



## **Parental Satisfaction with Quality of Health Care of Children with Sickle Cell Disease at the University of Benin Teaching Hospital, Benin City.**

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### **Keywords:**

Parental Satisfaction, Quality, Healthcare, Children, Sickle Cell Disease.

### **ABSTRACT**

**Background:** Parents play a major role in determining where and when to access care for their children. Assessing parental satisfaction with the health system will be a pointer to attitude towards health institutions compliance with treatment and achievement of better treatment outcome, especially in the care of children with chronic diseases such as sickle cell disease (SCD). This study determined parental satisfaction with quality of health care of their children with SCD at the University of Benin Teaching Hospital (UBTH), Benin City.

**Methods:** The study was a descriptive survey. A structured questionnaire with a five point Likert scale was used for data collection from parents of children with SCD. A mean score of 3.0 and above was used as an acceptable response for high level of satisfaction. The maximum allowable score was 5.

**Results:** Parents of children with SCD had a good perception of the health facility with a high mean score of  $4.35 \pm 0.43$ . Parental satisfaction was high (mean score ranged from  $3.49 \pm 0.68$  to  $4.31 \pm 0.50$ ) across the entire construct. The highest and lowest levels of satisfaction was found in the domain "visit to the doctors (mean score was  $4.31 \pm 0.50$ ) and "staff communication" (mean score  $3.49 \pm 0.68$ ) respectively. Socio-demographic and economic factors did not significantly affect parental satisfaction with quality of health care.

**Conclusion:** Parental satisfaction with quality of health care was high in this study. Areas with least level of satisfaction such as "communication with staff" and "care from the laboratory" should be reviewed for improvement.

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## **INTRODUCTION**

Patient satisfaction is a measure of the extent to which a patient is pleased or happy with the health care they received from their health care providers.<sup>1</sup> Satisfaction of patients with health care is also a function of their personal

preferences and expectations as far as health care is concerned.<sup>1-2</sup> Health care institutions, like every other organization offering a service, must meet the requirements and expectations of their customers - the patients, by being sensitive to their needs. Patient satisfaction is related to the extent to which

general health care needs and condition-specific expectations and needs of the patient are met.<sup>3</sup> In the care of paediatric patients, the parents are the decision makers. Parents decide when and where to access health care services for their children/wards, thus, their satisfaction with quality of care of their children/wards is important to ensure that they continue to access such care. Patient satisfaction is of great importance as a measure of the quality of health care services because it provides information on the health care provider's success at meeting the patients' needs and expectations. These are issues on which only the client is the ultimate authority.<sup>4,5</sup> Satisfied patients are more likely to comply with treatment and play active roles in their own care. They are also likely to continue using medical care services and stay with the specific health care provider. It is therefore necessary that the health care system adopts an evaluation process in order to improve satisfaction and the quality of care services delivered to patients.<sup>4</sup> In addition, the knowledge of patient satisfaction by health care professionals and institutions help to identify potential areas for service improvement.<sup>2</sup> Thus, health expenditure may be optimized through patient-guided planning and evaluation.

The satisfaction of patients is an important and commonly used indicator for measuring the quality of health care services.<sup>6-7</sup> Quality is the ability of a service or product to meet well-stated and known criteria based on customer's satisfaction from the performance of organizational work schedule.<sup>8</sup> In another way, Øvretveit et al<sup>9</sup> defined quality care as the 'provision of care that exceeds patients' expectations and achieves the highest possible clinical outcomes with the resources available. In rendering quality health care, services should be readily accessible, acceptable, comprehensive and complete.<sup>10-11</sup> High

technical competence of staff, warm and cordial interpersonal relationship between patient and staff, dissemination of accurate information to help in making informed decision and continuity of care are all important elements required to deliver quality health care to meet patients' satisfaction.<sup>10-12</sup> Without the expectations of the patient being met, quality of care is almost always perceived as poor. This is more so in patients who have chronic illnesses such as sickle cell anaemia who have to visit the health facility recurrently due to their chronic illness.

Sickle cell disease (SCD) is a chronic haemolytic disorder due to a genetic mutation of the  $\beta$  globin chain.<sup>13-14</sup> The prevalence of SCA is said to be 2% in Nigeria.<sup>13,15</sup> Nigeria has the highest burden of SCD in Africa.<sup>13</sup> Patients with SCD present with recurrent anaemia, bone pains and other major acute medical events which necessitate hospital admissions and clinic follow-up visits.<sup>16-17</sup> Some studies<sup>18-21</sup> have alluded to the fact that patients with chronic illnesses have high expectations of a definitive cure for their disorder and once this cannot be guaranteed, it can result in decreased patient satisfaction. Poor communication with attending physicians, lack of empathy, and the chronicity of many of the disorders as well as the need to continuously be on pills all lead to dissatisfaction.<sup>22-24</sup> For children with diseases such as SCD, parents or caregivers play a key role in seeking and determining the care received by their children or wards. There is also a high level of socio-cultural beliefs and traditions that compete with orthodox practice in the care of children with SCD.<sup>25-26</sup> It is therefore imperative that health care facilities should ensure good patient satisfaction and quality care to retain these patients. When there is dissatisfaction with health care services, parents are likely to seek alternative sources of care such as unorthodox care and

this is rampant among parents/guardians of children with SCD.<sup>26</sup> The knowledge of the satisfaction of parents of children with SCD will help in improving the efficiency and effectiveness of care and thus the overall quality of care can be improved on the long run.

In developed countries, several studies on patient satisfaction have been carried out in most facilities to ensure patient centered quality care services and retention of patients in these facilities.<sup>27</sup> But the situation is not the same in developing countries. Most studies on patient satisfaction and quality of care especially in those with chronic disorders are done in caucasians and mainly in the adult population.<sup>28-29</sup> The study by Brousseau et al<sup>22</sup> in Wisconsin, United States (2009), assessed parent-reported dissatisfaction with care among parents of children with SCD compared with general paediatric patients. They reported that parents of children with SCD (32.4%) were more dissatisfied with care of their children compared to those of general paediatric patients (14.6%). There is paucity of data on parental satisfaction with care of paediatric patients with SCD in Nigeria. It is worth noting that in Nigeria, the prevalence of SCD is very high and there is still a high rate of patronage of unorthodox care amongst patients with SCD despite several advances in medical care of SCD today.<sup>26</sup> A significant proportion of the children only present to the hospitals when they have developed complications, some of which may be life-threatening. Could dissatisfaction with health care services be responsible for this trend?

The knowledge of parental satisfaction with quality of health care provides information on the health care provider's ability to meet the parents' expectation in delivering acceptable care to their children/wards. The assessment of client satisfaction is very important because

it exposes aspects that only the client can provide information on. When this information is utilized, better service delivery can be achieved, thus, improving the quality of health care. The care of individuals and children with SCD is still a far cry from what it should be, especially in Nigeria, a country with the highest burden of SCD in sub-Saharan Africa.<sup>30</sup> Despite the establishment of some sickle cell centres around the country dedicated to the care of these patients, other sources of care compete with medical care thus hindering adequate care of these children; hence there is a need to determine the parental satisfaction with quality of health care services for children with SCD. Thus, this study determined the level of parental satisfaction with quality of health care of children with sickle cell disease at the sickle cell clinics of University of Benin Teaching Hospital (UBTH), Benin City.

## SUBJECTS AND METHODS

This study was conducted in the paediatric sickle cell clinic of the University of Benin Teaching Hospital (UBTH), Benin City. Benin City is the capital of Edo State, and is located in the south-south geo-political region of Nigeria. The paediatric sickle cell clinic of UBTH is a tertiary specialist clinic and a major referral center for paediatric sickle cell patients in Edo, Delta and other neighbouring states. This study was a descriptive, cross-sectional study which assessed the quality of, and level of parental satisfaction to health care received by children with SCD. The various aspects of quality of health care which include structure, process and outcome of health care as described by Donabedian<sup>31</sup> in 1988 were assessed. It also described parental perception of quality of health care received by these children. The satisfaction of parents was assessed with the use of a structured questionnaire. Participation in the study was

entirely voluntary. Ethical approval for the study was obtained from the Ethics and Research Committee of the hospital. Written informed consent was obtained from parents/caregivers of the subjects. All data obtained was treated with utmost confidentiality.

The study sample consisted of parents of children with SCD aged 1-17years who attend clinic at the UBTH, Benin City. A sample size of 89 was determined using the standard Cochran's formula<sup>32</sup> and a prevalence of 32.4%<sup>22</sup> after applying the formula for adjustment in population less than 10,000.<sup>33</sup> Parents of children with SCD aged 1-17years who have attended more than one clinic visit at UBTH and who were willing to participate in the study were recruited for the study. Subjects were recruited consecutively till the sample size was completed.

Information was collected from parents/caregivers with the aid of a structured questionnaire. The questionnaire contained biodata, family history, income of parents, expenditure on health care, evaluation of parental perception and parental satisfaction with quality of health care. The section assessing parental satisfaction had two subdivisions, namely, domains of satisfaction and overall satisfaction ratings. The domains evaluated satisfaction with clinic appointment (7 questions), staff communication (7 questions), clinic staff (5 questions), visit to doctor/medical officer in OPD (7 questions), visit to nurse in OPD, clinic facilities (4 questions) and health outcome (3 questions). The section on overall satisfaction/quality of medical care (7 questions) was included to assess the overall conclusion of the parents with regards to general care and quality of medical care received as well as their satisfaction with the service received from different health care personnel (such as

doctors, nurses, pharmacists, laboratory scientist and record officers).

The questionnaire was self-administered and the aspects evaluating parental perception and parental satisfaction with quality of health care consisted of questions with responses following the 5-point Likert scale (ranging from 1 = 'very dissatisfied' to 5 = 'very satisfied'). The minimum score for each question was one while the maximum score was five. For each domain, the level of satisfaction was assessed as the mean score of responses in that domain. Similarly, the overall satisfaction was assessed as mean scores for all respondents. A mean score of 3.00 and above was used as an acceptable response for good level of satisfaction.<sup>34-35</sup> The socio-economic status was assessed with the method described by Olusanya et al, 1985.<sup>36</sup> A pretest of the instrument was carried out among children with SCD attending sickle cell clinic of Sickle Cell Centre (SCC), Benin City. The questionnaire was tested for internal consistency using Cronbach's alpha ( $\alpha$ ). The satisfactory level was set at  $\alpha > 0.70$ . All the domains had satisfactory internal consistency ranging from 0.75 to 0.95 except for clinic staff domain with  $\alpha = 0.55$ . Modification was made on the questionnaire based on results of the pretest.

Data collected was imputed into Microsoft Office Excel 2011 Spreadsheet for sorting and coding. Thereafter, the data was imported into IBM Statistical Package for Social Sciences (IBM SPSS) version 20. Quality control of the data was carried out. The data was then processed and analyzed. Descriptive statistics such as frequencies and mean were calculated and presented in tables and charts. ANOVA and T-test was used to compare means of continuous variables as appropriate while chi-square was used to compare categorical data.

## RESULTS

### Socio-demographic characteristics of respondents

Eighty-nine parents of children with sickle cell disease (SCD) were recruited for this study. Fifty-five (62%) of respondents were males while 34 (38%) were females. The minimum age of respondents was 20 years while the maximum age was 62 years. The mean age of respondents was  $43.2 \pm 8.17$  years. The mean age for mothers  $39.7 \pm 7.49$  years was significantly lower than mean age of fathers  $45.5 \pm 7.87$  years ( $t=3.44$ ,  $p=0.001$ ). Majority of the respondents 58 (65.4%) were from the high socioeconomic class while 31 (34.6%) were in the middle class. There was no respondent in the low socio-economic class.

### Average monthly income of respondents and expenditure on children's health care

Thirty-seven respondents (41.6%) earn more than ₦50,000 monthly, 20 (22.4%) earn between ₦20,000 - <₦50,000, 14 (15.7%) earn between ₦10,000 - <₦20,000. Only 18 (20.3%) of respondents earn less than ₦10,000 per month. For the average monthly expenditure of respondents on health care, few respondents 4 (4.5%) spend more than ₦50,000 per month while 25 (28.1%) spend between ₦5,000 and ₦10,000 monthly on health care. Table 1 shows the sociodemographic characteristics, monthly income and expenditure on health care of respondents

### Parental perception of quality of health care service

Sixty-eight (76.8%) and 64 (72%) of respondents strongly agree that the doctors are competent to treat their children and that their children will get the best care in the facility, respectively. Similarly, 64 (72%) also strongly agree that their children will continue to receive care in the facility.

**Table 1: Socio-demographic Characteristics of Respondents**

Characteristics	Frequency (Percent)
<b>Sex</b>	
Male	55 (62.0)
Female	34 (38.0)
<b>Age-group (years)</b>	
< 30	4 (4.2)
30-39	25 (27.8)
40-49	39 (44.4)
≥ 50	21 (23.6)
<b>Educational qualification</b>	
No formal education	4 (4.6)
Primary	20 (22.4)
Secondary	47 (52.8)
Tertiary	18 (20.2)
<b>Socioeconomic class</b>	
Upper	58 (65.4)
Middle	31 (34.6)
Lower	0 (0.0)
<b>Monthly income</b>	
< ₦10,000	18 (20.2)
₦10,000 - <₦20,000	14 (15.7)
₦20,000 - <₦50,000	20 (22.4)
≥ ₦50,000	37 (41.6)
<b>Monthly Expenditure</b>	
<₦5,000	19 (21.3)
₦5,000 - <₦10,000	25 (28.1)
₦10,000 - <₦20,000	20 (22.5)
₦20,000 - <₦50,000	21 (23.6)
≥ ₦50,000	4 (4.5)
TOTAL	89 (100.0)

**Table 2: Level of parental perception of quality of health care service in UBTH**

Perception	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	Mean	SD
	n (%)	n (%)	n (%)	n (%)	n (%)		
The doctors are competent to treat your child.	68(76.8)	20(22.0)	0 (0)	1 (1.2)	0 (0)	4.74	0.52
Your child will get the best care in this facility.	64(72.0)	18(20.7)	6 (6.1)	1 (1.2)	0 (0)	4.63	0.66
The nurses will treat your child well.	33(37.8)	48(53.7)	6 (6.1)	1 (1.2)	1 (1.2)	4.26	0.73
Receiving care in this facility is stressful.	14(16.0)	38(42.0)	9 (9.9)	24 (27.2)	4 (4.9)	3.37	1.19
It is worth receiving care in this facility.	47(52.5)	37(41.2)	3 (3.8)	2 (2.5)	0 (0.0)	4.44	0.69
You will continue to receive care for your child in this facility.	64(72.0)	20(22.0)	4 (4.9)	1 (1.2)	0 (0.0)	4.64	0.64

*n=89, Mean cut-off is 3.00*

Forty-seven (52.5%) strongly agree that it is worth receiving care in the facility while 33 (37.8%) strongly agree that the nurses will treat their children well. However, thirty eight (42%) of respondents agree that receiving care in the facility was stressful. The mean values for the variables were above the cut-off value ranging from 3.37±1.19 to 4.74±0.52. The highest mean score (4.74±0.52) was found on the variable “the doctors are competent to treat your child” while the lowest mean score (3.37±1.19) was found for the variable “receiving care in this facility is stressful”. The total average mean score (4.35±0.43) for all variables was far above the cut-off of 3.00. The frequencies and mean value for each variable are shown in the table 2.

### **Parental satisfaction with health care services in UBTH**

The level of parental satisfaction with health care services was assessed under the following sub-divisions: domain of satisfaction and overall satisfaction. In the domains, level of satisfaction was assessed for clinic appointments, clinic staff, communication with staff, consultation with doctors, visit to nurses, clinic facilities and health outcome while overall satisfaction was assessed as single overall ratings for different service points such as OPD, pharmacy, laboratory and records.

The level of satisfaction was determined for each of these domains. All the domains had mean scores above the cut-off of 3.00, ranging from 3.49±0.68 to 4.31±0.50. The lowest mean

score (3.49±0.68) was found in “communication of staff” while “consultation with the doctors” had the highest mean score (4.31±0.50) (Table 3). Assessing the overall rating of care received at the different service points such as pharmacy, laboratory, records, nursing and medical personnel showed highest overall mean (4.09±0.6) for the “care from doctors” while the lowest overall mean (3.38±1.18) was seen in the “care from the laboratory scientist” (Table 3).

### Factors that affect parental satisfaction with quality of health care services

Table 4 shows the factors that may affect parental satisfaction and these included age, sex, educational qualification, socioeconomic class, monthly income and expenditure on health care. Eighty-three (93.3%) of the respondents were satisfied while only 6(6.7%) were dissatisfied. There was no statistically significant difference in the level of satisfaction based on sex, age groups and levels of educational qualification ( $p=0.67$ ,  $p=0.64$  and  $p=0.88$  respectively). Also, there was no statistically significant difference between those who were satisfied and those who were dissatisfied with regards to their socioeconomic class, monthly income and expenditure on health care ( $p=1.00$ ,  $p=0.26$  and  $p=0.14$  respectively).

### Mean comparison of socio-demographic and economic factors with level of satisfaction

The mean comparison of the socio-demographic and economic factors with level of parental satisfaction showed that gender ( $t=0.73$ ,  $p=0.46$ ) and age of respondents ( $F=1.50$ ,  $p=0.22$ ) did not significantly affect satisfaction. Similarly, socioeconomic class ( $t=1.22$ ,  $p=0.22$ ) and monthly average income ( $F=1.03$ ,  $p=0.38$ ) did not significantly affect satisfaction of respondents.

**Table 3: Level of parental satisfaction with quality of health care services in UBTH.**

Domain of satisfaction	Mean	SD
Clinic Appointment	3.54	0.57
Clinic Staff	3.78	0.54
Staff communication with you	3.49	0.68
Visit to Doctor/medical officer in OPD	4.31	0.50
Visit to Nurse in OPD	3.99	0.57
Clinic facilities	3.65	1.33
Health outcome	3.99	0.65
General Care given to you	4.21	0.54
The quality of your medical care	4.32	0.59
Overall rating of care from your doctor	4.37	0.68
Overall rating of care from your nurse	4.09	0.69
Overall rating of care from your pharmacist	3.41	1.20
Overall rating of care from your lab scientist	3.38	1.18
Overall rating of care from your record officer	3.99	0.84

*n=89, Mean cut off is 3.0, SD=Standard Deviation*

However, level of education and expenditure on health care significantly affected satisfaction of respondents ( $F=3.67$ ,  $p=0.02$  and  $F=2.74$ ,  $p=0.03$  respectively). Mean comparison of sociodemographic and economic factors are shown in table 5.

**Table 4: Level of satisfaction with quality of health care based on socio-demographic characteristics of the parents**

Variable	Satisfied n (%)	Dissatisfied n (%)	$\chi^2$	p-value
<b>Sex</b>				
Male	52 (94.5)	3 (5.5)	0.37*	0.67
Female	31 (91.2)	3 (8.8)		
<b>Age-group (years)</b>				
<30	4 (100.0)	0 (0.0)	1.68	0.64
30-39	22 (88.0)	3 (12.0)		
40-49	37 (94.9)	2 (5.1)		
≥ 50	20 (95.2)	1 (4.8)		
<b>Educational qualification</b>				
No formal	4 (100.0)	0 (0.0)	0.68	0.88
Primary	18 (90.0)	2 (10.0)		
Secondary	44 (93.6)	3 (6.4)		
Tertiary	17 (94.4)	1 (5.6)		
<b>Socioeconomic class</b>				
Upper	54 (93.1)	4 (6.9)	0.50*	1.00
Middle	29 (93.5)	2 (6.5)		
Lower	0 (0.0)	0 (0.0)		
<b>Monthly income (₦)</b>				
< 10,000	16 (88.9)	2 (11.1)	3.98	0.26
10,000 - <20,000	14 (100.0)	0 (0.0)		
20,000 - <50,000	20 (100.0)	0 (0.0)		
≥ 50,000	33 (89.2)	4 (10.8)		
<b>Monthly expenditure (₦)</b>				
<5,000	19 (100.0)	0 (0.0)	6.90	0.14
5,000 - <10,000	23 (92.0)	2 (8.0)		
10,000 - <20,000	20 (100.0)	0 (0.0)		
20,000 - <50,000	18 (85.7)	3 (14.3)		
≥ 50,000	3 (75.0)	1 (25.0)		

\* Fisher's exact. n=89

## Discussion

The measurement of quality of health care is challenging due to its inherent intangibility.<sup>37</sup> One of the indicators that have gradually been used over the years to assess quality of care is patient satisfaction. In general, children are dependent on their parents for sustenance and care. Parental perception and satisfaction with health care given to the children is paramount for accessing care and retention of such care in any health facility. Parents who are dissatisfied are unlikely to access care in such a facility at a later date. It is therefore wise for health care facilities to maintain high

**Table 5: Mean comparison of socio-demographic and economic factors and level of satisfaction**

Variable	N	Mean	ANOVA (F)	p-value
<b>Sex</b>				
Male	55	3.92±0.51	0.73*	0.46
Female	34	4.00±0.49		
<b>Age group</b>				
<30yrs	4	3.76±0.16	1.50	0.22
30 - 39yrs	25	3.95±0.61		
40 - 49yrs	39	3.83±0.49		
Above 50yrs	21	4.11±0.47		
<b>Level of Education</b>				
No formal education	4	4.50±0.30	3.67	0.02
Primary	20	3.69±0.56		
Secondary	47	3.96±0.49		
Tertiary	18	4.04±0.46		
<b>Socio-economic Status</b>				
Upper	58	4.01±0.52	1.22*	0.23
Middle	31	3.87±0.51		
<b>Average Monthly Income (₦)</b>				
<10000	18	3.87±0.59	1.02	0.38
10000 - <20000	14	3.82±0.45		
20,000 - <50000	20	4.10±0.42		
≥ 50,000	37	3.89±0.58		
<b>Average Monthly Expenditure (₦)</b>				
<5000	19	3.99±0.29	2.74	0.03
5000 - <10000	25	3.78±0.55		
10000 - <20000	20	4.17±0.48		
20000 - <50000	21	3.78±0.63		
≥ 50000	4	3.52±0.50		

\*T-test n=89

levels of satisfaction in order to remain competitive in the health care market.<sup>38</sup> Management of children with chronic diseases such as sickle cell disease involves frequent hospital visits and admissions. Satisfaction of parents of children with SCD is necessary to ensure that continued care is sought and maintained in a health facility.



The findings of this current study showed that parents of children with SCD had a very good perception of the quality of health care delivered in UBTH with high mean scores above the cut-off of 3.00 (maximum allowable score was 5.00). This is not surprising as UBTH is a tertiary centre and is equipped to be a major referral centre for children with SCD. The facility is also endowed with experts in the management of sickle cell disease. Thus, parents are likely to presume that their children will get the best care in the facility.

There was a high level of satisfaction with quality of care across the different domains in the present study. In all the domains, the mean scores were higher than the cut-off of 3.00. The least satisfaction was found in the domain of "staff communication with parents" with a mean score of  $3.49 \pm 0.68$ . This finding is in keeping with that in a study done in Calabar, where it was documented that poor attitude of health staff was a major area of dissatisfaction reported by patients.<sup>39</sup> In another study on the influence of patient-provider interactions, patients longed for improvement in inter-personal relationships of the health workers.<sup>40</sup> Respondents in that study felt that more personal care will result in better communication, patient involvement, patient satisfaction, and subsequently better quality of care. The highest level of satisfaction was documented in the domain of visit to the doctors with a high mean score of  $4.31 \pm 0.50$ . This is consistent with the single overall rating of satisfaction for care from doctors which was the highest among other health care personnel. The plausible reason for this finding in this study may be the fact that the hospital is endowed with highly trained professionals in the care of children with SCD. Management of sickle cell disease requires comprehensive care that can only be given by experts in the specialty. Thus, parents of

children who have access to professionals with knowledge in comprehensive care of SCD are likely to be highly satisfied with the care they receive. In a survey on quality of care in Burkina Faso, the mean score for clinical examination of patients by health care providers was 10.1 (maximum allowable score was 20).<sup>41</sup> Conflicting level of satisfaction was documented in a study carried out in Trinidad and Tobago on patients' perception and satisfaction with health care professionals at primary care facilities; the findings showed that the greatest needs for improvement were found to be in pharmacists' and doctors' services with specific reference to waiting times.<sup>42</sup> This suggests that satisfaction with quality of care is dependent on the facility logistics such as waiting time among other factors.

The effect of factors such as sex, age, educational qualification, socioeconomic class, income and expenditure on level of satisfaction with quality of health care were assessed in this study. It was found that sex, age, socioeconomic status and average monthly income did not significantly affect level of parental satisfaction in this study. This may be explained by the fact that the paediatric SCD clinic in this facility is run by the standard protocol for comprehensive care of sickle cell disease.<sup>30</sup> There are known standard guidelines in managing patients who present to the clinic, thus irrespective of the sociodemographic characteristics of the parents, all patients are attended to in the best possible way following the standard guidelines. Factors that affect satisfaction are diverse from different studies. In literature, age, sex and educational qualification have been documented to be factors that affect patient satisfaction. Contrary to the findings in this current study, Tsironi et al<sup>38</sup> in Greece found that sex significantly affected satisfaction of parents of children in the

neonatal intensive care unit. Females are said to be more satisfied than males.<sup>1</sup> A study on examining patients' perception of care also revealed that older patients tend to be more satisfied than younger patients.<sup>43</sup> Similarly, in another report on patient satisfaction with primary health care services in the United Arab Emirates, age was statistically significant for the domains of comprehensiveness. Older people felt that the clinic service was more comprehensive than younger people.<sup>44</sup>

This study found that the level of education and monthly expenditure on health care significantly affected the level of satisfaction of respondents. It was found that the less patients spend on health care, the more they were satisfied. Satisfaction was lowest in those who spend more than ₦50,000.00. Monthly expenditure could reduce the level of satisfaction especially if the expenditure exceeds the budgeted amount for health care for the month. In patients with SCD who are likely to come down with acute onsets of ill health, parents may have to expend unbudgeted funds needed for other purposes on care of these children. Thus, this could reduce their perceived level of satisfaction. It could also be that most of the parents are not on the National Health Insurance Scheme (NHIS) which should actually reduce the burden of out-of-pocket expenses on health care. Some studies have also alluded to the fact that less educated patient have higher levels of satisfaction as documented in this study.<sup>1, 45</sup>

### **Conclusion and Recommendations**

The findings in this current study revealed that there was a very good perception of the facility amongst parents of children with SCD. There was also a high level of satisfaction with quality of health care services received at the facility. Since parents are a major stakeholder

in the promotion of health in children, good perception and parental satisfaction with the care will greatly enhance the health seeking behaviour of these parents and improve retention of such children to continue to receive care in the facility. Access to national health insurance scheme can greatly reduce the burden of sudden monthly expenditure on care and contribute to further improvement in satisfaction. It is therefore recommended that aspect with lowest satisfaction vis-a-viz "care from laboratory scientist", "care from pharmacy" and "communication with clinic staff" should be addressed by proper training and re-training of staff on good human relations and other professional aspects of their work. It is also pertinent that there should be periodic assessment of client satisfaction across various departments for effective service delivery.

### **References**

1. Al-Sakkak MA, Al-Nowowaiser NA, Al-Khashan HI, Al-Abdrabulnabi AA, Jaber RM. Patient satisfaction with primary health care services in Riyadh. *Saudi Med J*, 2008; 29(3): 432-436.
2. Ofili OU. Patient satisfaction in healthcare delivery – a review of current approaches and methods. *European Scientific Journal*. 2014; 10: 25-39.
3. Ashrafun L. Factors determining in-patient satisfaction with hospital care in Bangladesh. *Asian Social Sciences*. 2011; 7: 15-24.
4. Youssef FN, Nel D., Bovaird T. Health care quality in NHS hospitals. *International Journal of Health Care Quality Assurance*. 1996; 9: 15-28.
5. Aldana JM, Piechulek H, Al-Sabir A. Client satisfaction and quality of health care in rural Bangladesh.

- Bulletin of the World Health Organization. 2001; 79: 512-517
6. Prakash B. Patient Satisfaction. *J Cutan Aesthet Surg.* 2010; 3: 151-155.
  7. Gupta KS and Rokade V. Importance of Quality in Health Care Sector: A Review. *Journal of Health Management.* 2016. doi:10.1177/0972063415625527
  8. Akpovi SU. Quality Service. In: *Organizational Behaviour.* 1<sup>st</sup> ed. AMFITOP publishers, Nigeria. 2011; 85-103.
  9. Øvretveit J. Does improving quality save money? A review of evidence of which improvements to quality reduce costs to health service providers. London: The Health Foundation, 2009.
  10. Hojat M., Louis DZ, Maxwell K, Markham FW, Wender RC, Gonnella JS. A Brief Instrument to Measure Patients' Overall Satisfaction with Primary Care Physician. *Fam Med.* 2011; 43: 412-417.
  11. Krowinski W, Steiber S. Measuring patient satisfaction. Chicago: American Hospital Publishing, 1996.
  12. Aisiku IP, Penberthy LT, Smith WR, Bovbjerg VE, McClish DK, Levenson JL et al. Patient satisfaction in specialized versus non-specialized adult sickle cell care centers: the PiSCES study. *J Natl Med Assoc.* 2007; 99: 886-90.
  13. World Health Organization. Sickle cell disease prevention and control. 2015 Available at: <http://www.afro.who.int/en/nigeria/nigeria-publications/1775-sickle%20cell%20disease.html>. Accessed on 14<sup>th</sup> November 2016.
  14. Wilkie DJ, Johnson B, Mack AK, Labotka R, Molokie RE. Sickle Cell Disease: An opportunity for palliative care across the life span. *Nurs Clin North Am.* 2010; 45: 375-397.
  15. Odunvbun ME, Okolo AA, Rahimy CM. Newborn screening for sickle cell disease in a Nigerian hospital. *Public Health* 2008; 122: 1111-1116.
  16. Beutler E. The sickle cell diseases and related disorders. In: Beutler E, Coller BS, Lichtman MA, Kipps TJ, Seligsohn U, editors. *Beutler Williams Haematology* 6<sup>th</sup> ed. McGraw Hill Professional, 2000.
  17. Smith-Packard B. Sickle cell patient and parent satisfaction with pain management in the Emergency Department. Master's Thesis, University of Pittsburgh, 2009.
  18. Crow R, Gage H, Hampson S, Hart J, Kimber A. The measurement of satisfaction with health care: implications for practice from a systematic review of the literature. *Health Technol Assess.* 2003; 6:244
  19. Witiw CD, Mansouri A, Mathieu F, Nassiri F, Badhiwala JH, Fessler RG. Exploring the expectation-actuality discrepancy: a systematic review of the impact of preoperative expectations on satisfaction and patient reported outcomes in spinal surgery. *Neurosurg Rev.* 2016;
  20. Noble PC, Conditt MA, Cook KF, Mathis KB. The John Insall Award: Patient expectations affect satisfaction with total knee arthroplasty. *Clin Orthop Relat Res.* 2006; 452: 35-43.
  21. Geurts JW, Willems PC, Lockwood C, van Kleef M, Kleijnen J, Dirksen C. Patient expectations for management of chronic non-cancer pain: A systematic review. *Health Expect.* 2016. doi:10.1111/hex.12527
  22. Brousseau DC, Mukonje T, Brandow AM, Nimmer M, Panepinto JA.

- Dissatisfaction with hospital care for children with sickle cell disease not due only to race and chronic disease. *Pediatr Blood Cancer*. 2009; 53:174-8.
23. Aljuburi G, Laverty A, Green SA. Trends in hospital admissions for sickle cell disease in England, 2001/02–2009/10. *J Public Health (Oxf)*, 2012; 1–7.
  24. Aljuburi G, Okoye O, Majeed A, Knight Y, Green SA, Banarsee R et al. Views of patients about sickle cell disease management in primary care: a questionnaire-based pilot study. *JRSM Short Rep*; 2012; 3: 78.
  25. Afolayan JA, Jolayemi FT. Parental attitude to children with sickle cell disease in selected health facilities in Irepodun Local Government, Kwara State, Nigeria. *Ethno Med*, 2011; 5(1): 33-40.
  26. Ameh SJ, Tarfa FD, Ebeshi BU. Traditional Herbal Management of Sickle Cell Anemia: Lessons from Nigeria. *Anemia*. 2012. <http://dx.doi.org/10.1155/2012/607436>
  27. Bleich SN, Ozaltin E, Murray CJL. How does satisfaction with the health-care system relate to patient experience? *Bulletin of the World Health Organization* 2009; 87: 271-278.
  28. Tonio S, Joerg K, Joachim K. Determinants of patient satisfaction: a study among 39 hospitals in an in-patient setting in Germany. *International Journal for Quality in Health Care*. 2011; 23: 503-509.
  29. Crispin, J, Angela C, Stephen B. The Picker Experience Questionnaire development and validation using data from in-patient surveys in five countries, *International Journal of Quality in Health Care*, 14, 2002; 353-358.
  30. Adewoyin AS. Management of Sickle Cell Disease: A Review for Physician Education in Nigeria (Sub-Saharan Africa). *Anemia*. 2015. doi: 10.1155/2015/791498.
  31. Donabedian A. The quality of care. How can it be assessed? *JAMA*, 1988; 260: 1743–1748.
  32. Cochran W.G. Sampling techniques. 3rd ed. New York: John Wiley & Sons; 1977.
  33. Araoye MO. Research Methodology with Statistics for Health and Social Sciences. Nathadex (Publ) Ilorin 2003; 115-122.
  34. Boone HN, Boone DA. Analysing Likert data. *Journal of Extension (Online)*, 2012; 50 (2). Available at: <https://www.joe.org/joe/2012april/tt2.php>. Accessed on 08/06/2017.
  35. Sauro J. How to interpret survey responses: 5 techniques, 2011. Available at <https://measuringu.com/interpret-responses/>. Accessed on 08/06/2017.
  36. Olusanya O, Okpere E, Ezimokhai M. The importance of social class in voluntary fertility control in a developing country. *West Afr J Med*. 1985; 4: 205-212.
  37. Al-Abri R. and Al-Balushi A. Patient Satisfaction Survey as a Tool towards Quality Improvement. *Oman Med J*; 2014; 29: 3–7.
  38. Tsironi S, Boyaretos N, Tsoumakas K, Giannakopoulou M, Matziou V. Factors affecting parental satisfaction in the neonatal intensive care unit. *Journal of Neonatal Nursing*. 2012; 18: 183-92.
  39. Oyo-ita A, Etuk SJ. Patients' perception of obstetric practice in

- Calabar, Nigeria. Nigeria Journal of Clinical Practice. 2007; 10: 224-228.
40. Lesley B. What really improves the quality of primary health care? A review of local and international experience. Child Health Unit, University of Cape Town, 1999.
  41. Kameli YL, Nikiema G, Capon BS, Martin-Prevel Y. Quality of ante-natal care and obstetric coverage in rural Burkina Faso. J Health Popul Nutr. 2010; 28: 67-75.
  42. Chisholm A. and Askham J. What do you think of your doctor? A review of questionnaires for gathering patients' feedback on their doctor. Picker Institute Europe, 2006.
  43. Faxelid EB, Ahlber M, Maimbolwa KI. Quality of sexually transmitted diseases' care in an urban Zambian setting: The providers' perspective. Intl Journal of Nursing Studies. 1997; 34: 353-357.
  44. Margolis SS and Almarzouqi RT. Patient satisfaction with primary care services in the United Arab Emirates. International Journal for Quality in Health care. 2003; 15: 241-249.
  45. Makhdoom YMAQ, Elzubair AG, Hanif M. Satisfaction with health care among primary health care centers attendees in Al-Kholer, Saudi Arabia. Saudi Arabia. Saudi Med J 1997; 18: 227-230.

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