

## Patients' Awareness and Perception of Diagnostic Clinical Radiography Students' Involvement in Routine Radiographic Examinations at a University Teaching Hospital

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### Abstract

**Background:** Radiography students participate in the radiographic examination of patients as a requirement of their clinical training. In view of our experience where some patients have doubts about the competence of clinical students, a feedback from our patients would be a good tool for quality assurance of our curriculum.

**Aim:** To get patients' feedback on the involvement of Radiography students in radiographic examinations at a University Teaching Hospital.

**Method:** A prospective, cross-sectional study was conducted. A structured questionnaire with questions on demographics, awareness and perception was used to elicit response from patients. The sample size of 150 patients was studied. The aim of the research was explained and their consent sought. SPSS version 17.0 was used for data analysis and p-value of 0.05 was selected as a criterion for statistical significance.

**Results:** A significant proportion of patients (68%) were aware that radiography students were involved in their routine radiographic examination and this was considered satisfactory (91%). They were also of the opinion that students need no consent to examine them radiographically (67%). Some patients preferred not more than two students in the diagnostic room with them (65%). However, some patients (62%) had gender preferences.

**Conclusion:** Radiography students involvement in routine radiographic examinations is beneficial. However, there may be improvement in patient care and smooth continuation of clinical posting through reduced number of students per diagnostic room. Radiographers should also intensify efforts to monitor students to ensure that the quality care is delivered.

**KEYWORDS:** Radiography students, radiographic examinations, perception

### Introduction

Routine radiographic examination has become a mainstream in current medical practice. Clinical students will be expected to show competency in six core areas as defined by the Accreditation Council for Graduate Medical Education: patient care, medical knowledge, professionalism, systems-based practice, practice-based learning

and improvement, and interpersonal and communication skills (Russ, Mckenney & Patel, 2013).

The involvement of students in the management of patients appears to introduce a third party into a strictly confidential matter. The cooperation of patients therefore and their consent to involve medical students in their care is vital to clinical education (Sayed-Hassan , Bashour & Koulsi, 2012). Patients will cooperate if their basic expectations are met. Pulia, (2011) noted that the basic expectations of patients is rapid and efficient care from a care giver who is empathetic and communicates well. If one works with that assumption then patients may not really care whether students contribute to their care as long as they get timely and efficient service. Ramanayake, (2012) in his study of 85 patients found 95.5% of them not only receptive to medical students but also uninhibited in discussing personal problems.

In a work carried out in the same Nigerian environment the authors stated that patient satisfaction is linked to the quality of services given and the extent to which specific needs are met. They were of the opinion that satisfied patients were likely to return for the services and recommend same to others (Nwaeze et al, 2013).

Nonetheless, it was noted that a large numbers of students and lack of experience as well as loss of privacy may evoke negative attitudes of patients, which may sometimes adversely affect the clinical teaching environment (Sayed-Hassan , Bashour & Koulsi, 2012 ). This line of thought is shared by Wright,(1974) who established that some patients found the presence of students disconcerting. However, that was a study carried out four decades ago. Perceptions are changing and new evidence emerging to add weight to the fact that patients-students relationship is improving. From the perspective of Marwan et al, the acceptance students get from patients is conditional; only when there is no direct contact between them (Marwan Yousef et al, 2012). Ramanayake et al, (2012) reported in his study a research conducted in Australia where patients expressed reservations on students presence when their problems involved worrying test results, emotional upset, internal examinations, and sexual problems. An anticipated consequence of patients reservations about students involvement in routine radiographic examination would be poor quality radiographs and unnecessary increase in patient radiation dose as a result of suboptimal cooperation.

It appears therefore, that that the acceptance of students and cooperation with them by patients depends on the students ability to create a perfect environment for privacy. Could there be other factors that affect this relationship? This work aims to get feedback from our patients on the involvement of students in their radiographic examinations.

**Method:** This was a cross-sectional study involving 150 volunteers (67 males and 83 females) aged 18 to 80 years carried out between June-July, 2014. A questionnaire was used as instrument for data collection. The questionnaire had a total of nineteen questions subdivided into two sections. The first section dwelt on demographic data such as gender, Age , Marital status and level of education while the

second section were core questions on awareness and perception. A convenience sampling method was used to prospectively recruit 150 patients from amongst non-emergency patients in the waiting area of the radiology department over a 6-week period. Informed, written consent from patients and ethical approval from the departmental ethical committee were obtained. The aim of the research was explained to the patients. Patients whose motor response and those whose auditory and visual acuity was poor were excluded. Those in pains and those with communicable diseases were also excluded to avoid nosocomial infection. Non-literate patients were assisted to tick their responses. SPSS version 17.0 was used for data analysis and p-value of 0.05 was selected as a criterion for statistical significance.

## Results

Females (83%) and patients aged 40-80 years were in the majority amongst the respondents. A summary of their attributes is summarized in Table 1. Perceptions of the respondents about the students are summarized in tables 2.

### Table 1: Characteristics of the respondents

### Table 2: Awareness and perception of respondents about students

## Discussion

The result of this study revealed that a significant proportion of patients (68%) are aware that radiography students were involved in their routine radiographic examination and this involvement was considered satisfactory (91%) by a large proportion of those who had visited the department more than once (table 1). The majority of the patients (91%) are not only positive that students involvement is beneficial but are also of the opinion that students need no consent to examine them radiographically (67%).

However, some patients appeared not to be comfortable with students of the opposite gender attending to them (62%) and would appreciate if not more than two students are in the diagnostic room with them (65%). One interesting discovery is that patients are indecisive as to whether students should be supervised or not (table 2). The major reason why this is so is because of their fear that students may not understand radiographic technique (56%).

The cooperation of patients and their consent to involve medical students in their care is vital to clinical education (Russ, Mckenney & Patel, 2013). Knowledgeable members of the public may be aware that future care-givers are trained this way. That may account for why we saw patients asserting that students should participate in their exams and should not request for consent before attending to them (table 2). This is in sharp contrast to a work carried out by a group of researchers in Kano where 52% of sampled patients singled out the Radiology department for complaint. 47% of their grouse was directed at the long delay in attending to them (Iliyasu et al, 2010). The hospital in question had not started training radiography students when the study was carried out. Perhaps if students were at

hand to help the waiting time would have been reduced. We did not experience such level of dissatisfaction from our study. In a related work where 400 patients were interviewed it was discovered that 67.8% approved the presence of medical students during the medical consultation and 58.2% of them felt comfortable with the presence of students. In terms of patients dissatisfaction their major finding was that privacy was the most important factor in the patients' reticence towards examination by the students, whilst the relative safety and comfort if a supervisor was available determined patients' agreement (Russ, Mckenney & Patel, 2013).

Our findings however revealed that a large proportion of patients (65%) would not feel comfortable with more than two students in the room. This is despite the fact that a large proportion of them (55%) have some level of tertiary education (table 1). Their perception therefore cannot be tied to level of education. Perhaps, personal experience of inappropriate handling in the past may have informed their reason for not only asking for fewer number of students but that the students be supervised. Our study bears some close similarity and striking differences from a closely-similar work where of the 67.8% of patients interviewed approved the presence of medical students during the medical consultation and 58.2% of them felt comfortable with the presence of students. 81.5% of the patients agreed to be examined by students in the presence of the supervisor, while 40.2% gave agreement even in the absence of the supervisor. Privacy was the most important factor in the patients' reticence towards examination by the students, whilst the relative safety and comfort if a supervisor was available determined patients' agreement (Sayed-Hassan, Bashour & Koudsi, 2012).

Ramanayake et al, (2012) in a study involving 85 patients with 81.3% of them females found out that 26.3% of patients preferred a medical student of the same sex during consultation. Only 38% are comfortable with students of the opposite gender from our study. This low frequency point to the fact that patients' privacy and confidentiality is a strong issue that matters to them despite their state of health. Cultural inhibitions may account for this as responses got from our study cut across both marital status and educational level.

We are of the opinion that patients do not generally mind the presence of students in the radiographic examinations room as long as the students are of the same gender, exhibit a high sense of competence and empathy, do not breach confidentiality and are not rough.

The limited space of the radiology department did not give us room to separate patients from one another. The likelihood of their comparing notes is therefore there.

A future study that would involve interviewing patients in the ward who had had radiologic examinations would be needful. This is based on the suspicion that some patients may have given positive response to questions asked in order to curry favour.

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