

A Comparative Analysis of Financial Consequences for C-Section Birth and Vaginal Birth among Working Women and Housewives

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Abstract

This research provides a comparative evaluation of the economic impacts of cesarean section (C- section) and vaginal delivery among working women and housewives. The study seeks to estimate the cost implication of both forms of delivery, taking into consideration direct costs in the form of hospitalization, medication, and surgery, as well as indirect costs in terms of loss of income and expenses on postnatal care. Utilizing a mixed-methods approach, the research is carried out in Pune with 200 respondents on purposive sampling to provide a fair representation. Statistical measures like mean, standard deviation, t-tests, and regression analysis were utilized using MS Excel and SPSS. The research identifies that C-section delivery is much costlier for families with longer stays in the hospital, surgery, and related medical bills. Conversely, vaginal deliveries, although less costly, can also incur significant indirect costs for postpartum recovery and accompanying healthcare requirements. The study also uncovers variations in health insurance coverage, where a significant percentage of women, especially housewives, experience financial pressure from out-of-pocket payments. The study emphasizes the need for stronger health policies, financial assistance programs, and greater insurance coverage to reduce the economic burden of childbirth, especially among economically disadvantaged women. The policy implications of the study are aimed at increasing financial support mechanisms, encouraging affordable maternal care, and enhancing access to insurance coverage to provide equal childbirth experiences.

Keywords: *Cesarean Section, Vaginal Birth, Financial Burden, Working Women and Housewives*

1. Introduction

Pregnancy is often perceived as a period of happiness and contentment for a woman, but it could also cause her to be anxious sometimes due to some complications. Nonetheless, medical advancements have led to the development of a surgical procedure known as a caesarean section in order to improve the rate of survival. The surgical procedure called caesarean section (CS) is performed in the case of maternal or fetal endangerment (Farman, 2023)¹. The number of C- sections is going up very quickly in underprivileged and middle-income countries, especially among women of high socio-economic development status (SES) (Van Der Spek et al., 2020)². A C-section is a surgery which is a procedure where an incision is made on the mother's belly to extract the baby. C-Section is a very important surgical procedure for the mother's and the baby's life that can save them under different conditions. There are some cases where elective caesarean will have many problems and medical concerns. However, in some situations, the doctor may see that a caesarean is the right decision for the proper functioning of the pregnancies of the baby and the mother (Khanum et al., 2021)³. While CS delivery serves as an alternative to vaginal birth in cases of impossibility or problems, it results in several long-term issues for both the mother and the infant. The CS delivery method was implemented to decrease mortality from puerperal conditions (Muniruzzaman et al., 2025)⁴.

The chance of experiencing economic costs depends on a number of factors, ranging from the ability to access care to the presence of health financing policies that achieve financial risk protection and the nature of the disease (Binyaruka, & Mori, 2021)⁵. Failure to use a C- section when necessary may result in increased maternal and neonatal mortality and morbidity (Altroug et al., 2025)⁶. Contemporary medicine characterizes a C-section as a life-saving, maternal-friendly surgical intervention (Mamuk, & Oskay, 2022)⁷. Moreover, cesarean birth is a medical procedure that incurs financial strain on the family and

necessitates hospitalization and anesthetic compliance (Ghukasyan, 2021)⁸. Surgical deliveries provide advantages to mother and perinatal health when executed with therapeutic rationale (Entringer et al., 2018)⁹.

Vaginal birth is a delivery in which forceps, a vacuum apparatus, or another tool is used to facilitate vaginal delivery, with or without mother exertion. The choice to use an instrument for fetal extraction considers the implications for the mother, fetus, and neonate, weighing these factors against the alternatives of cesarean birth or expectant care (Bahl et al., 2024)¹⁰. Vaginal birth is optimal for both the fetus and the mother when the infant reaches full-term, defined as a gestational age of 37 to 42 weeks. Vaginal delivery is favored due to the rising morbidity and mortality linked to operational cesarean deliveries (Desai, & Tsukerman, 2023)¹¹. Following vaginal delivery, women may experience exhaustion, lethargy, sleep disturbances, breast discomfort, physical pain, blood vessels, constipation, sexual dysfunction, and postpartum depression (El Sayed et al., 2019)¹². In contrast to vaginal birth, caesarean sections are linked to an elevated risk of maternal and newborn mortality, as well as other maternal morbidities such as getting sick, uterine rupture, and fetal embolism (Kizito, 2021)¹³.

2. Research Background

C-section birth and vaginal birth among working women

Pregnant women often engage in a decision-making process on the manner of delivery, influenced by several variables (Roudsari, et al., 2015)¹⁴. Childbirth is a multifaceted process including physical, emotional, social, physiological, cultural, and psychological components. Childbirth may be a significant and sometimes unpleasant event for women (Zakerihamidi et al., 2015)¹⁵. Natural childbirth is the recommended method of delivery, and cesarean sections should be restricted to instances when natural childbirth is impossible or poses a significant risk to the mother or infant's life (Safari-Moradabadi et al., 2018)¹⁶.

Employment during pregnancy may significantly impact negative obstetric, perinatal, and infant outcomes. Regarding shift work in women, shift workers may have heightened rates of monthly irregularities, and night shifts may correlate with elevated rates of spontaneous abortion (Suzumori et al., 2020)¹⁷. In the last decade, there has been significant interest in patient-requested cesareans and the rising frequency of cesarean deliveries in developed nations (Fuglenes et al., 2011)¹⁸. Pregnant working women often participate in the decision-making process on the manner of delivery, influenced by many variables. These processes are shaped by an individual's surroundings, values, personality, knowledge, and insight, which dynamically impact one another (Zewudu et al., 2024)¹⁹. The majority of employed women regarded the cesarean section as the preferable method of birth. Employed women favored caesarean sections owing to time constraints and a desire to minimize frequent medical appointments. They choose for cesarean delivery to facilitate the birth of the baby at a convenient moment (Verma, & Baniya, 2022)²⁰.

Cost variations between C-section and Vaginal Birth

A societal cost analysis encompasses all expenses associated with the intervention or therapy, including both direct and indirect costs. Direct costs refer to the resources used by a patient or participant, including expenses for medication, materials, personnel, as well as lodging and transportation costs incurred due to participation in an intervention or treatment. Indirect costs refer to the loss of value resulting from individuals with illnesses or patients undergoing certain treatments being unable to work for a particular duration or unable to fully engage in life (Aladin et al., 2024)²¹.

The cost of having a baby via cesarean section or vaginal delivery is influenced by such things as medical procedures, hospital stays, and last but not least, postnatal care. Typically, a c-section birth is surgery that is charged at a significantly higher price than a natural one since the anesthesia, operating room fees, and longer hospital stay are typically involved (Devika, 2024)²². Vaginal delivery is usually less invasive and requires a shorter stay in the hospital, making it much more cost-efficient since it necessitates fewer medical interventions (Kumar et al., 2023)²³.

Impact of Childbirth expenses on financial factors

Cost largely depends on various factors such as urban or rural location, type of birth, length of woman stay in the hospital, and gross quietness or boisterousness of the baby. The overall cost for the delivery includes the expenditures on medications as well as other fees such as physician fees, diagnostic test prices, transportation, and more. In India, the cost is a significant aspect determining the use of labor and maternity care services (Balla et al., 2022)²⁴. Globally, the amount of money that families and individuals are paying for the health care services is an important financial decision for families throughout the world. The imbalance and unpredictability of the household health care out-of-pocket expense could bring the families into bankruptcy and push them to poverty (Singh, 2019)²⁵.

In order to reduce Out-Of-Pocket Expenditures (OOPE) and simultaneously improve maternal health outcomes in the country,

the Government of India and most of the state governments have commenced the demand-side funding programs (Goli et al., 2016)²⁶. Different programs have been initiated, such as the Janani Suraksha Yojana (JSY) in 2005 and the Janani Shishu Suraksha Karyakram (JSSK) in 2011, to finance pregnant women and neonates, thus reducing or eliminating out-of-pocket spending (OOPE). Odisha state government has implemented policies like the free dispensing of medication scheme in 2013 and conditional cash transfer scheme Mamata in 2011 to counteract out-of-pocket spending for maternity care and improve nutritional outcomes. It provides financial support during the prenatal stage to nine months after delivery at a gradual scale (Sahu, & Bharati, 2017)²⁷.

The aim of the paper is to carry out a comparative study of the financial implications of C-section and vaginal delivery among working women and housewives. Childbirth, being a life-altering event, has not only medical but also considerable financial implications that differ depending on the delivery mode. The rising rate of C-section deliveries, particularly among women of higher socio-economic status, calls for a detailed analysis of the cost differences between C-section and normal births. The research aims to compare direct costs like hospitalization, medication, surgery, and postnatal care with indirect costs like loss of income, longer recovery times, and other economic limitations that affect household economic stability. By considering the impact of health policy and financial support programs in alleviating such costs, the study hopes to offer policy suggestions that might help dispel families' economic burdens. Ultimately, this study hopes to add to enlightened decision-making for childbirth options, affordability of healthcare, and the necessity for specialized financial interventions in order to guarantee equitable access to maternal care.

The significance of the study comparatively analyzes the cost implications of C-section and vaginal delivery among working women and housewives, which addresses a key area of maternal healthcare economics. The cost of giving birth, especially through C-sections, puts a heavy monetary burden on families, which affects household savings, financial well-being, and long-term economic health. Since working women might prefer C-sections because of the lack of time and ease, and housewives might have alternative economic and healthcare concerns, it is important to comprehend these cost differences. In addition, it highlights the shortcomings of existing health policies and insurance coverage, especially for the uninsured or underprivileged women, calling for special policy interventions. Through empirical information on the financial burden of giving birth, the research seeks to enlighten healthcare policymakers, insurers, and financial institutions to craft strategies that will reduce financial hardships. Finally, the research adds to debate on fair maternal healthcare, pushing for better support mechanisms in place financially to help make it affordable and accessible for all women irrespective of their employment.

The paper is divided into eight sections. Section 1 comprises the introduction of the document. A literature review on exploring the financial consequences for C-section birth and vaginal birth among working women and housewives is presented in section 2. Section 3 delineates the research model of the investigation. Research methodology and methods were examined in Section 4. The empirical findings and results have been provided in detail in section 5 and Section 6. It has been succeeded by a discussion of the results in section 7. Section 8 contains conclusions, implications, limitations, and directions for future research. References have finally been included.

2. Review of Literature

Cesarean deliveries correlate with an increased incidence of infant admissions to neonatal intensive care units (NICU), extended hospital stays, and heightened use of human resources for support (Kim, Y., et al., 2021)²⁸. Meanwhile (Irwind, R., et al., 2021)²⁹ intended to provide a predictive instrument for pregnant women who may need a cesarean section, enabling appropriate preparations by moms, family, and healthcare professionals. Similarly (Jahan, I. 2019)³⁰ intended to elucidate the reasons associated with elevated Caesarean section rates and to delineate the postpartum and pediatric problems linked to vaginal or Caesarean birth. On the other hand (Mathew, A. P. C., et al., 2024)³¹ evaluated and compared the quality-of-life post-normal vaginal birth and cesarean section among moms at a government tertiary care hospital.

Objective 1: *To analyze the cost differences between C-section and vaginal birth, considering hospital charges, medication, postnatal care, and indirect expenses.*

Hypothesis 1: *There is a significant difference in the total cost incurred between C-section and Vaginal Birth.*

The author Alexander, D. (2017)³² examined the correlation among physician remuneration, cesarean section use, and neonatal health, using vital statistics and newly acquired data on Medicaid reimbursements to doctors. Furthermore (Negrini, R., et al., 2021)³³ investigated the global increase in the incidence of C-sections. Evidence indicates that cesarean birth is not only costlier but also associated with inferior mother and newborn outcomes. This research evaluates the kind of delivery linked to greater healthcare value in low-risk pregnancies. Likewise

(Mohammadshahi, M., et al., 2018)³⁴ marked that the C-section rate reveals it is too high, therefore necessitating a strategic strategy for its regulation. The primary motivation for physicians to favor cesarean sections is financial considerations; hence, this research aimed to provide financial strategies to enhance normal vaginal deliveries (NVD) and reduce non- indicated cesarean sections.

Objective 2: *To examine the impact of childbirth expenses on financial factors (household savings, financial stability, and long-term economic well-being).*

Hypothesis2: *Childbirth expenses significantly impact financial factors (household savings, financial stability, and long-term economic well-being).*

Financial literacy is crucial for low-income communities to develop economic resilience and attain financial empowerment. Financial literacy initiatives inside microfinance institutions (MFIs) may significantly impact consumers by teaching them on money management, savings, budgeting, and prudent borrowing, therefore reducing financial vulnerability (Omowole, B. M., et al., 2024)³⁵. Similarly, Muhammad, T. (2019)³⁶ investigated the significance of financial stability. The propensity of unmarried women to marry was shaped by their views on economic stability, while the consumption capacity and financial resources of families dictated choices about childbearing and its timing.

Objective 3: *To provide policy recommendations for reducing the financial strain of childbirth on families, particularly for uninsured or underprivileged women.*

Hypothesis 3: *Existing health policies and financial aid schemes significantly reduce the financial burden of childbirth for uninsured or underprivileged women.*

The study of Allen, H., et al., (2024)³⁷ indicated that the expenses associated with delivery and postpartum healthcare lead to considerable and enduring financial distress, especially for lower- income couples with commercial insurance. Medicaid provides enhanced security for low- income families by reducing cost-sharing for labor and postpartum healthcare; yet even modest cost-sharing under Medicaid imposes financial burdens. On the other hand, Thayer, Z. M., & Gildner, T. E. (2021)³⁸ investigated the persons affected by financial pressure, namely pregnant women, for whom additional financial stress may be very significant owing to the expenses related to prenatal care and infant provisions. Financial stress has been linked to increased depressive symptoms in pregnant women, potentially affecting birth outcomes and the long-term health of kids.

There is extensive literature on the medical, economic, and policy impacts of the cost of giving birth, citing the increased cost and medical complications of C-sections over giving birth vaginally. There were few empirical studies on the differential economic burden, insurance coverage, and long-term economic impacts on these two groups. There was limited empirical work on the alleviation of financial burden by prevailing healthcare policies, especially for uninsured or underprivileged women, and on the need for additional research on targeted financial subsidies and policy efficacy.

3. Research Model based on Hypothesis

The study model analyzes the influence of birthing style and expenditures on overall childbirth costs and financial variables, emphasizing economic repercussions and policy ramifications.

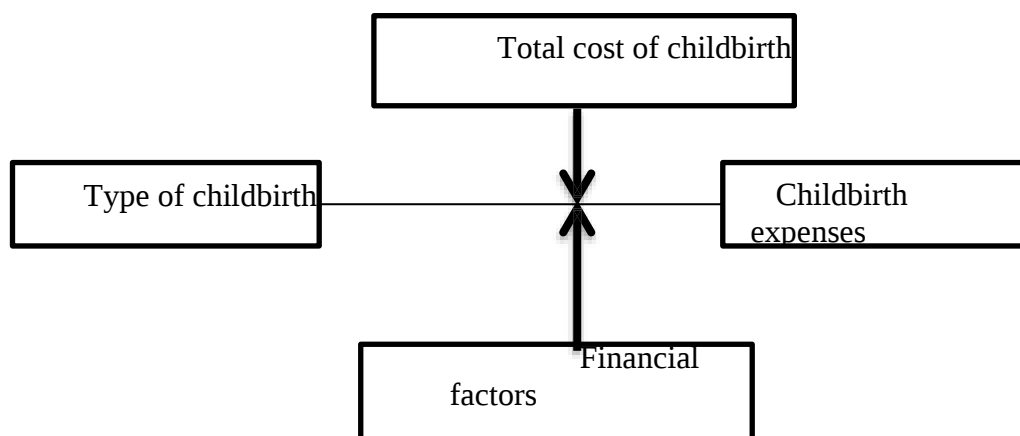


Figure 1: Research Model

4. Research Methodology

The study used a mixed-method design, combining both qualitative and quantitative research methods to provide a thorough analysis. The research is carried out in Pune, with working women and housewives being the focus as the target population. A purposive sampling method is used to obtain a sample size of 200 respondents to ensure that appropriate participants are chosen based on specific criteria. The study design is descriptive and comparative to measure variations and patterns in the cost of childbirth. A questionnaire is the main research tool for data collection to enable systematic information gathering. The type of childbirth and cost of childbirth are independent variables, and total cost of childbirth and financial considerations are dependent variables. Statistical analysis is conducted on MS Excel and SPSS to extract meaningful results from the data gathered. Several statistical measures, such as mean, standard deviation, T-test, and regression analysis, are utilized to explain the associations between independent and dependent variables. The methods are used to identify trends, compare, and make conclusions about the financial factors of childbirth among working women and housewives in Pune. The research approach is made reliable, valid, and comprehensive in addressing the economic implication of childbirth.

5. Result

Table 1: Demographic Variables

Sr. No.	Demographic Characteristics		N	%
1	Age Group	18–25 years	48	24%
		26–30 years	32	16%
		31–35 years	40	20%
		31–35 years	36	18%
		Above 40 years	44	22%
2	Employment Status	Full-time	33	16.50%
		Housewife	45	22.50%
		Part-time	51	25.50%
		Self-employed	34	17%
		Unemployed	37	18.50%
3	Educational Qualification	Below High School	48	24%
		High School Graduate	53	26.50%
		Postgraduate	48	24%
		Undergraduate	51	25.50%
4	Household Monthly Income	Below 20,000	44	22%
		20,000-50,000	52	26%
		50,001-1,00,000	65	32.50%
		Above 1,00,000	39	19.50%
5	Types of Delivery	Vaginal Birth	91	45.50%
		C-Section Birth	109	54.50%
6	Health Insurance Coverage	Fully Covered	67	33.50%
		Partially covered	54	27%
		Not Covered	79	39.50%

7	Number of Children	First-time mother	64	32%
		Two Children	84	42%
		Three or more Children	52	26%

Demographic respondent characteristics reflect a broad spread across a range of attributes. The maximum percentage falls in the 18–25 years (24%) and above 40 years (22%) age groups, and a proportionately even spread is reported across the rest of the ages. Employment data reveal that housewives (22.5%) and part-time employees (25.5%) form the largest number, followed by the unemployed (18.5%), self-employed (17%), and full-time employees (16.5%). The educational statuses are proportionately evenly distributed, with high school graduates (26.5%) being the largest group, followed by undergraduates (25.5%), postgraduates (24%), and those not graduating from high school (24%). For household monthly income, the largest segment (32.5%) falls in the ₹50,001-1,00,000 bracket, followed by 26% in the ₹20,000-50,000 bracket, while 22% fall below ₹20,000. Delivery types reflect a higher incidence of C-section deliveries (54.5%) compared to delivery through the vagina (45.5%). Health insurance-wise, the maximum percentage (39.5%) lacks insurance coverage, while 33.5% are fully insured and 27% are partially insured. The majority of the respondents have two children (42%), followed by first-time mothers (32%) and those with three or more children (26%). The demographic results provide an overall picture of the study participants, highlighting important socio-economic and health-related trends.

Hypothesis 1: There is a significant difference in the total cost incurred between C-section and vaginal birth.

Table 2: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.512 ^a	.262	.258	2.56889
a. Predictors: (Constant), Childbirth expenses				

The model summary table 2 shows the connection between childbirth costs and the dependent variable. The R value of 0.512 implies that there is a moderate positive connection between childbirth costs and the outcome variable. The R Square (0.262) suggests that about 26.2% of the dependent variable's variance is accounted for by childbirth costs. The Adjusted R Square (0.258) is adjusted for the number of predictors in the model and gives a lower but comparable value, reflecting a stable model fit. The standard error of the estimate (2.56889) is the average difference between observed and predicted values, reflecting the degree of accuracy in prediction. Overall, while birth costs heavily weigh upon the dependent variable, a significant amount of variation remains unaccounted for, which implies other factors as well have some role to play.

Table 3: ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	463.152	1	463.152	70.183	.000 ^b
	Residual	1306.643	198	6.599		
	Total	1769.795	199			
a. Dependent Variable: Financial factors						
b. Predictors: (Constant), Childbirth expenses						

Table 3 reveals that the regression model is effective in explaining the variation in the financial dimensions of the cost of childbirth. An F-value of 70.183 with its related significance value of .000 indicates a significant statistical relationship that causes the rejection of the null hypothesis that the cost of childbirth does not impact the financial factors. The model is able to explain a major variation in variance as revealed through the regression sum of squares (463.152) compared to the total sum of squares (1769.795). Despite the residual mean square (6.599) that suggests the existence of residual variance not explained by the model, the model in general still remains statistically significant in the prediction of financial factors.

Table 4: Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.149	.763		4.129	.000
	Childbirth expenses	.609	.073	.512	8.378	.000
a. Dependent Variable: Financial factors						

The result in Table 4 shows that the cost of childbirth has a significant effect on financial factors. The unstandardized coefficient (B = 0.609) indicates that as there is an increase in the cost of childbirth by one-unit, financial factors rise by 0.609 units. The standardized coefficient (Beta = 0.512) shows a moderate to strong positive correlation. The t-value (8.378) is high, and the significance level is 0.000, verifying the statistical significance of the correlation. This implies that the cost of childbirth is a primary driver of financial stress, highlighting the economic cost of childbirth and its impact on overall financial well-being.

Hypothesis 2: Childbirth expenses significantly impact financial factors (household saving, financial stability, and long-term economic well-being).

Table 5: Paired Samples Correlations

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Type of Delivery & Total cost of childbirth	200	-.141	.047

The results from Table 5 validate a weak negative correlation of (-0.141) between the type of delivery and the cost of giving birth, with significance of 0.047. This validates a statistically valid but weak inverse relationship, and as one factor increases, the other decreases slightly. Again, once more, the low correlation coefficient indicates that the type of delivery has a minimal impact on the cost of giving birth. While the statistical reliability ($p < 0.05$) indicates significance, the low correlation indicates that there could be other variables that could contribute more towards the determination of childbirth costs than the mode of delivery.

Table 6: Paired Samples Test

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Type of Delivery - Total cost of childbirth	-9.14000	2.87956	.20362	-9.54152	-8.73848	-44.889	199	.000

Table 6 displays the interpretation of a paired samples t-test between delivery type and overall birth cost. The difference in means is -9.14, revealing that one delivery type is notably cheaper than another. The standard deviation (2.87956) and standard error mean (0.20362) show the variation in differences. The 95% confidence interval is not zero and (-9.54152 to -8.73848) reiterates the statistical significance of the difference. The value of -44.889 in 199 degrees of freedom indicates a highly significant effect. The p-value (.000) further assures us that the cost difference is significant at the level 0.05, so the observed difference would not happen by chance. These results point out that the mode of delivery significantly influences childbirth costs, which could have an effect on healthcare affordability and policy-making on maternal care costs.

Hypothesis 3: Existing health policies and financial aid schemes significantly reduce the financial burden of childbirth for uninsured or underprivileged women.

The financial cost of delivery shows profound inequality between vaginal and cesarean sections, the former of which tends to be more costly medically. The paper explores financial cost of delivery among working women and housewife's, particularly for the poor and uninsured. Despite utilization of available schemes and health policies for financial aid to minimize such costs, inequality persists. The impact of government policies and insurance programs to alleviate out of pocket expenditure, the majority of women particularly homemakers lacking employer provided insurance are economically burdened. Apart from direct costs, indirect costs such as lost income, postpartum services, and long-term health problems also affect economic stability. Improvement suggestions based on policies include higher financial support, improved insurance cover, and facilitating access to low-cost maternal health care services. Integration of existing policies to ensure comprehensive cover for vaginal and cesarean sections would dramatically lower financial costs, particularly for economically disadvantaged women. Such inequality must be addressed to improve equitable maternal care (Abdel-Tawab et al., 2018)³⁹.

6. Findings

The finding of the paper demonstrates considerable economic consequences of the costs of childbirth, specifically pointing to inequalities between vaginal and C-section births. The statistical evidence validates that the costs of childbirth heavily influence financial aspects like family savings, financial well-being, and long-term economic health. The positive moderate correlation between childbirth expenses and financial burden ($R = 0.512$) implies that the increasing medical costs associated with childbirth, particularly among uninsured or disadvantaged women, impose a considerable financial burden on families. Second, although mode of delivery proves to have a statistically significant influence on overall childbirth expenses ($p < 0.05$), the weak negative correlation (-0.141) implies that factors other than the mode of delivery play a stronger role in varying costs. The findings highlight the inadequacies of current health insurance policies since a significant percentage of the respondents are still not covered (39.50%), further increasing financial burdens. Additionally, the paired samples t-test also validates the significant cost variation between vaginal and C-section deliveries ($p = 0.000$), which further emphasizes the need for policy measures to improve

affordability and financial support for maternal care. To reduce these cost burdens, policy suggestions focus on increasing insurance coverage, raising financial assistance for maternal care, and adding low-cost childbirth services, with guaranteed access for economically poor women.

7. Discussion

A cesarean section is an invasive treatment performed on a woman's abdomen and uterus when vaginal birth presents risks to both the mother and baby (Mersha, & Shibiru, 2024)⁴⁰. Similarly, Hyman et al., (2024)⁴¹ Cesarean section (C-section) delivery is medically requisite in 10%–20% of newborns. Unwarranted cesarean sections lead to increased rates of mother and baby morbidity (such as hemorrhage, infection, respiratory distress, and both temporary and permanent disabilities) and mortality (i.e., death). Superfluous C-sections incur elevated financial expenses, including significant out-of-pocket expenditures by patients. On the other hand, Barbounaki et al., (2021)⁴² studied the global proportion of women who have had a C-section has increased from around 7% in 1990 to 21% in 2023. A C-section is a life-saving treatment intended to save the woman's life; nonetheless, contemporary societal and medical factors contribute to the prevalence of C-section births. Likewise, Allin, et al., (2015)⁴³ stated that more than one in four births is delivered by Cesarean section across the OECD where fee-for-service remuneration schemes generally compensate C-sections more generously than vaginal deliveries.

Various social and demographic characteristics substantially influence the financial costs associated with pregnancy, especially for women. The research examines the socioeconomic and demographic factors influencing out-of-pocket expenditures (OOPE) during pregnancy and labor (Arumugam et al., 2024)⁴⁴. On the other hand, Acharya, et al. (2021)⁴⁵ indicated that out-of-pocket medical expenses after the first delivery exceed what American couples can financially manage, perhaps leading them to delay having a second child. This observation may be especially accurate when delivery medical expenses are sent to debt collection agencies. Moreover Kes, et al., (2015)⁴⁶ elevated expenditures associated with pregnant cases were further exacerbated during delivery and postpartum, mostly due to increasing facility-based fees and expenses.

The possession of health insurance serves as an indication of pregnant women's preparedness for childbirth (Laksono, et al., 2021)⁴⁷. Similarly Jeung, et al., (2022)⁴⁸ examined insurance transitions for birthing adults with continuous coverage, including Medicaid and Medicaid managed care, before, during, and after pregnancy. Likewise, Johnston, E. M., et al., (2021)⁴⁹ studied recent coverage improvements, more policy reforms are necessary to assist women in preserving health insurance coverage both before to and during pregnancy, as well as to enable them to manage persistent health concerns such as obesity and depression. Amu, et al., (2021)⁵⁰ explored wealth level and home location was the contextual characteristics substantially correlated with health insurance coverage. Women without formal education were 78% less likely to own health insurance (OR = 0.22, 95% CI = 0.21–0.24) in comparison to their counterparts with higher education. Urban women had greater likelihoods of possessing health insurance compared to their rural counterparts.

8. Conclusion

The comparative analysis of financial consequences for C-section birth and vaginal birth among working women and housewives is a prime example of how childbirth significantly affects the financial status of households. The results show that high hospitalization, surgery, anesthesia, and postnatal drugs make C-section deliveries bring about the highest direct costs, which results in a greater financial burden on families. Furthermore, costs that are not directly associated with the delivery process such as lost income, longer recovery periods, and postnatal medical expenses are the main source of financial stress for uninsured or underprivileged women. Despite the initiatives undertaken by the government and the availability of financial aid programs, the out-of-pocket payment for the mothers whose husbands are not sponsors of an insurance package is a still considerable concern. The underlying investigation recommends the amendments of structures that provide additional financial aid, intensified health insurance support, and the adoption of specific health policies to cut down the budgetary pressure of pregnancy and ensure the fair provision of high-quality and affordable maternal care.

The research points to the major economic consequences of childbirth, with the cesarean section costing families more money compared to the vaginal delivery. The economic cost especially devastating to housewife and the uninsured who do not enjoy financial security or employer-sponsored insurance. The associated high cost of Cesarean sections, hospital stays, surgery and lengthy recovery periods contributes to high out of pocket payments that adversely impact household savings and long-term financial health. As much as working women may use cesarean sections because of convenience and occupational stress, housewives may bear the brunt of financial costs because of a lack of income sources. The paper points out the importance of strong maternal health policies, improved financial assistance programs and improved insurance coverage to mitigate these

economic costs. Policy maker should prioritize raising awareness about cost effective maternal health care alternatives, equalizing access to birth services and simplifying financial assistance programs, particularly for economically disadvantaged women.

The study of the economic impact of cesarean sections compared to vaginal deliveries among working women and homemakers is enlightening on cost differences, financial burden, and implications for healthcare policy. First, the geographical scope of the study is limited to Pune, which might not be representative of the varied socio-economic conditions and healthcare availability in different regions, particularly in rural areas where maternity care dynamics might be quite different. Second, while the sample size of 200 respondents is enlightening, it might be too small to generalize to larger populations, and the threat of selection bias might distort the findings. Third, while the study is focused mainly on direct and indirect monetary costs, it does not account for qualitative aspects, such as the psychological or emotional distress of the costs of giving birth. Finally, while the study is enlightening on existing healthcare policies and insurance schemes, it does not provide any comments on their long-term effectiveness in reducing economic burdens or other policy interventions that might provide more sustainable financial support to women experiencing economic hardship. Future studies might overcome these limitations by using a larger and more diverse sample, longitudinal research methods, and qualitative insights to achieve a better understanding of the financial aspects involved in giving birth.

9. Future Research Direction

Future research into the economic cost of cesarean sections and vaginal deliveries among working women and homemakers can be targeted towards a range of key areas. First, longitudinal research can investigate the long-term economic cost of giving birth, including postpartum healthcare spending, maternal morbidity concerns, and effects on work and economic security. Second, comparisons between socio-economic classes and geographic locations can provide more insight into disparities in access to care, health insurance coverage, and individual spending. Additionally, future research can investigate the impact of state programs and private health insurance programs on reducing economic costs, especially for uninsured and economically disadvantaged women. The research can also be targeted towards exploring psychological and emotional costs associated with alternative methods of childbirth and the degree to which financial hardship influences postpartum well-being and domestic relationships. Lastly, the analysis of cost-effectiveness of alternative mother-child healthcare plans, including home birth and midwife-assisted births, in reducing economic stress can provide badly needed policy direction. Lastly, the convergence of economic modeling and healthcare outcomes through interdisciplinary research could provide a definitive picture of economic sustainability of maternal healthcare programs and inform future reform towards facilitating affordable, high- quality childbirth care for all.

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