Influence of socio demographic variables on patient's satisfaction with quality of nursing care in teaching hospitals in northern Nigeria

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Abstract
Nurses have become central to many lives but how well nurses have fulfilled clients' expectations is often a matter of great concern. Nurses in many developing nations have been criticized for negligence, poor interpersonal relationship, treatment errors and the use of abusive language. In view of these statements this study was conducted to assess the influence of socio demographic variables on patients' satisfaction with the quality of nursing care in teaching hospitals in Northern Nigeria. Descriptive cross-sectional survey design was adopted for the study and questionnaire, structured interview and focus group discussion (FGD) were used for data collection. The quantitative data was coded and analyzed using descriptive methods such as frequency tables, percentages and measure of central tendencies while inferential statistics (chi-square and regression analyses) were used to test the hypothesis. The finding showed that the mean age of respondents is 41 years. About half (47.4%) were Christians and the remaining (52.6%) were Muslims. Female respondents constitute (55.9%) while 44.1% were male. The respondents cut across socio-economic classes and units of the hospitals. The study revealed that, majority (77.6%) of the clients were satisfied with the quality of nursing care rendered in teaching hospitals in Northern Nigeria. The test of significant relationship between the variables showed that gender was not statistically associated with patients' satisfaction ($P<0.05$) while patients' age, educational attainment and economic class were statistically significant ($P>0.05$). Therefore, the study hypothesis was rejected. Among socio demographic factors that influenced patients' satisfaction with quality of nursing care, patients' level of education and economic status played major role. It is therefore recommended that, curriculum of nursing training and post qualification workshops and seminars should be strengthened with the components of human relation and behavioral science.

Keywords: Socio-demographic, Variables, Patients, satisfaction, Quality, Nursing care, Hospital.

Introduction and Background of the Study
Nursing is vested with the responsibility of providing holistic and quality care at every level of health service delivery. The major challenge of nurses is how to ensure that quality nursing service is provided to all patients. [1] Quality nursing care refers to standard of excellence of nursing intervention and actions derived from evidence based practice in order to ensure that all patients receive positive treatment. Ensuring quality nursing care is a great challenge in Nigeria in general and Northern Nigeria in particular because of limited financial resources, inadequate number of nurses, fast growing population and increased attendance in hospitals and clinics. [2]

Nursing as a caring profession has long been having the task of developing a scientific base for nursing practice in order to improve the practice of its members so that the quality of the services provided to patients will have the greatest impact and invariably lead to clients' satisfaction. Towards the end of the 20th century there had been global quest for institutionalization of quality care as one of the strategies for health reforms. This was with a view to ensuring effective and efficient health service provision. This quest led to the recognition of quality care as one of the major public health challenges in the 21st century. Similarly, based on the increasingly high cost of services and the concerns for effective use of resources, consumers are beginning to demand that professionals such as

nurses should examine the quality and efficacy of their practice and determine what effect their knowledge and skills have on the society. [3] According to Relman the whole world is on the threshold of third revolution in health care as a result of rapid expansion of scientific health and hospital technology, the need for cost containment and accountability. [4] This statement is indeed a wake – up call to all health care providers to brace up to the challenges by embarking on studies on all aspects of quality care for the benefit of humanity.

Patients' satisfaction with nursing care has been reported as the most important predictor of the overall satisfaction with hospital care and an important goal of any health care organization. [5] 2006). Therefore, dissatisfaction with the nursing care services may further lead to lower utilization of nursing services by patients.[6] It is commonly defined as an evaluation based on the fulfillment of treatment expectations.[7] In other words, it is the patients' perception of care received compared with the care expected.[8] The term patient satisfaction as used here means the positive physical experience of nursing care and favourable emotional reaction to nursing services in its various aspects. These could be achieved through good communication, comprehensive assessment of patient's needs and shared decision-making. It is also possible if there is good interpersonal relationship and positive treatment outcomes [7]

A study of Egypt's health programme found greater increase in consumers' flow over a two-year period at health care centres

that met at least 90 percent of quality. Nearly 40 percent of women interviewed did not attend the nearest clinic. Among women using more distant clinics, nine of every ten said the reason was better services at the more distant health care centres.[9] Similarly, rural women in Peru reported switching from public to private health providers for better care. [10] The role of satisfaction as a predictor was further investigated through examining its dependence on case characteristics. While older users were more frequently satisfied with life, those with greater functional impairment and below average self-perceived health reported lower life satisfaction. [11]

How then, do consumers judge the quality of nursing care provided? A growing body of research is discovering what clients want and how to measure consumer satisfaction. In both developed and developing countries, consumers share seven major concerns. Louise, Matthews and Stones [12] identified the following as what consumers want; respect, understanding, complete and accurate information, access, technical competence, fairness and results. Louise and others further argued that, overall patient satisfaction have strong association with both user characteristics and the effect of life satisfaction. This association was therefore examined firstly by considering each characteristic separately and secondly by modeling the presence of each satisfaction measure in terms of those characteristics having a significant effect, using logistic regression. Arthritis, loneliness and problems of keeping warm were all characteristics associated with reduced satisfaction, while most resource inputs, including social work intervention, were positively related to satisfaction. General life fulfillment was also associated with improved satisfaction levels. [12]

Similarly, many studies have reported variations in the association of satisfaction according to socio-demographic characteristics of patients. As reported by Hassan and others, [13] gender, income and level of education were consistently associated with patients' satisfaction with health care services in Kuwait while age, occupation, marital status and other socio-demographic variables did not show any significant relationship with patients' satisfaction. Another study in twelve European countries concluded that age and gender of patients were of little importance in determining patients' satisfaction with quality of health care services. [14]

According to Mehrnoosh *et al.* clients' satisfaction survey in teaching hospitals in Iran showed that, there were no significant relationship between gender, age and family income with level of patients' satisfaction with nursing care (P>0.05) [15]. Similarly, Chan and Chau studies in hospitals in Hong Kong revealed that, gender of patients did not affect their overall satisfaction with nursing care. [16] These results are in contrast with the findings of Hajifatahi and others, [17] in which they observed that gender and age were associated with the patients' satisfaction and that older patients were more satisfied with nursing care than the younger patients. In the same vein, Pascoe [18] reported that, patients with higher income tend to be less satisfied with quality of nursing care while Brian, Nguyen, Emperor, & Guillemin revealed that patients admitted in private rooms were more satisfied with nursing care rendered to them. [19] On the contrary, findings of Mehrnoosh and others showed that there was no relationship between income of the patients, type of rooms and their overall satisfaction with nursing care. [15]

Badru defines quality health care as the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge. [20] Similarly, Campbell and Roland argues that modern view of quality of care is the degree to which health services meet patients' needs and expectations both in the aspect of technical and interpersonal care. They further states that, it has become more important to deliver health care that meets the subjective needs of patients. These needs varies along our socio demographic characteristics such as age, gender, level of education, income etc. [21] In view of the foregoing, this study is designed to examine the influence of socio demographic variables on patient's satisfaction with the quality of nursing care in teaching hospitals in Northern Nigeria.

Statement of Research Problem

Nurses have become central to many lives. This can be seen from the life-cycle of the modern man in which birth; treatments and death take place in hospitals under direct care of nurses who stay closest to the clients. How well nurses have fulfilled clients' expectations across social strata is often a matter of great concern. However, nurses in many developing nations have been criticized for lacking human touch and insulting patients. [22] In fact, cases of negligence, poor interpersonal relationship, treatment errors and use of abusive language by nurses abound in many hospitals and clinics. There is often general dissatisfaction of patients and relatives with health organizations and the providers of health care particularly nurses.[22] The major problems of nursing stem from the way nurses are perceived by different people within and outside the health care delivery system, most especially the general public.[23]

Health care services exist to meet the health needs and expectations of people at different strata of the society. Today health is considered more than a basic human right. It has become a matter of public concern, national priority and in some cases that of political action. People irrespective of their age, tribe and level of education are less willing to tolerate poor services and are insisting on better health care. It is evident that the consumers of nursing services have become an effective force in determining nursing practice. [24] It is in line with the above statement of problem that this study was conducted to assess influence of socio demographic variables on patient's satisfaction with quality of nursing care in teaching hospitals in northern Nigeria.

Research Hypothes1s

There is no significant difference in the levels of patients' satisfaction with quality of nursing care across socio-demographic variables of respondents.

Significance of the Study

Most often, the nature of nurse-patient relationship may become the yardstick through which the status of a hospital or service organization is measured or adjudged. Often the disposition of these clients varies and very complex. According to Ehiemere and Ezenduka [25] this complex nature is more exaggerated during illness and it is within this different group that most nursing activities are performed. Thus, nurses must be good public relations practitioners in order to forestall conflicts and maintain cordial relationships among their various clients. Therefore, the results of this study will assist the managements and the nursing services units of these tertiary health institutions

to gain insight into the level of patients' satisfaction with the nursing care in the institutions. The result will provide feedback to nurses in order to improve the quality of care rendered to consumers of different social background. It will also help to identify areas of satisfaction and dissatisfaction of consumers of nursing care in the institutions and to better understand what they are doing right and wrong, thereby creating room for improvement and corrections as the need may be.

Methods Research Design

A descriptive cross sectional research design was adopted to determine influence of socio demographic variables on patient's satisfaction with nursing care in teaching hospitals in northern Nigeria. The choice of descriptive cross sectional survey method for this study derives from its appropriateness and economic standpoint. It is appropriate because it has elicited data that adequately represented the population of study within reasonable limits of error. It is economical in the sense that it permitted the generalization of the findings to the entire population of study which would have been too expensive to study.

Area / Location of Study

The study setting is northern Nigeria. Northern Nigeria is made up of three geo-political zones plus Federal Capital Territory that is, Northwest, Northeast and North-central. As at the time of this study, there are seven accredited teaching hospitals in Northern Nigeria, they include, one first-generation teaching hospital established in the 1960s (i.e. Ahmadu Bello University Teaching Hospital, Zaria), three second- generation teaching hospitals established in the 1970s as well as three third-generation teaching hospitals established in the 1980s and 1990s. It is important to note that there are state and privately owned teaching hospitals in northern Nigeria but they are yet to be fully accredited by the regulating bodies hence were not included in this study.

Population of Study

The study populations were all in-patients and some out-patients once admitted in the hospitals but not later than five years ago. Thus the respondent was selected from both current in-patients and former in-patients who were over eighteen (18) years and have or had been in the ward for three nights or more. Therefore, children less than 18 years of age were excluded because it is assumed that as minors they are not matured enough to assess quality of nursing care and their satisfaction or dissatisfaction with services provided. However, patients in psychiatric wards and mental health units were excluded as most of them may not be in the right frame of mind to assess quality of nursing care provided. On the average, the number of in-patients in each adult ward of these teaching hospitals in northern Nigeria is twenty six (26) and each teaching hospital has an average of ten (10) wards for adult patients excluding psychiatric/mental health wards. Therefore, the approximate total population of study is 1,820 in-patients and unestimated number of out-patients. [22]

Sample Size and Sampling Procedures

Simple random sampling technique was used to select the primary sample unit (PSU) of three teaching hospitals in Northern Nigeria using the list of the teaching hospitals as sampling frame. Simple random sampling was also used to select two male wards and two female wards in each of the hospitals selected using lists of wards in the hospitals as sampling frame. These four (4) wards per selected hospital form the secondary sample unit (SSU) for the study. The hospitals included the first generation teaching hospital in the North West (Ahmadu Bello University Teaching Hospital Shika-Zaria) and one each of second generation teaching hospitals from North Central (Jos University Teaching Hospital, Jos) and North East (University of Maiduguri Teaching Hospital, Maiduguri) respectively. The criteria for subject selection in this study was all in-patients in the selected wards that have been on admission for at least three days and are 18 years and above since that is the adult legal age in Nigeria.

Out of the approximated total population of 1,820 adult patients on admission in these teaching hospitals, a sample of 292 adult in – patients was chosen by the researcher using simple random sampling method. Using the attendance list of the out patients as sampling frame, simple random sampling method was used to select eight (8) male and eight female former in - patients who came for out – patient or follow up visit in each of the teaching hospital. A total of sixteen (16) samples per teaching hospital and fourty eight (48) former in – patients for the three teaching hospitals was included in the study. Therefore, the sample size of 292 of currently in – patients and fourty eight (48) samples of out patients, a total of 340 sample size was used for this study.

Research Instruments

The instruments for the collection of data for this study are structured questionnaire, an interview schedule and focus group discussions. The 23 items questionnaire for this study was developed by the researcher guided by the published standardized questionnaires of General Practice Assessment Survey (GPAS) [26] and Newcastle Satisfaction with Nursing Scales (NSNS). [27] A five point Likert scale and yes or No question formats were used to elicit the response of patients. Scoring on the scale are as follows; Very dissatisfied 1, Dissatisfied 2, fairly satisfied 3, Satisfied 4 and Very satisfied 5 as well as well fulfilled, fairly fulfilled and not fulfilled. The same questionnaire was used for the interview of the respondents without formal education. However, a qualitative method (Focus Group Discussion) was used to complement the data obtained through quantitative approach.

Validation and Reliability of InstrumentS

To ensure face validity of the instruments for this study, an expert in the discipline had a closer look at the questionnaire and made necessary corrections. To ascertain content validity of instruments copies of instruments were distributed to a panel of three experts in the field for items rating from 1 point = not relevant to 4 points = very relevant. Thereafter, the total items rated were computed and a CVI of 0.86 was obtained at 5 percent level of significance which was considered as very good content validity index. The questionnaire and interview schedule were pre-tested (pilot study) on a group of fifteen (15) adult in-patients and three (3) out-patients from JUTH, Jos and on another group of fifteen (15) adult in-patients and three (3) out-patients in ABUTH Zaria making a total of thirty six (36) patients. Test-retest of the instruments was carried out on another thirty (36) patients with two weeks interval. The two sets of data obtained were subjected to statistical test and reliability correlation coefficient of 0.81 was obtained at 5

percent level of significance and was taken as a good reliability index for the instruments.

Data Collection Procedures

Data collection was carried out by the researcher and three trained research field assistants over a period of two to three months. Both the researcher and the research assistants administered the self-completion questionnaire to the literate respondents in the various hospitals. The questionnaire was also used by the researcher and his assistants as interview guide for those respondents who could not read and write. The focus group discussions (FGD) sessions were conducted by the researcher and the field assistants. Responses of discussants were recorded using a tape recorder and through note taking by the researcher and the assistant.

Techniques of Data Analysis

The quantitative data collected using questionnaire was coded and entered into the computer, using Statistical Package for Social Sciences (SPSS) software version 16.0. Descriptive and inferential statistical methods were used to analyse the data. Descriptive statistics was used to organise and describe the phenomenon of patient's nursing needs and expectation while inferential statistics was used to test the research hypothesis. The cross-tabulated variables were tested using chi-square statistic and value $p < 0.05$ was used as the level for statistical significance.

The qualitative information recorded on tape during FGDs was transcribed to complement the notes taken and editing was done in line with the objectives of the study. The content of the transcript was coded and a log book was prepared. Content analysis method was used to analyze the information obtained from the FGDs to complement data gathered through quantitative approach. This involved summarizing, classifying and analyzing the key information within a thematic framework but grounded in the respondents own accounts.

Ethical Considerations

The ethical and research review committees in the selected teaching hospitals was given the proposal and copies of the instrument for assessment and a written permission to collect data from patients was obtained. Individual patient's consent to participate in the study was obtained after explaining the study goals and their freedom to decline participation to them. The respondent was assured of anonymity and confidentiality and the general ethical principle of beneficence and non-maleficence was maintained at every stage of the investigation.

Results

The findings from the quantitative data (questionnaire and structured interview) are triangulated with the content analyses of findings from the qualitative information gathered through Focus Group Discussions (FGDs).

Table 1: Cross tabulation of levels of patients' satisfaction with quality of nursing care across age of respondent s

Age (years)	1	2	3	4	5	Total	M
	VD	D	FS	S	VS		3.4
18 – 24	- -	19(5.6%)	9(2.6%)	19(5.6%)	9(2.6%)	56(16.5%)	3.3
25 – 34	19(5.6%)	9(2.6%)	- -	10(2.9%)	9(2.6%)	47(13.8%)	2.6
35 – 44	19(5.6%)	10(2.9%)	38(11.2%)	9(2.6%)	20(5.9%)	96(28.2%)	3.0
45 – 54	- -	- -	28(8.2%)	28(8.2%)	28(8.2%)	85(25%)	4.0
55 and above	- -	- -	19(5.6%)	19(5.6%)	19(5.6%)	56(16.5%)	4.1
Total	38(11.2%)	38(11.2%)	94(27.6%)	85(25%)	85(25%)	340(100%)	3.4

$X^2 = 152.39$, DF =16, at 0.05 Significant level, Critical value = 26.296

Key: 1 = Very Dissatisfied (VD) 2 = Dissatisfied (D) 3= Fairly Satisfied (FS) 4 = Satisfied (S) 5 = Very Satisfied (VS) M = Mean

As revealed in Table 1, 8.2% of respondents between 45-54 years were very satisfied with quality of nursing care while 5.6% of patients between 35-44 years were very dissatisfied with quality of nursing care received. Some (11.2%) and (8.2%) of respondents within 35-44 and 45-54 years respectively said they are fairly satisfied with quality of nursing care in the hospitals. Similarly, 5.6% of respondents in both 18-24 years and 55 years and above said they are satisfied with the care received in the hospitals. However the mean satisfaction rating of 3.4 indicates that most of the respondents across the age categories were satisfied with quality of nursing care. The test of significant difference shows that there is statistically significant difference in the patient's satisfaction with nursing services received in the hospitals across age categories. Therefore, age of patient could be said to be one of the determining factor in client's satisfaction with nursing care. A young male discussant explained his own experience with nurses in this way:

You cannot expect everybody to treat you the same way. Most of the nurses are very good, they will want to do everything for you, you call them they will come, when it is time for you to eat they will ensure you eat, when it is time for you to bath they will make sure you take your bath, when it is time for you to take your medicine they will bring it for you and when you have visitors who came to greet you they will allow them (sic). But some of the nurses do not care for all these things, we know them (A focus group discussant in UMTH)

Other sentiment voiced by a middle age female discussant was that:

Since most nurses are female, this women attitude towards women tends to play up in the attitude of some nurses, in the sense that when you as a woman is sick in the hospital and you want a woman (female nurse) like you to do everything for you, they tend to be reluctant and they see you to be asking for too much but I know they will be ready to do more things for men (male patients) than they will do for women or female patients (A focus group discussant in ABUTH)

Table 2: Cross tabulation of levels of patients' satisfaction with quality of nursing care across gender of respondents

Sex	1 VD	2 D	3 FS	4 S	5VS	Total	M
Male	13(3.8%)	19(5.6%)	47(13.8%)	29(8.5%)	42(12.4%)	150(44.4%)	3.5
Female	25(7.4%)	19(5.6%)	47(13.8%)	56(16.5%)	43(12.6%)	190(55.6%)	3.4
Total	38(11.2%)	38(11.2%)	94(27.6%)	85(25%)	85(25%)	340(100%)	3.5

X^2= 7.78, df= 4, at 0.05 Significant level, Critical value = 9.488

As shown in Table 2, some (7.4%) of female respondents said they were very dissatisfied with quality of nursing care received while 12.6% and 16.5% said they were very satisfied and satisfied respectively. Similarly, 13.8% of the male respondents said they were fairly satisfied and 12.4% said they were very satisfied with quality of nursing care rendered in these hospitals while 3.8% said they were very dissatisfied. The mean score of satisfaction of 3.5 reveals that most of the respondents across gender variables were satisfied with quality of nursing care. The test of significant difference shows that there is no statistically significant difference in the male and female patients' levels of satisfaction with nursing services received in the hospitals. Hence, it could be concluded that even though little variations exist in patient's satisfaction across gender but it is not a determining factor of consumer's satisfaction with quality of nursing care.

Table 3: Cross tabulation of levels of patients' satisfaction with quality of nursing care across educational attainment of respondents

Levels of education	1 VD	2 D	3 FS	4 S	5 VS	Total	M
No formal education	- -	- -	24(7.1%)	45(13.2%)	53(15.6%)	122(35.9%)	4.2
Primary education	- -	19(5.6%)	24(7.1%)	34(10%)	17(5%)	94(27.6%)	3.5
Secondary education	25(7.4%)	- -	40(11.8%)	6(1.8%)	15(4.4%)	86(25.3%)	2.8
Tertiary education	13(3.8%)	19(5.6%)	6(1.8%)	- -	- -	38(11.2%)	1.8
Total	38(11.2%)	38(11.2%)	94(27.6%)	85(25%)	85(25%)	340(100%)	3.1

X^2= 224.7, DF= 12, at 0.05 Significant level, Critical value =21.026

Table 3 shows that 15.6% and 13.2% of respondents that were not literate said they were very satisfied and satisfied respectively with quality of nursing care they received and none was dissatisfied while 7.4% and 3.8% of respondents that had secondary and tertiary education respectively said they were very dissatisfied with the quality of nursing care rendered. None of the respondents who had tertiary education said they were satisfied or very satisfied while 10% of respondents that had primary education said they were satisfied. The mean satisfaction score across level of education is 3.1, however the rating shows a steady decline with higher education (4.2 for no formal education, 2.8 for secondary school certificate holders and 1.8 for tertiary school graduates). It then means that the higher the respondents' level of education the lesser their extent of satisfaction with nursing care provided in these hospitals. The test of significant difference shows that there is a statistically significant difference in the clients' levels of satisfaction with nursing services received in these teaching hospitals across respondents' educational attainment. Therefore, level of education of patient is one of the factors that influence patient's satisfaction with quality of nursing care.

Table 4: Cross tabulation of levels of patients' satisfaction with quality of nursing care across economic status of respondents

Economic Status	1 VD	2 D	3 FS	4 S	5 V.S	Total	M
Lower class (Less than N50,000/month)	- -	- -	83(24.4%)	78(22.9%)	85(25%)	246(72.4%)	4.0
Middle class (N51,000 – 200,000/month)	25(7.4%)	23(6.8%)	11(3.2%)	7(2.1%)	- -	66(19.4%)	2.0
Upper class (N201,000 and above/ month)	13(3.8%)	15(4.4%)	-	-	-	28(8.2%)	1.5
Total	38(11.2%)	38(11.2%)	94(27.6%)	85(25%)	85(25%)	340(100%)	2.5

X^2= 270.26, DF= 8, at 0.05 Significant level, Critical value = 16.507

Table 4 reveals that 25% of patients in lower economic class were very satisfied with quality of nursing services rendered, 22.9% were satisfied and none was dissatisfied while 3.8% of respondents in upper class in the study said they were very dissatisfied and 4.4% were dissatisfied with quality of nursing care received. Some (7.4%) and (6.8%) in the middle class were very dissatisfied and dissatisfied respectively, only 2.1% and 3.2% of respondents in the middle class said they were satisfied and fairly satisfied and none in that category said they were very satisfied. The average satisfaction scores across the respondents' economic status revealed a sharp decline from satisfied (4.0) among respondents in lower economic class to fairly satisfied (2.0) among respondents in middle class and to dissatisfied (1.5) among respondents in the upper class. It then means that the higher the respondents' economic class the lesser their level of satisfaction with quality of nursing care provided in these hospitals. The test of significant difference shows that there is a statistically significant difference in the levels of patients' satisfaction with nursing care in the hospitals across economic class. It can then be concluded that statistically significant differences exist in patient's satisfaction with quality of nursing care across socio-demographic characteristics such as age, level of education and social status but such difference does not exist across patient's gender. Therefore, the hypothesis which state that there is no significant difference in patient's satisfaction with quality of nursing care across various socio-demographic variables is rejected.

Table 5: Stepwise regression analysis of patients' socio-demographic variables and levels of satisfaction with quality of nursing care

Independent Variables	Partial R^2	Model R^2	F	Prob. >F	Percentage Contribution
Patients' level of education	0.0091	0.3601	2.8114	0.1174	36%
Patients' economic status	0.0189	0.2014	3.6351	0.1012	20.1%
Patients' occupation	0.0194	0.1443	4.0132	0.0854	14.4%
Age of patient	0.0199	0.14005	4.1433	0.0613	14%
Gender	0.0210	0.0481	6.2017	0.0083	4.8%

Constant R = 0.2177

Table 5 reveals that the socio-demographic variables of the patients that determine their satisfaction with quality of nursing care in these hospitals includes level of education (36%), economic status (20.1%), patients' occupation (14.4%) and patients' age (14%). The respondents' gender also played but little role in the determination of clients' satisfaction with quality of nursing care in these hospitals.

Discussions of Findings

The respondents are adults with the mean age of about 41 years hence it is assumed they are capable of accessing quality of nursing care and their satisfaction with nursing services provided. The respondents cut across gender categories and marital status. About half of the respondents are Christians and the remaining are Muslims. Most of the respondents are Hausa/Fulani and other ethnic groups in Northern Nigeria. Majority of the respondents had no formal education or had primary education while a few had tertiary education. Similarly, most of the respondents are housewives, unemployed and farmers while some are civil servants, students and traders. Majority of the respondents are in the lower socio-economic class and a few are in middle and upper class respectively.

The test of significant difference of patients' satisfaction across socio-demographic characteristics revealed that there is no significant difference in consumers' satisfaction with quality of nursing care across gender categories. This finding is similar to Mehrnoosh and others, in which they reported that, in Republic of Iran there were no significant relationship between gender and level of patients' satisfaction with nursing care. [15] Similarly, Chan and Chau study in hospitals in Hong Kong revealed that, gender of patients did not affect their overall satisfaction with nursing care. [16] On the other hand, the findings of this study show that there is a statistically significant difference in the patients' satisfaction with quality of nursing care across age categories. This is in tandem with the findings of Hajifatahi and others in which they observed that age was associated with the patients' satisfaction and that older patients were more satisfied with nursing care than the younger clients. [17]

Porter and Perry opined that age and gender of an individual are major determinants of persons' needs, expectations and satisfaction at every stage of life and that the needs and expectations of the young and old patients as well as male and female clients differ considerably. They further buttress their comments with empirical report that, most old and female patients in United States of America expects and demands for more attention than most male and young clients which they said invariably influence clients' satisfaction. [28] These assertions and findings to a greater extent are in tandem with hypothesis one of this study. Therefore, it can be said that, even though gender may be one of the major determinants of human needs and expectations but not in all cases would gender determine differences in patients' satisfaction with quality of nursing care in the hospital.

The test of significant difference in tables 18 and 19 revealed that the calculated chi-square of 224.7 with DF= 12 and calculated chi-square of 270.26 with DF= 8 at both 0.05 significant level, were greater than the table /critical value of 21.026 and 16.507 respectively. Therefore, statistically significant differences are observed across level of education and the social status (income) of respondents. Most of the educated patients were less satisfied with quality of nursing care while majority of the less educated and those that had no formal education were satisfied with quality of nursing care received in the hospitals under study. This is supported by previous findings by Pascoe in which he reported that, patients with higher income tend to be less satisfied with quality of nursing care [18] while Brian, Nguyen, Emperor and Guillemin revealed that patients admitted in private rooms were more satisfied with nursing care rendered to them. [19]

In the same vein, Hassan and others reported that income and level of education were consistently associated with patients' satisfaction with health care services in Kuwait.[13] On the contrary, findings of Mehrnoosh *et al.* showed that there was no relationship between income of the patients, type of rooms and their overall satisfaction with nursing care.[15] The reason that could be adduced for these relationships is that the educated respondents and those in upper socio-economic class were enlightened, well informed and aware of their right while non literate clients are less enlightened and may not be in a vantage position to assess quality of care as such they could be satisfied with whatever services rendered.

The stepwise regression analyses revealed that when the influence of socio demographic characteristics are combined together, level of education had a greater percentage contribution, followed by patients' economic status as well as occupation and age while the contribution of gender to patients' satisfaction with quality of nursing care rendered in these hospitals was negligible.. This is in tandem with Chan and Chau studies in hospitals in Hong Kong which revealed that, gender of patients did not affect their overall satisfaction with nursing care. [16] It is also in support of Pascoe who reported that, patients with higher income tend to be less satisfied with quality of nursing care. [18] The findings are related to Carr- Hill findings in which he reported that, patient age and gender have only a minor influence on patient satisfaction. [29] However, this result is in contrast with the findings of Hajifatahi *et al.* in which they observed that gender was associated with patients' satisfaction with the quality of nursing care. [17]

Conclusions

In view of the findings of this study, it could be concluded that most consumers of nursing care in teaching hospitals in Northern Nigeria were satisfied with over-all quality of nursing care. It was also observed that, among the socio-demographic

variables found to be associated with satisfaction, literacy and income of clients seems to have more significant effect while patients' age and occupation contributed minimally to patients' satisfaction with quality of nursing care.

Recommendations
1. Continuing education programme, workshops and seminars on human relation and clinical psychology should be organized for nurses in Northern Nigeria so as to improve their interpersonal relationship with patients and clients' relatives.
2. Nursing and Midwifery Council of Nigeria (NMCN) as the regulating body for nursing training and practice in Nigeria should review and strengthened the contents of human relation and behavioral sciences in the curriculum of nursing training programmes so as to produce nurses with more knowledge and skills in the areas of human relation.

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