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Relevance of meeting general outpatients' information needs to their perceptions of healthcare quality in a hospital in Ghana: a Healthcare Quality Survey using modified SERVQUAL analysis

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ABSTRACT

Background Patients determine quality of healthcare by their perception of the gap between the healthcare they experience/receive and that which they expect. This can be influenced by the ability of healthcare staff to adequately communicate information about the healthcare provided. This study assessed the level of relevance of meeting patients' information needs with respect to their assessment of healthcare quality in a private hospital's general outpatient department in Ghana.

Design Study design was cross-sectional using exit self-administered questionnaires among 390 outpatients. Healthcare quality was measured using a modified form of the Service Quality model gap analysis (gap between experience and expectations). A negative gap signifies unmet patient expectations. Microsoft Excel and Stata V.15.0 were used for analysis using t-test and multiple linear regression. A p value ≤0.05 denotes statistical significance.

Findings The mean percentage of patients' expectations of quality of healthcare was 87.6% (SE 0.031), while patient experience was 86.0% (SE 0.029), with a significant negative gap of −0.08 (p<0.002). Their highest expectation of the quality of healthcare was for their information needs to be met, with a mean score of 4.44 (SE 0.03). Two of the four items under the information needs dimension that showed no statistically significant gaps were 'saying all their problems' (gap=0.00; p<0.9) and 'explanation of treatment/medications' (gap=0.01; p<0.6). Those with statistically significant negative gaps were 'explanation of investigations and procedures' (gap=−0.18; p<0.0001) and 'explanation of the diagnoses' (gap=−0.11; p<0.02), signifying unmet expectations.

Conclusions The outpatient's greatest need for quality healthcare in this study was for their information needs to be met. Providing information on patient diagnoses and investigations are the areas least likely to be adequately communicated to patients.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ The information received by a patient about their healthcare can affect their assessment of the quality of healthcare they receive.

WHAT THIS STUDY ADDS

⇒ The study highlights that healthcare providers at the general outpatient departments of hospitals are more likely not to appropriately educate patients about their diagnosis, investigations and procedures.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Communication skills and the content of what a healthcare provider should provide as information (*highlighting information about patient diagnosis and investigations*) to a patient should be part of the primary training of healthcare workers, as well as their ongoing continuous professional development.

INTRODUCTION

Quality is is providing care according to set standards, and quality of healthcare in hospitals is the impact derived from healthcare delivered.[1] The Institute of Medicine[2] also defined quality of healthcare as the extent to which health services for individuals and the population increase the likelihood of desired outcomes and are consistent with current professional knowledge. Seven dimensions of healthcare, that is, safety, timeliness, efficiency, effectiveness, equity, people-centred care and integration, define its quality. Quality can thus be viewed from both the clinical and patients' perspectives. From the perspective of the patient, it can be defined as how well a patient's expectation of healthcare is reasonably met, matching up to his/her expectations, or the ability to exceed the patients' expectations.[3 4] In developing countries such as Ghana where this current study was undertaken, how patients perceive quality builds their confidence in the mainstream healthcare system and prevents them from avoiding the system or accessing it only when other unorthodox and unsafe means of healthcare have failed.[5] The perception of healthcare quality by the patient has now

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come to be accepted as a performance indicator of health facilities.[1 6] In some healthcare settings, patient ratings are used to assess quality of healthcare. This gives an overall composite quality of healthcare level for all the metrics used to assess quality. There is some controversy among researchers about the validity of such ratings as the ratings may be dependent on other factors such as the type of healthcare received and selection bias.[7 8] Formerly, health facilities operated by seeing patients as benefactors of good deeds and so they often did not take full responsibility for the patients' experiences and outcomes. The inception of patient-centred care where it is not just the clinician who dictates what the patient needs medically, but also that the patients' expected outcomes of health are met, has for years now ensured that patients are active participants of the healthcare they receive rather than passive recipients.[9] Central to patient-centred care is the importance of communication of patients' health-related information to them so that being well informed, they can give their full consent to treatments prescribed, make informed choices and are fully engaged with the care given to them.[10 11]

Healthcare workers' ability to communicate relevant information to patients is used as a yardstick by the patients to determine their competence and also quality of healthcare.[12] Patients use the gaps in communication to determine how good their healthcare provider is. These gaps could be found in having ample time with their healthcare provider to fully disclose their health challenges; understanding their diagnoses, investigations and procedures done; understanding the treatments prescribed for them; and where applicable, get the opportunity to choose/or add their voice where management options are concerned.[13] There are a number of challenges with adequate exchange of information between patient and provider. Fricker[14] introduced the concept of epistemic injustice where within the healthcare context, a patient is unable to communicate his health needs or challenges to the understanding of the provider either because the patient lacks the medical literacy to explain his experience, his symptoms have low medical prestige in the eyes of the provider or he is disbelieved (in the complaints of his symptoms) because of other contextual factors such as his race, religion or lifestyle.[14 15] In all these, even when healthcare providers compensate their lack of appreciation/understanding of a patient's complaints with empathy, the patients perceive the quality of healthcare they have received to be poor.[16] Patients similarly have low perceptions of healthcare quality when they are unable to understand 'what is happening to them', from their clinical diagnosis to the treatment given, making them have no opinion as to what is good or bad for them, explained by Fricker[14] as hermeneutical injustice.[11 14] Some patients may have looked up their symptoms on the internet, and so if the information the practitioner at the healthcare facility gives them does not align reasonably with what they have read, they perceive quality to be poor.[17 18] If a practitioner decides that a patient cannot assimilate details of medical information so they simplify the information given to the patient omitting facts (a form of hermeneutical injustice), the patients' health information needs are not met. Besides these, other barriers to adequate bidirectional understanding of information by patient and practitioner include language barrier, low educational level, cultural factors, clinicians' poor communication skills or poor knowledge of patients' medical conditions, and non-verbal cues. Poor and inadequate information in the healthcare process can result in non-compliance with treatment, unhappy patients and poor health outcomes.[19]

The general outpatient department (OPD) provides primary healthcare and is the first point of call for conditions that are not an emergency. In Ghana, patients usually go to the OPD to seek the medical services of a general medical practitioner (medical officer or physician assistant) or family physician and are discharged home the same day, referred for specialist care or admitted for inpatient care. Among the top 10 conditions reporting for care to the Ghanaian general OPD include uncomplicated malaria, upper respiratory tract infections, diarrhoeal diseases and acute urinary tract infection.[20] Evidence from low and middle-income countries in Africa and Asia show that general OPD attendance accounts for 60–80% of all hospital visits.[21 22] This results in many general OPDs being busy with long patient queues and prolonged waiting times. This and the low physician to patient ratio (0.2 physicians:1000 patients as at the year 2020 for Ghana) result in little time for effective delivery of information to patients.[23] The modes of payment of patients at the private health facility where this study was carried out were out of pocket, private insurance and credit facilities paid by employers of the patients. Middle-class workers (or their dependents) who reasonably have the ability to make out-of-pocket payment without encountering any financial challenges access the general OPD services in private hospitals. These include owners of small to medium-scale sole proprietor businesses and artisanal shops, and professionals such as teachers, lawyers, actors, accountants, doctors, etc. Lower income earners such as manual industrial workers, support staff of organisations, also do assess these health benefits usually under the financial benefits cover of their employers. Private healthcare services usually operate as such in urban and periurban towns where they are likely to break even financially. Government healthcare facilities in comparison, whose range of services is more specialised and found in all parts of the country including remote rural areas, provide healthcare services with limited cover by the National Health Insurance Scheme, which is a social health insurance. The choice of Ghana for this study was purposive and based on feasibility, and the level of maturity of healthcare quality management programme in the subregion, and cost.

The Service Quality (SERVQUAL) model questionnaire is an extensively used service quality tool for health and other service delivery entities.[3] The model had 10 original dimensions that its proponents developed from

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the fifth gap of the gap model. They reduced the dimensions to the current five in 1988 as follows: tangibility (*physical appearance of environment*), reliability (*delivering service promised accurately*), responsiveness (*delivering service promptly without wasting time*), assurance (*communication, credibility, security, competence and courtesy*) and empathy (*understanding the customer and accessibility*).[24] A sixth dimension, 'The patients' information needs' dimension, constructed through review of literature on the information that patients require from their healthcare providers, was added to the SERVQUAL questionnaire. It captured the patient's ability to express their needs adequately to the doctor, their diagnosis, procedures/investigations and treatment being explained to them by the doctor. Each of the six modified SERVQUAL dimensions had four or five subservice quality items under it. There were two parts for each of the modified SERVQUAL dimensions, one measuring patients' expectations, and the other patients' experience of the quality of service they had received.[24] Quality of healthcare is measured as a gap between the patients' experience and their expectations. A negative gap means that the patients' expectations were not met.

This study assessed the relevance of meeting patients' information needs to general outpatients' assessment of healthcare quality in Ghana, highlighting the specific aspects of patient information needs healthcare providers are less likely to adequately educate them on.

METHODS

Study design, sampling and eligibility criteria

The study was a Healthcare Quality Survey using the descriptive cross-sectional study design. Consecutive sampling technique was used to select participants. Exit self-administered questionnaires were administered to 390 general outpatients above 18 years using the Cochran's formula estimate of sample size for cross-sectional studies.[25] There was no patient and public involvement in the methodology of this study.

Study settings

Data were collected from the general outpatient clinic of a private medical facility located in Tema in the Greater Accra Region of Ghana. The clientele base of the hospital was fairly representative of the different classes of urban populations in Ghana—mainly salesmen, craftsmen, traders and professionals like teachers, bankers and nurses.[26] The health facility is a 47-bed facility that was set up some 43 years ago providing primary and secondary-level healthcare for the residents of Tema and its environs. The mode of payment of the facility at the time of the study included out-of-pocket payment, private health insurance and medical cover by companies for their staff. The facility provides outpatient, inpatient and specialised services in specialties such as family medicine, internal medicine and nephrology, obstetrics and gynaecology, general surgery, dermatology, paediatrics and ophthalmology. The study was conducted at the general outpatient clinic that receives all cases initially who are triaged to be non-emergencies and refers to the appropriate specialty when necessary. Patients after being triaged are attended to by the physician, sent for diagnostic investigations if required, after which they return to the physician to manage them appropriately. Patients attending the general OPD may also be coming in for review after a previous OPD or inpatient visit to the health facility. This category of respondents and the private hospital were chosen because they were more accessible, were not severely ill and also consented to be part of the study participants.

Data collection tools and methods

Information on the sociodemographic characteristics of the participants was collected. A modified version of the SERVQUAL model, made up of six dimensions, was used to assess healthcare quality.[3 24] Each dimension of the SERVQUAL questionnaire had four or five subitems that were scored on a 5-point Likert scale (ie, 1–5) with '1' being the lowest and '5' being the highest. There were two parts for each dimension, one measuring patients' expectations, and the other patients' experience of the quality of service they had received.[24] The questionnaire used for the study has been attached as online supplemental material.[27]

Data analysis

All data collected for all 390 participants were entered into Microsoft Excel, cleaned and analysed with Stata V.15. The results were organised and presented with means, mean percentages, standard error (SE) and tables. The mean difference between the healthcare quality that was experienced and that which was expected was determined with the paired t-test. Associations between sociodemographic variables and the healthcare quality variables were determined with multiple linear regression. Cronbach's alpha for the modified SERVQUAL questionnaire was determined with STATA. A p value ≤0.05 denoted statistical significance.

Ethics

Consent was sought from the private healthcare facility that this study was conducted in. Written informed consent was obtained from study participants before the administration of study tools. The study objectives and the rights to refrain from participation at any point in the study were explained to them. Also, anonymity and confidentiality were maintained by excluding the names of the patients from the study.

RESULTS

Sociodemographic characteristics of respondents

The mean age of respondents was 33.5±11.4 years with a range of 18–74 years. Female respondents were in the majority (215/390, 55.1%). Majority of the respondents had some level of education (377/390, 96.7%) and had attended the facility at least twice (299/390 76.7%)

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Table 1 Sociodemographic characteristics of respondents

Variables (n*)	Frequency	%
Mean age (390*)	33.5	11.4
Sex (390*)		
Male	175	44.9
Female	215	55.1
Educational level (390*)		
None	13	3.3
Primary	1	0.3
Junior high	43	11
Senior high	125	32.1
Tertiary	208	53.3
Employment (384*)		
Unemployed	20	5.1
Trader/businessman	120	30.8
Government employee	72	18.5
Private sector employee	96	24.6
Student	75	19.2
Other	7	1.8
Mode of payment (390*)		
Out of pocket	210	53.9
Private insurance	31	7.9
Credit/company	149	38.2

*n=total number of responses per variable.

(table 1). Those who had visited the hospital more than twice had 0.3 points higher (R^2=0.0540; F(13, 370); p=0.002) perceptions of experienced healthcare quality than those who were visiting for the first time. Also, increasing educational level resulted in lower perceptions of quality of outpatient care experienced (table 2).

The perceptions of outpatients of expected healthcare quality

The mean percentage of patients' expectations of healthcare at the OPD was 87.6% (SE 0.031). Their highest expectation among the service quality dimensions was for their information needs to be met, with a mean score of 4.44 (SE 0.03). Under this, their highest expectation was for their treatment/medications and diagnosis to be explained to them, both with a mean score of 4.53 (SE 0.04). Empathy, assurance, reliability and responsiveness, and finally tangibility followed respectively with their mean scores outlined in table 3.

The perceptions of outpatients of experienced quality of healthcare

The mean percentage of perceptions of experienced quality of healthcare was 86.0% (SE 0.029). The highest perception of quality of outpatient care was experienced in the information needs dimension with a mean score of 4.38 (SE 0.03) as opposed to the tangibility dimension which had the least mean score of 4.21 (SE 0.03). Refer to table 3.

Differences between patients' experience and expectations of quality of healthcare

Differences between patients' experience and expectations in the five original SERVQUAL dimensions

The mean percentage of experience of quality was 86.0% while mean expectations of quality were 87.6% with a significant negative gap of −0.08 (p<0.002). All five positive gaps in service quality items were not statistically significant. Out of 21 service quality factors of the five SERVQUAL dimensions, 10 showed significant negative gaps. Refer to table 3.

Differences between patients' experience and expectations for patients' information needs dimension

Patient information needs had a mean gap score of −0.66. Two of the four items (*saying all their problems and explanation of treatment/medications*) had positive gaps that were not statistically significant. The items with statistically significant service quality gaps (negative gaps) in patient information needs were explanation of investigations and procedures done and explanation of the diagnoses. Refer to table 3.

DISCUSSION

General discussion

The outpatients in our study have shown that they expect and do experience high levels of healthcare quality even though most of their expectations in the service quality items were not met. They experienced a high mean percentage of quality of healthcare of 86%, much higher than 68.4% found among inpatients and those reporting for review in a similar study in Ghana.[28]

The patients' greatest expectation among all the dimensions used to assess healthcare quality was for their information needs to be met, in line with findings from previous studies where patients showed that they want to be informed about their health status, and even in written form, to improve retention of the information.[29] Clinicians educating patients adequately improves health outcomes by ensuring adherence to treatment, and has been found in resource poor settings to reduce self-referrals of patients to higher level facilities which have higher overhead costs; and it has also been found to improve perceptions of quality even when other negative factors such as long waiting times are present.[30]

Information about their treatment and about patients being able to voice out adequately their needs to the doctor was close to being met as the study found them to have statistically insignificant gaps. Interestingly, a study that looked at patients' knowledge of their treatment found that only 40% of them knew the names or the intended use of their medications.[31] Information about the diagnosis and the investigations of the patients in this study, however, had statistically significant gaps. Some studies have demonstrated that some patient diagnoses

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Table 2 Associations between sociodemographic variables and experienced healthcare quality

Sociodemographic variable (n*)	Coefficient	P value	95% CI
Age (390*)	0.004	0.19	−0.002, 0.01
Sex (390*)			
Male	Reference		
Female	−0.03	0.61	−0.15, 0.09
Education (390*)			
None	Reference		
Primary	0.088	0.88	−1.06, 1.24
Junior high	−0.40	0.03	−0.76, 0.04
Senior high	−0.36	0.04	−0.69, 0.02
Tertiary	−0.44	0.01	−0.78, 0.1
Employment (384*)			
None	Reference		
Trader	−0.08	0.58	−0.35, 0.19
Government employee	−0.15	0.28	−0.44, 0.13
Private sector employee	−0.28	0.05	−0.56, 0.004
Student	−0.09	0.56	−0.37, 0.20
Mode of payment (390*)			
Cash	Reference		
Insurance	−0.17	0.12	−0.39, 0.05
Credit	0.07	0.29	−0.06, 0.20
Visit (390*)			
Once	Reference		
Twice	0.15	0.04	0.01, 0.29
More than twice	0.26	0.002	0.09, 0.42
Constant	4.48	0	4.03, 4.93

Adjusted R^2=0.0540; $F(13, 370)$=3.38; p=0.0013, significance level p<0.05.
*n=total number of responses.

are elusive even to the clinician, especially those conditions that are diagnosed by exclusion, or easily misdiagnosed, therefore communicating them to patients tends to be difficult.[32] However, considering that the profile of conditions that usually present to the OPD in our study setting is straightforward and easy to diagnose, it is interesting that there are gaps in their communication to patients. Chugh *et al*[33] showed in their paper on patient education that some healthcare practitioners may intentionally or subconsciously withhold information from patients assuming they do not need to know or will not understand.

Considering the statistically significant negative gap found in informing patients about their investigations, there are a number of possibilities attributable to this finding. In her book chapter on Effective Communication in Nursing, Sibiya[11] noted that giving a patient facts about medical information, and then explaining it to them, is a better way of communicating than just giving explanations and opinions without the facts. For example, explaining to a patient *why a test is necessary to aid diagnosis* may be more appealing to them than just telling them that *they 'should' do a test.*[34,35] This assertion is also relevant considering that some patients look up their symptoms and its implications on the internet and may already have an opinion before seeing the physician, and so they may require the facts of levels and specific parameters of investigation outcomes rather than another opinion, to allay their fears about conflicting health information.[18,36] Other possibilities also do exist. For instance, due to the inadequate medical literacy rate of some patients, an attempt at educating the patient on what is wrong with them and the facts of the outcomes of investigations may not be easy for them to understand.[33] The absence of a common language may also make the understanding of message delivered elusive. This current study found under *reliability* and *responsiveness* dimensions that there were statistically significant gaps in the time patients were receiving service suggesting relatively long waiting times at the general OPD. Providers in this study may therefore not be spending enough time educating the patients. It has been explained by studies that healthcare providers who spend extra time to educate their clients in the context of busy OPDs and high patient-doctor

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Table 3 Mean scores of service quality dimensions (n=390*)

SERVQUAL dimensions	Mean perception score (SE)	Mean expectation score (SE)	Mean gap score (SE)	P value
Tangibility				
1 The hospital has up-to-date facilities.	4.04 (0.03)	4.08 (0.04)	−0.05 (0.03)	0.2
2 The physical environment of the hospital is appealing.	4.36 (0.04)	4.39 (0.04)	−0.03 (0.04)	0.3
3 The hospital has modern looking equipment.	4.04 (0.04)	4.15 (0.04)	−0.11 (0.04)	**0.002***
4 There is availability of adequate seating at the hospital.	4.42 (0.04)	4.40 (0.04)	−0.02 (0.57)	0.6
Average *Tangibility* scores	4.21 (0.03)	4.26 (0.04)	−0.04	
Reliability				
1 The staff provides service on scheduled time.	3.93 (0.05)	4.21 (0.04)	−0.28 (0.05)	0.000*
2 Doctors and staff are professional and competent.	4.49 (0.04)	4.48 (0.04)	0.01 (0.05)	0.67
3 Medical procedures were performed correctly the first time.	4.22 (0.04)	4.34 (0.04)	−0.12 (0.04)	0.003*
4 There is consistency in duty performance by staff at the hospital.	4.38 (0.04)	4.47 (0.04)	−0.09 (0.04)	0.04*
Average *Reliability* scores	4.26 (0.03)	4.37 (0.04)	−0.11	
Responsiveness				
1 Hospital staff was helpful to the patients.	4.23 (0.04)	4.29 (0.04)	−0.06 (0.04)	0.1
2 The staff was responsive to patient needs.	4.46 (0.04)	4.45 (0.04)	0.01 (0.04)	0.89
3 The staff responded immediately when called by the patients.	4.12 (0.04)	4.31 (0.04)	−0.19 (0.05)	0.000*
4 Prompt service delivery without wasting time.	4.22 (0.05)	4.42 (0.04)	−0.2 (0.05)	0.0001*
Average *Responsiveness* scores	4.25 (0.04)	4.37 (0.04)	−0.11	
Assurance				
1 The hospital had skilled staff to provide healthcare delivery.	4.30 (0.04)	4.28 (0.04)	0.02 (0.04)	0.6
2 The hospital staff treats patients with dignity and respect.	4.45 (0.04)	4.47 (0.04)	−0.02 (0.04)	0.6
3 The staff at the hospital possesses a wide spectrum of knowledge.	4.22 (0.04)	4.29 (0.04)	−0.07 (0.02)	**0.04***
4 The staff at the hospital was courteous.	4.49 (0.04)	4.49 (0.04)	0.002 (0.04)	0.9
Average *Assurance* scores	4.36 (0.03)	4.38 (0.03)	−0.02	
Empathy				
1 The staff has my best interests at heart.	4.27 (0.04)	4.37 (0.04)	−0.10 (0.03)	**0.002***
2 The staff understands my specific needs at the hospital.	4.48 (0.04)	4.51 (0.04)	−0.03 (0.04)	0.4
3 The personnel give me special attention at the hospital.	4.14 (0.04)	4.37 (0.04)	−0.23 (0.04)	**0.000***
4 The staff welcomes your weakness in facility.	4.41 (0.04)	4.48 (0.04)	−0.07 (0.04)	0.09
5 The staff at the hospital was caring to patients.	4.33 (0.04)	4.43 (0.04)	−0.10 (0.04)	**0.01***
Average *Empathy* scores	4.33 (0.03)	4.43 (0.03)	−0.10	
Information needs				
1 I had the opportunity to say all my problems.	4.39 (0.03)	4.39 (0.04)	0.00 (0.03)	0.9
2 My diagnosis was explained to me.	4.42 (0.04)	4.53 (0.04)	−0.11 (0.04)	**0.02***
3 Investigations and procedures were explained to me.	4.15 (0.04)	4.33 (0.04)	−0.18 (0.04)	**0.0001***
4 Treatment/medications were explained to me.	4.54 (0.04)	4.53 (0.04)	0.01 (0.04)	0.6
Average *Information needs* scores	4.38 (0.03)	4.44 (0.03)	−0.66	

Adapted from Khamis and Njau [22].
Boldened text refer to the 6 modified SERVQUAL dimensions. *(asterix) p- values are the sub- items that were statistically significant.
*n=total number of responses for each item under each dimension.
SERVQUAL, Service Quality.

ratios are resented by their colleagues as being lazy and avoiding work.[11] Different cadres of the healthcare staff are also likely to give conflicting information to the patient and this may also affect their understanding.[36]

Strengths and limitations

The strength of the study includes highlighting the specific information needed by patients that is least likely to be met at the general OPD and therefore providing the opportunity for interventions to improve them in patient-provider communication. Also importantly, the study assessed a bidirectional flow of patient-provider information flow instead of

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a unidirectional *provider providing information to a patient*. In addition, the study provides some detail of the specific areas patients want improved to enhance their experience of care in any health facility.

This study is limited in that it was conducted in a single health facility; therefore, the findings may not be generalisable. In addition, the SERVQUAL model gap analysis does not proffer means of addressing the gaps.

Implications for policy, practice and research

For operational policy in hospitals, it is essential that healthcare workers' primary training prioritise patient-provider education as it is key to achieving quality of healthcare. At regular review meetings of hospital departments, healthcare providers, especially doctors, should be encouraged to holistically explain patient diagnoses and the need for and results of their investigations to them. Quality improvement processes through implementation research and on-the-job continuous professional development, and customer service training (patient-centred care), should highlight the areas of patient-provider communication likely to have deficits. These can be used by healthcare managers to equip staff with the requisite improvement and communication skills needed to address them.

CONCLUSION

Meeting patients' information needs is essential to their perceptions of quality of healthcare. The greatest need for quality of healthcare of the general outpatients in our study is for their information needs to be met. Healthcare providers at the general OPD of the hospital are less likely to adequately communicate to patients information about their diagnoses and investigations.

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Contributors AAA, EO and AM all contributed to the conceptualisation and study design, data collection, analysis and interpretation, and write-up of manuscript, critically reviewing and approving manuscript for publication. All are accountable for all aspects and the integrity of the manuscript. AAA is the guarantor.

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Competing interests None declared.

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Patient consent for publication Not applicable.

Ethics approval This study involves human participants and was approved by Ghana Health Service Ethics Review Committee (approval number: GHS/RDD/ERC/Admin/App/18/112). Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request. Data are anonymised information about patients' perceptions of the healthcare they received in a hospital. Data are available upon reasonable request from the principal investigator.

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