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PATIENTS' PERSPECTIVE OF PATIENT-CENTRED CARE IN SELECTED HEALTH FACILITIES IN SOUTHERN GHANA

Augustine Adomah-Afari [1]
Frank Kofi Kanku

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A B S T R A C T

This research assessed patients' perspective of factors associated with patient-centred care in selected health facilities in the Volta Region of southern Ghana. A descriptive hospital-based cross-sectional survey design was used where a structured questionnaire was administered to 403 patient participants. Regression analysis was conducted and the results reported in proportions, frequencies and odds ratios. The level of patient-centred care practice among patients in the selected health facilities was 56.8%. Patient-centred care was influenced by age (aOR=1.13; CI:1.02-1.25), educational status (aOR=0.02; CI:0.001-0.63), road network (aOR=0.09; CI:0.02-0.63) and cultural barriers (aOR=15.22; CI:1.65-139.99). Individual patient and community system factors including cultural beliefs have the potential of influencing patient-centred care satisfaction with the quality of care delivery in health facilities. Thus, there is a need for the government to address the problem of deplorable road networks in the communities.

1. INTRODUCTION

Arguably, health is the backbone of every nation as they seek to ensure the wellbeing and growth of the nation (Greve, 2008). Involvement of patients in health decisions is rare in Africa in general and Ghana in particular (Stiggelbout *et al*., 2012). In Ghana and other developing countries, the demand for healthcare services has increased overtime (Atinga, Abekah-Nkrumah, & Domfeh., 2011, Ahenkorah & Nicola, 2015). This means that health providers should seek to provide quality care to their patients/clients as they face intense competition. Thus, healthcare quality affects patient satisfaction, which in turn influences positive patient behaviours such as loyalty (Naidu, 2009). Naidu (2009) contends that patient satisfaction and healthcare service quality, though difficult to measure, can be operationalised using a multi-disciplinary approach that combines patient inputs as well as expert judgement. This explains why there is growing recognition for patient-centred care (PCC), as a fundamental part of healthcare quality and patient safety (Papanikolaou & Zygiaris, 2012). Ever since the Institute of Medicine's report on 'Crossing the Quality Chasm', patient-centred care has been recognised as a high priority for the delivery of healthcare services in many countries across the globe (Institute of Medicine (IOM), 2001, Santana *et al*. 2018). The model emerged in the early 1950s and rapidly became prevalent in the area of healthcare plans and policies in the late 90s (Natan, 2017). McCance, McCormack and Dewing (2011) attribute the involvement of PCC in health policies to the need of the healthcare system to find ways to improve the quality of care while correcting the inequity in care, focusing on interaction, cooperation, and a holistic approach.

[1] Corresponding author: Augustine Adomah-Afari
Email: afari@ug.edu.gh, augustineafari@yahoo.co.uk

The term 'patient-centred care' has been discussed in a number of different terms, including patient and family-centred care, relationship-centred care, and user/client-centred care (Santana *et al*., 2018). Santana *et al*. (2018) note that patient-centred care provides a model in which healthcare providers are encouraged to link up with patients or their primary clients to co-design and deliver tailored care that offers people the high-quality care they desire and also improves healthcare system efficiency and effectiveness for the population. The World Health Organization (WHO) has established policy frameworks for patient/people-centred healthcare stressing person-centeredness as the fundamental competency of healthcare professionals and health workers (World Health Organization (WHO), 2013). Patient-centred care also serves as a key component of healthcare quality and primary care (Gemmae *et al*., 2018). Robinson, Callister, Berry and Dearing (2008) argue that working in accordance with the PCC model leads to a better exchange of information between patients and health professionals and enhances the quality of care, hence, increasing patient satisfaction, adherence to care, and improving health outcomes.

Some years back, the focus and attention on the quality of healthcare services were not on the agenda of developing countries, including Ghana, however, with time, there has been increasing attention placed on the need for improved health service provision (Atinga *et al*., 2011). Ahenkorah and Nicola (2015) argue that the principal reason for ensuring that quality health service is provided to patients and the general public is that patient satisfaction can only be met when the services provided are of low cost but are provided by highly competent healthcare workers including medical practitioners. One of the best approaches to ensuring patient satisfaction is through person-centered care and its associated health system, which provide the opportunity for individuals to make an informed choice on their healthcare needs and help them to manage their own health care and other related needs (De Silva, 2014). Although numerous models of patient-centred care exist in the developed world, only a few can be traced to low-resource countries (Peprah & Atarah 2014). Practical guidance on the implementation of patient-centred care has not been well documented in most sub-Saharan African nations, including Ghana (Ahenkorah & Nicola, 2015; Afulani, Phillips, Aborigo, & Moyer, 2019). Additionally, factors influencing the implementation and barriers have not well been outlined. This has made it extremely difficult for healthcare providers to understand and follow appropriate procedures when dealing with patients.

Patient-related (socio-demographic characteristics) factors have been identified to influence the implementation of patient-centred care in health institutions despite the evidence showing that patients taking an active role in research and adaptive strategies by researchers all helped in person-centred care delivery (Moore *et al*., 2017). Health provider or organisational factors constraint healthcare providers in their efforts at ensuring patient-centred care (Moore *et al*., 2017). Studies have reported that very limited knowledge exist of how to change the traditional approach of providing healthcare services to a stage where patients will be the prime focus and will be key players in sustaining their preference and care (Cronholm *et al*., 2013; Nutting *et al*., 2010). Understanding of organisational practices necessary to shift the culture of a whole healthcare organisation to implement and practice PCC remains incomplete. Moore *et al*. (2017) explain that person-centred care can be categorised under three main groups, which include professional attitudes toward stereotypes, practices on the traditional approach to healthcare, and key determinants of the development of interventions on patient-centered care.

This makes it rather difficult for healthcare providers to understand their relationship with patients in delivering healthcare in health facilities. Community factors have also been identified to be having a negative influence on patient-centred care practice (Musheke, Bond, & Merten., 2012). Musheke *et al*. (2012) informed that patient attrition from anti-retroviral therapy (ART) care was influenced by an interplay of personal, social, health system and structural-level factors. The lack of an understanding of the influence of social factors on the provision of patient-centred care by healthcare providers has created challenges for healthcare providers. In view of the aforementioned problems, it is unclear which of these factors could be fostering or impeding practice of patient-centred care in healthcare facilities in Ghana (Nkrumah & Abekah-Nkrumah, 2019). Limited evidence exists with respect to the Volta Region of southern Ghana. Thus, this research assessed factors associated with patient-centred care in selected health facilities in the Volta Region of Ghana.

2. METHODOLOGY

2.1. Study Design

The study was carried out using a hospital-based cross-sectional survey design using quantitative methods to assess patient-centred care in selected health facilities in the Volta Region of southern Ghana. A descriptive cross-sectional study examines the relationship between exposure and outcome prevalence in a defined population at a single point in time (Setia, 2018). This study type was advantageous because it is less time-consuming than case-control or cohort studies, and inexpensive (Setia, 2018).

2.2. Study Area

The study was conducted in selected public health facilities in the Volta Region of southern Ghana. Volta Region is one of the 16 administrative regions of Ghana located on the east of the Volta Lake with Ho as its capital city/town. The region covers an area of 20,570 square kilometres representing 8.6% of Ghana, between latitudes 5° 45'N and 8°45'N. The region is bordered on the east by the Republic of Togo and south by the

Atlantic Ocean. The region spans all the vegetation zones of the country stretching from the Atlantic coast in the south to the north. The region had a projected total population of 2,118, 252, with a growth rate of 2.5% based on the 2010 population census (Ghana Statistical Service (GSS), 2013). The total population has been zoned into twenty-five (25) districts, including Keta Municipality, Akatsi and South Tongu Districts (Ghana Statistical Service (GSS), 2013). The native and largest ethnic group is the Ewe people (68.5%) (Ghana Statistical Service (GSS), 2013). In terms of economic activity, 53.8% of the population is economically active while the inactive population is 46.2% with more females (54.7%) unemployed than males (Ghana Statistical Service (GSS), 2013). The region has major markets, which are located in every district capital town, which are organised mostly on weekly basis (Ghana Statistical Service (GSS), 2013). Almost half of the population (49.9%) of the region is in skilled agricultural/agriculture, forestry and fishery. Almost half of the population is inactive economically reflecting a high poverty level and for that reason their inability to pay for the health care services offered. Volta Region has a total of 326 health institutions out of which 242 are Ghana Health Service (GHS) administered ones and 18 are Mission-owned, one facility is quasi-government (that is the military hospital – MRS) at the medium mortar regiment in Ho, and 65 privately owned. Many of the Ghana Health Service run health centres were community-initiated. Every district now has a hospital either government or mission owned (Ghana Health Service (GHS), 2019). The four selected health facilities were based in the Keta Municipality, Akatsi District, and Sogakofe District. The health facilities provide 24 hours services in areas of Out-Patient Department (OPD), In-Patient care, Reproductive and Child Health, Obstetric and Gynaecological.

2.3. Study population and sampling

The study included all patients in the selected hospitals. Criteria for selecting patient participants were on a voluntary basis, and at least should have received a complete outpatient or inpatient medical service, or were receiving inpatient medical services at the time of the study and those who were willing to enrol in the study were included. The study excluded patients who did not satisfy the criteria. The sample size was calculated using the Cochran's sample size calculation formula. An alpha level of 0.05 (error of 5%) was assumed. Since the actual estimation of patients who visit the hospitals in the region was unknown as well as there was no documentation on patient-centered care, the study assumed the expected frequency as 50%. This is the proportion of unknown patient-centered practice among the hospitals in the region (Bruce *et al*., 2015). The total target sample size was 403 patients receiving care in the hospitals. Using the researchers' own estimation, the sample proportion was estimated for each of the health facilities as:

$$\frac{\text{Bed capacity of hospital} \times \text{estimated sample size}}{\text{Total bed capacity of all the hospitals}}$$

E.g.: Keta Municipality = $\frac{110 \times 403}{310}$ = 143 participants

A similar calculation was done for all the hospitals and the sample size for the respective hospitals are shown. Table I about here.

Different sampling strategies were applied to select the health facilities and participants involved in the study. A multi-stage sampling technique was used in sampling the respondents (Setia, 2018). The Volta Region is divided into sixteen (16) districts, which is already in a form of cluster. Three districts were selected out of the twenty-five (25) districts based on their geographical locations. Balloting was done to select the wards in each hospital by writing the names of all the wards on different pieces of paper. These pieces of paper were then folded and placed in a box, mixed thoroughly and three of them were picked at random. This procedure was repeated for all the other hospitals, which resulted in the selection of twelve (12) wards within the four hospitals. The selection of the twelve wards in the four hospitals helped to achieve maximum coverage and representativeness of the entire hospital. In selecting participants for each ward, the hospital's bed capacity was collected from the hospital management. This gave a total bed capacity of 310. The total bed capacity of each hospital, for example, Keta Municipality (110) was divided by the total bed capacity of the hospitals involved (310) and then multiplied by the sample size (403) to obtain the sample proportion of the hospital (143). The figure obtained was then divided into three equal parts for each ward. The research assistants identified the ward In-charge or volunteers to assist them locate the centre of the ward. A sharpened pencil was spun and where the pointed end turned to then became the first bed to start the data collection. When it was difficult to find any qualified participant who was willing to participate, the research assistants moved to the next bed until a qualified participant was found. This was repeated in each hospital and ward until the total sample size of 403 was attained.

2.4. Data Collection

A structured designed questionnaire with closed-ended questions was administered to collect data from the participants at the selected health facilities between July and December, 2020. Based on the objective, the hypotheses of the study were set as: there is an association between patient/client (socio-demographic characteristics) factors and patient-centred care; there is an association between health system/provider factors and patient-centred care; and there is an association between community factors and patient-centred care among patients in health facilities in Ghana using the Volta Region as a benchmark. These were factored into the design of the questionnaire, which was based on the

service quality (SERVQUAL) scale modified to suit the study with three dimensions of patient-centred care (Parasuraman et al., 1991). These were medical, service quality and, patient dimensions. The medical dimensions included the physician-patient relationship, treatment decisions, treatment methods, and prevention. The patient dimensions included medical services availability, treatment participation, and joint decision-making process. The questionnaire was divided into two main sections. Section one collect data on socio-demographic background of participants while section two measured the service quality perceptions of patients. On the service quality dimensions, the questions were categorised into the nine dimensions of service quality as adopted for the study – tangibility, reliability, responsiveness, assurance, empathy, accessibility and affordability, priority, culture and communication. A five-point Likert scale was used, ranging from "Strongly Disagree =1.0-1.49, Disagree =1.50-2.49, Neutral = 2.50-3.49, Agree = 3.50-4.49, Strongly Agree = 4.50-5.0". This format has been applied in healthcare surveys (see Kumaraswamy, 2012). Two well trained research assistants versatile in the English and dominant local languages (Ewe, Akan etc) assisted in administering the questionnaires as either interviewer-administered or self-administered depending on the ability of the participant to read English language or not. Each questionnaire was administered within 30 minutes to one hour.

2.5. Data Analysis

Data entry was done using Microsoft Excel application and performed by two independent data entry clerks to minimise errors and to maintain consistency. STATA software was used for analysis. Descriptive analysis was done, and results were then presented in means, standard deviation and percentages. To assess quality of patient-centred care, eight dimensions of the SERVQUAL model were used, including tangibles, reliability, responsiveness, assurance, communication, empathy, culture and affordability. Chi-square test was done to test for association between the outcome variable and the categorical independent variables at a significance level of $P<0.05$. Logistic regression was used to determine the strength of the association between the independent variables and the outcome variable (satisfaction with patient-centred care).

2.6. Quality assurance

A day's training session was organised for the research assistants, which focused on explaining the contents, significance, and how to fill out the questionnaire. The training session also included language training and translation of the questionnaire into the local and other languages (Ewe, Akan, etc). The study instrument was pretested in the St. Anthony Hospital in the Volta Region of Ghana. St. Anthony Hospital has similar demographic characteristic as the study area/facilities. A pre-testing of the study instruments was conducted on 5% of the required sample size to test for the accuracy of the questionnaire. Responses or feedback were used to modify the survey tools before the main study was conducted. Attention was paid to the examination of the returned questionnaires where those with missing items and errors were checked and corrected on the site. The data was double-checked to ensure validity and coded.

Table 1: Socio-demographic characteristics of respondents (n = 403)

Variables	Frequency	Percent (%)
Age in years	39.2 ± 16.0	
Gender		
Male	189	46.9
Female	214	53.1
Educational level		
No formal education	62	15.4
Primary	68	16.9
Junior high	119	29.5
Senior high	107	26.6
Tertiary	47	11.7
Median number of hospital visits in the past 12 months Range (1,12)	4	
Employment status		
Unemployed	76	18.9
Employed	308	76.4
Student	19	4.7

2.7. Ethical clearance

Appropriate steps were taken to ensure compliance with ethical issues involved in the conduct of the study within appropriate regulations. Ethical clearance was granted by the Ghana Health Service Ethical Review Committee with reference number GHS-ERC030/03/20. Permission to use the health facilities and patients was granted by the appropriate authorities of the selected hospitals in the region. A written informed consent was signed or thumb-printed by each study participant. The purpose of the study, the benefits, and rights of the subjects and the procedures involved were explained to all participants. Participants were assured that participation was voluntary and they had the right to withdraw from the study at any time they did not feel comfortable to continue. Participants were assured of anonymity and confidentiality as all information provided were kept and protected from illegal access, were only identified by a code number and names did not appear or mentioned in any part of the report of this study.

3. RESULTS

3.1. Socio-demographic characteristics of respondents

The results indicated that the mean age of respondents was 39.2 years (SD±16.0). More than half were females, 214 (53.1%) and males were 189 (46.9%). Majority of them, 341 (84.6%) had had some form of education with 62 (15.4%) having had no formal education. The median number of hospital visits of respondents was 4. Most of the respondents, 308 (76.4%) were employed with 19 (4.7%) being students (Table 1).

3.2. Service dimensions and patient-centred care

The results showed that reliability was ranked first (M=4.15, SE=0.02). Four items were used to assess reliability with respondents most satisfied with how medical procedures were performed correctly the first time (M=4.20, SE=0.03). Overall, the factors used to rank reliability were statistically significant (p=0.001). Culture was ranked second (M=4.13, SE=0.03). Respondents were satisfied with how the hospital staff did not discriminate based on ethnic backgrounds (M=4.26, SE=0.04). The factors used to rank culture were statistically significant (p=0.001). Responsiveness was ranked third (M=4.08, SE=0.02). The responsiveness of the staff to the needs of patients was mostly satisfying (M=4.10, SE=0.03). Overall, the factors used to rank responsiveness were statistically significant (p=0.001). Assurance was ranked fourth (M=4.04, SE=0.02). Respondents were satisfied with how the staff treated patients with dignity and respect (M=4.10, SE=0.03). The factors used to rank assurance were found to be statistically significant (*P*=0.001).

Empathy was ranked fifth (M=3.94, SE=0.02). The care shown by the hospital staff greatly satisfied the respondents (M=4.09, SE=0.03). Overall, these factors used to rank empathy were statistically significant (p=0.001). Tangibility was ranked sixth (M=3.71, SE=0.03). The physical environment of the hospital greatly satisfied patients (M=3.80, SE=0.03). The factors used to rank tangibility were statistically significant (*P*= 0.001). Affordability was ranked seventh (M=3.69, SE=0.03). Respondents were satisfied that NHIS worked at the hospital (M=4.25, SE=0.03) and this association was statistically significant (*P*=0.001). Communication was ranked eighth (M=3.52, SE=0.04). Respondents were mostly satisfied with the doctor's willingness to answer any questions relating to illness (M=3.66, SE=0.04), which was statistically significant (*P*=0.001). Results of the overall level of satisfaction showed that respondents were generally satisfied with patient-centred care at the hospitals (M=3.92, SE=0.01), which was statistically significant (*P*=0.001) (Table 2).

Table 2: Service dimension and patient-centred care

SERVQUAL STATEMENTS	Mean	Standard error (SE)	p-value
Tangibility			
The hospital has up to date facilities.	3.67	0.03	0.000
The physical environment of the hospital is appealing.	3.80	0.03	0.000
The hospital has modern-looking equipment.	3.65	0.03	0.000
There is availability of adequate seating at the hospital.	3.71	0.04	0.000
Average Tangible score	3.71	0.03	
Reliability			
The staff provides service on scheduled time.	4.07	0.03	0.000
Doctors/staff are professional and competent.	4.18	0.03	0.000
Medical procedures were performed correctly the first time.	4.20	0.03	0.000
There is consistency in duty performance by staff at the hospital.	4.10	0.03	0.000
Average Reliability score	4.14	0.02	

SERVQUAL STATEMENTS	Mean	Standard error (SE)	p-value
Responsiveness			
Hospital staff was helpful to the patients.	4.07	0.03	0.000
The staff was responsive to patient needs.	4.10	0.03	0.000
The staff responded immediately when called by the patients.	4.07	0.03	0.000
Prompt service delivery without wasting time.	4.08	0.03	0.000
Average Responsiveness score	4.08	0.02	
Assurance			
The hospital had skilled staff to provide healthcare delivery.	4.13	0.03	0.000
The hospital staff treats patients with dignity and respect.	4.10	0.03	0.000
The staff at the hospital possesses a wide spectrum of knowledge.	4.01	0.03	0.000
The staff at the hospital was courteous.	3.90	0.03	0.000
Average Assurance score	4.04	0.02	

Table 2: Service dimension and patient-centred care

SERVQUAL STATEMENTS	Mean	Standard error (SE)	p-value
Empathy			
The staff has my best interests at heart.	3.90	0.03	0.000
The staff understands my specific needs at the hospital.	3.98	0.02	0.000
The personnel give me special attention at the hospital.	3.94	0.02	0.000
The staff welcomes your weakness in facility.	3.78	0.03	0.000
The staff at the hospital was caring to patients.	4.09	0.03	0.000
Average Empathy score	3.94	0.02	
Communication			
I received adequate explanation of any tests I had to undergo	3.35	0.05	0.997
The doctors were willing to answer any questions relating to illness.	3.66	0.04	0.000
I was given adequate information on my health condition.	3.59	0.05	0.024
I was given adequate information on my treatment.	3.46	0.05	0.451
Average Communication score	3.52	0.04	
Culture			
The hospital Staff do not discriminate based ethnic backgrounds	4.26	0.04	0.000
The Staff use language patients understand.	3.86	0.04	0.000
The staff at the hospital does not discriminate based on your religion.	4.25	0.04	0.000
Average Culture score	4.13	0.03	
Priority			
Elderlies and children are given special care at the hospital.	4.01	0.04	
Affordability			
Does NHIS card work in this hospital?	4.25	0.03	0.000
The charge for services at the hospital is affordable	3.13	0.06	1.000
Average Affordability score	3.69	0.03	
Patient Satisfaction			
I am satisfied with healthcare service delivered in this hospital.	4.05	0.03	
Overall satisfaction	**3.92**	**0.01**	**0.000**

3.3. Level of patient centred care among patients in health care facilities

The results showed that majority of the respondents, 228 (56.8%) said 'Yes' they were satisfied while 174 (43.2%) said 'No' they were not satisfied with the level of patient-centred care practiced by the various hospitals in the study (Figure 1).

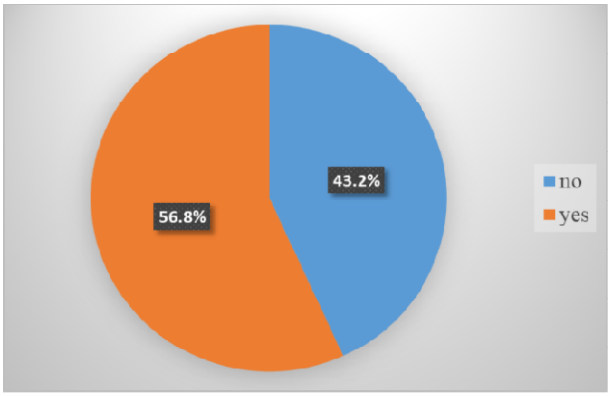

Figure 1: Level of patient-centred care among participants in the health care facilities.

3.4. Factors associated with satisfaction with patient-centred care

Factors which were associated with satisfaction with patient-centred care in the bivariate analysis were analysed in the multiple logistic regression model. The results showed that a one year increase in age significantly increased the odds of respondents being satisfied with patient-centred care by 7% (cOR=1.07; 95% CI=1.002-1.14; *P*=0.043). However, after adjusting for (educational level, description of road network to health facilities, cultural barriers to health care) a one year increase in age significantly increased the odds of respondents being satisfied with patient-centred care by 13% (aOR=1.13; 95% CI=1.02-1.25; *P*=0.017). The odds of being satisfied with patient-centred care was significantly reduced by 89% among respondents who had had tertiary education as compared to those who had had no formal education (cOR=0.11; 95% CI=0.01-0.97; *P*=0.046). After adjusting for (age in years, description of road network to health facilities, cultural barriers to health care), this association was found to be significant (aOR=0.02; 95% CI= 0.001-0.63; *P*=0.025). Respondents who described the road network to health facilities as not accessible had significantly reduced odds of being satisfied with patient-centred care by 82% as compared to those who described the road network to the health facilities as very accessible (cOR=0.18; 95% CI=0.05-0.71; *P*=0.014). After adjusting for (age in years, educational level, cultural barriers to health care), this association was found to be significant (aOR=0.09; 95% CI=0.02-0.63; *P*=0.014). Patients who lived in communities with no cultural barriers to health care had significantly 6.31 times odds of being satisfied with patient-centred care as compared to those who lived in communities with cultural barriers (cOR=6.31; 95% CI=1.54-25.89; *P*=0.011). After adjusting for (age in years, educational level, description of road network to health facilities), this association was found to be significant (aOR=15.22; 95% CI=1.65-139.99; *P*=0.016) (Table 3).

Table 3: Factors associated with satisfaction with patient-centred care

Variables	cOR(95% CI)	p-value	aOR(95% CI)	p-value
Age in years	**1.07(1.002 - 1.14)**	**0.043***	**1.13(1.02 - 1.25)**	**0.017**
Educational level				
No formal education	1.00		1.00	
Primary	1.09(0.07 - 17.94)	0.948	0.66(0.02 - 19.31)	0.811
Junior high	1.93(0.12 - 31.46)	0.643	1.75(0.06 - 49.15)	0.743
Senior high	1.74(0.11 - 28.28)	0.698	1.22(0.04 - 33.90)	0.908
Tertiary	**0.11(0.01 - 0.97)**	**0.046***	**0.02(0.001 - 0.63)**	**0.025***
Description of road network to health facilities				
Very accessible	1.00		1.00	
Somehow accessible	2.49(0.28 - 22.52)	0.417	2.84(0.28 - 28.71)	0.376
Not accessible	**0.18(0.05 - 0.71)**	**0.014***	**0.09(0.02 - 0.63)**	**0.014***
Cultural barriers towards health care				
Yes	1.00		1.00	
No	**6.31(1.54 - 25.89)**	**0.011***	**15.22(1.65 - 139.99)**	**0.016***

*(statistically significant, p≤0.05)

4. DISCUSSION

The study found that majority of patient respondents (56.8%) had access to patient-centred care in the various health facilities showing a highly significant level of satisfaction. This finding justifies the argument that the primary goal and benefit of patient-centred care is to improve the health outcomes of individuals, not only the health outcome of the populations, although population health outcome may also improve, this does not only benefit the patients but the health providers as well through improve patient satisfaction score by both the patient and their families (Abugre, Mogre, & Bhengu, 2019).

The study showed a significant relationship between client-related factors and patient-centred care as age and educational status were significantly associated with the level of satisfaction with patient-centred care. Furthermore, the findings showed that as a patient's/client's age increases, the level of satisfaction with patient-centred care increases. This clearly indicates that when patients/clients are aging, more attention should be paid to them and given the best care and support. In other context, it is indicated that the utilisation of health care services increases with age and therefore, the level of satisfaction increases with time as one establishes relationship with health workers over time (Spiers *et al*. 2019). Some researchers observed that patients' age at the time of illness was an important predictor for a quality of health care (Chubike & Constance, 2013). Reynold *et al*. (2006) supports this view that a patient's age at the time of illness has a significant influence on patient-centred care. This current study observed that patients who were aging received better treatment with high level of satisfaction as against those who were younger (15-24 years). The 2008 Ghana Demographic Health Survey (GDHS) showed that older people tend to seek more and received better health care services than younger people (Ghana Statistical Service (GSS), 2013). Chubike and Constance (2013) also contend that as one's age increases, the level of access to healthcare services increases and by that, good relationship was established with healthcare providers, which could improve the level of satisfaction with patient-centred care in Nigeria.

An earlier study had argued that patients with low education measure their satisfaction with how well they were received and whether they had drugs for their ailment in Iran (Kelarijani, Jamshidi, Heidarian, & Khorshidi, 2014). Another significant finding was the association between the level of satisfaction with patient-centred care and the educational status of the patients/clients. The level of patient-centred care satisfaction decreases as the educational status of the patient/client increases (AOR: 0.02; CI:0.01-0.63). Significantly, the study observed that patients/clients who had never been through any formal education had higher level of satisfaction as compared to those who had achieved tertiary level of education. As a patient/client obtains higher level of education, s/he developed higher sense of judging from a poor service or good service. Patients/clients who are able to read and understand the kind of treatment been given are able to compare different service provision in other jurisdictions. Patients/clients with tertiary education can ask questions as to why a particular service is provided, sometimes with experience from previous or past services provided. Willems, De Maesschalck, Deveugele, Derese and De Maeseneer (2005) argued that high-income and educated patients perceived a shorter social distance or gap between the doctor and themselves and were more likely to engage with the doctors in their interactions and ask more questions during patient-physician interactions. However, low-education and income patients often perceived their physician as an expert and are less likely to question the quality of services/care management process.

Rademakers, Delnoij, Nijman and De Boer (2012) also indicated that while patients/clients with higher level of education were more particular about patient-centred care and placed more importance to it, patients/clients with lower level of education did not see the need for patient-centred care and were mostly satisfied with the services they received. The study noted that patients who had higher education most often critiqued the services provided by healthcare providers and demanded better services when they felt they were not satisfied. Inferring from these studies suggest that the level of patient-centred care satisfaction may be relative to educational status of the patients/clients. Another study showed that patient satisfaction was largely influenced by the level of patients' education in Iran (Kelarijani *et al*., 2014). Kelarijani *et al*. (2014) reported that patients who had attained a master's degree or PhD level of education had far lower rates of satisfaction in relation to patient-centred care as compared to those who had never been to school. Furthermore, the study noted that patients/clients with lower education do not have the capacity to interpret any medical report and may take any information given by health providers without asking detailed questions. A study supports this view that a higher level of education provides an opportunity for a patient/client to be served better thereby increasing satisfaction level (Rosewilliam *et al*., 2019). Rosewilliam *et al*. (2019) deduced that as a person's educational status increases, preferential treatments are given, especially when the individual is a professional worker with higher dignity in society. These individuals have the privilege of having special doctors or nurses who provide specialised care to them.

Health service factors analysed also played a significant role in determining the level of satisfaction with patient-centred care. There were different levels of how each health service dimension influenced the level of satisfaction with patient-centred care. At the first level, patient-centred care satisfaction was influenced by the reliability of the services provided by healthcare providers. Irrespective of the level of health service (primary, secondary or tertiary), if the services are not reliable anytime it is needed, patients/clients will never be satisfied. The reliability of health care service was

dependent on medical procedures, the competency of healthcare provider, the availability and consistency of service. Galal and Al-Gamal (2014) justify that the level of health service utilisation is dependent on the reliability of the service, especially with the availability of healthcare providers anytime services are needed. Breen *et al*. (2009) also mentioned that the use of technology increases the level of reliability as health workers tend to spend less time on a particular activity - this eventually improves service provision to patients/clients. Kabali, Gourbin and De Brouwere (2011) note that access to quality health delivery services could also be explained by the attitude of health service providers. Esena and Sappor (2013) observed that reliability of the service depended on the attitude of workers and that poor attitudes of workers could lead to low satisfaction with the service by the patient/clients.

Another significant health service factors that could influence satisfaction with patient-centred care was how well the clients were treated. Patients were more satisfied with services when they observed that they were not discriminated against as a result of their culture, gender or background. The Patient Charter of Ghana Health Service is emphatic that clients are entitled to equal treatment by healthcare providers irrespective of their background, level of income or educational status, colour or creed (Ghana Health Service (GHS), 2002). When patients/clients are given the needed respect by service providers, they feel comfortable to visit the facility regularly. However, as has become a common culture in most parts of the country (Ghana), some health service providers are unable to communicate to their clients in their own language (Abor, 2019). Abor (2019) posits that health workers who are posted or transferred to areas where they do not speak the language find it difficult to communicate to their clients and this has a higher propensity to affect the level of satisfaction. Nkrumah and Abekah-Nkrumah (2019) also acquiesce to this that language difference between providers and patients/clients always affects the level of satisfaction and clients may leave the facility with some challenges in relation to adherence to drugs.

Responsiveness and assurance from health workers had a significant effect on the level of satisfaction with patient-centred care among patients/clients. Patients/clients who received prompt services and were not made to wait for long hours were most often satisfied. More so, when patients/clients receive a prompt response to their questions and concerns, they feel satisfied and are always motivated to go to the same facility for services. Coupled with that patients/clients get more satisfied when there is maximum assurance from service providers on the quality of service (Rosewilliam *et al*., 2019). Patients/clients were more satisfied when staff treated them with dignity and respect irrespective of their status (education and economic). The findings from this study showed that patients/clients were more satisfied when healthcare providers showed much care and empathy and were able to understand their specific needs.

A study recommended a need for conscious effort to increase health infrastructure and equipment through a supportive policy and regulatory framework (Moyer, Ghazi, Daniel, Gasgarth, & Carlson, 2012). Another significant factor that was observed in this study was the tangibility of the hospital facility. When the physical environment is appropriately designed and built, patients/clients get some sort of relief just at the entrance of the facility. Another significant factor on the tangibility was the availability of logistics and equipment that improve service delivery. When there are available laboratory resource centres within the health facilities, patients/clients did not walk distances to get laboratory results. However, when laboratory resource centres are separated far away from the main facility, patients/clients feel dissatisfied with the services for the fact that they would have to travel long distances to access separate services. Hasanpoor-Azghdy, Simbar and Vedadhir (2014) argue that one of the significant efforts made over the years to improve access to and utilisation of healthcare services was the availability of improved infrastructure and logistics. Moyer *et al*. (2012) also argue that an enabling environment at various levels of the health system, adequate supplies, infrastructure, and an efficient and effective referral system could improve service delivery and increase the level of satisfaction among patients/clients.

Affordability of service was another significant factor that could influence the level of satisfaction with patient-centred care. The assessment of affordability was linked to the amount paid by patients/clients at the health facility and access to health insurance card. Patients/clients who paid for services at the facility were less satisfied with patient-centred care while patients/clients with national health insurance and did not do out-of-pocket payment were more satisfied. Another aspect of the affordability factor was the cost of transport to the facilities and other logistics. Gabrysch and Campbell (2009) confirmed this finding by observing that cost of healthcare services or affordability could significantly affect the level of satisfaction with patient-centred care. However, patients/clients tend to be dissatisfied with patient-centred care when they pay more for medicine, travelling and transportation, other logistics and endure long waiting time. Dalaba *et al*. (2014) also argue that for fear of higher cost of service provision, patients and their respective families may resort to self-medication or herbal preparation, which may eventually affect the quality of service received. Dalinjong (2018) supports this argument by noting that even though the National Health Insurance Scheme (NHIS) has been in session for more than 10 years, there are still some levels of financial barriers that affect the level of satisfaction related to patient-centred care.

Community-related factors were seen to have had some influence on satisfaction with patient-centred care. The

findings showed that the location of the facility, which was determined by the road network to the facility could have a significant influence on patient satisfaction with patient-centred care. Esena and Sappor (2013) had argued that though the facility may be far from the community centre, if the road network is in good shape, access to quality health care would be improved. However, patient-centred care in most developing countries is constraint by the level of road network to the facility and whether the location is closer to the clients or not (Galal & Al-Gamal., 2014). Generally, the road network to the health facilities within the study area was in poor condition. Patients/clients had to struggle before getting to the facility, leaving them exhausted even before reaching the facility. Pregnant women and other clients who were weak to walk distances to the facility complained of dissatisfaction even before the main service was provided. A study corroborated this position by explaining that client utilisation of health services is influenced by the location of the facility, especially with regards to geographical access, which is influenced by road network (Gabrysch & Campbell, 2009). Esena and Sappor (2013) also indicate that physical and geographical access significantly affect how health services are utilised by community members and that when the facility is located in a place that is easily accessible, there is high tendency of the facility being accessed by the community members. Mwaliko *et al*. (2014) maintain that access to health facility at the time of illness is crucial and when access is difficult, including road network coupled with poor transport system, the patient's condition may be worsened prior to reaching the facility.

Another significant community factor that was associated with the level of satisfaction with patient-centred care was the availability of cultural beliefs. The study showed that patients who lived in communities with no cultural barriers to health care were significantly satisfied with patient-centred care as compared to those who lived in communities with cultural barriers. A cultural belief system has, over the years, affected the level of utilisation of healthcare service, especially with maternal and child healthcare (Henry *et al*., 2017). Henry *et al*. (2017) confirmed that diversities in socio-cultural beliefs affect patients' ability to access healthcare service. For instance, with increased cultural beliefs, patient-centred care is limited leading to dissatisfaction among the patients/clients; and certain cultures view illness and disease as a spiritual predicament, and therefore, solution to illness should be consulted at a traditionalist or use herbal medicine to cure the illness. Munguambe *et al*. (2016) argue that a patient's preference for alternative care is influenced by the existence of and use of herbal medicine, which is highly believed to be better than alternative medicine. Yanagisawa, Oum and Wakai (2006) also explained that certain cultural beliefs and practices could influence a woman's ability to seek maternal health service, especially for women with first pregnancies.

5. CONCLUSION

The study assessed factors that could associate with patient-centred care in the Volta Region of southern Ghana using quantitative methods to collect data for subsequent analysis. Generally, the study observed higher level of satisfaction with patient-centred care among the patients (56.8%). The findings of the study support the hypotheses proposed and have implications for policy and practice in the health sector. The study concludes that there was a significant relationship between patients'/clients' socio-demographic characteristics and patient-centred care, which was determined by age and the educational status. Moreover, the study concludes that there was a significant relationship between health service factors and patient-centred care, which was demonstrated in the reliability of service, the culture of the service provided, how responsive the health workers were to the patients and the level of assurance patients received from the service providers. In addition, the study observed a significant relationship between community-related factors and patient-centred care, which was manifested in the description of road network to health facilities and cultural barriers toward health care. Substantially, most of these issues have been outlined in the Ghana Health Service's Patient Charter (Ghana Health Service (GHS), 2002). The Charter outlines the responsibility of the service provider and the patient. However, there is a gap in looking at what the government's role will be in promoting quality care to the patient. In this study, one of the significant roles observed was the location of the health facilities which was influenced by the road network. Therefore, this study provides some evidence for policy reformulation of the Patient Charter by suggesting the role of government in achieving quality health care - there is a need for the government to address the problem of deplorable road networks in the communities. Countries with similar resource constraints like Ghana could also take a cue from the findings of the study for the formulation and reformulation of policies on patient-centred care.

5.1. Limitations and future research

There were some limitations to the study. Firstly, the study was limited to only the Volta Region, which is one of the 16 regions in the country. The results may not generally be the same for all regions, even though the context can be applied in other regions. Secondly, the study used a limited sample size even though it focused on the entire region. This was a result of time constraints and other data collection challenges. Moreover, the restrictions by the COVID-19 pandemic affected the number of participants for the study as well as the coverage. Notwithstanding these challenges, the study outcome and results have not been compromised. Further studies could be conducted in other regions to include more facilities and make a comparative assessment between southern, middle and northern parts of the country. Additionally, a larger sample size could

be considered in any future study and may focus on tertiary facilities to assess challenges to patient-centred care or quality of care.

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Conflict of interest
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Augustine Adomah-Afari
Health Policy, Planning & Management, School of Public Health, College of Health Sciences, University of Ghana – Legon
afari@ug.edu.gh,
augustineafari@yahoo.co.uk
ORCID: 0000-0002-0105-134X

Frank Kofi Kanku
Principal Nursing Officer/Deputy Nurse Manager, Richard Novati Catholic Hospital, Sogakope, Volta Region, Ghana
kankufrank@yahoo.com
ORCID: 0000-0002-9180-6530X