

Case Study

Determinants and Satisfaction Outcomes of Pregnancy Care in China: The Case of Ghanaian Women in Zhenjiang

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Abstract: The concept of maternity care satisfaction focuses on women's expectations and results in women having a positive attitude about the care received during pregnancy, childbirth and after birth. The proportion of births to Ghanaian migrant mothers in China is increasing, and there is an increasing demand for information regarding their reproductive health. To reduce maternal and neonatal morbidity and death rates, it is crucial for foreign women who use maternity services to be satisfied with their care. Ghanaian women's birth experiences in China might be harmed by language and cultural disparities. Little is known about their experiences in China's homogeneous society. A survey of 317 postnatal Ghanaian foreigners in Zhenjiang, China provided the study's data and was analyzed using IBM SPSS Statistics 25. The results showed that (76%) of postnatal foreigners were satisfied with delivery care. Though the satisfaction level was high, respondents raised the issues of poor communication (62.8%) and high cost of delivery care (52.4%) as some of the general experiences they faced. Healthcare providers' strengthening routine monitoring of maternal and newborn health programs will help deliver more woman-centered care.

Keywords: Pregnancy Care, Delivery Care, Foreign Women, Cost, Satisfaction, Zhenjiang, China**How to cite this paper:**

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1. Introduction

Pregnancy puts women in a vulnerable position, and access to, utilization of, and quality of care are all important aspects of the support they get [1]. China has one of the most homogeneous cultures among emerging economies, with foreigners constituting only 0.1 percent of the population [2]. As a result, the concept of a multicultural world is a relatively new phenomenon [3]. The health of foreigners is garnering more attention, indicating that health systems must adapt to different immigrant populations [4]. Empirical research on the health service usage of foreigners in China is critically needed to better informed health policies tailored to their requirements. Since the number of pregnant foreign women grows, cultural and linguistic issues make it difficult for them to obtain the care they require, as they are frequently misinterpreted [5]. The availability, use, and successful execution of important labor and delivery treatments are all linked to good pregnancy and childbirth outcomes [6].

Mothers' opinions of and satisfaction with quality treatment are critical issues to ask and understand regarding maternal health [7]. Although patient satisfaction is difficult to quantify, quality healthcare cannot be attained if patients are unsatisfied. Service expectations do not refer to what providers do but rather what they should provide [8, 9]. Satisfaction is the feeling that arises from a subjective assessment of the difference between what happened and what the person believes should have happened [10, 11]. Women's satisfaction with delivery service may impact their future service usage.

Tayelgn, A., D.T. Zegeye, and Y. Kebede [12] discovered a link between a satisfied delivery experience and favorable sentiments towards a child.

Even though foreign women require support and safety during childbirth, there is no broad institutional recognition of the requirement for culturally responsive care. As a result, China is still in the early stages of developing maternity care and research that reflects a diversified community [2]. Comparatively, immigrant women often seem less able to realize their reproductive health potential (good physical and emotional health during pregnancy and postpartum). Foreign women find it challenging to get maternity healthcare facilities that meet their needs due to different issues, including poor social and economic standing, racism, uncertain residence status, and low language skills [13].

To reduce maternal health disparities between Ghanaian foreigners and Chinese, studies on migrant populations are necessary. Foreigners are a minority group in China, so we expect some of our findings on foreigners could facilitate the understanding of foreign mothers and their childbirth experiences in China. Therefore, to influence the health reform policy agenda and the pregnancy outcomes and maternity care needs of foreigners, this study explored the experiences of pregnancy care among Ghanaian nationals in Zhenjiang, China. An assessment of maternity care from the perspective of foreign women might aid in cultural knowledge and sensitivity in Chinese maternity care.

The purpose of this study:

- Assessment of foreign women's satisfaction outcomes and
- Determinants of foreign women's satisfaction.

2. Literature Review and Hypotheses Development

2.1. Ghanaian Women's Expectations about Maternity Care

In China, maternity care is mostly hospital-based and obstetrician-led. Women's delivery experiences are commonly acknowledged to be impacted by their culture [14]. Respect, warmth, and support are what women need during childbirth regardless of their culture according to diverse studies [15].

Ito *et al.* [16] conducted interviews with twenty (20) American mothers who had just given birth in Japan. According to their data which was examined using a stress-coping model, women felt alone [17]. Several large-scale studies of immigrant women's antenatal and delivery care in Australia discovered that women wanted safe, compassionate, supportive, and respectful care [18]. Women were more concerned about harsh, hurried, and unsupportive care than about caregivers' lack of knowledge about their cultural customs [19].

Furthermore, labor discomfort and unavailable social support during childbearing were the main reasons for women in China to want a caesarean section (C-S) [20]. These reasons may account for China's persistently high C-S rates of 41.1–45.6 percent (2012 to 2016) [21]. According to Park *et al.* [22], in their study of immigrants health in Japan, one hundred and thirty-four (134) women, including Japanese women ($n = 103$) and Chinese women ($n = 31$) were studied. Foreign women were more cautious to speak with healthcare practitioners than Japanese women, according to their results. This conclusion was linked to disparities in language as well as communication habits [23, 24].

2.2. Structure of maternal healthcare services

The structure of maternal healthcare services highlights the role of cleanliness, the availability of healthcare professionals and the availability of medicines and supplies in pregnancy care to promote foreigners maternal satisfaction. Good physical environment and efficient management were significant in foreign women's positive assessment of the health facility and maternal care services [25]. Women in Bangladesh who gave the hospital's service accessibility a good rating were more satisfied with the treatment received than women who gave the facility a negative rate [26].

Cultural competence in healthcare is the ability of professionals and organizations to recognize and include these factors in their maternal structure of care. Culturally competent maternal health care services strive to give the best treatment to all patients, regardless of race, ethnicity, cultural background, and proficiency; it influences foreign women's satisfaction [24, 27]. In India and China, having access to physicians and nurses who can deliver treatment while being attentive to cultural differences is a requirement for high-quality healthcare [28]. Dissatisfaction with services in Ghana and Nigeria was attributed to the lack of midwives and inadequate staff to care for women, particularly during labor [29].

The availability of medical supplies also influences foreign women satisfaction of maternal healthcare services. For instance, the availability of prescription drugs, essential equipment like blood pressure monitors or thermometers, lab services and emergency supplies like blood and transfusion services, were reported as significant predictors of foreign women satisfaction with care in studies in India, Oman, Nigeria, Gambia and Uganda [8, 30-33]. Dissatisfaction with services in India and Nigeria has been linked to the sporadic unavailability of vital medications.

Based on the literature review above the following hypothesis were developed:

Hypothesis 1 (H1). *The structures involved in maternal healthcare has a direct impact on Ghanaian women satisfaction.*

2.3. Process of Maternal Healthcare Delivery

An effective antenatal care service is not the sole purpose of the hospital but also improves the level of Ghanaian foreign women's satisfaction with health services in China. Effective processes in maternal healthcare delivery comprise rapid attention, privacy, and cognitive support as the determinants of foreign women's satisfaction [34]. Rapid attention is a determinant of foreign women's satisfaction. Foreign women were more satisfied with rapid attention of care in lower healthcare centers than in hospitals in Sri Lanka [35].

The purpose of maintaining confidentiality poses particular questions in the context of public health. Privacy during medical examinations is of particular importance to encourage individuals to use health services [29]. Foreign women who use maternity care services prioritize their right to privacy during physical examinations, labor, and delivery. In Bangladesh and India, maintaining privacy during an examination or delivery by using a separate room or screen was crucial in determining satisfaction [36]. Physical examinations and procedures like perineal shaving were associated with shame, which made foreign women feel more uncomfortable and reduced their satisfaction levels [37].

Moving to a new country involves lots of adjustment and may be stressful [38]. Provision of cognitive support through effective communication and sharing adequate information with women about their condition or the care required emerged as a critical determinant of foreign women's satisfaction with maternal care, as seen in the studies in Ghana, Malawi, Nigeria, and Iran [39]. This investigation makes use of Albert Bandura's Social Cognitive theory. Cognitive theory suggests that people's interpretations of events cause their reactions to events. It occurs in a social setting with dynamic and reciprocal interactions between the individual, their surroundings, and their conduct. The theory considers a person's prior experiences, which influence whether a behavioural activity will take place [40]. Interpersonal interactions, nonracial communication, the process of imparting information, consultation in decisions regarding care, and transparent mechanisms for registering patient feedback were all aspects of cognitive support [41]. In Ghana, women who had information and no language barrier during labor felt involved in their care and were satisfied with care. Similarly, poor interpersonal interactions with healthcare practitioners were a common barrier to foreign women's acceptance of care [42]. Based on the above, the study hypothesized that:

Hypothesis 2 (H2). *The process in maternal care delivery positively impact on Ghanaian women satisfaction in China.*

2.4. Cost of Maternal Healthcare

Many countries reported that national budgets allocated to maternity care and complications are inadequate, high out-of-pocket expenses are widespread and lack of innovative financing models are significant barriers to scaling up maternal healthcare services [43]. Financial barriers to care seeking during pregnancy and childbirth are widespread, with high out-of-pocket expenses for childbirth services for Ghanaian foreigners. The capacity to pay is a key factor in determining whether foreign nationals use maternal healthcare services [44]. A recent study in India showed that the mean out-of-pocket expenditure on a normal delivery in a public facility was US\$28 compared with US\$84 in a private facility, and cesarean delivery costs three times more than normal delivery [13, 44, 45]. Many countries in Asia and Africa have pursued user fee removal or fee exemption for care during labor and childbirth including cesarean section but foreigners are excluded [46]. Most research examining the use after the abolition of user fees for deliveries has shown an increase in assisted births and cesarean sections at healthcare institutions and some cases, higher gains among immigrant populations [46, 47]. Based on the above, the study hypothesized that:

Hypothesis 3 (H3). *The cost of maternal healthcare has a direct correlation with Ghanaian women satisfaction.*

2.5. Delivery Outcomes

Antenatal care is the entrance point for pregnant women, which obtain a wide range of health issues and preventive health services [6]. Several studies reported that the reasons for not attending antenatal classes were lack of transportation, language barriers, and negative perceptions about the type of information provided, and these affected the satisfaction outcomes of foreigners [47].

In Gambia, Ghana, India, and Thailand, satisfaction with care influenced maternal and infant outcomes, including survival and health of mothers and newborns [48]. Birthing issues are the leading cause of death problems, especially for foreign women with disabilities of reproductive age, mainly in developing countries [31]. Immigrant mothers' perceptions of childbirth and hospital service varied. A survey conducted by Tan, D.J.A et al [49] revealed that most foreign women faced many barriers in the utilization of delivery care services and their bad experiences often led them to underutilize pregnancy care services. In contrast, Wallace et al. [50] found that 90% of the pregnant immigrant women in their study thought that hospital staff were sensitive to their cultural and religious needs.

Postpartum period is very important because about 60% of complications occur here; then postpartum depression may occur; this is a key period of establishing breastfeeding; this is the appropriate time for contraceptive recommendations [51]. Katz and Gagnon [52] investigated the postpartum experiences of immigrants in Paris and discovered 12 of 20 immigrant mother-infant pairs, no charted evidence either of contact within 48 h of discharge or of interventions to address maternal depression and social isolation. Consideration of these factors will be important in tailoring context-based programs to ensure the delivery of adequate maternity care to immigrant women.

Based on the above review, this hypothesis was drawn:

Hypothesis 4 (H4). *There is a direct impact of delivery outcomes on Ghanaian women satisfaction in China.*

2.6. Conceptual Framework

The WHO's quality of care framework for maternal and newborn health and Srivastava's[53] conceptual framework of a mother satisfaction served as the foundation

for our framework. Our framework conceptualizes satisfaction by establishing four characteristics (drawn from the Donabedian model of quality of care) to analyze the factors across the three periods of pregnancy care. As our main aim was to address foreign women's experiences and their satisfaction with care provided during pregnancy care; we included the satisfaction score and elements of structure, process, cost, and delivery outcomes in our framework (Figure 1). Based on the literature review this conceptual framework was developed.

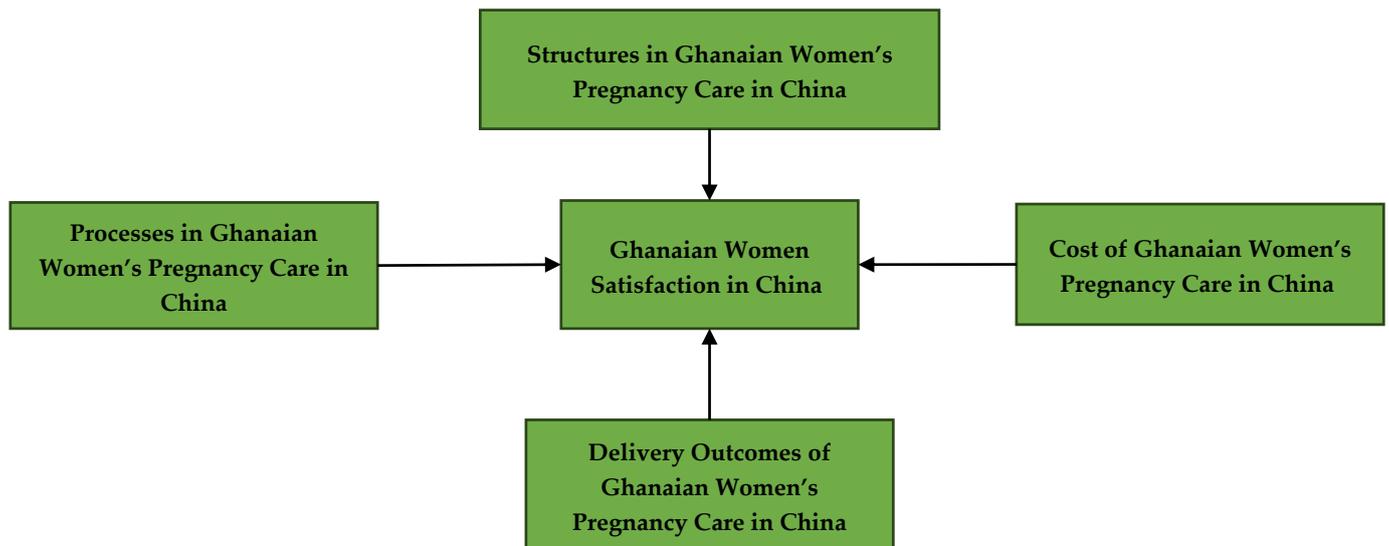


Figure 1. Conceptual Framework of the Study. Adapted from Donabedian model of quality of care

3. Methodology

3.1. Research Profile Area

Of China's 22 provinces, Jiangsu is the fifth most densely inhabited [54]. China's overall population was 3,210,418 people as of the 2020 census [10, 27]. Jiangsu has 58,201 foreign residents, according to the Communiqué of the Seventh National Population Census (No. 8). In China's Jiangsu Province, Zhenjiang is a prefecture-level city. It is located on the Yangtze River's southern bank, near the Grand Canal's junction. It is located between Yangzhou (to the north) and Nanjing (to the west) and Changzhou (to the east) [55]. Zhenjiang was originally Jiangsu's provincial capital and is still a major transportation hub [49]. Below is a pictorial representation of the map Jiangsu and Zhenjiang city.



Figure 2. The map of Zhenjiang showing the districts in Zhenjiang. Source: ScienceDirect.com

3.2. Materials and Methods

In this study, a quantitative research method was used. The study looked at relationships between pregnancy care services and satisfaction among Ghanaians in Zhenjiang, China. A cross-sectional survey was used to acquire the information. Data were collected through a convenient sampling technique. In the lack of historical prevalence statistics on the population under research, p was estimated to be 0.5 to get the largest sample size. The data was acquired primarily from Zhenjiang, Jiangsu Province's biggest industrial city. The Zhenjiang Township was purposively selected due to its growing population of foreigners. The total population size of Ghanaians in Zhenjiang in the year 2020 was 3,700. The census revealed that the town has a sex ratio of 51:49 males to females. The population of Ghanaian women in Zhenjiang in their reproductive age was 1,813. Furthermore, a sample size of 327 Ghanaian women was calculated using a margin of error of 5%, a confidence interval of 95% assumed ($Z_{\alpha/2}=1.96$), based on this population sample of women.

$$n = \frac{\left(\frac{Z_{\alpha}}{2}\right) 2xp(1-P)}{d^2}, \quad (1)$$

where n is the sample size; $Z_{\alpha/2}$ is the confidence level at 95% = 1.96; P is the proportion of satisfaction of foreign women which is unknown, assumption of 50% ($P = 0.5$); and d is the margin of error of 4.5%:

$$n = \frac{(Z_{\alpha/2})^2 * P(1-P)}{d^2}, n = \frac{(1.96)^2 * 0.5(1-0.5)}{(0.05)^2}, n = 384 \quad (2)$$

Since the source population is less than 10,000, the formula by Yamani (1967) was used to get the final sample size as follows:

$$n = \frac{N}{1+N(d)^2}, n = \frac{1813}{1+1813(0.05)^2}, n = 327 \quad (3)$$

Where 'N' is the source population-all estimated pregnant foreign women, and n is the calculated sample size. Hence, the sample size will be calculated at a total of source population.

Data was obtained from three hundred and twenty-seven (327) research participants who differed on one key trait at a specific point in time using a cross-sectional survey approach, allowing the findings to be generalized [56]. The cross-sectional survey design was chosen because it is often used in studies that use the individual as the unit of analysis and is ideal for descriptive, explanatory, and exploratory purposes [57]. The target demographic were Ghanaian women who had sought maternity care in Zhenjiang, China for the period of one year. The following were exclusion criteria: (1) gave birth after a protracted stay in the hospital owing to pregnancy difficulties; (2) was in poor physical shape.

3.3. Data Collection

An anonymous online structured questionnaire was used to collect the data. The questionnaire was created in such a way that women could be analytical while maintaining their anonymity. It was based on Fujiwara [58] quality care questionnaire (QCQ) and the Scale for Maternal Healthcare Satisfaction (SMS). The 43-item questionnaire was divided into three categories. Each of the components assess different aspects of maternity healthcare services and satisfaction. Gender, age, marital status, religion, activities, and educational level were collected in the first section of the questionnaire. The second section elicited data on foreigners' use of maternal health care services, and the third section elicited their satisfaction ratings. The Maternal Healthcare Questionnaire (MHQ) was used to collect data throughout three different time periods: antenatal, delivery, and the postpartum period. On a 5-point Likert scale, responses ranged from 1 to 5, with 1 indicating strong agreement and 5 indicating strong disagreement. The questionnaire provided informed written permission, which study participants were free to accept or decline. Each respondent was informed about the study's objectives and assured of confidentiality.

3.4. Data Analysis Technique

A total of 2 months was used to collect data. Out of the 327 respondents of the questionnaires, only 317 were credible and usable. Once data collection was finished and the questionnaires modified and coded, data was entered and processed using the Statistical Package for Social Sciences Software version 25. The normality of data was tested using the Shapiro-Wilk test. All the quantitative data were found to be not normally distributed if ($p \leq 0001$). Descriptive analysis such as percentage, mean, and standard deviations was utilized to define the study population concerning sociodemographic, and other relevant characteristics. The relationship between the independent and outcome variables was examined using bivariate and multivariable logistic regression models. Multivariable logistic regression analyses were used to understand the significance of the association between dependent and independent variables. The reliability (internal consistency of the instrument) was checked by Cronbach's alpha. It measures the reliability of the instrument between each domain and the whole of the instrument. All domains had Cronbach's alpha greater than 0.7. The valid and reliable instruments used were: Structure (cleanliness, human resources, medical & supply availability), Process (promptness, privacy, cognitive support), Cost of care, Delivery Outcomes and Foreign women satisfaction. All independent variables with P value < 0.05 were considered as statistically significant in this study.

4. Results

A total of 317 Ghanaian women in Zhenjiang participated in this study. Sociodemographic characteristics of respondents are shown in [Table 1](#). The majority of

study participants (70%) were aged 25 to 44. More than half of the research participants (83.3%) have attended university, while about (16.7%) have completed high school. About 55.8% of women worked, while the remainder were unemployed (44.2%) (Table 1). Most (41.1%) were Christians and 54.9% were married.

Table 1. Selected percentages of the Socio-demographics characteristics of all research participants in Zhenjiang. (N=317)

Variables	Frequency	Percentages(%)
Age in years		
18-24	61	19.2
25-34	147	46.4
35-44	109	34.4
Mean(SD)	2.15(0.72)	
Educational Level		
High School	53	16.7
University	264	83.3
Mean(SD)	2.83(0.37)	
Marital Status		
Married	174	54.9
Divorced	37	11.7
Single, Never Married	106	33.4
Mean(SD)	2.24(1.40)	
Employment status		
Unemployed	140	44.2
Employed	177	55.8
Mean(SD)	1.56(0.5)	
Religion		
Christian	130	41.10
Muslim	72	22.7
Traditionalist	62	19.6
Others	53	16.6
Mean(SD)	2.12(1.12)	

The obstetric-related characteristics of the mothers are summarized in Table 2. More than half (58.7%) were primiparous with a mean of 1.5 (SD \pm 0.6). Most (81.4%) planned to be pregnant and (88%) had antenatal care as well. The majority of foreign mothers (85.5%) had vaginal births, whereas (14.5%) of foreign women had cesarean section. The average cost of delivery was about 7000Rmb.

In the bivariate analysis, satisfaction was positively associated with the different components of satisfaction ($p < 0.001$) (Table 3). Most of the research participants were satisfied by the cleanliness of the center (77.6%), privacy (75.7%), and availability of human resources (64.7%), cognitive support (63.4%), rapid attention (56.2%), delivery outcome (58%), and availability of medicines and supplies (53.6%) and cost of care (30.6%). Overall, about (76%) were satisfied with the service that they received while the others (24%) are not satisfied (Table 3).

Table 2. Obstetric Characteristics of Ghanaian Women in Zhenjiang N= 317

Variables	Frequency	Percentages (%)
Parity		
One	186	58.7
Two	115	36.3
Three	16	5.0
Mean(SD)		1.46(0.59)
Going for Antenatal Care		
Yes	278	88
No	39	12
Mean(SD)		1.75(1.21)
Readiness for Pregnancy		
Yes	258	81.4
No	59	18.6
Mean(SD)		1.94(1.30)
Type of Delivery		
Vaginal	271	85.5
Caesarean	46	14.5
Mean(SD)		1.15(0.35)
Cost of Delivery		
2000-3000 Rmb	4	1.3
4000-5000 Rmb	29	9.1
6000-7000 Rmb	154	48.6
8000-9000 Rmb	66	20.8
≥10000 Rmb	64	20.2
Mean(SD)		3.5(0.96)

Table 3. Different levels of Satisfaction-related variables of Ghanaian Women in Zhenjiang (N=317)

Variables	Satisfied (%)	Not Satisfied (%)	<i>p</i>
Structure			< 0.001
<i>Cleanliness</i>	246 (77.6)	71 (22.4)	
<i>Availability of Human Resources</i>	205 (64.7)	112 (35.3)	
<i>Availability of Medicines & Supplies</i>	170 (53.6)	147 (46.4)	
Process			
<i>Rapid Attention</i>	178 (56.2)	139 (43.8)	< 0.001
<i>Privacy</i>	240 (75.7)	77 (24.3)	
<i>Cognitive Support</i>	201 (63.4)	116 (36.6)	
Delivery Outcome	184 (58)	133 (42)	< 0.001
Cost of Care	97 (30.6)	220 (69.4)	< 0.001
Overall Satisfaction	240 (76)	77 (24)	< 0.001

Socio-demographic and obstetric factors were of relatively minor importance to foreign women's satisfaction. In the bivariate analysis, satisfaction was negatively associated with age ($p = .498$), level of education ($p = .660$), the type of religion ($p = .690$) and delivery type ($p = .604$). Additionally, marital status ($p = .518$), employment status ($p = .469$), parity ($p = .094$) and readiness to get pregnant ($p = .468$) were positively associated with foreign women's satisfaction.

Regression analysis with a robust linear model revealed that foreign women's characteristics such as age, marital status (*all* $p > 0.001$) was not significant with foreign

women's satisfaction of pregnancy care [Table 4b](#). A majority of the studies investigated association between maternal satisfaction and socio-demographic characteristics of the women. There was an insignificant relationship between satisfaction and the characteristics of foreign women ([Table 4b](#)). In Nepal, Mocumbi [59] also discovered an insignificant relationship between satisfaction and socio-demographic factors. This result confirms what we found in this study.

Table 4. Association between Ghanaian Women's Characteristics and Satisfaction (N=317)

Variables	Beta	t	Sig.	95.0% Confidence Interval for B	
				Lower Bound	Upper Bound
Age	-.074	-1.217	.224	-1.620	.382
Marital status	.031	.522	.602	-.377	.649
Level of education	-.033	-.584	.560	-2.348	1.273
Employment status	.028	.455	.649	-1.115	1.787
Type of religion	-.002	-.039	.969	-.617	.593
Parity	.123	1.901	.058	-.044	2.555
Readiness to get pregnant	.063	1.029	.304	-.276	.881
Type of birth	.007	.117	.907	-1.873	2.109
(Constant)		3.540	.000	5.458	19.122
<i>R-Square</i>		.020			
<i>Ad. R-Square</i>		-.006			

Compared to general satisfaction with maternal care services, we discovered a more significant proportion of negative answers for various healthcare experiences ([Table 5](#)). About Sixty-three percent (63%) had a lower proportion of Chinese fluency and so could not understand the information offered by healthcare workers during a consultation or delivery. Five-three (53.3%) of the foreign women reported that healthcare workers did not inquire if they had any questions or spent enough time explaining things. High cost of delivery care (52.4%) and inflexible payment methods (61.5%) increased the odds of being dissatisfied the most ([Table 5](#)). Women with an unanticipated pregnancy, a higher education, and poor language abilities reported higher levels of discontent. Yelland *et al* [60, 61] reported that foreigners (women) had negative experiences with maternal healthcare providers due to cultural differences and hospital routines. Communication and linguistic obstacles for foreign women are recurring issues in this and prior research. Poor communication and inadequate understanding make it difficult for foreign women to choose suitable treatment options and give informed consent. Women find it difficult to form a relationship with their care provider when they are unable to communicate in the local language, which has an influence their capacity to get care [11]. This finding is comparable to that of [11, 16, 27, 31, 62], who found that if foreign women could comprehend "everyday Chinese," they got insufficient explanations from healthcare practitioners, since healthcare providers overestimated their literacy level. Our findings have implications for policies on childbirth care in health care organizations.

Table 5. Association of a Foreign Women's Negative Experience with Satisfaction of Care in Zhenjiang (N=317)

Satisfaction Outcomes	Satisfied/Yes (%)	Not Satisfied/No (%)	<i>p</i>
Language Barrier(Communication)	118 (37.2)	199 (62.8)	< 0.001
Intervention without Consent	148 (46.7)	169 (53.3)	< 0.001
High Cost of Delivery Care	151 (47.6)	166 (52.4)	< 0.001
Flexible Payment	122 (38.5)	195 (61.5)	< 0.001

The regression analysis (Table 6) was utilized to examine the impact of the determinants and Ghanaian foreign women's satisfaction of pregnancy care. The linear regression results in Table 6 sought to test the research Hypotheses. The results from Table 6 indicate an R-square value of 0.930 ($R^2 = 0.930$) which implies that, about (93%) of the variations in the dependent variables (Foreign Women's Satisfaction) is explained by the independent variables such as Structure, Process, Delivery outcomes and Cost of Care. Similarly, results from (Table 6) shows that, the F-statistics ($F = 1047.042, p < 0.001$) was statistically highly significant. This implies that, the independent variables have joint statistically significant impact on the dependent variable (Ghanaian women's Satisfaction).

Table 6. Determinants of Foreign women Satisfaction and Pregnancy care in Zhenjiang (N=317)

Components	β	Mean	SD	t	Sig.(<i>p</i>)	95.0% CI for β	
						Lower	Upper
Structure	.200	2.014	1.0123	2.275	.024**	.027	.376
Process	.547	2.006	.9767	8.383	.000***	.425	.685
Delivery Outcomes	.356	2.106	.9390	6.426	.000***	.261	.491
Cost of care	.110	2.756	1.0185	0.662	.509	-.024	.049

Note *** $p < 0.001$, ** $p < 0.05$; a. Dependent Variable: Foreign Women Satisfaction; b. Predictors: Structure, Process, Cost of care, Delivery Outcomes

5. Discussion

It is crucial to ensure that every woman delivers in a safe environment and that primary level facilities are enabled to provide evidence-based routine childbirth care and basic emergency obstetric care, as well as, referral capability for complicated cases. From the research participants perspective, it was determined that the structures in maternal healthcare services influence foreign women satisfaction of care delivery. Thus, the structure (cleanliness, availability of human resources and availability of medicines and supplies) impacts foreign women satisfaction positively.

Hypothesis 1 (H1). *The structures involved in maternal healthcare has a direct impact on Ghanaian women satisfaction in China.*

Regarding the Hypothesis (H1) which shows that structural indicators affects foreign women satisfaction. The findings of this study revealed that structure ($\beta = 0.650, p < 0.05$) has a significant and positive direct impact on Ghanaian Women's Satisfaction. This supports the earlier research literatures of foreign women satisfaction on maternal healthcare services. This result implies that, an improvement in the structural facilities of maternal healthcare services tend to promote foreign women satisfaction of care. Mocumbi [59], reported a high rate of satisfaction associated with structural and process of care factors in Southern Mozambique after they investigated foreign women's satisfaction in childbirth.

Among structural indicators, cleanliness and availability of human resources emerged as the most important determinants of Ghanaian women satisfaction in our

study. This is in line with a study conducted in Wolaita [63] where respondents who reported that the institution was clean were seven times as high to be satisfied as those who reported that the institution was not clean. It is obvious that a clean and attractive environment will enhance someone's satisfaction with the existing service. However, there was considerably little support for this result as a factor in foreign women's satisfaction. This is substantiated with these findings [12, 13, 15, 26, 46, 63] that women in their first visit to the facility express greater satisfaction with services owing to the positive impact of first experience of care, as compared to those making repeat visits. The primary structural factor influencing foreign women's satisfaction in their research is the availability of medicines and equipment.

Concerning process of care indicators (rapid attention, privacy, and cognitive support), privacy and cognitive support plays a crucial role in influencing foreign women's satisfaction with care during pregnancy. Information and advice, along with emotional support, comfort measures and communication may reduce anxiety and fear associated with adverse effects during labor and childbirth [64].

Hypothesis 2 (H2). *The process in maternal care delivery positively impacts Ghanaian women satisfaction in China.*

The findings of this study discovered that process ($\beta = 0.547, p < 0.001$) has a highly significant and positive direct influence on Foreign Women's Satisfaction. That is, the results of our investigations and existing literatures supported Hypothesis 2 (H2). The most startling discovery was that cognitive support and privacy were the two most often mentioned determinants influencing foreign women's satisfaction. In a research conducted by Oman [65], foreign women's satisfaction correlated with both the messages' substance and how they were sent, including the provider's dedication, availability of time, and capacity to communicate in a foreign language. A significant predictor of foreign women's satisfaction with care was the provider's respect for privacy. The review's [34, 37, 46, 47, 52, 59], highest amount of evidence focuses on how providers behave in terms of rapid attention, privacy, and cognitive support. It shows the importance women attach to being treated with privacy and empathy, irrespective of socio-cultural or economic context.

Similarly, our study found that Chinese literacy hampered positive communication between Ghanaian Women and healthcare practitioners at times. We did discover that a larger percentage of women did not comprehend the information provided by healthcare staff. In terms of care quality, this language barrier is concerning. A recent study [13, 32, 34] found that 'excellent communication' is one of the significantly related variables to general satisfaction and is consistent with our findings. As a result, higher satisfaction among women with less Chinese language competence, as demonstrated in our study, might be attributable to decreased expectations. Surprisingly, Öztürk, G. and N. Gürbüz [66] discovered no link between language proficiency and satisfaction.

Hypothesis 3 (H3). *The cost of maternal care has a positive correlation with Ghanaian women satisfaction in China.*

Cost of maternal care have emerged as determinant of Ghanaian women satisfaction in China. The findings of this study confirms the claims that cost had a positive association with foreign women's satisfaction. That is, the results of our investigations and existing literatures supported Hypothesis 2 (H2). Positive associations between cost and foreign women satisfaction were found in studies in Norway, Canada, and Japan [32, 34, 37]. In India, Kenya, and Pakistan, the cost of treatment was a driving factor of satisfaction with maternal care services during hospital and at-home births [16, 23, 32, 47, 67]. However in our investigations cost ($\beta = 0.11, p > 0.001$) was statistically insignificant. Thus, our findings revealed that cost of maternal healthcare of foreigners did not influence Foreign Women's Satisfaction. This means that regardless of the cost of maternal healthcare services of foreigners, it did not affect their care. Although overall cost was not significant in this study, many foreign women in this research reported financial strains that made it

difficult to meet basic living expenses, transportation to appointments, and the price of necessary treatment. This was made worse by the inability to work in the host nation or the difficulty in finding work. Living in temporary or shared housing, bad housing conditions, and the impact of dispersion were also prominent concerns.

Hypothesis 4 (H4). *There is a direct impact of delivery outcomes on Ghanaian women satisfaction in China.*

Delivery Outcomes purposely investigated satisfaction with labour and childbirth as well postpartum in this study. Our findings revealed the delivery outcomes ($\beta = 0.356, p < 0.001$) has a direct influence on foreign women satisfaction of care. Thus, delivery outcomes was highly significant to foreign women satisfaction. Women are more vulnerable during labor and childbirth, so they must get care and attention, and it is natural for them to rate delivery outcomes high. Their satisfaction hinges upon timely and 'good' quality care, as per the woman's expectations. The postpartum periods also greatly influence delivery outcomes. Evidence from [13, 20, 27, 68, 69] support this study findings of delivery outcomes impacting foreign women satisfaction and supports Hypothesis 4 as well. This shows that delivery outcomes and overall foreign maternal healthcare can be improved by making service delivery more effective, efficient and equitable.

5.1. Implications for Practice and Further Study

First, midwives are supposed to be agents of change and so there is a need for midwives to work within the framework of the Patient's Charter and uphold ethical behaviours. Women have the right to a high standard of care and it is necessary that maternal healthcare providers create an environment that supports this. Midwives should adopt positive attitudes to encourage foreign women to seek care from health facilities.

Also, practitioners must recognize that all women want a positive pregnancy experience, regardless of their background. Communication and medical history-taking approaches, for example, can be used with a wide range of patients. Curiosity, empathy, respect, and humility are fundamental attitudes that can enhance the professional relationship. This study added to our understanding of the experiences and perspectives of foreign women giving birth in China. Healthcare providers must also recognize that their acts of kindness and attitudes might have a beneficial influence on women from various cultures. Healthcare practitioners should change their communication approach as much as possible to be more in sync with the culture and respect to benefit the local and international women alike.

Finally, future research will have to enhance a generic instrument for assessing the quality of foreign maternity care. Cultural competency educational programs for healthcare workers and medical and nursing students must be designed to teach them the consequences of caring for culturally diverse patients. Interventions must be aimed at providing culturally appropriate treatments aimed at overcoming interpersonal obstacles. Interactions that were friendly, nonjudgmental, culturally aware, and respectful could be used to build connections and trust with target groups.

6. Conclusion

The findings of our study offer new insight into the pregnancies of foreigners in China. Their unique experiences included: the continuity of maternity care, humane care with the privacy respected, personalized sensitive care needs, and preferences for cultural sensitive care. Foreign women in China require culturally competent healthcare professionals who can deliver unbiased, high-quality, trauma-informed maternity care. Cultural competence is not an unrelated aspect of medical care but rather an inherent part of overall maternal healthcare quality. Efforts to promote cultural competency among healthcare personnel and organizations would benefit all patients.

Foreign (Ghanaian) women are affected by cultural and language variations and are the most vulnerable in different countries. It is vital to lower obstacles to offer everyone

equitable access to maternity care services inside the Chinese healthcare system, regardless of their origins. While overall satisfaction was high, as expected based on the literature, we discovered a significant percentage of negative answers for some pregnancy care situations.

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