



## PRIMARY HEALTH CARE CONSUMERS' PERCEPTION OF QUALITY OF CARE AND ITS DETERMINANTS IN NORTH-CENTRAL NIGERIA

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### ABSTRACT

**Background:** The importance of incorporating the perspective of the patient when evaluating and designing health care programs is now widely recognized. The objective of this study was to assess consumers' perception of quality of care and its determinants among Primary Health Care Consumers in Ilorin, Nigeria.

**Methodology:** It was a descriptive cross-sectional study carried out among consumers of Primary Health Care in Ilorin South Local Government Area of Kwara State. Sample size of 250 was determined using Fishers formula and multistage sampling technique was used to select respondents. Semi structured interviewer administered questionnaire was used and data analysis was done using Epi-info. Frequency tables and cross-tabulations were generated with a statistical significance p-value pre-determined at less than 0.05.

**Results:** The average mean perception score of quality of care was  $13.56 \pm 4.01$  out of a maximum of 20. The highest mean perception was in the domain of lack of interruption during consultation ( $13.79 \pm 4.11$ ) while the lowest was in the domain of respect for patients' opinion ( $13.03 \pm 3.86$ ). Consumers that were given adequate information from doctors are 210 (84.0%), those that were

*motivated to continue seeking healthcare are 211 (84.4%), while 178 (71.2%) felt that the consulting room provided enough privacy. Factors that affected satisfaction with treatment were age, sex, educational level, and income level.*

**Conclusion:** *Perception of care was lowest in the domains of privacy and respect for patients' opinion. There is need to train Primary Health Care providers on improvement of quality of care.*

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**Keywords:** Consumers, Primary health care, Quality of care.

## 1. INTRODUCTION

The importance of incorporating the perspective of the patient when evaluating and designing health care programs is now widely recognized (Hekkink *et al.*, 2003). Patient-based assessments of medical care are being used to measure the quality of health care (Ajayi *et al.*, 2005; Using patients' feedback, 2009). Patient satisfaction with care received is an important dimension of evaluation that is examined only rarely in developing countries (Ariba *et al.*, 2007). However reports from previous researches consistently reveal low quality of care (Coulter and Cleary, 2000; Margolis *et al.*, 2003; Ajayi *et al.*, 2005; Ehiri *et al.*, 2005; Eze and Okaro, 2006; Onajole *et al.*, 2006). Up to 80% of patient complaints to disciplinary bodies are attributable to a breakdown of communication between patients and doctors. The main reason for the establishment of health institutions is the clients. Their experiences with the health system will determine their attitude toward health institutions; determine their return visit, compliance with treatment and achievement of better treatment success (Olumide, 1997). Therefore monitoring of patients' experiences of health care can provide organizations with a yard stick against which to measure the quality of their services (Coulter and Ellins, 2006).

In a survey in Burkina Faso on perception of quality of Antenatal care the mean reception score was 14.7 (maximum achievable score =20) (Kameli *et al.*, 2010). This is an equivalent of about 73.5%. In Calabar, Nigeria, Etuk *et al* found out that poor attitude of health staff was a major area of dissatisfaction that patients have (Oyo-ita *et al.*, 2007). In the study 114 patients (81.4%) reported poor attitude of health staff as major area of dissatisfaction. In another study of the influence of patient-provider interactions, many patients longed for urgent improvement in interpersonal relationships of the health workers (Lesley, 1999). Respondents felt that more personal care will result in better communication and more patient involvement, patient satisfaction, hence better quality of care (Yuchi and Guanming, 2009).

In the domain of communication, a study carried out by Akande (2002) in Ilorin on patients' perception on communication between patients and doctors revealed that 47.3% of outpatients were given adequate information on their ailments. With respect to clients being informed about appointment dates, Sambo *et al.* (2010) found that 62% of respondents were informed about the next appointment date.

In the domain of respect for patients' opinion, a study in Mexico on patient satisfaction (Dobova *et al.*, 2009) showed that the mean score of patients in allowing patients to give an opinion was 3.09+1.2 (maximum allowable score=5). It was reported from a study in Scotland on patients' experiences and satisfaction with health care, one of the major determinants of patient satisfaction was respect for patients' preferences (Jenkinson *et al.*, 2002).

In Minna, Nigeria, [Sambo et al. \(2010\)](#) found that 76% of respondents in the survey were satisfied with questions asked during consultation. In a similar survey on quality of care in Burkina Faso the mean score for clinical examination of patients by providers was 10.1 (maximum allowable score was 20) ([Kameli et al., 2010](#)).

[Faxelid et al. \(1997\)](#) in a study on examining patients' perception of care, it was revealed that older patients tended to be more satisfied than younger patients. In a related study 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 ([Margolis et al., 2003](#)). A positive association was found between age and satisfaction; individuals aged >70years were more likely to be satisfied with the health system than individuals 18-29years ([Sara et al., 2009](#)).

In a study on patient satisfaction with primary health care services in the United Arab Emirates educational status was statistically significant for the domain of effectiveness. People with higher levels of education felt that the clinic service was less effective than those who were less educated ([Blumenthal, 1996](#)). A weak but statistically significant association was found between education and satisfaction; people with some college education were less likely to be satisfied with the health system than people without a high school diploma ([Blumenthal, 1996](#)).

Several studies have identified prolonged waiting times as the main component of patient dissatisfaction, as well as the most frequent reason patients leave before medical evaluation ([Ademola-Popoola et al., 2005](#); [Eze and Okaro, 2006](#); [Ariba et al., 2007](#); [Yuchi and Guannming, 2009](#)). In a study carried out in Trinidad and Tobago on patients' perception and satisfaction with health care professionals at primary care facilities, the findings revealed that the greatest needs for improvement were perceived to be in pharmacists' and doctors' services with particular reference to waiting times ([Chisholm and Askham, 2006](#)).

In Enugu Teaching Hospital in a study conducted by Eze et al 67.5% of respondents complained of long waiting time of one to four hours to see their doctor ([Eze and Okaro, 2006](#)). Similar findings also in a Nigerian teaching hospital by [Ademola-Popoola et al. \(2005\)](#) reported long waiting time in 89.4% of respondents particularly for doctor's consultation. This is also in line with a study conducted by [Sambo et al. \(2010\)](#) where 36.7% of respondents waited for 1-3 hours before seeing a doctor. The objective of this study was to assess consumers' perception of quality of care and its determinants among Primary Health Care Consumers in Ilorin, Nigeria.

## 2. METHODOLOGY

The study was carried out in Ilorin, capital of Kwara state, Nigeria. Ilorin can be described as an emerging city with a projected population (projected in 2011 based on 2006 census and annual growth rate of 3.2%) of 854,737 ([NPC, 2006](#)). Alanamu Health Centre, where the study was conducted, is a primary health facility located in Ilorin West LGA. It provides services such as immunization, maternal services, family planning, growth monitoring, food demonstration and general outpatient consultations. Geriatrics care is also available at this health facility. There is a total of sixty-three staffers; nine from Unilorin Teaching Hospital and forty seven from the local government. There is one consultant epidemiologist, five resident doctors, nineteen nurses, fifteen

community health extension workers, one laboratory technician, one pharmacy technician, two record officers, fifteen attendants, two night guards and one labourer. The patient load is about 750 patients per month.

The respondents included patients and care givers that came to Alanamu Health Centre for consultation, Ilorin. During the study period of one month, there were 739 patients. Adults above the age of eighteen were included in the study. Parents or guardian were also interviewed on behalf of those lesser than eighteen years. Those below the age of 18 years who had no guardian/parent with them were excluded from the study.

Exit interview was conducted on consumers of health care using a pre-tested semi-structured questionnaire. No health worker was involved in collection of data from the consumers to avoid bias. Data was collected in 4 weeks. The minimum sample size of 250 was determined using the Fishers' formula  $z^2pq/d^2$ .

Multistage sampling technique was used to select respondents. In stage 1, one out of the nine primary health care centres in Ilorin was selected by simple random sampling using balloting without replacement and Alanamu primary health care centre was selected. The nine PHC Centres that fulfilled the criteria of having 10 hospital beds were those recruited into the study. In stage 2, a systematic random technique using hospital register was employed to select patients as they come for consultation. Sampling frame was determined using records of past six months. This showed that an average of about 750 patients was seen in each of the health facilities monthly. The study period was one month hence a sampling frame of 750 was used. Sampling interval was determined by dividing the sampling frame (750) by the sample size (250) and a sampling interval of 3 was arrived at.

Thereafter every 3<sup>rd</sup> consecutive patient was recruited into the study. The index patient was selected by simple random sampling method through balloting. To ensure that a patient was not selected twice, there was a register for all patients that have participated in the study. This was crosschecked by one of the research assistants before enlisting any of the patients for the study. If a patient refused to participate in the study the next patient was used to replace him/her. A private and detached room in the facility was used to provide confidentiality for the patients during the interview.

Interviewer administered semi-structured questionnaire was administered as exit interviews by trained research assistants. The questionnaire was adapted from the QUOTE Questionnaire (Quality of care from the patients' eyes) (CMAI, 2004). Twenty five questionnaires were pre-tested at the PHC facility in Okelele, Ilorin East LGA which is about 10 kilometers away from the study center. Pretesting helped to detect deficiencies or ambiguities in the questionnaires. Appropriate corrections were made to the questionnaires after pretesting.

The analysis was done using EPI INFO version 3.4.1 For questions on perception that had the option of yes and no, frequency tables and cross tabulations were generated. Chi-square test was used to determine statistical significance of observed differences in cross tabulated variables. The level of significance was predetermined at a p-value of less than 0.05.

Questions that used the Likert scale had options ranging from 1 to 5 where 1 was the worst perception and 5 was the best. Such questions were asked for various categories of health workers

(doctors, nurses, pharmacy technician and laboratory technicians). Maximum score obtainable was 20 while the minimum score obtainable was 4. For such questions the Likert scoring was added for each respondent and the mean determined for all the respondents.

The student t test was used to compare the means when there were only two means to compare. Analysis of variance was used to compare the means when there were more than two means to compare. This was also used to determine statistical significance of observed differences in cross tabulated variables.

Ethical approval for the study was obtained from the ethical committee of the University of Ilorin Teaching Hospital. Informed consent was also obtained before interview from the respondents. Permission from the Local Government was sought before the study was carried out.

### 3. RESULT

Two hundred and fifty patients were interviewed. The age distribution of respondents ranged from 18 to 30 years while the mean age of patients interviewed was  $21.84 \pm 2.45$ . A larger proportion of patients were females as they accounted for 239 out of 250 (95.6%) respondents. A greater proportion of the patients (37.6%) had only primary education, about a quarter (25.6%) had no formal education while about one fifth (19.6%) had secondary education and the remaining 17.2% had post secondary education. Only 11 out of the 250 respondents earned more than ₦20,000 (\$125) monthly while 21 of them earned between ₦10,001- ₦20,000 (\$62.5- \$125). Most of the patients (190) had a monthly income of less than ₦10,000 (\$62.5) (85.6%).

The average perception of quality of care on a scale of 1-20 with five variables measured was  $13.56 \pm 4.01$ . These variables with the respective scores of perception of quality of care attributed to them included exchanged greetings with patient ( $13.74 \pm 4.07$ ), respect for patients' opinion ( $13.03 \pm 3.860$ ), satisfied with time spent with doctor ( $13.74 \pm 4.01$ ), satisfied with treatment and care received ( $13.52 \pm 3.99$ ), lack of interruption during consultation ( $13.79 \pm 4.11$ ).

Out of all the respondents in this study, 226 (90.4%) said they were offered seat by nurses, 229 (91.6%) said empathy was shown to them by doctors, 210 (84.0%) said they were given adequate information by doctors on how to manage their illnesses, 198 (79.2%) said their next appointments were clear to them, 205 (82.0%) said they were given adequate information on how to use their drugs, 211 (84.4%) were motivated to continue seeking health care and 178 (71.2%) of them agreed that the consulting room provided enough privacy for them while being seen by a doctor. The average number of those that indicated they were well treated was 210 (83.9%).

The group of patients earning less than 10,000 accounted for the lowest level of perception of care ( $12.82 \pm 4.07$ ) while those with an income level of  $>20,000$  had the highest level of perception of care ( $16.45 \pm 2.94$ ). Forty three of the respondents were in the age range 30-39 and these have a mean level of perception of  $12.81 \pm 3.98$ . Those within the age ranges of 18-29, 40-49 and  $\geq 50$  were 125, 29 and 53 respectively and they have average levels of perception of  $14.18 \pm 4.00$ ,  $14.10 \pm 4.34$  and  $12.21 \pm 3.42$  respectively. This is significant as it has a P value of 0.0105. Likewise, the relationship between the consumer's sex and treatment also showed statistical significance with a P value of 0.0037 as the male patients responded with a higher level of perception ( $16.91 \pm 2.66$ ) than the females who had a satisfaction score of  $13.36 \pm 3.98$ .

The waiting time to see a doctor has an inverse relationship with the level of satisfaction in the patients interviewed. Those that waited for less than or equal to 15 minutes to see a doctor were 84 and had a score of level of satisfaction of  $13.07 \pm 4.18$ . Also, 120 patients indicated they waited for 16-30 minutes and had a level of satisfaction score of  $13.74 \pm 3.98$  and 46 respondents waited for more than 30 minutes and also scored  $13.74 \pm 3.69$ . These relationships between the waiting times and scores of level of satisfaction however were not statistically significant as the P value was 0.4575.

#### 4. DISCUSSION

The mean age of respondents was  $36.2 \pm 15.06$ . There were more female (95.6%) respondents than males (4.4%). It can be assumed that more females than males present for treatment in primary health care centres since it has been shown that women have significantly higher mean number of morbidities than men (Abdulraheem *et al.*, 2011). The mean perception for each of the variables of quality care in table 2 was  $13.56 \pm 4.01$  over a maximum scale of 20. This was higher than the score of  $10.3 \pm 3.0$  obtained from a similar survey done in Burkina Faso (Nikiema *et al.*, 2010) on quality of antenatal care and obstetric coverage.

Also, 90% of the patients said they were offered a seat by nurses while 91.6% said empathy was shown to them by doctors. These figures were not consistent with the survey conducted by Oyo-ita *et al.* (2007) in which 81.4% of the patients reported poor attitude of health staff as major area of dissatisfaction that patients have. The disparity however might be as a result of personal care and better communication as 84.0% of the patients in this study were given adequate information by their doctors on how to manage their illnesses. Previous studies show that better communication, more patient involvement and patient satisfaction lead to improved quality of care (Yuchi and Guanming, 2009).

In this study, it was found that 210 (84.0%) of patients were given adequate information by their doctors on how to manage their illnesses. This is similar to the finding in Central Ethiopia where 576 (75.0%) of the respondents were of the opinion that health care providers told them enough about how to manage their diseases (Birhanu *et al.*, 2010). However in another survey of patient satisfaction with obstetric ultrasound service in a Nigerian teaching hospital, results showed that majority of patients (66%, N=215) were not given adequate information required to make a knowledgeable decision about their scan (Eze and Okaro, 2006). It appears clinicians give patients more information than laboratory workers as laboratory workers may assume that the clinicians should give patients information.

With respect to clients being informed about appointment dates, this study found out that 79% of respondents were well informed about their next appointment dates. In a related study by Sambo *et al.* (2010), it was found that 62% of respondents were informed about the next appointment date.

Results from this study also showed that 82.0% of patients were given enough information on drug use. In the study carried out by Sambo *et al.* (2010) in North Central Nigeria, 83% of respondents were informed on how to take their drugs. This finding however differs from a study on the rationality of drug prescriptions done in Burkina Faso which revealed that about one-third of

health workers did not give adequate information to patients on how long the drugs prescribed to them had to be taken (Dobova *et al.*, 2009).

Respondents that felt that consulting rooms provided enough privacy were 71.2% in this study. This is similar to findings by Birhanu *et al.* (2010) in Ethiopia which showed that 592 (77.1%) of the respondents felt that there was privacy during consultation. In a related study a higher level of patients' perception of privacy was reported by Yousuf *et al.* (2009) in a survey in Malaysia whereby privacy was reported to be among 246 (98.4%) respondents.

This study revealed that the respondents in the 18-29 age group had the highest level of satisfaction ( $14.18 \pm 4.00$ ) with treatment offered while those over the age of 50 had the lowest level of satisfaction thus indicating that young people tend to have a higher level of satisfaction than the older ones. The study on patient satisfaction of female and male users of Veterans' health administration services by Wright *et al.* (2006) however showed that older people were satisfied than the younger ones. More so, findings from a related study by Faxelid *et al.* (1997) showed that those  $\geq 70$  years were more likely to be satisfied with the health system than the younger individuals. It was shown that Male respondents had a higher level of satisfaction than their female counterparts. This is in agreement with a similar survey by Ress-Lewis (1994) in which male patients expressed greater satisfaction with quality of health care than female patients. It is also consistent with the result of a study carried out by Wright *et al.* (2006) in which males showed greater levels of satisfaction than females.

The category of patients with secondary and post-secondary education had a statistically significant higher level of satisfaction with treatment ( $15.14 \pm 3.69$  and  $14.56 \pm 4.24$  respectively) when compared with those with only primary education and those without any formal education who had  $12.81 \pm 3.96$  and  $12.61 \pm 3.62$  levels of satisfaction respectively. This could be attributed to a tendency of health care workers in Primary Health Care centres to give preferential treatment or pay closer attention to more educated patients. It could also mean that the health care workers could relate better with the educated patients compared to those without formal education. This finding however is not consistent with findings in a similar study done in United Arab Emirate where people with higher levels of education felt that the clinic service was less effective than those who were less educated (Blumenthal, 1996). The level of satisfaction noticed among respondents with an income level of  $> \text{N}20000$  ( $16.45 \pm 2.94$ ). It is probable that better treatment is offered to the affluent.

Perception of care was lowest in the domains of privacy and respect for patients' opinion. There is need to train Primary Health Care providers on improvement of quality of care while emphasizing the need to offer every patient privacy during consultation and treatment regardless of their economic or educational status. The right attitude and should be used while attending to patients. The government at every level should endeavor to put in place adequate facilities for patients' privacy while constructing health care centers.

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**Table-1.** Socio-demographic Characteristics of Consumers

| Variable                      | Frequency (%)            |
|-------------------------------|--------------------------|
| <b>Age</b>                    |                          |
| 18-29                         | 125 (50.0)               |
| 30-39                         | 43 (17.2)                |
| 40-49                         | 29 (11.6)                |
| ≥50                           | 53 (21.2)                |
| <b>Total</b>                  | <b>250 (100.0)</b>       |
| <b>Mean</b>                   | <b>36.21±15.06</b>       |
| <b>Sex</b>                    |                          |
| Male                          | 11 (4.4)                 |
| Female                        | 239 (95.6)               |
| <b>Total</b>                  | <b>250 (100.0)</b>       |
| <b>Educational level</b>      |                          |
| No formal                     | 64 (25.6)                |
| Primary                       | 94 (37.6)                |
| Secondary                     | 49 (19.6)                |
| Post-Secondary                | 43 (17.2)                |
| <b>Total</b>                  | <b>250 (100.0)</b>       |
| <b>Monthly Income (Naira)</b> |                          |
| ≤10,000                       | 190 (85.6)               |
| 10,001-20,000                 | 21 (9.5)                 |
| >20,000                       | 11 (5.0)                 |
| <b>Total</b>                  | <b>222 (100.0)</b>       |
| <b>Mean</b>                   | <b>7,763.51±7,186.83</b> |

**Table-2.** Consumers' perception of Quality of care

| Variable                                   | Mean Perception ± Standard Deviation |
|--|--------------------------------------|
| Exchanged greetings with patient           | 13.74 ± 4.07                         |
| Respect for patients' opinion              | 13.03 ± 3.86                         |
| Satisfied with time spent with             | 13.74 ± 4.01                         |
| Satisfied with treatment and care received | 13.52 ± 3.99                         |
| Lack of interruption during consultation   | 13.79 ± 4.11                         |
| Average                                    | 13.56 ± 4.01                         |

**Table-3.** Consumers' perception of Quality of care

| Variable   | Frequency (%)     |
|--|-------------------|
| Patient offered seat by Nurses   | 226 (90.4)        |
| Empathy shown to patients by doctors                                   | 229 (91.6)        |
| Given adequate information by doctors on how to manage their illnesses | 210 (84.0)        |
| Patient's next appointment clear to him/her                            | 198 (79.2)        |
| Given adequate information on drug use                                 | 205 (82.0)        |
| Motivated to continue seeking health care                              | 211 (84.4)        |
| Consulting room provided enough privacy                                | 178 (71.2)        |
| <b>Average</b>   | <b>210 (83.9)</b> |

**Table-4.**Determinants of satisfaction with treatment

| Variable               | N (Total-250) | Means (SD) | ANOVA/Student t test | p-value |
|------------------------|---------------|------------|----------------------|---------|
| Age (years)            |               |            |                      |         |
| 30-39                  | 43            | 12.81±3.98 | 3.83                 | 0.0105  |
| 18-29                  | 125           | 14.18±4.00 |                      |         |
| 40-49                  | 29            | 14.10±4.34 |                      |         |
| ≥50                    | 53            | 12.21±3.42 |                      |         |
| Sex                    |               |            |                      |         |
| Male                   | 11            | 16.91±2.66 | 2.93                 | 0.0037  |
| Female                 | 239           | 13.36±3.98 |                      |         |
| Educational level      |               |            |                      |         |
| Primary                | 94            | 12.81±3.96 | 6.13                 | 0.0005  |
| Secondary              | 49            | 15.14±3.69 |                      |         |
| No formal              | 64            | 12.61±3.62 |                      |         |
| Post-Sec               | 43            | 14.56±4.24 |                      |         |
| Income level (Naira)   |               |            |                      |         |
| <10,001                | 190           | 12.82±4.07 | 9.23                 | 0.0001  |
| 10,001-20,000          | 21            | 15.81±2.91 |                      |         |
| >20,000                | 11            | 16.45±2.94 |                      |         |
| Waiting time (Minutes) |               |            |                      |         |
| 16-30                  | 120           | 13.74±3.98 | 0.78                 | 0.4575  |
| >30                    | 46            | 13.74±3.69 |                      |         |
| ≤15                    | 84            | 13.07±4.18 |                      |         |