2.9%)	9 (16.9%)

OOPE: out-of-pocket expenditure (OOPE). * Multiple responses

The analysis shows that mothers who had normal deliveries in private healthcare facilities also used savings and current incomes as major source of financing OOPE (86.7% of families), while 42.6% families also borrowed from friends and relatives to meet the expenses, 26.4% families had to sell their assets to meet OOPE, 5.9% of families received some money as gift from friends/ relatives and 2.9% families had unsecured loans to meet the expenses. For mothers who had cesarean deliveries in private healthcare facilities the sources of finance were savings and current income (81.1%), borrowings (60.4%), sales of assets (39.6%), gifts (28.3%) and unsecured loans (16.9%). A detailed analysis of sources of financing OOPE on delivery care in public and private hospitals reveal that mothers who opted private healthcare facilities had to depend more on borrowing, sales of assets, gifts and unsecured loans compared to those opted public hospitals for delivery care.

Figure 2 shows that savings and current income were the major source of financing OOPE on delivery care sought by mothers in public and private hospitals. The figure shows that 92.6% and 84.3% of mothers who availed delivery care from the public and private hospitals respectively used savings and current income to meet their OOPEs. While

51.2% of mothers who sought delivery care in private hospitals resorted to borrowings; this source was opted by 26.9% of mothers who had their child births in the public hospitals. Likewise, mothers who sought delivery care in the private hospitals had to sell their assets (32.2%) and took loans (9.10%) as compared to those sought delivery care in the public hospitals (14.7% and 3.30%).

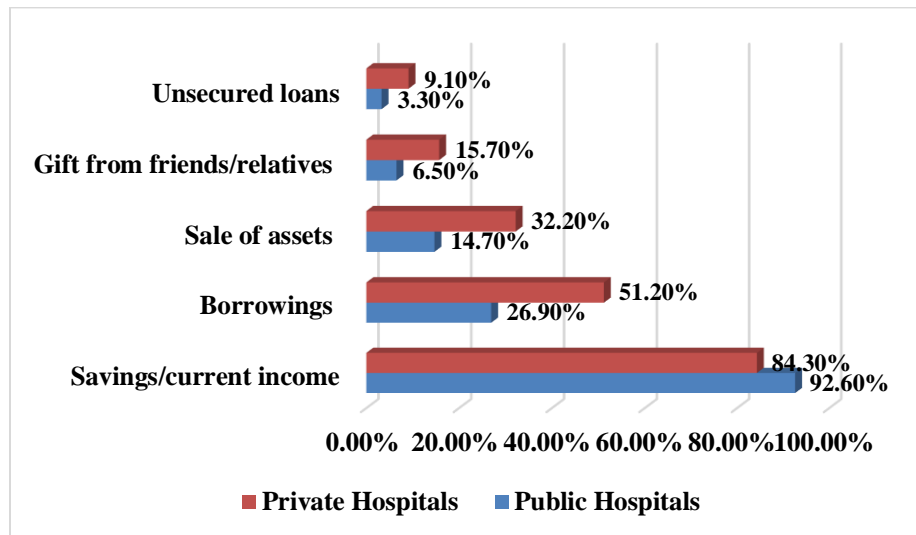


Figure 2: Sources of financing OOPE on delivery care in public/private hospitals.

The details of sources used to finance OOPE on delivery care by monthly household income of the respondents is shown in Table 2. The analysis reveals that majority of low-income families used multiple sources to meet the burden of OOPE on delivery care in both public and private healthcare facilities. A significant proportion of low-income group had resorted to borrowing and sales of household assets to meet OOPE on delivery care.

Table 3 Sources of financing OOPE on delivery care

Sources OOPE	Household Monthly Income					
	Below 10,000 (n=200)	10,001 - 20,000 (n=74)	20,001 - 30,000 (n=45)	30000-40000 (n=17)	40001-50000 (n=20)	Above 50,000 (n=12)
Savings/current income	177 (88.5%)	62 (83.8%)	41 (91.1%)	17 (100%)	20 (100%)	12 (100%)
Borrowings	83 (41.5%)	25 (33.7%)	10 (22.2%)	8 (5.8%)	1 (5.0%)	0
Sale of assets	46 (23.0%)	22 (29.7%)	5 (11.1%)	2 (11.7%)	0	0
Gifts from friends/relatives	19 (9.5%)	11 (14.8%)	3 (7.3%)	2 (11.7%)	0	0
Unsecured loans	13 (6.5%)	6 (8.1%)	0	0	0	0

The overall analysis in Table 3 shows that savings/current income of the households were the primary source of funding for delivery care by 88.5% of the low income rural families (below PKR 10,000 PKR per month), and 41.5% of them also borrowed money from their friends and relatives to cope with the expenditure on delivery care. Besides, 23.5% of families had to sell their household assets, 9.5% of them received some money as gifts from relatives and friends and 5.2% of them had to borrow money on interest to pay for delivery care, while 6.5% also resorted to unsecured loans. These families received no direct financial incentives from the government for seeking care at the public health facilities. Despite various government initiatives to improve maternal healthcare services in Pakistan, a significant proportion of the rural families had incurred OOPE on delivery care in the public and private healthcare facilities.

5 | DISCUSSION

Several studies in developing countries have shown that OOPE deters households from seeking health care and can also cause considerable hardship and financial impoverishment, particularly among the poor. The present research findings show that savings or current income of the households were the primary sources of financing OOPE on delivery care (90%) of rural women. The second source of finance is borrowing, as the study found that 35% of households had to borrow money from friends and relatives to cope with the current expenditure. This is followed by selling household assets, as the study showed that almost one-fifth of families sold some of their household assets to meet delivery care expenditures.

Further, the analysis reveals that mothers who opted for private healthcare facilities for delivery care had to depend more on borrowing, sales of assets, gifts, and unsecured loans than those who opted for public hospitals for delivery care. A majority of low-income families used multiple sources to meet the burden of OOPE, and a significant proportion of them had resorted to borrowing and sale of household assets to meet OOPE on delivery care. These findings were supported by studies conducted in other countries.^{14-17,20} Other studies in Pakistan support these findings. An earlier study in Pakistan²¹ found that 35% of public hospital users and 64% of private hospital users who could not afford travel costs took loans for meeting maternal healthcare expenses. The proportion of women who took loans was higher among those living more than 5 km from the healthcare facility than those living within 5 km. Another study in Pakistan²² found that most women who incurred OOPE borrowed money from their relatives and friends or sold household items. The present study also noted that none of the families received direct financial incentives from the government for seeking care at public healthcare facilities. Despite various government initiatives to improve maternal healthcare services in Pakistan, many rural families have incurred OOPE in seeking delivery care.

6 | CONCLUSION

This study showed that savings or current income were the primary sources of financing OOPE on delivery care by 90% of respondents, followed by borrowing, as the study revealed that 35% of participants borrowed money from friends and relatives to cope with the current expenditure on delivery. Mothers who opted for private healthcare facilities for delivery care had to depend more on borrowing, sales of assets, gifts, and unsecured loans than those who opted for public hospitals for delivery care. None of the families received direct financial incentives from the government for seeking care at public healthcare facilities. The study concludes that despite various government initiatives to improve maternal healthcare services in Pakistan, most rural families have incurred OOPE in seeking delivery care.

Conflict of Interests

Authors declare no competing interest

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