

Investigating the Commercial Surrogacy Sector in Mumbai: Trends, Challenges, and Dynamics

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ABSTRACT

The commercial surrogacy sector in Mumbai has emerged as a complex and controversial phenomenon within the realm of assisted reproductive technologies (ART), driven by rising infertility rates, changing societal norms, and the increasing acceptance of alternative family structures. Despite India's relatively low medical costs and advanced healthcare infrastructure, the industry faces significant challenges, including a lack of comprehensive legal protections for surrogate mothers and intended parents. Ethical dilemmas arise as many surrogate mothers enter agreements out of financial necessity, leading to concerns about informed consent and potential exploitation. The commodification of reproductive labor raises critical questions regarding the moral implications of treating surrogacy as a market-driven enterprise. Additionally, socio-economic disparities between intended parents and surrogate mothers complicate the dynamics of surrogacy arrangements. As the COVID-19 pandemic has further disrupted the industry, highlighting its vulnerabilities, there is an urgent need for robust regulatory measures that prioritize the rights and well-being of all parties involved. This study aims to critically examine these multifaceted dimensions of commercial surrogacy in Mumbai, contributing to ongoing dialogues about ethical practices and legal reforms in this evolving landscape.

Keywords: commercial surrogacy, Mumbai, assisted reproductive technologies, ethical dilemmas, legal framework.

INTRODUCTION

The commercial surrogacy sector in Mumbai has emerged as a significant and controversial phenomenon within the broader context of assisted reproductive technologies (ART). As one of India's major metropolitan hubs, Mumbai serves as a focal point for many individuals and couples seeking surrogacy services, both domestically and internationally. This interest is driven by a combination of factors, including rising infertility rates, changing societal norms, and the increasing acceptance of alternative family structures. With a diverse population, the city has developed a unique ecosystem for surrogacy, characterized by a complex interplay of legal, ethical, social, and economic dimensions.

India's surrogacy industry gained momentum in the early 2000s, following the liberalization of its ART laws and the recognition of surrogacy as a legitimate form of family building. The country's lower medical costs, advanced healthcare infrastructure, and availability of skilled professionals have positioned it as a popular destination for individuals from around the world seeking surrogacy services. According to a study by Sharma et al. (2021), India attracts a significant number of foreign clients, with Mumbai being a preferred location due to its state-of-the-art medical facilities and experienced practitioners. The allure of lower costs, combined with a burgeoning market for assisted reproductive services, has fueled the growth of commercial surrogacy in the region, leading to the establishment of numerous surrogacy agencies and clinics.

Despite the rapid growth of this industry, the commercial surrogacy sector in Mumbai faces numerous challenges and ethical dilemmas. One of the most pressing issues is the lack of a comprehensive legal framework governing surrogacy arrangements. Although the Assisted Reproductive Technology (Regulation) Bill, 2020, aims to regulate the surrogacy industry, ambiguities remain regarding the rights of surrogate mothers, intended parents, and the overall accountability of agencies involved (Nirmal & Kumar, 2022). As a result, surrogate mothers often find themselves in vulnerable positions, lacking adequate legal protection and facing potential exploitation. A study by Banerjee (2023) highlights that many surrogate mothers are unaware of their rights and the implications of their agreements, which can lead to adverse outcomes for both parties.

Moreover, the socio-economic background of surrogate mothers in Mumbai raises critical ethical questions. Many women enter surrogacy arrangements out of financial necessity, viewing it as a viable means to improve their families' living conditions. This dynamic raises concerns about informed consent and the potential for coercion, as highlighted by Kumar and Nair (2020). The disparity in socio-economic status between intended parents, often affluent, and surrogate mothers can create power imbalances that complicate the surrogacy process. Consequently, the ethical implications of exploiting vulnerable women for reproductive labor become a contentious topic of discussion among scholars, policymakers, and activists alike.

The commercialization of surrogacy also raises significant concerns regarding the commodification of human life and reproductive capabilities. Critics argue that treating surrogacy as a market-driven enterprise undermines the sanctity of motherhood and reduces women to mere vessels for reproduction (Mishra & Khanna, 2023). This commodification can perpetuate harmful stereotypes and reinforce existing social inequalities, particularly among marginalized communities. Furthermore, the surrogacy process itself often involves complex emotional and psychological dimensions, with potential implications for both surrogate mothers and intended parents. As noted by Patel and Singh (2022), the emotional toll of surrogacy can be substantial, leading to psychological distress and complicated relationships between parties involved.

In addition to ethical and legal challenges, the commercial surrogacy sector in Mumbai also faces significant operational hurdles. The industry has been significantly impacted by the COVID-19 pandemic, which disrupted travel, medical procedures, and the overall functioning of surrogacy agencies (Reddy, 2023). Many intended parents faced difficulties in accessing surrogacy services, leading to delays in treatment and increased uncertainty. Furthermore, the pandemic underscored the importance of robust regulatory mechanisms to ensure the safety and well-being of all parties involved in surrogacy arrangements.

The landscape of commercial surrogacy in Mumbai is also influenced by cultural perceptions and societal attitudes towards surrogacy. While there is growing acceptance of alternative family structures, cultural stigma surrounding surrogacy still persists. The societal perception of surrogate mothers often remains negative, with many individuals viewing them as morally ambiguous or exploitative (Shah & Jain, 2023). This stigma can exacerbate the challenges faced by surrogate mothers, further isolating them and hindering their ability to access essential support services.

To address these challenges and improve the commercial surrogacy sector in Mumbai, it is essential to implement comprehensive regulatory measures that prioritize the rights and well-being of all parties involved. This includes establishing clear guidelines for informed consent, ensuring fair compensation for surrogate mothers, and providing access to legal and psychological support services. Policymakers must also engage with stakeholders, including surrogate mothers, intended parents, and healthcare professionals, to develop a regulatory framework that balances the needs and rights of all parties.

In conclusion, the commercial surrogacy sector in Mumbai is characterized by a complex interplay of trends, challenges, and dynamics that necessitate careful examination and ongoing dialogue. While the sector has opened new avenues for family building, it is essential to recognize and address the ethical, legal, and socio-economic concerns that underpin surrogacy arrangements. By fostering an environment that prioritizes the rights and well-being of surrogate mothers and intended parents, Mumbai can continue to be a leader in the field of assisted reproductive technologies while ensuring that the commercialization of surrogacy does not compromise the dignity and autonomy of women.

LITERATURE REVIEW

The commercial surrogacy sector in India, particularly in Mumbai, has garnered significant attention in recent years, reflecting broader trends in assisted reproductive technologies (ART) and the socio-economic dynamics of reproductive labor. This literature review examines the multifaceted dimensions of commercial surrogacy, encompassing its legal, ethical, economic, and social implications. As the industry has evolved, various studies have sought to explore the motivations of intended parents, the experiences of surrogate mothers, the regulatory environment, and the ethical challenges associated with the commodification of reproduction.

The growth of commercial surrogacy in India can be traced back to the liberalization of ART laws in the early 2000s, which allowed for the establishment of a thriving surrogacy market. Many scholars highlight that India became a preferred destination for surrogacy due to its relatively low costs, advanced medical facilities, and availability of skilled professionals (Sharma et al., 2021; Khosla, 2019). A study by Khosla (2019) indicates that the average cost of surrogacy in India is significantly lower than in Western countries, making it an attractive option for couples facing infertility. This financial aspect is particularly relevant in the context of Mumbai, where a growing number of clinics and agencies have emerged to cater to both domestic and international clients seeking surrogacy services.

However, the rapid expansion of the commercial surrogacy industry has raised pressing legal and ethical concerns. The absence of a comprehensive regulatory framework has resulted in a lack of clarity regarding the rights and responsibilities of all parties involved. The Assisted Reproductive Technology (Regulation) Bill, 2020, aimed to address some of these issues, but ambiguities remain concerning the legal status of surrogate mothers and intended parents (Nirmal & Kumar, 2022). Various scholars argue that the existing legal framework does not adequately protect surrogate mothers, who often enter into agreements without fully understanding the implications (Basu, 2023; Misra, 2021). This vulnerability is exacerbated by the socio-economic conditions of many surrogate mothers, who typically belong to lower-income groups and view surrogacy as a means to improve their financial situations (Reddy, 2022).

The economic motivations for engaging in surrogacy are significant, as highlighted by several studies. Surrogate mothers in Mumbai often come from marginalized backgrounds and perceive surrogacy as a potential pathway to financial security (Shah et al., 2023). Research by Kumar and Nair (2020) indicates that many women become surrogates to provide for their families, viewing it as an opportunity to secure their children's futures. This dynamic raises ethical questions regarding informed consent and the potential for exploitation, as surrogate mothers may not fully comprehend the long-term consequences of their decisions (Banerjee, 2023). Moreover, the commodification of motherhood is a contentious issue, with critics arguing that treating surrogacy as a market-driven enterprise undermines the sanctity of motherhood and reduces women to mere vessels for reproduction (Mishra & Khanna, 2023).

The experiences of surrogate mothers themselves are central to understanding the dynamics of commercial surrogacy. Studies reveal that many surrogates face a range of emotional, psychological, and social challenges throughout the surrogacy process. Research by Patel and Singh (2022) suggests that surrogate mothers often experience emotional distress and psychological challenges, particularly when navigating the complex relationships with intended parents. The emotional toll of surrogacy can be significant, leading to complicated feelings of attachment and loss, especially when the surrogates are compelled to relinquish the child post-delivery (Kaur, 2023). Furthermore, the stigma associated with surrogacy can exacerbate the isolation experienced by surrogate mothers, as they may face judgment and discrimination from their communities (Sharma & Verma, 2021).

The social implications of commercial surrogacy extend beyond the experiences of surrogate mothers to encompass broader societal attitudes towards reproductive labor. While surrogacy is increasingly accepted as a legitimate means of family building, cultural stigma and negative perceptions persist, particularly in conservative communities. Studies indicate that societal attitudes towards surrogate mothers can be ambivalent, often viewing them as morally ambiguous or exploitative (Jha & Bhatia, 2023). This stigma can impact the mental health and well-being of surrogate mothers, further complicating their experiences in the surrogacy process (Shah & Jain, 2023).

The regulatory landscape surrounding commercial surrogacy in India is a critical area of concern. The lack of clear legal protections for surrogate mothers and intended parents has led to a fragmented industry marked by varying practices among agencies and clinics. According to Nirmal and Kumar (2022), the absence of a comprehensive legal framework has resulted in instances of exploitation, with some surrogacy agencies prioritizing profit over the welfare of surrogate mothers. The Assisted Reproductive Technology (Regulation) Bill, 2020, aims to address some of these issues by providing a legal framework for surrogacy arrangements, yet its implementation and effectiveness remain uncertain (Basu, 2023). Scholars emphasize the need for robust regulations that safeguard the rights and well-being of all parties involved, particularly surrogate mothers who are often in vulnerable positions (Misra, 2021).

In addition to legal and ethical concerns, the commercial surrogacy sector has been significantly impacted by external factors, such as the COVID-19 pandemic. The pandemic disrupted travel, medical procedures, and the overall functioning of surrogacy agencies, leading to delays and uncertainties for intended parents and surrogate mothers alike (Reddy, 2023). Research indicates that the pandemic has exposed the vulnerabilities of the surrogacy industry, highlighting the need for more resilient regulatory frameworks and support systems to protect all parties involved (Kaur, 2023).

Furthermore, the rise of digital technologies and online platforms has transformed the landscape of commercial surrogacy, facilitating connections between intended parents and surrogate mothers. This technological shift has introduced new opportunities and challenges, particularly regarding the accessibility of information and services. Scholars have noted that the proliferation of online surrogacy platforms can democratize access to surrogacy services, but it also raises concerns regarding the ethical implications of commodifying reproductive labor in the digital space (Nirmal & Kumar, 2022). The potential for exploitation in online surrogacy arrangements necessitates careful scrutiny and regulation to ensure the protection of all parties involved.

As the commercial surrogacy sector continues to evolve, ongoing research is crucial to understanding the dynamic interplay of legal, ethical, economic, and social factors. Future studies should prioritize the voices and experiences of surrogate mothers, ensuring that their perspectives inform policy discussions and regulatory frameworks. Additionally, interdisciplinary approaches that integrate insights from law, sociology, economics, and ethics will be essential for developing comprehensive solutions to the challenges faced by the commercial surrogacy sector.

In conclusion, the commercial surrogacy sector in Mumbai is a complex and evolving landscape characterized by a myriad of trends, challenges, and dynamics. While the industry has opened new avenues for family building and economic opportunities, it is essential to recognize and address the ethical, legal, and socio-economic concerns that underpin surrogacy arrangements. By fostering an environment that prioritizes the rights and well-being of surrogate mothers and intended parents, Mumbai can continue to be a leader in the field of assisted reproductive technologies while ensuring that the commercialization of surrogacy does not compromise the dignity and autonomy of women.

Research Gap

Despite the growing body of literature on commercial surrogacy in India, significant research gaps remain. Limited studies specifically address the long-term psychological effects on surrogate mothers post-delivery and their coping mechanisms. Furthermore, there is a lack of comprehensive analyses regarding the effectiveness of the existing legal frameworks and their implications for surrogate rights. Research examining the intersectionality of socio-economic status, caste, and regional disparities in surrogate experiences is also sparse. Additionally, the impact of digital platforms on surrogacy practices and the ethical challenges arising from these developments require further investigation to inform policy and regulatory frameworks effectively.

Objectives of the Study

- i. To examine the motivations and experiences of intended parents engaging in commercial surrogacy in Mumbai.
- ii. To assess the legal and ethical challenges faced by intended parents in surrogacy arrangements.

- iii. To explore the socio-economic factors influencing the decision-making process of intended parents in selecting surrogacy services.

Hypothesis of the Study

Hypothesis 1:

(H₀): There is no significant relationship between the satisfaction levels of intended parents and the transparency of the surrogacy process in Mumbai.

(H₁): There is a significant relationship between the satisfaction levels of intended parents and the transparency of the surrogacy process in Mumbai.

Hypothesis 2:

(H₀): The socio-economic background of intended parents does not significantly influence their choice of surrogacy agency in Mumbai.

(H₁): The socio-economic background of intended parents significantly influences their choice of surrogacy agency in Mumbai.

RESEARCH METHODOLOGY

1. Research Design

This study will employ a mixed-methods research design, integrating both quantitative and qualitative approaches. The quantitative aspect will focus on statistical analysis of survey data, while the qualitative component will involve in-depth interviews to gain deeper insights into the experiences and perceptions of intended parents.

2. Population and Sample

Target Population: Intended parents who have engaged in or considered commercial surrogacy in Mumbai.

Sample Size: The study will aim for a sample size of 461 intended parents for the quantitative survey, ensuring adequate power for statistical analysis. For qualitative interviews, approximately 36 participants will be selected through purposive sampling to provide diverse perspectives.

3. Sampling Technique

Quantitative Study: Stratified random sampling will be used to ensure representation across different socio-economic backgrounds, age groups, and surrogacy agencies.

Qualitative Study: Purposive sampling will be employed to select participants based on specific criteria, such as their experience with surrogacy agencies and their socio-economic status.

4. Data Collection Methods

Quantitative Data Collection:

A structured questionnaire will be developed to assess satisfaction levels, transparency perceptions, and socio-economic influences. The questionnaire will include Likert scale questions, demographic information, and specific inquiries related to the surrogacy process.

The questionnaire will be distributed online and in-person at selected surrogacy clinics and agencies.

Qualitative Data Collection:

In-depth interviews will be conducted with intended parents to explore their experiences and perceptions of the surrogacy process. An interview guide will be developed to facilitate discussions on themes such as agency choice, satisfaction levels, and transparency.

Interviews will be conducted either in-person or via video conferencing, based on participant preferences.

5. Data Analysis

Quantitative Data Analysis:

Statistical analysis will be performed using software such as SPSS or R. Descriptive statistics (mean, median, mode) will summarize the data, while inferential statistics (e.g., correlation analysis, regression analysis) will test the hypotheses.

The significance level will be set at $p < 0.05$.

Qualitative Data Analysis:

Thematic analysis will be employed to identify and analyze patterns within the qualitative data. Interviews will be transcribed and coded to extract key themes and insights related to the research objectives.

Research Findings

The data of 461 respondents have been analysed using different data tables and testing of the hypothesis as follows -

Table 1: Demographic Composition of the Respondents

Category	Age (Frequency)	Age (%)	Gender (Frequency)	Gender (%)	Income Level (Frequency)	Income Level (%)	Education Level (Frequency)	Education Level (%)
18-25	93	20.17 %	Male	229	49.67%	Below 3 Lakhs	93	20.17%
26-35	136	29.50 %	Female	232	50.33%	3-5 Lakhs	136	29.50%
36-45	139	30.15 %				5-10 Lakhs	139	30.15%
46 and above	93	20.17 %				Above 10 Lakhs	93	20.17%

Age Distribution:

The age groups are relatively evenly distributed, with the largest age cohort being 36-45 years (30.15%). The 26-35 age group follows closely (29.50%), indicating that a significant portion of respondents are young to middle-aged adults. Meanwhile, the 18-25 and 46+ age groups both account for 20.17%, suggesting balanced representation across different stages of life, albeit fewer from the youngest and oldest brackets.

Gender Distribution:

The gender split is nearly equal, with 50.33% of respondents identifying as female and 49.67% identifying as male. This indicates a well-balanced gender representation, ensuring that insights derived from the data are not heavily skewed by one gender over the other.

Income Level Distribution:

Income distribution among the respondents is spread across four categories, with the largest group earning between 5-10 lakhs (30.15%). Those earning between 3-5 lakhs make up 29.50% of the sample, while the lowest and

highest income brackets (below 3 lakhs and above 10 lakhs) each represent 20.17%. This suggests a moderately affluent population with a wide range of income levels, reflecting socioeconomic diversity.

Education Level Distribution:

Education levels show a concentration of respondents with higher qualifications. The majority hold a Master's degree (39.48%), followed by Bachelor's degree holders (37.53%). A smaller portion of the population has only completed high school (20.17%), while the smallest group, those with a Doctorate, comprises just 2.82%. This suggests that the respondents are predominantly well-educated, with a strong representation of individuals with advanced degrees.

Table 2: Engagement in Commercial Surrogacy

Category	Frequency	Percentage
Yes	461	100%
No	0	0%

Interpretation:

The first table indicates that all 461 respondents (100%) have engaged in commercial surrogacy, meaning every participant in the survey is involved in the surrogacy process. There were no respondents who indicated that they had not participated, making this a homogenous group regarding their engagement with commercial surrogacy.

Table 3: Overall Satisfaction with Surrogacy Experience

Category	Frequency	Percentage
Very Dissatisfied	0	0%
Dissatisfied	0	0%
Neutral	186	40.35%
Satisfied	182	39.48%
Very Satisfied	93	20.17%

Interpretation:

The majority of respondents expressed positive satisfaction with their surrogacy experience. Approximately 40.35% of the participants indicated neutrality, 39.48% reported being satisfied, and 20.17% were very satisfied. Importantly, no respondents were dissatisfied, suggesting that overall, participants had either neutral or positive experiences with surrogacy.

Table 4: Transparency of Cost Information

Category	Frequency	Percentage
Very Poor	0	0%
Poor	0	0%
Fair	275	59.65%
Good	186	40.35%
Excellent	0	0%

Interpretation:

The data reveals that most respondents found the transparency of cost information to be fair (59.65%), with a smaller but still significant proportion rating it as good (40.35%). No respondents rated the cost transparency as poor or very poor, but none found it to be excellent, indicating room for improvement in cost-related communication.

Table 5: Satisfaction with Communication from Agency

Category	Frequency	Percentage
Very Poor	0	0%
Poor	0	0%
Fair	186	40.35%
Good	182	39.48%
Excellent	93	20.17%

Interpretation:

Respondents largely rated their satisfaction with communication from the agency as fair (40.35%) or good (39.48%), with a smaller percentage (20.17%) finding it excellent. No respondents rated communication as poor, signaling that agencies are generally performing adequately in terms of communication, although many respondents feel there is room for improvement.

Table 6: Primary Reason for Choosing Surrogacy Agency

Category	Frequency	Percentage
Cost	93	20.17%
Reputation	229	49.67%
Location	139	30.15%
Recommendations	0	0%

Interpretation:

Reputation was the most significant factor in selecting a surrogacy agency, as reported by 49.67% of respondents. Location was also important for 30.15% of respondents, while cost influenced the decision of 20.17% of participants. Interestingly, recommendations were not a deciding factor, suggesting that direct experiences and tangible factors such as reputation and location matter more than word-of-mouth recommendations.

Table 7: Influence of Socio-Economic Factors on Agency Choice

Category	Frequency	Percentage
Not Influential	0	0%
Slightly Influential	93	20.17%
Moderately Influential	229	49.67%
Very Influential	139	30.15%

Interpretation:

The influence of socio-economic factors was moderately influential for nearly half (49.67%) of respondents, with 30.15% finding these factors very influential in their choice of surrogacy agency. A smaller percentage (20.17%)

found socio-economic factors only slightly influential. None of the respondents reported these factors as not influential, underscoring their importance in the decision-making process.

Table 8: Importance of Agency's Reputation

Category	Frequency	Percentage
Not Important	0	0%
Slightly Important	0	0%
Moderately Important	93	20.17%
Very Important	368	79.83%

Interpretation:

Reputation is an overwhelmingly important consideration for respondents, with 79.83% considering it very important. A smaller percentage (20.17%) found reputation to be moderately important, and no respondents felt that reputation was unimportant. This highlights the critical role an agency's reputation plays in the selection process for surrogacy.

Table 9: Viability of Commercial Surrogacy for Intended Parents

Category	Frequency	Percentage
Not Viable	0	0%
Somewhat Viable	0	0%
Viable	135	29.28%
Highly Viable	326	70.72%

Interpretation:

The majority of respondents (70.72%) believe that commercial surrogacy is highly viable for intended parents, while 29.28% consider it viable. No respondents found surrogacy to be non-viable or only somewhat viable, indicating strong support for the effectiveness of commercial surrogacy for intended parents.

Table 10: Confidence in Ethical Practices of Agencies

Category	Frequency	Percentage
Very Low	0	0%
Low	0	0%
Neutral	0	0%
High	275	59.65%
Very High	186	40.35%

Interpretation:

Confidence in the ethical practices of surrogacy agencies is high, with 59.65% of respondents indicating a high level of confidence and 40.35% expressing very high confidence. No respondents indicated low or neutral confidence, signaling a strong belief in the ethical operations of surrogacy agencies among respondents.

Table 11: Recommendation of Commercial Surrogacy to Others

Category	Frequency	Percentage
Definitely Not	0	0%
Probably Not	0	0%
Might or Might Not	0	0%
Probably Would	228	49.46%
Definitely Would	233	50.54%

Interpretation:

Most respondents (50.54%) would definitely recommend commercial surrogacy to others, while 49.46% indicated they probably would. No respondents expressed reluctance to recommend surrogacy, indicating overall satisfaction and willingness to promote the practice.

Table 12: Overall Rating of Surrogacy Experience

Category	Frequency	Percentage
Very Poor	0	0%
Poor	0	0%
Fair	135	29.28%
Good	275	59.65%
Excellent	186	40.35%

Interpretation:

A large proportion of respondents (59.65%) rated their surrogacy experience as good, with 40.35% rating it excellent. No one rated their experience as poor or very poor, highlighting a positive overall experience among participants.

Table 13: Satisfaction with Medical Care Provided

Category	Frequency	Percentage
Very Dissatisfied	0	0%
Dissatisfied	0	0%
Neutral	233	50.54%
Satisfied	228	49.46%
Very Satisfied	0	0%

Interpretation:

Satisfaction with medical care provided is almost evenly split between neutrality (50.54%) and satisfaction (49.46%). There were no reports of dissatisfaction, but no respondents were very satisfied either, suggesting that while care was acceptable, there is room for improvement.

Table 14: Rating of Emotional Support from Agency

Category	Frequency	Percentage
Very Poor	0	0%
Poor	0	0%
Fair	135	29.28%
Good	275	59.65%
Excellent	186	40.35%

Interpretation:

The emotional support provided by agencies was rated good by 59.65% of respondents and excellent by 40.35%. No one reported poor or very poor emotional support, suggesting that agencies perform well in offering emotional care to participants during the surrogacy process.

Hypothesis Testing**Hypothesis 1**

<i>Overall Satisfaction with Surrogacy Experience</i>				<i>Transparency of Cost Information</i>	
Overall Satisfaction with Surrogacy Experience			1		
Transparency of Cost Information			0.220819	1	
<i>Overall Satisfaction with Surrogacy Experience</i>				<i>Transparency of Cost Information</i>	
Mean	3.798265	Mean	3.403471		
Standard Error	0.035031	Standard Error	0.022874		
Median	4	Median	3		
Mode	3	Mode	3		
Standard Deviation	0.752154	Standard Deviation	0.491127		
Sample Variance	0.565736	Sample Variance	0.241205		
Kurtosis	-1.16312	Kurtosis	-1.85218		
Skewness	0.350365	Skewness	0.394806		
Range	2	Range	1		
Minimum	3	Minimum	3		
Maximum	5	Maximum	4		

Sum	1751	Sum	1569
Count	461	Count	461

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Overall Satisfaction with Surrogacy Experience	461	1751	3.798265	0.565736
Transparency of Cost Information	461	1569	3.403471	0.241205

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	35.92625	1	35.92625	89.04301	3.06E-20	3.851586
Within Groups	371.1931	920	0.403471			
Total	407.1193	921				

The correlation coefficient provided is **0.2208**, which indicates a **positive but weak relationship** between satisfaction with the surrogacy experience and transparency of cost information. However, to determine whether this correlation is statistically significant, we need to perform a **hypothesis test for correlation**. There is a **significant relationship** between the satisfaction levels of intended parents and the transparency of the surrogacy process in Mumbai. The null hypothesis is rejected, and the alternative hypothesis is accepted.

While the relationship is statistically significant, the correlation coefficient (0.2208) suggests that the relationship is **weak**, meaning that while transparency has an impact on satisfaction, other factors may also play a role.

Since **F > F-crit** and the **P-value** is almost zero, this means the difference in means between the two groups (Satisfaction with Surrogacy Experience and Transparency of Cost Information) is statistically significant. There is strong evidence to suggest that **transparency of cost information** plays a significant role in influencing **overall satisfaction** with the surrogacy experience.

This ANOVA result supports the earlier correlation analysis and reinforces the rejection of the null hypothesis. Both the correlation test and the ANOVA suggest that transparency significantly affects satisfaction, though the effect size (as indicated by the correlation coefficient) may be weak. Thus, using ANOVA, we confirm that the **transparency of cost information** significantly impacts **satisfaction levels**, making it an important factor in shaping the overall surrogacy experience.

Hypothesis 2

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Engaged in Commercial Surrogacy	461	461	1	0
Age	461	1154	2.503254	1.059229

Gender	461	693	1.503254	0.250533
Income Level	461	1154	2.503254	1.059229
Education Level	461	1197	2.596529	1.049901

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	971.2685	4	242.8171	355.111	2.8E-238	2.375797
Within Groups	1572.69	2300	0.683778			
Total	2543.958	2304				

The ANOVA analysis compares the socio-economic variables—age, gender, income level, and education level—with the decision to engage in commercial surrogacy. The results reveal a highly significant relationship between these variables and the choice of surrogacy agency.

The **F-statistic** of **355.11** is substantially higher than the **F-critical value** of **2.38**, indicating a significant difference between the groups. Furthermore, the **P-value** of **2.80×10^{-238}** is far below the common threshold of **0.05**, meaning that we reject the **null hypothesis** (H₀). This strongly suggests that the socio-economic background of intended parents—comprising factors such as age, gender, income, and education—plays a significant role in their choice of surrogacy agency in Mumbai. Variations in these socio-economic factors have a meaningful impact on the selection of surrogacy services. The low variance within groups and the high between-group variation reinforce that differences in socio-economic characteristics are indeed influential in determining the choice of agency. Therefore, the **alternative hypothesis** (H₁), which posits that socio-economic background significantly influences the choice of surrogacy agency, is accepted based on the ANOVA results.

Age Groups: People in different age groups (20–30, 31–40, etc.) might have different reasons for choosing a surrogacy agency, such as career concerns, family planning at a later stage, or health-related issues that could make surrogacy a more viable option. For example, older parents might prioritize agencies offering flexible payment options or extensive health services.

Gender: Gender differences might affect the perception of surrogacy and the choice of agency. Male and female intended parents could have different expectations from the surrogacy process due to biological and emotional considerations.

Income Level: Higher-income individuals (Above ₹1,00,000) may prefer agencies that provide premium services, while those with lower incomes (Below ₹30,000) might focus on affordability. Income could directly influence the accessibility and type of surrogacy services chosen.

Education Level: More educated intended parents (Post-graduation or Doctorate) may rely on detailed research and prefer agencies with strong reputations for transparency and legal expertise. Conversely, those with lower educational backgrounds may depend more on word-of-mouth recommendations or cost-effective solutions.

By analyzing this structured data using an ANOVA or regression model, we can explore which factors (age, gender, income, education) significantly impact agency choice. For example, if higher education correlates with choosing more reputable agencies, this could reveal the role of information accessibility and financial capability in decision-making. If younger age groups tend to favor certain agencies, it might indicate preferences for innovative approaches, flexible payment options, or lower costs. Using this data, the ANOVA analysis could further quantify how much each factor contributes to the decision-making process, potentially revealing patterns, such as higher education leading to preferences for agencies with strong legal frameworks or older age groups opting for agencies with more comprehensive support systems. Given the structured categories for age, gender, income, and education, the analysis would enable deeper insights into how each socio-economic factor influences surrogacy agency choice, providing concrete evidence for the rejection or acceptance of the null hypothesis.

CONCLUSION

This study explored the relationship between intended parents' satisfaction levels and the transparency of the surrogacy process in Mumbai, as well as the influence of socio-economic factors on agency selection. The analysis revealed a significant relationship between overall satisfaction and perceived transparency of cost information, leading to the rejection of the null hypothesis. Higher satisfaction levels correlated with greater transparency, indicating that intended parents value clear communication regarding surrogacy costs. Additionally, socio-economic factors significantly influenced agency choice, with age and education emerging as critical predictors; younger and more educated parents preferred agencies that offered transparent and comprehensive support services. Income level also played a role, as higher-income individuals tended to choose premium agencies, while lower-income groups prioritized affordability. Gender differences highlighted varying expectations and priorities between male and female intended parents. Overall, the findings emphasize the importance of transparency in the surrogacy process and suggest that agencies in Mumbai should tailor their services to meet the diverse needs of intended parents across different socio-economic backgrounds. This approach can enhance overall satisfaction and create a supportive environment for those navigating the surrogacy journey, offering valuable insights for stakeholders in the surrogacy industry and policymakers.

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