

# Patients' satisfaction with diagnostic radiology services in two major public and private hospitals in Ghana

## Abstract

**Background:** Patient satisfaction is regarded as the most important indicator of quality of care. Client satisfaction surveys may provide the only means for clients to express concerns about the services received, and to express their views about new services needed.

**Aim:** To investigate patients' satisfaction with diagnostic radiology services in selected hospitals in Accra.

**Methods:** A cross-sectional and descriptive survey employing a quantitative method of gathering data was used. Purposive sampling was used to choose survey participants from two hospitals that provided diagnostic radiological services. The survey was conducted with a self-administered questionnaire to measure patients' satisfaction with various aspects and overall satisfaction with diagnostic radiology care.

**Results:** Two hundred (200) patients took part in the study. The study revealed 81.5% of study population expressing satisfaction with the overall quality of diagnostic radiology care in Accra. The study also showed that 97% of patients expressed satisfaction with overall quality of diagnostic radiology care in the private hospital and 66% of respondents from the public hospital expressed satisfaction with overall quality of care.

**Conclusion:** It was concluded from the study that patients were overall satisfied with diagnostic radiology care in Accra but satisfaction levels of patients differed with various aspects of the care process. It was seen also that patients' level of satisfaction with the private healthcare provider was higher than with the public healthcare providers.

**Keywords:** patient satisfaction, private and public healthcare providers, health care, diagnostic radiology

Volume 1 Issue 1 - 2016

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**Received:** September 08, 2016 | **Published:** October 25, 2016

## Introduction

Radiology is part of the health service industry and as a service provider one needs to understand quality and delivery of service, which includes knowledge of customer service, customer satisfaction and all of its related issues.<sup>1</sup> Patient satisfaction is an expression of the gap between expected and perceived characteristics of service.<sup>2</sup> Patient satisfaction surveys serve as an avenue to assess communication and information transfer between clinicians and patients and can therefore be a patient's medium of expressing dissatisfaction with the provision of information.<sup>3</sup> Satisfaction may also influence a person's decision to seek medical advice, comply with treatment and maintain a continuing relationship with practitioners.<sup>4</sup>

Ensuring excellent service quality is essential for healthcare companies to achieve a competitive advantage and to differentiate themselves in the market.<sup>5</sup> The most perplexing issue facing healthcare financiers and politicians according to Lochoro<sup>2</sup> is the debate on how to improve the quality of care delivered. Patient satisfaction is regarded as the most important indicator of quality of care and can be used to enhance programs within the health care facilities.<sup>6</sup> Interest has therefore increased not only in the assessment and treatment

interventions by the health care givers, but also in the systematic evaluation of delivery of that care.<sup>7</sup>

The private sector can be an important component in systems characterized by public-private provision of health services and the right mix of services from the two sectors can substantially contribute to the development of a health system.<sup>8</sup> Previous studies have related satisfaction to individual consumer experiences and behavior as well as outcomes of care with few having examined the use of satisfaction measures to compare quality across different hospitals or health care providers.<sup>3</sup> Minimal commitments have been given to patient satisfaction studies in the developing world and in countries like Uganda, there is still a large disproportion of power between providers and users of health services.<sup>2</sup> The current situation in Ghana can be likened to that of Uganda where there is a less commitment level given to patient's satisfaction because of the minimum number of workforce and the few facilities available. Therefore, there is the need to understand, document and raise awareness of providers and users on satisfaction and its significance for future enhancement.

Patients satisfaction usually echo their perception of the health care offered as well as the process of giving that care, compared to their expectations.<sup>9</sup> Deficits in research in radiography may restrict

the chance to improve patient services.<sup>10</sup> Studies have been done in Ghana aimed at assessing determinants of consumer satisfaction of healthcare,<sup>11,12</sup> however maximizing health system performance at any given level of resources is a major challenge for resource poor countries such as Ghana.<sup>12</sup> Client satisfaction surveys may provide the means for clients to express concerns about the services received, and to express their views about new services that are needed.<sup>13</sup> This study sought to investigate patients' satisfaction with diagnostic radiology services in selected hospitals in the Greater Accra Region, Ghana and in doing that it sought to achieve these purposes—First the anticipation was that the outcome of this study will help provide healthcare providers in the field of diagnostic radiology in Ghana information or data on the state of satisfaction or dissatisfaction of patients with radiology services in the country. It was also the expectation that the study will equip the entire Radiology team with knowledge on improving upon services offered to meet their patients' needs. The final expectation was the study could help policy and decision-makers to understand the need to plan and implement programmes that meet the expectations and needs of their patients.

## Materials and methods

Approval for this study was obtained from the research ethics committee of a higher education institution. The ethics approval was supported by written permission for the study to be conducted at the study site. All study participants gave informed consent prior to the commencement of the study.

This study was a retrospective study that sought to find how patients were satisfied with services provided by their caregivers within the two selected hospitals. This survey data employed a quantitative approach using a survey instrument to collect data from a sample of the population. With a cross sectional descriptive approach this study sought to provide information about the behavior, attitudes or other characteristics of a patients undergoing radiological services. A satisfaction survey questionnaire which was self-administered was used. The study was conducted at two different Units, one was a government Teaching Hospital and the other was a Private hospital between the months of May and June 2014. A convenient sampling method was used to choose a sample size of 230 patients (115 for each hospital) referred to these hospitals. Patients 15years and above, able to understand English and one of the local languages in Ghana and willing to give consent to participate in the study were selected. Patients under 15years, blind patients, ward patients, unconscious patients and those not willing to sign the consent form were excluded from the study.

Self-administered questionnaires were chosen as the method of administering the survey to patients on completion of their examination. The questionnaire consisted of 23 questions (closed ended and open-ended) designed to elicit both quantitative and qualitative data to gather factual and attitudinal information. The first section focused on the demographic data while the second section focused on the type of examination, patients' knowledge of the facility and examination. The final section focused on patients' satisfaction with the service rendered (see [Appendix 1](#)). The questionnaires were sent to each centre and patients who had completed their examination were approached to complete the survey questionnaire. Patients were required to complete the questionnaire at the waiting area after signing the consent form, after which they were collected by the investigator. English was the official language used to answer the questions, but for

those who could not read nor write, questions were read, interpreted in the local language they understood and questionnaire completed by the researcher and co-investigators. The results were entered into a database and analyzed statistically using the Statistical Package for Social Scientists (SPSS) version 19.0 and presented in the form pie charts for easy interpretation of results.

## Results

Two hundred out of two hundred and thirty (200/230) questionnaires were completed and returned in time to be used in the analysis of data giving a response rate of 87%. The study showed that 38% of respondents were within 50years and 70years and 4.5% were above 70years. The majority (62%) of respondents were females. There was also an even distribution of male respondents with 38 respondents representing (50%) of the male population coming from both centers. On the education level of respondents, 33% of the respondents stated that they had attained up to Tertiary level or post-secondary education where as 15% of the respondents had no formal education.

Eighty-five (85) respondents had experienced diagnostic radiology before and one hundred and fifteen (115) respondents had no previous experience with diagnostic radiology. On the experience with the hospital, 132 of 200 representing 66% of respondents stated that it was their first experience at the facility at which they had visited while 34% respondents stated otherwise. 70% of all the patients who patronized the public facilities indicated that they had previously visited the hospital while 62% of the patients in the private facilities had patronized services in the past. 58% of the patients within the public facilities expressed dissatisfaction with the comfort and appearance of the waiting whereas only 2% expressed the same in the private facilities.

With overall satisfaction of patients, 92% indicated that they were satisfied with the overall services with the private sector while 68% were satisfied with the public services. The 8% of the private sector respondent complaints were cost related and high charges for procedures that would have been cheaper in the public facilities. This was different in the public sector where 78% indicated that they were satisfied with the cost of procedures. Courtesy of staff was one score that scored 98% in the public sector while in the private sector the courtesy of staff was 83%. Overall, 47% expressed dissatisfaction with the explanations received on procedures from the staff in the public sectors, compared to only 7% from the private facilities. Again, 44% indicated dissatisfaction with effective communication between radiographer/radiologist and patient, 32% expressed dissatisfaction with courtesy of other staff, and 37% were dissatisfied with staff respect for privacy. Finally, aspects that scored high dissatisfaction among the public health patients were comfort and appearance of waiting area.

In all, 53% of the respondents came for Conventional X-Ray examination where as 7% had undergone Magnetic Resonance Imaging procedures (MRI) (Figure 1).

A total of 82% of the respondents agreed that they were satisfied with care received though 15% of the respondents disagreed with this (Figure 2).

Overall, 78% participants from the private sectors were of the view that they will recommend the facility where they received radiological care to others though 4% of the respondents were indifferent in their response to the assertion (Figure 3).

A total of 66% of the respondents agreed to satisfaction with overall care quality, though 29% disagreed and 5% were indifferent in their assertion (Figure 4).

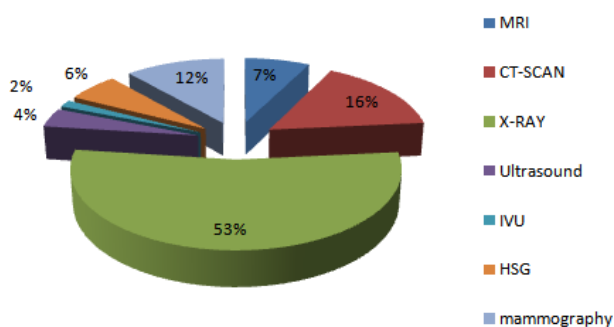


Figure 1 Patients examinations done during the study.

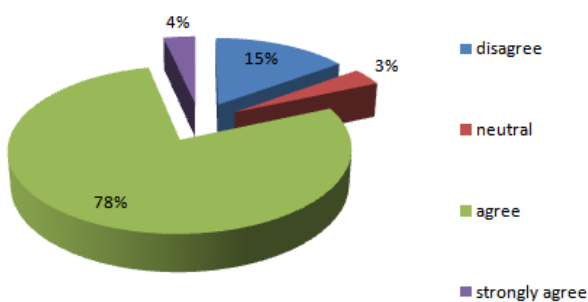


Figure 2 Overall satisfaction of respondents in the private facility.

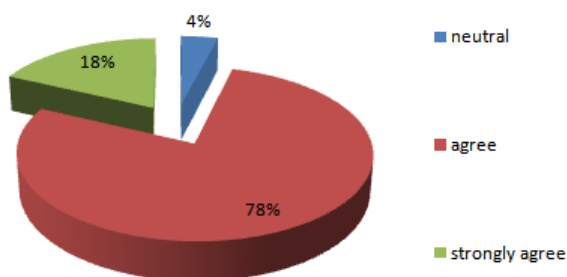


Figure 3 Recommending the facility to other people by respondents from the private facility.

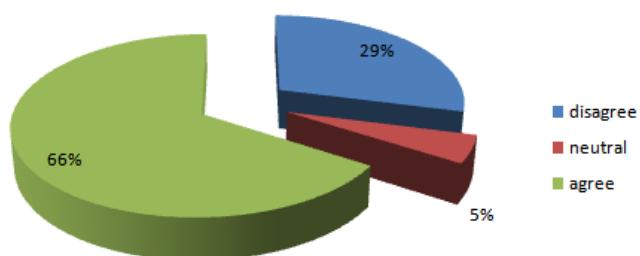


Figure 4 Satisfaction with overall quality of care received in the public facility.

In all, 60% of the respondents agreed that they will recommend the facility where they received radiological care but 19% disagreed to that.

## Discussion

Two hundred out of two hundred and thirty (200/230) questionnaires were completed and returned in time to be used in the analysis of data giving a response rate of 87%. The high response rate could be attributed to enthusiasm of respondents about the topic and the relatively small sample population used in the study compared to the total number of patients who visited the centres during the period of the study. The lower representation of patients above 70years may be attributed to most of them being either too sick or not mentally able to participate in the study. The greater number of female respondents may be because some of the examinations such as mammography and Hysterosalpinography (HSG) are limited to only females.

### Respondents experience with facility and diagnostic radiology

Experiences revealed from the results that 57.5% of respondents had no experienced diagnostic radiology in the past to base their expectation upon and these findings were similar to the study of Hare<sup>14</sup> where most patients who were referred for radiological examinations had no idea of what they may encounter and what the examination may involve. Patients scheduled for radiological examinations could therefore be provided with brochures or materials that may help educate them on the procedure they are about to undergo thereby helping ease patients' fear and anxiety levels. Also, 66% of the private respondents stated that it was their first experience with the facility. Although both healthcare facilities recorded a percentage of patients who had patronized their service before, the percentage was higher (70%) with the public healthcare provider compared to the private one which was 62%. This indicates that there could be higher maintenance of customers for the public facility possibly because of the low socioeconomic and low standard of living for many Ghanaians. The implication may be that public healthcare providers in Ghana are likely to gain an advantage over the private healthcare providers in terms of patient/customer-loyalty which is usually essential for any organization and its functioning especially in terms of more referrals of patients. Lower cost in the public sectors could also be a factor for many patronizing the public services. The 62% who patronized the private facilities may have done so as a result of their social status, financial capabilities or the type of work they do.

### Patients' satisfaction with private and public diagnostic care

Patients satisfaction vary from several aspect of care within the hospital setting whether public or private and that affect the overall quality of care.<sup>3</sup> Results showed that patients expressed a high satisfaction level with most aspects of diagnostic radiological care in both hospitals, especially the private one. The study revealed that more than 90% satisfaction level was recorded with each aspect of diagnostic radiological care in the private hospital with the exception of affordability of care (8%). However, 78% of respondents from the public hospital indicated satisfaction with affordability of care. Affordability of care is the only aspect of care with which patients' satisfaction level was higher in the public hospital than the private one according to the results. Radiographer courtesy was the aspect of care in the public hospital with which patients were most satisfied as 98% of patients expressed satisfaction with this aspect of care in the public hospital. Comfort and appearance of waiting area in the public hospital was the only aspect of care which recorded majority (58%) of patients from the public hospital expressing dissatisfaction.

Although dissatisfaction levels with aspects of care such as radiographer/radiologist explanation of procedure, effective communication between radiographer/radiologist and patient, courtesy of other staff and staff respect for privacy in the public hospital is usually high among studies done,<sup>7,13</sup> the results in this study show a high level of satisfaction with these aspects of care. According to Bielin & Demoulin,<sup>15</sup> waiting time satisfaction is not only a service satisfaction determinant, but also moderates the satisfaction-loyalty relationship and that investment in improving services might be better spent on information and communication, rather than on physical facilities. Results revealed that 82% of respondents from the private hospital were satisfied with how promptly they were attended to and only 45% of respondents from the public hospital expressed satisfaction with how promptly they were attended to upon arrival. It could be deduced from the results that private healthcare providers in Ghana are attaching importance to the waiting time aspect of care as suggested by Bielin & Demoulin<sup>15</sup> whereas much effort is needed to improve waiting time in Ghanaian public hospitals.

Results also revealed that 47% of the public hospital respondents expressed dissatisfaction with radiographer/radiologist explanation of procedure, 44% indicated dissatisfaction with effective communication between radiographer/radiologist and patient, 32% expressed dissatisfaction with courtesy of other staff, and 37% were dissatisfied with staff respect for privacy. The high levels of dissatisfaction recorded with radiographer/radiologist explanation of procedure to patient and effective communication with patient may be due to the large number of patients who visit this facility in a day which puts lots of pressure on the radiographers/radiologist to complete care for as many patients as possible in a limited time.

Respect for privacy dissatisfaction may be attributed in part to the poor conditions of changing rooms, waiting areas and design of examination rooms. Patients often feel a sense of intrusion of their privacy when examination rooms are not guarded from other staff and patients. Staff attitude and courtesy high dissatisfaction levels may also be partially attributed to the large number of inpatient patients who visit this facility, each expecting to leave early and may sometimes lead to altercations between receptionist and patients. Staff was however not justified to be of bad behavior to patients based on this reason.

Results indicate a high level of patient satisfaction especially with all aspects of diagnostic radiological care in the Ghanaian private hospitals. Apart from the high level of satisfaction with the affordability of care in the public hospital, various elements of care in the public facilities were not significantly high compared to that of the private hospitals. The results were in conformity with the work of Kyei et al,<sup>12</sup> in which the authors were of the view that patients who received care from a private provider expressed overall satisfaction with service, but some dissatisfaction regarding the cost of treatment.

### Patients' overall satisfaction with diagnostic radiology service

The study indicated that majority of respondents (81.5%) expressed overall satisfaction with the quality of diagnostic radiology services. Although some dissatisfaction levels were recorded with certain aspects of care, both hospitals had a larger proportion of respondents expressing satisfaction with overall quality of care. Almost all respondents (97%) from the private hospital indicated satisfaction with the overall care process and 66% of respondents from the public

hospital also expressed satisfaction with overall quality of care. The findings indicate that most patients in Ghana were satisfied with overall quality of diagnostic radiology service and satisfaction levels were higher with private services than the public one.

It could be deduced from the findings of this study that private hospitals in Ghana had higher patient satisfaction with all services in comparison to the public hospitals. This is contrary to the work of Tuan, Dung, Ingo & Dibley<sup>16</sup> in which the authors reported that although private facilities are competing successfully with the public ones, the private ones do not provide better services and that the quality of private health care services is not controlled and is significantly poorer than public services. The results however confirm the work of Lech & Petryka<sup>17</sup> in which the authors stated that patients of privately owned clinics are much more satisfied from the services provided by the private clinics than patients treated by local government-owned clinics.

### Patients recommendation of facilities

The majority (78%) of respondents indicated that they would recommend the facility they visited to other people. A very large proportion (96%) of patients who received care in the private facility stated that they would recommend the facility to other patients. However, 60% of the patients from the public facility stated that they will recommend the facility to others. This is in accordance to Andaleeb<sup>18</sup> in which the author is of the view that patient realization about quality of healthcare drives a greater proportion of the population towards private hospitals.

### Conclusion

This work has provided the first evidence of current status of patients' satisfaction with diagnostic radiology services in hospitals in Ghana. Patient satisfaction was high in the private facilities compared to the public facilities. Location of the health facility and the perception of an efficient and effective staff base affect patients' satisfaction. Satisfied patients may revisit and recommend the health facility to other patients as seen in the responses by the participants.

- i. Based on the findings of this study, the following recommendations were made:
- ii. Public hospitals in Ghana should make efforts to improve upon the various aspects of care especially patient waiting areas and training of staff on the need to be as hospitable to patients as possible.
- iii. The private healthcare provider should also take into consideration ways to make care more affordable to patients.
- iv. Since most patients who visit the hospitals are attending for the very first time in their life, Ghanaian hospitals can focus on patient education using educational materials such as magazine or posters.

### Acknowledgements

None.

### Conflict of interest

Author declares that there is no conflict of interest.

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