Impact of socioeconomic status on patient experience on quality of care for ambulatory healthcare services in Tertiary hospitals in Southeast Nigeria.

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Abstract
Background: To determine how socioeconomic factors, such as level of education and employment status, affect patient experiences on quality of care for ambulatory healthcare services in teaching hospitals in southeast Nigeria. Methods: The study used a cross-sectional design to collect data using exit poll. A pre-tested structured questionnaire was administered on clients accessing care in the outpatient departments of three tertiary hospitals in Nigeria. The assessment of patient experiences for quality of care was based on five (5) domains of care: waiting time; environment of the outpatient department; quality of doctor’s care; quality of care by nurses/other health workers; and responsiveness of care. In addition, the overall quality of care was assessed. Results: The mean rating of patient experience of quality of care for the ambulatory care (outpatients’ visits) was 74.31 ± 0.32%. There were moderate differences among the hospitals for various levels of patients’ care, especially for waiting time, quality of doctors’ care and overall quality of care. Employment status was a statistically significant (p ≤ 0.05) determinant of overall patient experience rating for quality of care, while the level of patient’s education was an influence on the perception of waiting by the patients and their rating of care from nurses/other healthcare providers (apart from medical doctors).
Conclusion: The study show that educational and employment status (measures of socioeconomic status) of patients determined how patients receiving ambulatory (outpatient) healthcare services perceived the quality of care in the hospitals. Hence, in order to ensure equity, there is need to institutionalize patient-centered care, giving full consideration to patients’ socioeconomic status. Keywords: Quality of care, Patient Experience, Socioeconomic Status, Hospitals, Nigeria.

Background
People’s state of health and the manner with which it is cared for is indeed regarded as a very important component of economic development of any country [1, 2]. The health sector targets often relate to traditional hospital functions such as diagnosis, outpatient treatment and inpatient care. Outpatient services are those hospital services that do not require an overnight stay and can include things such as diagnostic tests, prescriptions or simple treatment/procedures [3]. This services is offered on ambulatory basis, and it account for majority of patient-medical professional encounters than any other hospital services (approximately four times than that of inpatients).
Few studies have examined patient experience of quality of care in resource-scarce environment like sub-Saharan African countries such as Nigeria. Measurement of quality can be very useful to stakeholders who chooses between different health care providers, and to the policy makers who strive to enunciate better health policies [4]. Standardized surveys of patients and relatives can reliably measure hospital performance by assessing patients’ experience and outcomes of treatment. Patient experience (PE) evaluates what happens at the point of contact between the patient, the practice, and the provider [5]. It does captures health system responsiveness, including the manner and environment in which people are treated when they seek healthcare [6]. It also include sufficient information and education of the patient, coordination of care, physical comfort, emotional support, respect for patient preferences, involvement of family and friends [4].

Patient experience is not the same as perceived quality which is predominantly a cognitive assessment of what happened and how it happened [7]. It is also different from patient satisfaction which is referred to as patients’ emotion, feelings and their perception of delivered healthcare service [8]. Patient satisfaction is regarded as the degree of congruency between patient expectations of ideal care and their perception of the real care received [9] and it tend to ask patient to give subjective responses. In contrast, PE ask patients to give factual responses to questions about what did or did not happen during episode of care.

A major challenge to measuring healthcare quality in low- and middle-income countries (LMICs) was emphasized by a study carried out by Dunsch et al., (2017) on more than 2200 patients in Nigeria using positive and negative framed satisfaction statements [10]. The result show that patient satisfaction measurement are deeply sensitive to the framing of the questions and hence the need to adapt patient experience that avoids agree/disagree and yes/no questions. It is believed that PE survey questionnaires that are well designed and appropriately administered can provide robust measure of quality of care and reliably measure hospital performance against explicit standardization [11, 12]. Several studies have been carried out on quality of healthcare services especially in developed countries, quite a handful in African region and very few in sub-Saharan African countries like Nigeria. Many reviewed literature on quality of healthcare show that waiting time is one of the
most important indicators or variables of healthcare quality. One of such is a cross sectional observational study by the Patels (2017) on waiting time and outpatient satisfaction at Gujarat medical education research society hospital India, using 135 patients from the outpatient department (OPD) [13]. A cross sectional survey of nurses (33,659) and patients (11,318) in 12 countries in Europe and the United States on patient safety, satisfaction and quality of hospital care, using hierarchical modelling and robust logistic regression, show that deficits in hospital care quality were common in all countries [14]. Mejabi et al., (2008) in their work on dimensions of hospital service quality in Nigeria, as published in European Journal of Social Sciences, used probability and quota sampling methods on 6 service points (medical outpatient clinic, surgical outpatient clinic, medical male ward, medical female ward, surgery male ward and surgery female ward) and applied correlation matrices/factor analysis to evaluate quality of healthcare in two Nigeria teaching hospitals. Their findings show that eight (8) dimensions of resource availability, quality of care, condition of the clinic/ward, condition of the facility, quality of food, attitude of doctors and nurses, attitude of non-medical staff and waiting time adequately describe service quality phenomena in Nigerian hospital setting [15].

The aim of the present study is to evaluate patients’ experience (PE) on quality of care among clients accessing ambulatory (outpatients) healthcare services in teaching hospitals, Southeast Nigeria. There is paucity of knowledge on the effects of socio-economic variables on PE for ambulatory healthcare services in hospitals. The present study focused on how socio-economic factors represented, in the context of this study, by level of education and employment status of outpatients affect PE on quality of care. Level of education and employment status were used because the two are the commonest socio-economic status parameters that are used by the teaching hospitals in Nigeria when disaggregating socio-economic status of their patients.

**Methods**

The study design was a cross-sectional exit survey. Three (3) tertiary hospitals were randomly selected from seven (7) teaching hospitals in Southeast, Nigeria. The study population was 7847 patients, which was the projected outpatients flow for the 3 hospitals over a period of 3 months the
data collection lasted. The hospitals are: Enugu State University Teaching Hospital (ESUTH),
University of Nigeria Teaching Hospital (UNTH) and Federal Teaching Hospital Abakaliki (FETHA).
The sample size was determined using a formula for calculating required sample size for a patient
population of less than 10000 persons. \( N_f = n/1 + (n/N); \) \( N \) is average number of target population.
Value of \( n \) was calculated using: \( n = Z^2pq/d^2 \) as the formula [16]. Where \( n \) is minimum sample size
required, \( Z \) is normal standard deviation at 95% confidence level and is 1.96, \( p \) is prevalence of the
factor under study (in this case the outpatients) and from previous studies it is 84% (0.84) for
outpatients [17].
A pre-tested structured patient experience questionnaire (PEQ) with scores assigned to the questions
was developed and used for this study. The PEQ is designed to elicit actual experiences, ranging from
the duration of hospital’s waiting time to the environmental condition of the outpatient department,
the quality of care rendered by the doctors and other health workers, the responsiveness of care and
indeed the patient’s overall rating of his experience [18].
The study generated and attached relative weights to each question as an indirect measure of the
quality of ambulatory healthcare services based on plausible measurements from previous studies
that were adopted for the context of the study area [18, 19, 20]. These weights in the present study
were represented by scores, ranging from zero to ten (0-10).
The questionnaire was pre-tested in a secondary level hospital that is located within the same
geographical region, using about 10% of the sample size. The instruments were also pre-tested and
revised for language and understanding. Hence there was no obvious problem with the respondents
comprehending the questions and providing plausible answers to the questions. A reliability test for
the questionnaire was carried out for internal and external consistency using Cronbach’s alpha test
and this gave Cronbach’s alpha coefficient of 0.632 (i.e. >0.5), showing that the questionnaire was
consistent and therefore reliable. A total of 422 questionnaires were administered to respondents
(outpatients) in the teaching hospitals by well-trained interviewers. The responses were elicited
without patient’s identifier after a written consent were obtained from respondents [18, 20].
The data were analyzed using statistical methods such as Z-test and ANOVA to examine mean differences, and Chi-square/Log Linear association tools to compare the relationship between PE variables with level of education and employment status.

Results
A total of 408 respondents fully responded to all the questions out of the 422 questionnaires that were administered, which is a response rate of 96.7%. The results show that 50.7% of the respondents were males, whilst 49.3% were females. The majority (73%) of the patients were within active age range of 18-65 years. About 24% were above 65 years and 2.9% were below 18 years of age. It was found that 40.7% of the respondent had university education and 25.2% had high school education, whilst the remaining 34.1% had either primary school education or no formal education. Less than half (about 41.7%) were employed, while 28.2% were unemployed and 18.1% retirees that were no longer economically active. Table-1 also show that slight majority (51%) of the patients received healthcare services at the surgical outpatient department (SOPD), while 49% were cared for in medical outpatient department (MOPD).

Table-1: Demography and socioeconomic status of the outpatients
| Variable          | Categories       | FETHA  | ESUTH  | UNTH   |
|-------------------|------------------|--------|--------|--------|
| Sex               | Male             | 87(55.1)| 67(49.3)| 53(46.5)|
|                   | Female           | 71(44.9)| 69(50.7)| 61(53.5)|
| Marital Status    | Married          | 110(69.6)| 98(72.1)| 71(62.3)|
|                   | Not Married      | 41(25.9)| 32(23.5)| 40(35.1)|
|                   | Others           | 7(4.4) | 6(4.4)  | 3(2.6)  |
| Age(Years)        | <=18             | 6(3.8) | 2(1.5)  | 4(3.5)  |
|                   | 19-64            | 112(70.9)| 96(70.6)| 90(78.9)|
|                   | 65+              | 40(25.3)| 38(27.9)| 20(17.5)|
| SES Level of Ed   | No Formal Ed     | 23(14.6)| 15(11)  | 16(14)  |
|                   | Primary Ed       | 36(22.8)| 26(19.1)| 23(20.2)|
|                   | Secondary Ed     | 50(31.6)| 29(21.3)| 24(21.1)|
|                   | University Ed    | 49(31) | 66(48.5)| 51(44.7)|
| Employment Status | Employed         | 68(43) | 56(41.2)| 46(40.4)|
|                   | Not Employed     | 37(23.4)| 34(25)  | 44(38.6)|
|                   | Student          | 22(13.9)| 13(9.6) | 14(12.3)|
|                   | Retired          | 31(19.6)| 33(24.3)| 10(8.8)|
|                   | Total            | 158(100)| 136(100)| 114(100)|

The figures in the bracket, (), are % along the column.

**Indicates a significant different (p < 0.05), while the p-value of less than 0.05 indicates a significant difference between the hospital services (medical and surgical)**

Table-2: Analysis of Mean Difference for Patient’s Experience Variables
| Variable                        | FETHA        | ESUTH        | UNTH         | p-value | Remark             |
|--------------------------------|--------------|--------------|--------------|---------|--------------------|
| Waiting Time                   | 10.56<sup>b</sup> | 7.67<sup>a</sup> | 11.32<sup>b</sup> | 0.000   | Significant        |
|                                | ±4.96        | ±4.23        | ±5.73        |         |                    |
| OPD Environment                | 26.21<sup>a</sup> | 26.64<sup>a</sup> | 27.09<sup>a</sup> | 0.285   | Not Significant    |
|                                | ±4.42        | ±4.95        | ±4.10        |         |                    |
| Quality of Doctors Services    | 43.89<sup>c</sup> | 41.63<sup>b</sup> | 38.66<sup>a</sup> | 0.000   | Significant        |
|                                | ±7.04        | ±9.23        | ±9.74        |         |                    |
| Quality of care by Nurses/Other Medical Staff | 22.04<sup>a</sup> | 19.89<sup>a</sup> | 19.95<sup>a</sup> | 0.172   | Not Significant    |
|                                | ±7.23        | ±6.60        | ±7.67        |         |                    |
| Responsiveness                 | 48.83<sup>a</sup> | 51.07<sup>a</sup> | 48.82<sup>a</sup> | 0.282   | Not Significant    |
|                                | ±13.38       | ±10.86       | ±15.93       |         |                    |
| Overall Quality Rating (%)     | 76.46<sup>b</sup> | 72.90<sup>a</sup> | 73.00<sup>a</sup> | 0.014   | Significant        |
|                                | ±11.08       | ±11.89       | ±12.39       |         |                    |

Values are mean ± Standard Deviation. Mean values along the row with different alphabetical superscript indicates a significant different.

Table-2 shows that there were significant statistical differences (p ≤ 0.05) among hospitals for mean patient experience (PE) scores on waiting time, quality of doctors’ care and that of overall rating.

FETHA had the highest mean PE score for quality of doctor’s care (43.89±7.04) and for overall PE rating (76.46±11.08%). While UNTH had the best score for waiting time PE score (11.32±5.73).

Table-3: Analysis of mean difference for Patient’s Experience variables scores among patients, along type of care (Surgical and Medical)
| Variable                              | Service Type | Hospital               | P-value | Remark       | OVERALL |
|--------------------------------------|--------------|------------------------|---------|--------------|---------|
|                                      |              | FETHA                  | ESUTH   | UNTH         |         |
| Waiting Time                         | Medical      | 11.0b ±0.53            | 7.4a±0.47 | 11.67a ±0.91 | 0.000  | Significant |
|                                      | Surgical     | 10.18b ±0.58           | 8.0a±0.56 | 11.31b ±0.62 | 0.001  | Significant |
|                                      | p-value      | 0.290                  | 0.417   | 0.749        |         |
| OPD Environment                      | Medical      | 27.22a ±0.43           | 26.44a  | 25.85a ±0.55 | 0.170  | Insignificant |
|                                      | Surgical     | 25.36a ±0.52           | 26.89b  | 28.16b ±0.498 | 0.002  | Significant |
|                                      | p-value      | 0.007*                 | 0.611   | 0.002*       |         |
| Quality of Doctors’ care or Services| Medical      | 44.63b ±0.68           | 43.75b  | 35.25a ±1.60 | 0.000  | Significant |
|                                      | Surgical     | 43.27a ±0.85           | 39.03a  | 41.62a ±1.90 | 0.028  | Significant |
|                                      | p-value      | 0.216                  | 0.004*  | 0.026*       |         |
| Quality of care or Services by Other Medical Staff | Medical | 22.71a ±1.17 | 22.4a ±1.13 | 19.23a ±1.63 | 0.142  | Insignificant |
|                                      | Surgical     | 21.64b ±1.01           | 16.47a  | 20.88b ±1.90 | 0.065  | Insignificant |
|                                      | p-value      | 0.49                   | 0.010*  | 0.513        |         |
| Responsiveness                       | Medical      | 50.00b ±1.29           | 50.53b  | 42.92a ±2.38 | 0.003  | Significant |
|                                      | Surgical     | 47.85a ±1.63           | 51.72b  | 53.93b ±1.62 | 0.016  | Significant |
|                                      | p-value      | 0.302                  | 0.515   | 0.000*       |         |
| Overall Rating (in %)                | Medical      | 78.37c ±1.14           | 74.53b  | 68.43a ±1.58 | 0.000  | Significant |
|                                      | Surgical     | 74.85b ±1.29           | 70.89a  | 76.96b ±1.51 | 0.020  | Significant |
|                                      | p-value      | 0.043*                 | 0.041*  | 0.000*       |         |

Values are mean ± Standard Deviation. Mean values along the row (among the hospitals) with different alphabetical superscript indicates a significant different (p < 0.05), while the p-value of less than 0.05 indicates a significant difference between the hospital services (medical and surgical).
in their mean PE scores, within and between the hospitals. FETHA’s MOPD had mean PE score of 27.22±0.43 points for its environment, better than that of its SOPD which had mean PE score of 25.36±0.52 points. FETHA’s MOPD overall PE rating was 78.37±1.14% and significantly higher than that of SOPD (74.85±1.29). Similarly, in ESUTH the MOPD services were significantly (p ≤ 0.05) better than those of SOPD for quality of doctor’s care, quality of care by nurses/other health professionals, as well as for overall rating. Only UNTH’s SOPD overall PE rating of 76.96±1.51% was significantly (p ≤ 0.05) better than that of its MOPD (68.43±1.58%).

Table-4: Measure of association between Patient Experience variables and socioeconomic status of outpatients

| SES Categories | Waiting Time | Chi-Square | Line As |
|----------------|--------------|------------|--------|
| Level of Education | ≤10 | >10 | |
| No Formal Education | 21a (38.9) | 33a (61.1) | | 11.2 |
| Primary Education | 47b (55.3) | 38b (44.7) | |
| Secondary Education | 60c (58.3) | 43c (41.7) | |
| Tertiary Education | 109d (65.7) | 57d (34.3) | |
| Employment Status | | | 6.358[0.95] |
| No Formal Education | 102a (60) | 68a (40) | |
| Primary Education | 56c (48.7) | 59c (51.3) | |
| Secondary Education | 31a (63.3) | 18a (36.7) | |
| Tertiary Education | 48b (64.9) | 26b (35.1) | |

| Variable | Categories | OPD Environment | Chi-Square | Line As |
|----------|------------|----------------|------------|--------|
| Level of Education | ≤15 | >15 | |
| No Formal Education | 1a (1.9) | 53a (98.1) | | 2.3 |
| Primary Education | 4a (4.7) | 81a (95.3) | |
| Secondary Education | 5a (4.9) | 98a (95.1) | |
| Tertiary Education | 12a (7.2) | 154a (92.8) | |
| Employment Status | | | 4.734[0.192] |
| No Formal Education | 14a (8.2) | 156a (91.8) | |
| Primary Education | 4a (3.5) | 111a (96.5) | |
| Secondary Education | 2a (4.1) | 47a (95.9) | |
| Tertiary Education | 2a (2.7) | 72a (97.3) | |

| Variable | Categories | Quality of Doctors Services | Chi-Square | Line As |
|----------|------------|----------------------------|------------|--------|
| Level of Education | ≤25 | >25 | |
| No Formal Education | 5a (9.3) | 49a (90.7) | | 0.3 |
| Primary Education | 8a (9.4) | 77a (90.6) | |
| Secondary Education | 6a (5.8) | 97a (94.2) | |
| Employment Status | Category       | proportions | Chi-Square |
|-------------------|----------------|-------------|------------|
|                   | Tertiary Education | 13\(^a\)(7.8) | 6.706[0.082] |
|                   | Employed          | 13\(^b\)(7.6) | 153\(^a\)(92.2) |
|                   | Not Employed      | 12\(^c\)(10.4) | 103\(^c\)(89.6) |
|                   | Student           | 6\(^c\)(12.2)  | 43\(^c\)(87.8)  |
|                   | Retired           | 1\(^a\)(1.4)   | 73\(^a\)(98.6)   |

| Variable Categories | Quality of care or Services by Nurses/other Medical Staff | Chi-Square | Line As |
|---------------------|----------------------------------------------------------|------------|---------|
|                     | ≤25                                                      | >25        |         |
| Level of Education  |                                                          |            |         |
| No Formal Education | 3\(^a\)(14.3)                                           | 18\(^c\)(85.7) |         |
| Primary Education   | 5\(^b\)(20.8)                                           | 19\(^b\)(79.2) |         |
| Secondary Education | 10\(^b\)(19.6)                                          | 41\(^b\)(80.4) |         |
| Tertiary Education  | 26\(^c\)(38.2)                                          | 41\(^a\)(60.3) |         |
| Employment Status   |                                                          |            |         |
| Employed            | 13\(^a\)(20.3)                                          | 51\(^a\)(79.7) | 5.057[0.536] |
| Not Employed        | 17\(^a\)(30.4)                                          | 39\(^a\)(68.6) |         |
| Student             | 6\(^a\)(40)                                             | 9\(^a\)(60) |         |
| Retired             | 9\(^a\)(31)                                             | 20\(^a\)(69) |         |

| SES Categories | Responsiveness | Chi-Square | Line As |
|----------------|----------------|------------|---------|
| Level of Education | ≤50 | >50 |        |
| No Formal Education | 18\(^a\)(33.3) | 36\(^a\)(66.7) |         |
| Primary Education  | 33\(^a\)(38.8) | 52\(^a\)(61.2) |         |
| Secondary Education | 37\(^a\)(35.9) | 66\(^a\)(64.1) |         |
| Tertiary Education  | 52\(^a\)(31.3) | 114\(^a\)(68.7) |         |
| Employment Status   |                |            |         |
| Employed            | 55\(^a\)(32.4) | 115\(^a\)(67.6) | 0.675[0.879] |
| Not Employed        | 42\(^a\)(36.5) | 73\(^a\)(63.5) |         |
| Student             | 18\(^a\)(36.7) | 31\(^a\)(63.3) |         |
| Retired             | 25\(^a\)(33.8) | 49\(^a\)(66.2) |         |

| Variable Categories | Overall Rating (%) | Chi-Square | Line As |
|---------------------|--------------------|------------|---------|
| Level of Education  | ≤70 | >70 |        |
| No Formal Education | 17\(^a\)(31.5) | 37\(^a\)(68.5) |         |
| Primary Education  | 32\(^a\)(37.6) | 53\(^a\)(62.4) |         |
| Secondary Education | 33\(^a\)(32) | 70\(^a\)(68) |         |
| Tertiary Education  | 68\(^a\)(41) | 98\(^a\)(59) |         |
| Employment Status   |                |            |         |
| Employed            | 60\(^b\)(35.3) | 110\(^b\)(64.7) | 8.711[0.033]* |
| Not Employed        | 51\(^a\)(44.3) | 64\(^a\)(55.7) |         |
| Student             | 21\(^c\)(42.9) | 28\(^c\)(57.1) |         |
| Retired             | 18\(^a\)(24.3) | 56\(^a\)(75.7) |         |

Each superscript letter denotes a subset of Variable categories whose row proportions do not differ significantly from each other at the .05 level, ( )-%, [ ] - p-value.
Table-4 show that higher proportion (61.1%) of outpatients without a formal education had mean PE score of more than 10 points for waiting time, compared to 34.3% of outpatients with university education and 41.7% of those with high school education. The result show significant association between PE scores on waiting time and level of education. This was not so for PE score on OPD environment, quality of doctor’s care and responsiveness of care for outpatients (as shown in table-4). With quality of care by nurses/other care givers, the result show significant (p ≤ 0.05) association with educational status; again larger proportion of outpatient without formal education (85.7%) scored this domain high compared to 68.6% of outpatients with university education. The result also show that employment status only had significant (p ≤ 0.05) association with the overall PE rating; about 75.7% of retirees and 64.7% of employed outpatients recorded higher overall PE rating in the hospitals studied. Students and un-employed had least overall PE rating.

Discussion
The present study evaluated how outpatients of two different socioeconomic group (educational and employment status) rate their experience in respect to various domain of care at the Teaching hospitals in Southeast Nigeria. The study is an attempt to know how Patient experience can serve as metric for health industry competition and differentiation, since it reflects quality of care from the patient’s perspective [21]. The study confirms that measurement of patient experience is an important aspect of evaluation of healthcare services; and it provides an opportunity to improve care, meet patients’ expectations, enhance strategic decision making, as well as effectively manage and monitor health care performance [21]. There is no doubt that in the public eyes, hospitals will continue to be the ‘face’ of the health system, and upon it the public assess the quality of services provided [22]. Thus, the emerging consensus that patient experience is a fundamental aspect of provider quality [23].

An inference from the findings is that UNTH had the shortest waiting time because patients spent less time waiting for services from doctor or other care giver. The other hospitals could learn from what
UNTH is doing right and apply the same procedures in their facilities in order to decrease their waiting times and enhance PE with their quality of ambulatory care. It has been shown that increased waiting time also affect the overall treatment provided by physician and other care givers [24]. In UK the national standard or accepted waiting time is 30 minutes [25]. In Nigeria, previous studies show that the majority of outpatients wait as long as 80-180 minutes or more in the OPDs, and the commonest reason for this long waiting time is the large number of patients as against few health workers [17, 26]. A study in India obtained average waiting time outside the various OPDs of only 12 minutes and 98.52% of patients were very satisfied with it [13]. The finding that very educated patients, unlike the illiterate ones, are less satisfied with waiting time, could be a reflection of their increased awareness of their rights and privileges because of their level of education and therefore more discerning of the expected quality of healthcare services. The educational status of the respondents was also related to their expectations of the quality of care by the nurses/other health workers. The poorly educated outpatients rated waiting time and quality of care by nurses/other health workers higher than the more educated people, probably because they were not knowledgeable of the quality of services that should be provided to them. On the other hand, educational status was not significantly associated with patients’ rating for OPD environment, doctors’ care and responsiveness of care. However, this differs from the findings of Zalmanovitch and Vashdi (2014) who reported that a lower level of education predicates greater responsiveness of care for primary and preventive healthcare than higher level of educational status [27].

The mean overall patient experience rating in this study, although higher than that of similar study in a Federal Medical Centre in Southeast Nigeria (where average satisfaction score of outpatients respondents was 66.8%), is slightly below 83.0% obtained in a hospital of similar status (Aminu Kano teaching hospital) in Northern Nigeria [28, 29, 30]. The study showed that employment status, and not level of educational, had direct significant association with patients’ rating for overall quality of care. Higher proportion of employed and retired outpatients rated the quality of care from the hospitals high. This, to some extent, is at variance with the findings of Arpey, et al (2017) who in their recent study observed that patients’ SES had no impact in the way they are viewed or treated by their
physicians [31]. However, our findings agreed with that of Myers, et al (2006) and Bernheim, et al (2008) who found that physicians as a group perceive and treat low SES patients differently from those of higher SES [32, 33]. Maharlouei, et al (2017) had also reported on how the overall patient experience was associated with different SES [34].

The limitations of this study include its inability to capture all the domains of patient care in the hospitals. It was restricted to measures of outpatient or ambulatory healthcare services. Thus, the findings cannot be generalized to include that of admitted patients. Another limitation is the fact that the data collection instrument used both coding and tick-box approaches, which could have led to some confusion for the enumerators/interviewers. However, the thorough training that was undertaken for the interviewers before field work ensured that they understood the response formats and could navigate between coding and tick-box approaches. Coding framework from previous studies was adapted [18, 19, 20] and pretested in the study area, hence the possible occurrence of bias is potentially insignificant. Though, the pre-test showed that the instrument worked well within the study context, it is recommended that a uniform coding approach be used in future studies.

**Conclusion**

The study revealed how employment status was significantly associated with overall patient experience rating of the quality of care for ambulatory (outpatients) care in hospitals. While level of education significantly impacted on how outpatients perceived waiting time and quality of care from nurses/other care givers in the hospital. Further study will be required to assess the drivers of the rating of quality of care, the provider-side influences on quality of care and effect of socio-economic status on inpatients type of healthcare services in the hospitals.

**Recommendations**

The study has demonstrated the need to put into consideration the socioeconomic status of patients in the course of providing healthcare services for a given population.

**Abbreviations**

ESUTH: Enugu State University Teaching Hospital; FETHA: Federal University Teaching Hospital; LMICs: low- and middle-income countries; MOPD: medical outpatient department; OPD: outpatient department; PE: patient experience; PEQ: patient experience questionnaire; SES: socio-economic
status; SOPD: surgical outpatient department; UNTH: University of Nigeria Teaching Hospital.

Declarations

Ethics approval and Consent to participate

Permission for this study was obtained from Nigeria Federal Ministry of Health, and approvals were obtained from respective Health Research Ethical Committees of all the three participating Teaching Hospital:

1. University of Nigeria Teaching Hospital Health Research Ethics Committee,
   NHREC/05/01/2008B-FWA00002458-1 RB00002323;
2. Federal Teaching Hospital Health Research Ethics Committee,
   FETHA/REC/VOL1/2017/479; REC PROTOCOL NUMBER 14/02/2017 -24/02/2017;
3. Enugu State University Teaching Hospital Parklane, ESUTHP/C-MAC/RA/034/175.

Informed written consent were obtained from all patients that participated in the study. For those patients who were below 18 years of age, parental written consent were obtained.

Consent for publication

Not applicable.

Availability of data

Data-sets used and analyzed for the study are available and may be released by the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Author’s contributions

HA conceptualized and designed the study and coordinated all the research activities including the drafting of the manuscript. OA coordinated the data collection. OO and IO contributed to the design of
the study and oversaw the supervision the study. CN analyzed and interpreted the data. 

All authors reviewed the study findings, read and approved the manuscript before submission.

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Additional Files
1. Patient Experience Questionnaires (PEQ) on Quality of Healthcare Services in Nigeria Teaching Hospitals
2. Informed Consent Form for patients
3. Samples of Ethical Approval for the Study.

Supplementary Files
This is a list of supplementary files associated with this preprint. Click to download.

Additional file 2.docx
Additional File 1. Patient Experience Questionaire (PEQ).docx
Additional file 3.docx