

Women's Satisfaction and Perceived Quality of Emergency Obstetric Care: Mixed-Methods Multi-centre Study

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Research Article

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Abstract

Introduction

: Patient satisfaction and perceived quality of care are important indicators of effective and respectful emergency obstetric care (EMOC). However, evidence integrating women's experiences with healthcare providers' perspectives remains limited in Nigeria. This study aimed to assess women's satisfaction and perceived quality of emergency obstetric care and explore patient and provider perspectives at two hospitals in Benin City.

Methods

A mixed-methods study was conducted among 228 postpartum women who experienced obstetric emergencies at the University of Benin Teaching Hospital and Edo Specialist Hospital in Benin City, Nigeria. Quantitative data were collected using a modified Person-Centered Maternity Care scale and analysed using descriptive statistics, Chi-square/Fisher's exact tests and logistic regression. Statistical significance was set at $p < 0.05$. Qualitative data were obtained from one per-centre focus group discussion involving women who had received emergency obstetric care and key informant interviews with healthcare workers, including doctors and midwives. Qualitative data were thematically analysed and triangulated with the quantitative findings.

Results

Overall, 92.1% of women reported high satisfaction, while 90.8%, 90.8% and 92.5% reported high dignity and respect, communication and autonomy, and supportive care, respectively. Operative delivery independently increased the odds of poor satisfaction (AOR = 4.459; 95% CI:1.254–15.861; $p = 0.021$). Qualitative findings confirmed generally positive experiences but revealed challenges relating to staff attitude, communication, staffing shortages, infrastructure, financial barriers and postoperative support.

Conclusion

Despite high satisfaction with emergency obstetric care, important workforce, infrastructural, financial, communication and respectful-care challenges persisted. Addressing these barriers is essential to improving women's experiences and strengthening quality, patient-centred emergency obstetric care in resource-limited settings.

INTRODUCTION

Maternal and newborn health remains a major global health priority, with sub-Saharan Africa continuing to bear a disproportionate burden of preventable maternal and perinatal morbidity and mortality despite

improvements in other health indicators.^{1,2} Effective emergency obstetric care (EmOC) is central to reducing this burden because life-threatening complications such as postpartum haemorrhage, eclampsia, obstructed labour and sepsis may occur unpredictably during pregnancy, childbirth or the postpartum period. Consequently, timely, accessible and high-quality EmOC, supported by an efficient referral system, remains fundamental to improving maternal outcomes and achieving global maternal mortality reduction targets.^{3,4}

Quality maternity care, however, extends beyond maternal survival and appropriate clinical intervention to how women experience the care they receive. Women's satisfaction is an important patient-reported measure of maternity-care quality and may influence trust in healthcare providers, future use of health facilities and subsequent care-seeking behaviour.⁴⁻⁶ Increasing attention is therefore being directed towards person-centred dimensions of maternity care, including dignity and respect, effective communication, informed consent, privacy, autonomy, emotional support and timely responsiveness to women's needs.

These dimensions are particularly important during obstetric emergencies, when women may be frightened, clinically unstable and required to make urgent decisions regarding potentially lifesaving interventions. Although the urgency of treatment may prioritise clinical outcomes, poor communication, disrespectful interactions, delays, inadequate supportive care and financial or health-system barriers may negatively influence women's experiences. Conversely, respectful communication, prompt attention and supportive care may enhance satisfaction even in the context of severe obstetric complications. Assessing women's experiences alongside the perspectives of healthcare providers may therefore provide a more comprehensive understanding of the quality of EmOC than clinical outcomes or satisfaction measures alone.

This is particularly relevant in Nigeria, where maternal morbidity and mortality remain high and access to quality facility-based maternal healthcare continues to be challenging.⁷ Dissatisfaction with maternity services, financial constraints and perceived poor quality of care may discourage facility utilisation and contribute to the continued use of traditional and faith-based birth attendants.⁸ Despite this, evidence on women's satisfaction and perceived quality of care specifically following obstetric emergencies remains limited, particularly evidence incorporating both women's experiences and healthcare providers' perspectives.

This mixed-methods study therefore assessed the prevalence, determinants, facility differences and care gaps in women's satisfaction and perceived quality of emergency obstetric care, while exploring women's experiences and healthcare providers' perspectives at the University of Benin Teaching Hospital and Edo Specialist Hospital, Benin City, Nigeria.

METHODOLOGY

The study was carried out at the University of Benin Teaching Hospital (UBTH) and Edo Specialist Hospital (ESH), Benin City, Edo State, Nigeria. The study design was an analytical cross-sectional study using mixed methods (quantitative and qualitative methods). The study duration was 6 months, from August 1st, 2025, to January 31st, 2026. The study population comprised postpartum women who delivered at either facility within the preceding 12 weeks and experienced an obstetric emergency. Women who received emergency obstetric care at either hospital, attended the selected postnatal clinics during the study period, and consented to participate were included in the study.

The sample size was calculated using Cochran's formula for estimating a single population proportion, based on the 67.31% prevalence of maternal satisfaction reported by Bishaw et al. at a 95% confidence level. After allowing for a 10% non-response rate, the minimum sample size was 220; however, 228 participants were recruited and included in the quantitative component of the study to ensure an adequate sample size.^{9,10} Participants were recruited consecutively from the postnatal clinics of both hospitals until the required sample was attained.

The qualitative component involved a focus group discussion (FGD) among women who had received emergency obstetric care and key informant interviews (KIIs) with healthcare providers involved in emergency obstetric care.

DATA MANAGEMENT

Data Collection Tools: Quantitative and Qualitative Data Tools

Quantitative Data

Quantitative data were collected using a structured interviewer-administered questionnaire incorporating a modified Person-Centered Maternity Care (PCMC) scale. The questionnaire obtained information on sociodemographic and obstetric characteristics, type of obstetric emergency, booking and referral status, mode and time of delivery, and women's experiences of emergency obstetric care. Satisfaction and perceived quality of care were assessed across the PCMC domains of dignity and respect, communication and autonomy, and supportive care. Overall satisfaction and willingness to recommend the hospital were also assessed. PCMC domain scores were obtained by summing the corresponding item scores. Scores $\geq 75\%$ of the maximum attainable score for each domain were classified as high, while scores $< 75\%$ were classified as low.

Qualitative Data

Focus Group Discussion

A semi-structured FGD guide was developed to explore women's experiences of emergency obstetric care. The discussion explored satisfaction with care, communication, respect and dignity, privacy,

waiting time, provider attitude, financial barriers, supportive care, health-system challenges and recommendations for improving services. One FGD was conducted in each centre among postpartum women (involving eight women per centre) who had received emergency obstetric care. The discussion was audio-recorded with participants' consent and transcribed verbatim for analysis.

Key Informant Interviews

A semi-structured KII guide was used to explore healthcare providers' perspectives on the quality and delivery of emergency obstetric care. Doctors (6 who are caregivers per centre) and nurses/midwives (8 per centre) directly involved in providing emergency obstetric care were purposively selected. The interviews explored communication and informed consent, provider attitude, staffing and workload, infrastructure and equipment, financial barriers, blood bank and theatre services, and opportunities for improving emergency obstetric care. Interviews were audio-recorded with consent and transcribed verbatim.

DATA ANALYSIS

Quantitative data were analysed using SPSS version 25.0. Categorical variables were summarised using frequencies and percentages, while continuous variables were presented using means and standard deviations as appropriate. Chi-square or Fisher's exact tests were used to assess associations between participants' characteristics and satisfaction with emergency obstetric care. Variables associated with satisfaction were further assessed using multivariable logistic regression, with adjusted odds ratios and 95% confidence intervals reported. Statistical significance was set at $p < 0.05$.

Qualitative data were analysed thematically. Transcripts were reviewed, coded and organised into themes reflecting women's experiences and healthcare providers' perspectives on emergency obstetric care. The quantitative and qualitative findings were subsequently triangulated to identify areas of convergence, complementarity and divergence. Findings were presented using prose, tables, figures and illustrative participant quotations.

RESULT

Quantitative findings

A total of 228 postpartum women participated in the quantitative component of the study, while the qualitative component comprised women who had received emergency obstetric care and healthcare providers. The findings are presented according to women's satisfaction and perceived quality of care, associated factors, qualitative themes, and triangulation of the quantitative and qualitative findings.

In Fig. 1, the majority of respondents, 210 (92.1%), reported a high level of satisfaction, while 18 (7.9%) reported a low level of satisfaction.

In Table 1, the Dignity and Respect domain, 207 (90.8%) respondents reported a high level of care, while 21 (9.2%) reported a low level. The mean score for this domain was 15.8 ± 2.9 . Communication and Autonomy domain, 207 (90.8%) respondents reported a high level of care, whereas 21 (9.2%) reported a low level. The mean score was 24.4 ± 3.0 . Regarding the Supportive Care domain, 211 (92.5%) respondents reported a high level of care, while 17 (7.5%) reported a low level. The mean score for this domain was 40.9 ± 10.1 .

Table 1
Domain of Satisfaction with their mean

Domains	Frequency (n = 228)	Percent
Dignity and respect		
High	207	90.8
Low	21	9.2
Mean $\pm$ St.D = 15.8 ± 2.9		
Communication and autonomy		
High	207	90.8
Low	21	9.2
Mean $\pm$ St.D = 24.4 ± 3.0		
Supportive care		
High	211	92.5
Low	17	7.5
Mean $\pm$ St.D = 40.9 ± 10.1		

In Table 2, the Mode of delivery was also significantly associated with satisfaction ($p = 0.013$), with poor satisfaction higher among women who had operative delivery than non-operative delivery (11.9% vs. 2.9%). In Table 3, operative delivery was independently associated with poor satisfaction. Women who had operative delivery had over four-fold higher odds of poor satisfaction than those with non-operative delivery (AOR = 4.459; 95% CI: 1.254–15.861; $p = 0.021$).

Table 2
The Association between Satisfaction Level and Obstetrics History

Variables	Satisfaction level		Test Statistics	p-value
	Poor (n = 18)	High (n = 210)		
	Frequency (%)	Frequency (%)		
Parity			$\chi^2 = 4.506$	0.197
0	0 (0.0)	33 (15.7)		
1–2	13 (72.2)	109 (51.9)		
3–4	4 (22.2)	46 (21.9)		
≥ 5	1 (5.6)	22 (10.5)		
Booking Status			$\chi^2 = 0.318$	0.588
Booked	12 (66.7)	153 (72.9)		
Unbooked	6 (33.3)	57 (27.1)		
Referral Status			$\chi^2 = 1.354$	0.321
Referred	8 (44.4)	123 (58.6)		
Not referred	10 (55.6)	87 (41.4)		
Emergency type			Fisher's Exact = 22.049	< 0.001
PPH	3 (16.7)	67 (31.9)		
Eclampsia	0 (0.0)	62 (29.5)		
Obstructed labour	0 (0.0)	24 (11.4)		
Others	15 (83.3)	57 (27.1)		
Others type(n = 72)			Fisher's Exact = 12.495	0.061
Breech	1 (6.7)	6 (10.5)		
Fetal distress	1 (6.7)	6 (10.5)		
Fetal macrosomia	1 (6.7)	2 (3.5)		
PIH	2 (13.2)	9 (15.8)		
Preeclampsia	10 (66.7)	11 (19.3)		
Preterm labour	0 (0.0)	7 (12.3)		
Previous CS	0 (0.0)	5 (8.8)		

Variables	Satisfaction level		Test Statistics	p-value
	Poor (n = 18)	High (n = 210)		
	Frequency (%)	Frequency (%)		
PROM	0 (0.0)	7 (12.3)		
Sepsis	0 (0.0)	4 (7.0)		
Delivery Mode			$\chi^2 = 6.228$	0.013
Non operative	3 (16.7)	99 (47.1)		
Operative	15 (83.3)	111 (52.9)		
Time of Admission			Fisher's Exact = 2.362	0.888
Morning	4 (22.2)	52 (24.8)		
Afternoon	4 (22.2)	35 (16.7)		
Evening	10 (55.6)	123 (58.5)		

Table 3
Multivariable Logistic Regression Analysis of Factors Associated with Poor Satisfaction

Variables	B (Regression coefficient)	AOR	95% CI		p-value
			Min	Max	
Delivery Mode					
Operative	1.495	4.459	1.254	15.861	0.021
Non operative	1*				
*Reference Category, statistically significant, AOR - Adjusted Odds Ratio, CI - Confidence Interval.					

In Table 4, there was no significant difference in mean Dignity and Respect scores between ESH and UBTH (15.74 ± 1.10 vs. 15.79 ± 3.80 ; $p = 0.900$), while UBTH had significantly higher mean scores for Communication and Autonomy (24.92 ± 3.66 vs. 23.62 ± 1.62 ; $p < 0.001$), Supportive Care (41.54 ± 6.05 vs. 40.04 ± 2.34 ; $p = 0.011$), and overall PCMC (82.24 ± 12.78 vs. 79.41 ± 4.62 ; $p = 0.022$) compared with ESH.

Table 4
Comparison of Mean PCMC Scores Between Facilities

Domains	ESH Mean $\pm$ SD (n = 101)	UBTH Mean score $\pm$ SD (n = 127)	t-value	p-value
Respect and dignity	15.7 $\pm$ 1.1	15.8 $\pm$ 3.8	-0.126	0.900
Communication and autonomy	23.6 $\pm$ 1.6	24.9 $\pm$ 3.7	-3.577	< 0.001
Supportive care	40.0 $\pm$ 2.3	41.5 $\pm$ 6.0	-2.555	0.011
Total PCMC score	79.4 $\pm$ 4.6	82.2 $\pm$ 12.8	-2.320	0.022

Qualitative Findings

Satisfaction, Communication and Respectful Care

The qualitative findings generally supported the high satisfaction observed quantitatively, while providing deeper insights into women's experiences and healthcare providers' perspectives. Women described emergency obstetric care as generally prompt, satisfactory and lifesaving, with one participant stating, "It was okay. You people tried." (FGD Participant). Providers similarly emphasised the urgency given to obstetric emergencies: "We are swift in our actions... before they came in, we were ready." (KII Participant). However, women's experiences varied in relation to communication, respect and provider attitude. Providers identified language, educational and sociocultural factors as barriers to communication and informed consent, noting that "Many will come, they don't even understand what we are speaking." (KII Participant). Some women also described negative interactions with staff, including being ignored or spoken to harshly: "No answer. Why are you shouting, why are you calling me?" (FGD Participant).

Health-System and Infrastructural Constraints

Health-system and infrastructural constraints emerged prominently from providers' accounts. Staff shortages, heavy workloads, limited theatre capacity, blood bank logistics, inadequate critical-care resources and overcrowding were reported as challenges to timely and patient-centred care. One provider illustrated the workload pressure: "You have one doctor on duty and you have four emergencies." (KII Participant). Women also identified deficiencies in ward facilities and postoperative support, with one reporting, "There were times that there was no water running in the bathroom." (FGD Participant). Women, particularly following caesarean delivery, expressed a need for greater practical and emotional support during recovery.

Financial Barriers and the Role of CEmONC

Financial barriers were also important, with providers reporting that patients' inability to pay for investigations, surgery, blood products and essential materials could delay care. Women similarly expressed concern about having to procure materials during emergencies: "I really wasn't comfortable

with the fact that they would ask you to get your patient pack before you get attended to.” (FGD Participant). In contrast, the Comprehensive Emergency Obstetric and Newborn Care (CEmONC) programme was highly valued for reducing out-of-pocket expenditure, with one woman stating, “They were able to clear all your bills.” (FGD Participant), while another rated the programme “10 over 10.” (FGD Participant).

Recommendations for Improving Emergency Obstetric Care

Women and healthcare providers recommended increased staffing, improved infrastructure and equipment, better communication, public health education, women’s empowerment and sustained financial protection through programmes such as CMOC. Providers particularly emphasised the need for additional personnel, “We need more doctors.” (KII Participant) and improved equipment and critical-care resources. Overall, women focused predominantly on their direct experiences of respect, provider attitude, financial costs and postoperative support, while providers highlighted the health-system constraints underlying care delivery, demonstrating complementary perspectives on opportunities to improve emergency obstetric care.

DISCUSSION

This mixed-methods multicentre study demonstrated high satisfaction with emergency obstetric care (EmOC), with 92.1% of women reporting high satisfaction and over 90% reporting favourable experiences across dignity and respect, communication and autonomy, and supportive care. Qualitative findings supported the generally positive experience, with women describing care as prompt and lifesaving, but also revealed concerns regarding communication, provider attitude, postoperative support, staffing, infrastructure and financial barriers. The satisfaction level observed in this study was considerably higher than the pooled prevalence of 67.31% (95% CI: 60.18–74.44) reported in a systematic review and meta-analysis of 36 studies on women’s satisfaction with skilled delivery care in Ethiopia.¹⁰ In the review, shorter waiting time, assured privacy, appropriate labour pain management, access to ambulance services, shorter duration of labour and favourable newborn outcomes were among the factors associated with greater satisfaction.¹⁰ Differences in study populations, healthcare settings, measurement tools and women’s expectations may partly explain the higher satisfaction observed in our study; additionally, prompt and successful management of potentially life-threatening obstetric emergencies may have positively influenced women’s perceptions of care.

High ratings for dignity and respect, communication and autonomy, and supportive care are encouraging because person-centred care is an essential dimension of maternity-care quality. The PCMC scale specifically evaluates these domains and has demonstrated validity across LMIC settings.¹¹ Nevertheless, qualitative accounts revealed occasional harsh interactions and communication difficulties related to language, educational level and sociocultural influences on informed consent. Similar concerns have been reported internationally: a WHO-led multicountry study involving Nigeria

found that more than one-third of women experienced mistreatment during childbirth, while recent Nigerian evidence from Lagos documented substantial disrespect and abuse during facility-based childbirth.^{12,13} These findings emphasise that high overall satisfaction does not necessarily exclude individual experiences of disrespect or poor communication.

The significant facility-level difference in satisfaction is consistent with the Nigerian mixed-methods study by Banke-Thomas et al., which found that although women generally rated the clinical aspects of emergency obstetric care positively, satisfaction gaps remained in service delivery, care organisation and *responsiveness*, with inadequate staffing, heavy workload and overcrowding affecting attention to women's needs.¹⁴ In the present study, compared to ESH, UBTH had higher mean Communication and Autonomy, Supportive Care and overall PCMC scores but greater variability, suggesting that while most women received highly rated care, a subgroup experienced substantially poorer care. This finding adds to the literature by demonstrating that higher average person-centred care scores can coexist with greater variation in patient experience within a tertiary referral facility, possibly reflecting greater case complexity, referral burden, operative workload and health-system pressures at UBTH.

Mode of delivery was an important determinant of satisfaction. Women who underwent operative delivery had more than four-fold higher adjusted odds of poor satisfaction compared with those who had non-operative delivery (AOR = 4.459; 95% CI: 1.254–15.861; $p = 0.021$). This finding is consistent with evidence showing lower satisfaction following caesarean compared with vaginal delivery in some settings.¹⁵ The qualitative findings provide additional context, as women requiring operative care described unmet postoperative support needs, while providers highlighted workload and resource constraints. Emergency operative delivery may involve unexpected intervention, anxiety, rapid decision-making, postoperative pain and greater dependence on healthcare workers; therefore, improved counselling, informed consent, analgesia and postoperative physical and emotional support may improve women's experiences.

Health-system constraints were prominent in the qualitative findings despite high quantitative satisfaction. Providers described shortages of doctors, nurses and midwives, heavy workloads, limited theatre capacity, blood-bank challenges and inadequate critical-care resources, while women reported deficiencies in ward facilities and postoperative support. Similar challenges have been reported in a Nigerian mixed-methods assessment of EmOC, where insufficient and overworked healthcare workers, infrastructure deficiencies, shortages of blood products and high costs affected service delivery.¹⁴ This illustrates the value of combining women's and providers' perspectives: women predominantly described their direct experiences of care, whereas providers revealed health-system constraints that may not be apparent from satisfaction scores alone. The triangulated findings similarly showed that infrastructure limitations were principally identified through qualitative enquiry despite high quantitative satisfaction.

Financial barriers represented another important finding that emerged predominantly from the qualitative component. Women and healthcare providers described difficulties paying for investigations, surgery, blood products and essential materials, which could potentially delay emergency treatment.

Similar financial barriers to EmOC have been documented in Nigeria.¹⁴ Women strongly valued financial support that reduced out-of-pocket expenditure, improved timely access to emergency obstetric care, and protected families from the financial burden of obstetric emergencies.

A major contribution of this study is the demonstration that high average satisfaction may mask substantial heterogeneity in women's experiences of emergency obstetric care. Operative delivery and facility-level differences identified subgroups with poorer experiences, while qualitative findings revealed interpersonal, perioperative, financial and health-system deficiencies that were not fully captured by quantitative satisfaction measures. These findings have practical implications for resource-limited settings: improving EmOC requires not only timely lifesaving interventions but also respectful communication, strengthened staffing and infrastructure, adequate perioperative and postoperative support, and financial protection. Addressing these dimensions may improve women's experiences while advancing more responsive, equitable and person-centred emergency obstetric care.

CONCLUSION

Women reported high satisfaction and favourable experiences with emergency obstetric care, particularly in dignity and respect, communication and autonomy, and supportive care. However, operative delivery was independently associated with poor satisfaction, while qualitative findings revealed important workforce, infrastructural, financial, communication and postoperative-support challenges despite the high satisfaction reported. Strengthening perioperative and postoperative support, respectful communication, staffing and infrastructure, alongside sustained financial protection through programmes, may improve women's experiences and promote more responsive, person-centred emergency obstetric care.

STRENGTH OF THE STUDY

A major strength of this study is its mixed-methods approach, integrating patient-reported PCMC measures with women's experiences and frontline healthcare providers' perspectives. This provides a comprehensive understanding of emergency obstetric care and demonstrates how high satisfaction may coexist with important interpersonal, perioperative, financial and health-system challenges in resource-limited settings.

LIMITATION

The cross-sectional design limits causal inference, while recruitment of postpartum clinic attendees may have introduced selection and recall biases. The small number of women reporting poor satisfaction may also have limited the precision and stability of the multivariable regression estimates. Additionally, the study was conducted in two hospitals in Benin City, which may limit the generalisability of the findings to other healthcare settings.

ETHICAL CONSIDERATION:

Ethical approval was obtained from the Health Research Ethics Committee of the University of Benin Teaching Hospital, Benin City, Nigeria (PROTOCOL NUMBER: ADM/E22/A/VOL. VII/14831310199), which also covers ESH. The study was conducted in accordance with the ethical principles of the Declaration of Helsinki. Written informed consent was obtained from all participants, and participation was voluntary with the right to withdraw at any time. Confidentiality, anonymity and privacy were maintained by excluding personal identifiers and conducting interviews privately. Data were securely stored, used solely for research and publication purposes, and permission was obtained before audio-recording qualitative interviews.

Abbreviations

AOR – Adjusted Odds Ratio; CEmONC – Comprehensive Emergency Obstetric and Newborn Care; CI – Confidence Interval; CS – Caesarean Section; EmOC – Emergency Obstetric Care; ESH – Edo Specialist Hospital; FGD – Focus Group Discussion; KII – Key Informant Interview; LMIC – Low- and Middle-Income Country; PCMC – Person-Centered Maternity Care; PIH – Pregnancy-Induced Hypertension; PPH – Postpartum Haemorrhage; PROM – Prelabour Rupture of Membranes; SD – Standard Deviation; SPSS – Statistical Package for the Social Sciences; UBTH – University of Benin Teaching Hospital; WHO – World Health Organization.

Declarations

CONFLICT OF INTEREST:

There was no conflict of interest throughout the study.

FUNDING: Nil

AVAILABILITY OF RESEARCH MATERIALS

All relevant raw data will be freely available to any scientist wishing to use them for non-commercial purposes on request. Please contact the corresponding author for relevant raw data if needed.

AUTHOR CONTRIBUTIONS

- The lead author and the corresponding author conceptualized the study, performed Data collection and analysis and take responsibility for the integrity of the data.
- All authors participated in writing the manuscript.
- All authors participated in data interpretation, critically reviewed the manuscript for significant intellectual input, provided final approval for publication, and accept responsibility for all aspects of the study.

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Figures

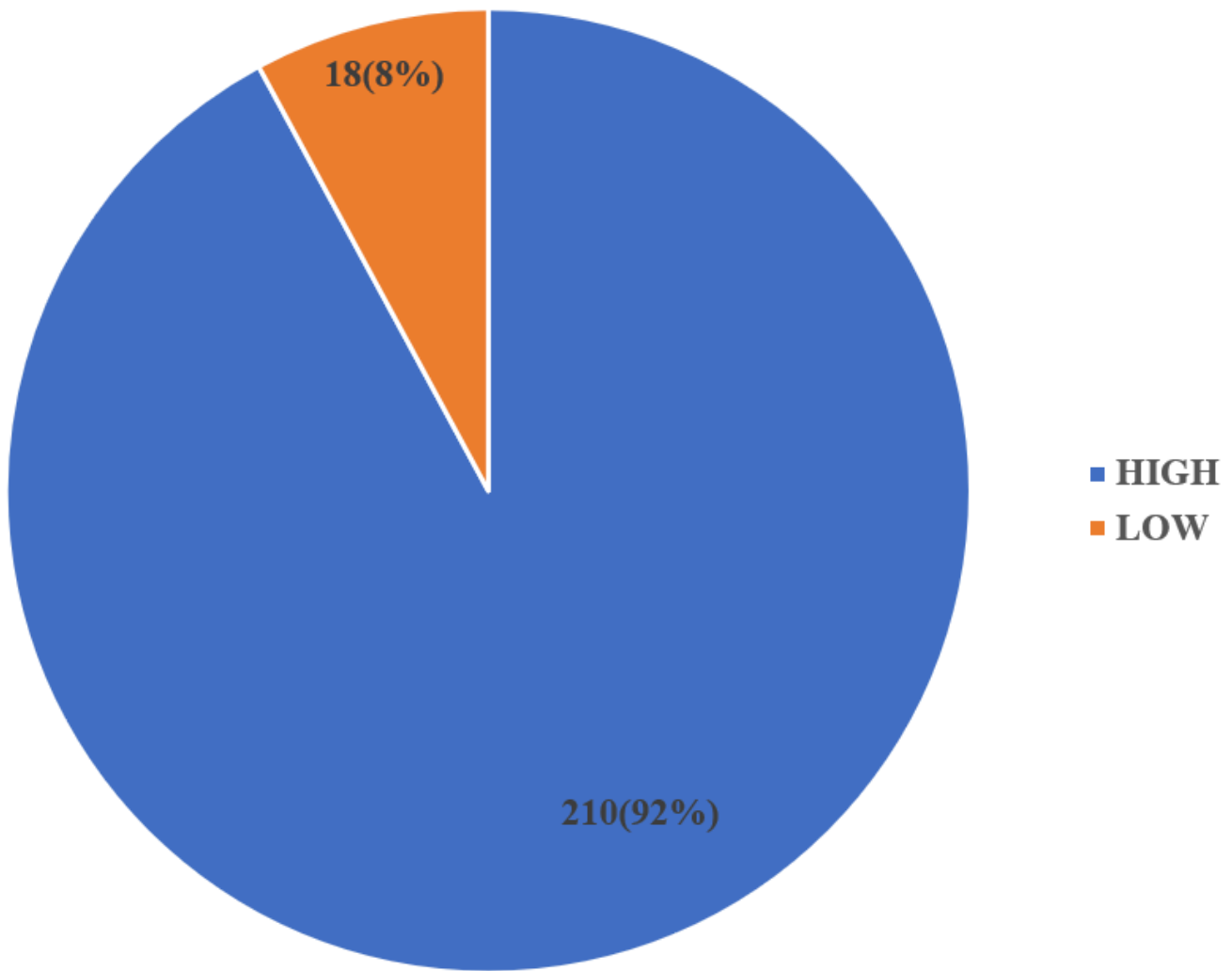


Figure 1

Satisfaction Level