



ORIGINAL

## Challenges encountered by newly qualified radiographers in their early clinical practice in southwestern Nigeria

### Desafíos a los que se enfrentan los radiólogos recién titulados en sus primeras prácticas clínicas en el suroeste de Nigeria

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#### ABSTRACT

**Background:** formal qualification does not rule out the challenges a radiographer may face by virtue of being new in the clinical practice, and does not necessarily mean acquisition of the needed competency to practice. This study was designed to evaluate challenges encountered by newly qualified Radiographers in their early clinical practice in Southwestern Nigeria.

**Materials and methods:** a descriptive cross-sectional study was conducted among 360 newly qualified Radiographers selected hospitals in South West Nigeria. A well-designed questionnaire was used for data collection and it was analysed with descriptive and inferential statistics.

**Results:** the major communication challenges were: effective communication with patients and careers ( $3,8 \pm 0,8$ ) and effective communication with members of the team ( $3,8 \pm 1,0$ ). The major clinical challenges identified were: cannot perform special exams unaided ( $1,7 \pm 0,6$ ) and cannot prioritize exams according to urgency ( $1,6 \pm 1,0$ ). The major technical challenges identified were: cannot take remedial actions for poor quality radiograph ( $2,1 \pm 0,5$ ) and restriction from access to some machines ( $1,9 \pm 0,7$ ). The major workload challenges identified were: assignment of too much work ( $2,0 \pm 0,4$ ) and poor supervision of new radiographers by superiors ( $1,7 \pm 0,9$ ). The major welfare challenges identified were delay in salary ( $2,1 \pm 0,7$ ) and difficulty in getting internship placement ( $2,1 \pm 0,6$ ). The result from the Chi-square test revealed that there were no statistically significant relationships between the challenges faced by newly qualified radiographers in their early clinical practice and their categories ( $\chi^2=4,806$ ,  $df=2$ ,  $p=0,09$ ).

**Conclusion:** newly qualified radiographers faces numerous challenges such as technical, communication, workload, poor supervision as well as welfare challenges. There were no statistically significant relationships between the challenges faced by newly qualified radiographers in their early clinical practice and their categories. The study, therefore, recommends the need to create a formal mentorship program for newly qualified radiographers, to provide them with guidance and support. There is also need to provide opportunities for continued professional development for newly qualified radiographers, such as workshops or courses. Also, more staff should be employed so that the workloads are evenly distributed among the radiographers on staff.



**Keywords:** Challenges; Professionals; Radiographers; Students.

## RESUMEN

**Antecedentes:** la cualificación formal no excluye los retos a los que puede enfrentarse un radiógrafo por el hecho de ser nuevo en la práctica clínica, y no significa necesariamente la adquisición de la competencia necesaria para ejercer. Este estudio fue diseñado para evaluar los desafíos encontrados por los radiógrafos recién cualificados en sus primeras prácticas clínicas en el suroeste de Nigeria.

**Materiales y métodos:** se realizó un estudio descriptivo transversal entre 360 radiógrafos recién titulados de hospitales seleccionados del suroeste de Nigeria. Se utilizó un cuestionario bien diseñado para la recogida de datos, que se analizaron mediante estadística descriptiva e inferencial.

**Resultados:** los principales retos de comunicación fueron: comunicación efectiva con los pacientes y los profesionales ( $3,8 \pm 0,8$ ) y comunicación efectiva con los miembros del equipo ( $3,8 \pm 1,0$ ). Los principales retos clínicos identificados fueron: no poder realizar exámenes especiales sin ayuda ( $1,7 \pm 0,6$ ) y no poder priorizar los exámenes según la urgencia ( $1,6 \pm 1,0$ ). Los principales retos técnicos identificados fueron: no poder tomar medidas correctoras en caso de radiografías de mala calidad ( $2,1 \pm 0,5$ ) y restricción de acceso a algunas máquinas ( $1,9 \pm 0,7$ ). Los principales problemas de carga de trabajo identificados fueron: asignación de demasiado trabajo ( $2,0 \pm 0,4$ ) y escasa supervisión de los nuevos radiógrafos por parte de sus superiores ( $1,7 \pm 0,9$ ). Los principales retos en materia de bienestar identificados fueron el retraso en el salario ( $2,1 \pm 0,7$ ) y la dificultad para conseguir un puesto de prácticas ( $2,1 \pm 0,6$ ). El resultado de la prueba de Chi-cuadrado reveló que no había relaciones estadísticamente significativas entre los retos a los que se enfrentaban los radiógrafos recién titulados en sus primeras prácticas clínicas y sus categorías ( $\chi^2 = 4,806$ ,  $df=2$ ,  $p=0,09$ ).

**Conclusión:** los radiógrafos recién cualificados se enfrentan a numerosos retos como técnicos, de comunicación, carga de trabajo, supervisión deficiente, así como retos de bienestar. No hubo relaciones estadísticamente significativas entre los retos a los que se enfrentan los radiógrafos recién titulados en sus primeras prácticas clínicas y sus categorías. Por lo tanto, el estudio recomienda la necesidad de crear un programa formal de tutoría para los radiógrafos recién titulados, con el fin de proporcionarles orientación y apoyo. También es necesario ofrecer oportunidades de desarrollo profesional continuado a los radiógrafos recién cualificados, como talleres o cursos. Además, debería contratarse a más personal para que las cargas de trabajo se distribuyan uniformemente entre los radiógrafos de plantilla.

**Palabras clave:** Retos; Profesionales; Radiógrafos; Estudiantes.

## INTRODUCTION

Radiography is the art and science involving the use of different forms of radiant energy for the purposes of diagnosis and therapy.<sup>(1)</sup> It also refers to a medical imaging profession that uses X-rays to produce images of the internal structures of the human body, enabling medical professionals to differentiate between normal and abnormal anatomical and physiological processes on radiographs.<sup>(2)</sup> Radiography is practiced by someone trained in an approved and accredited institution and licensed by a designated authority/regulatory body of the country where the individual wishes to practice. Each country has its own regulatory body like the Radiographers Registration Board of Nigeria (RRBN) in Nigeria. Others include; Health and Care Professions Council (United Kingdom), Australian Institute of Radiography, American Registry of Technologists, Canadian Association of Medical Radiation Technologists (CAMRT) etc. Radiographers, therefore, play an important role in the management and treatment of patients, hence a need for them to take up their roles efficiently.<sup>(2)</sup>

Radiographers Registration Board of Nigeria was established by Decree No. 42 of 1987, now Cap R1 Laws of the Federal republic of Nigeria 2004. This is the regulatory body tasked with determining the standards of knowledge and skills that should be attained by persons seeking to become members of the profession. The board also maintains a register of members of the profession and publish from time-to-time list of licensed persons. For individuals to execute their professional duties, they must meet the following criteria: should have completed training at an accredited institution of higher learning, demonstrate knowledge and skills of a particular profession and must adhere to the ethical codes and standards of that profession,<sup>(3)</sup> and fulfilling these requirements provides qualification for a graduate to practice.

Professional roles are important because they set the standards of acceptable practice and conduct of a particular profession and they ensure that professionals adhere to and act in accordance with the standards of the profession.<sup>(4)</sup> However, formal qualification does not rule out the challenges a radiographer may face by virtue of being new in the clinical practice, and does not necessarily mean acquisition of the needed competency to



practice. For instance, there has been an increase in reports where recently qualified healthcare professionals were unable to assume their professional roles efficiently.<sup>(5)</sup> Several challenges have been identified on why recently qualified healthcare professionals are not confident in taking up their professional roles and these challenges may go a long way to hamper the progress and quality of newly qualified healthcare professionals in clinical training.

Recently, newly qualified doctors have been reported to find it challenging to cope with their new responsibility and are therefore uncertain of their role even if it is considered an intrinsic part of clinical practice.<sup>(6)</sup> It was also further noted that nurses may experience stress as they acquire competencies when caring for patients and taking up additional responsibilities.<sup>(7)</sup> Recently qualified radiographers may also experience challenges as they assume responsibility for students' supervision and assessment.<sup>(8)</sup> Portainer *et al.*<sup>(9)</sup> stated that recently qualified health workers, including radiographers, struggle with workplace integration. There are also undocumented complaints received from various heads of departments and radiologists regarding recently qualified radiographers' ability to fully assume their professional roles.

The working environment for newly qualified diagnostic radiographers is unpredictable. It is high pressured, target driven work where speed and efficiency is often in conflict with patient care.<sup>(10)</sup> Although Lewis *et al.*<sup>(11)</sup> was referring to private practice, a culture, where the radiographer is measured by their productivity in a busy environment, can be seen in the National Health Service (NHS). The continual increase in the demand for imaging results in diagnostic radiography being a profession under pressure. According to Stewart-Lord *et al.*<sup>(12)</sup>, the expectations and requirements for the role are much more expansive in recently time. Newly qualified radiographers have more to contend with, as practices that were once considered special, have now become a first post competency<sup>(13)</sup> they include the ability to perform head computed tomographic (CT) examinations, and the knowledge and ability to assist in other imaging modalities for example magnetic resonance imaging and ultrasound. Qualified diagnostic radiographers also have a professional responsibility for educating, mentoring and training students and supervising assistant practitioners<sup>(14)</sup> newly qualified staff members feel the pressure of a busy environment more acutely than experienced staff. Additional challenges including lack of dedicated training imaging equipment, high student-to-placement site ratio and lack of radiation monitoring badges for students were previously reported<sup>(15)</sup> these factors, if unresolved, may result in poor workplace performance and possible attrition.

These challenges need to be given urgent consideration as part of efforts to harmonise practice through the training and development of newly qualified radiographers in their early clinical practice in Southwestern Nigeria. Therefore, identifying the challenges faced by newly qualified radiographers in their early clinical practice could improve the quality of the training. Several challenges have been documented in many countries regarding clinical trainings and even in some part of Nigeria. However, there is no documentation on the challenge(s) faced by newly qualified radiographers in their early clinical practice in Southwestern Nigeria. This study attempts to identify, document and to recommend solution(s) to the existing challenges encountered by newly qualified radiographers in their early clinical practice in Southwestern Nigeria.

## **MATERIALS AND METHODS**

This was a cross-sectional study conducted among 360 newly qualified radiographers working in healthcare facilities both government and private in Southwestern Nigeria. Only newly qualified and recruited staffs, which include intern radiographers, corper members and newly recruited Radiographers, were sampled. The 360 respondents were selected using convenient sampling technique.

The instrument for data collection was semi-structured questionnaire designed in English language according to the study objectives. The questionnaire consist of section A and B. Section A has questions on the demographic data of the respondents while section B was categorized into professional challenges, communication challenges, patient-care challenges, technical challenges and workload challenges.

A pilot test was done to determine the reliability of the research instrument. Forty (40) copies of the questionnaire were administered to radiographers at a health facility share similar characteristics with the study area. The copies of the questionnaire were distributed to the radiographers on two occasions with an interval of one week. The two test scores were tested using Cronbach's Alpha test and it yielded a score of 0,854 or 85,4 % which indicated that it was reliable.

The validity of the questionnaire was determined using the Index of item Objective Congruence (IOC) method used by previous authors.<sup>(16,17,18,19)</sup> This was done by calculating the index of item-objective congruence (IOC). According to the index parameters, an IOC score higher than 0,6 was assumed to show adequate content validity, and all the scores obtained in this study for all the items of the questionnaire after IOC analysis was higher than 0,6.

The respondents were given the questionnaire to fill after explanation and clarification had been made by the researchers where necessary and the consent properly obtained using written informed consent form. After explaining to the respondents the objectives and the significance of the study, copies of the questionnaire were



administered to the respondents during their free time. In addition, clarifications were made on the areas of the questionnaire, which the respondents might not understand. The completed questionnaires were collected at the spot. The researchers continued this way until the whole questionnaire was completed. Data collection took a period of two (2) months.

The data obtained from the spreadsheet was rearranged in an ordered manner to enhance its processing by the Statistical Package for Social Sciences (SPSS) version 23.0 and Microsoft Excel 2016. The results were presented using descriptive statistics in the form of tables, charts, frequency tables and percentages. Decision rule process was done following these statements; Item with mean score of 2,5 and above indicates that the respondents agree (are positive) with the statement, while item with mean score below 2,5 indicates that the respondents disagree (are negative) with the statement. Similarly, Grand Mean score of 2,5 and above indicates that the respondents agree with the category of statements, while grand mean score below 2,5 indicates that the respondents disagree with the category of statements. A 4-point Likert Scale was used, which was scored from 1 point for strongly disagree to 4 points for strongly agree, with a mean score of 2,5 for decision making. The association between challenges identified and the categories of Radiographers were determined using Chi-square at statistically significance level set at  $p < 0,05$ .

## RESULTS

Out of 360 respondents, the majority 243 (67,5 %) were males while females accounted for 117 (32,5 %). Large proportion 174 (48,3 %) of the respondents were within the age group of 26-30years, followed by age group of 20-25years 160 (44,4 %) and the least 1(0,3 %) with the mean age of 26years  $\pm 3,4$ . Most 145(40,3 %) of the respondents were intern radiographers. The majority 210(58,3 %) of the respondents started work in 2023 and the least 70(19,4 %) of the respondents started work in 2021. Large number 260 (72,2 %) of the respondents worked in government-owned healthcare facilities. The highest number 100 (27,8 %) of the respondents graduated in 2021 and the least 20(5,6 %) of the respondents graduated in 2017. (table 1)

Table 2 shows the characteristics of the workplace of the respondents. Findings indicate that less than half 160(44,4 %) worked under supervision for 2 weeks. Those who worked in CT/MRI/mammography department as well as whose work was limited to Conventional X-ray alone were in the majority 160 (44,4 %) and 140 (38,9 %). The majority 310(86 %) of the respondents had a day off from work while only a minority 55(15,3 %) received incentives at work. More than one third 140 (38,9 %) of the respondents stated that they usually attend clinical meetings while a lesser proportion 100 (27,8 %). were of the opinion that their work favours personal growth. The major inspiration that majority got from their colleagues was to relocate abroad (83,3 %;  $n = 300$ ) and to make money through different private practice (PP) centres (27,8 %;  $n = 100$ ).

Table 3 shows the challenges for newly qualified radiographers in their early clinical practice among the respondents. Findings indicate that the major communication challenges were: effective communication with patients and careers ( $3,8 \pm 0,8$ ) and effective communication with members of the team ( $3,8 \pm 1,0$ ). The major clinical challenges identified were: cannot perform special exams unaided ( $1,7 \pm 0,6$ ) and cannot prioritize exams according to urgency ( $1,6 \pm 1,0$ ). The major technical challenges identified were: cannot take remedial actions for poor quality radiograph ( $2,1 \pm 0,5$ ) and restriction from access to some machines ( $1,9 \pm 0,7$ ). The major workload challenges identified were: assignment of too much work ( $2,0 \pm 0,4$ ) and poor supervision of new radiographers by superiors ( $1,7 \pm 0,9$ ). The major welfare challenges identified were: there was delay in salary ( $2,1 \pm 0,7$ ) and find it hard to get internship placement ( $2,1 \pm 0,6$ ). The result from the Chi-square test revealed that there was no statistically significant relationships between the challenges faced by newly qualified radiographers in their early clinical practice and their categories ( $P \chi^2=4,806$ ,  $df=2$ ,  $p= 0,09$ ). (table 4)

Variables	Options	Frequency (N)	Percentage (%)
Gender	Male	243	67,5
	Female	117	32,5
Age (years)	20 - 25	160	44,4
	26 - 30	174	48,3
	31 - 35	20	5,6
	36 - 40	5	1,4
	41 and above	1	0,3
Mean age ( $\pm$ SD)	26 Years ( $\pm 3,4$ )		
Status	Intern Radiographer	145	40,3
	Corper Radiographer	105	29,2
	Radiographer	110	30,6



Year of graduation	2017	20	5,6
	2018	25	6,9
	2019	50	13,9
	2020	70	19,4
	2021	100	27,8
	2022	95	26,4
Year work started	2021	70	19,4
	2022	80	22,2
	2023	210	58,3
Place of work	Government	260	72,2
	Private	100	27,8

**Table 2.** Characteristics of the workplace of the respondents (n = 360)

Variables	Options	Frequency (N)	Percentage (%)
Duration of work	3 months	40	11,1
	2 months	100	27,8
	2 weeks	160	44,4
	1 week	10	2,8
	No supervision	50	13,9
Area of posting	CT/MRI/mammography	160	44,4
	Limited to Conventional X-ray alone	140	38,9
	Ultrasound/sonographer	50	13,9
	Radiotherapy	10	2,8
Days off (week)	1	310	86,1
	2	48	13,3
	More than 2	2	0,6
Incentives	Yes	55	15,3
	No	300	83,3
	No idea	5	1,4
Attend clinical meetings	Yes	140	38,9
	No	210	58,3
	No idea	10	2,8
Favours personal growth	Yes	100	27,8
	No	255	70,8
	No idea	5	1,4
Inspiration from senior colleagues*	Relocate abroad	300	83,3
	Make money through different PP centres	100	27,8
	Further studies	10	2,8
	Area of specialization	8	2,2

\*Multiple responses applicable

**Table 3.** Challenges for newly qualified radiographers in their early clinical practice in Ibadan (n = 360)

Item	SD (1)	D (2)	A (3)	SA (4)	Mean	S.D.
Communication challenges						
Effective communication with patients and careers.	0	5	55	300	3,8	0,8
Effective communication with members of the team.	0	0	60	300	3,8	1,0
Language barrier between new radiographer and patient and careers.	0	210	50	100	2,7	0,6
Clinical challenges						
Cannot prioritize exams according to urgency.	200	110	45	5	1,6	1,0
Cannot book a patient for specials unaided.	210	40	8	2	1,2	1,0
Cannot perform special exams unaided.	130	200	26	4	1,7	0,6



Cannot plan exams using request form and departmental protocol.	300	40	17	3	1,2	0,6
Cannot work accurately at an appropriate speed.	301	48	11	0	1,2	0,7
Technical challenges.						
Cannot manipulate equipment safely and effectively.	312	48	0	0	1,1	1,1
Cannot take remedial actions for poor quality radiograph.	110	107	125	18	2,1	0,5
Restriction from access to some machines.	160	76	120	4	1,9	0,7
Workload challenges.						
Assignment of too much work.	154	120	36	50	2,0	0,4
Poor supervision of new radiographers by superiors.	200	110	5	45	1,7	0,9
Welfare challenges.						
Find it hard to get internship placement.	100	180	20	60	2,1	0,6
Was accommodation provided.	300	20	40	0	1,3	0,6
There was delay in salary.	210	0	50	100	2,1	0,7
Was given orientation about area of specialization.	201	19	140	0	1,8	1,1

Table 4. Associations between challenges and categories of radiographers

Variables	Challenge		X <sup>2</sup>	df	P-value
	Yes N (%)	No N (%)			
Status					
Intern Radiographer	128 (88,3)	17 (11,7)	4,806	2	0,09
Corper Radiographer	86 (81,9)	19 (18,1)			
Radiographer	86 (78,2)	24 (21,8)			
* Chi square test					

## DISCUSSION

### Clinical challenges for newly qualified radiographers in their early clinical practice

The study found evidence that there were several clinical challenges that newly qualified radiographers in the selected hospitals encountered during their clinical practice. This finding seems to support the stance that was documented in previous study which revealed that recently qualified radiographers have been reported to find it challenging to cope with their new responsibility and are therefore uncertain of their role even if it is considered an intrinsic part of clinical practice.<sup>(6)</sup> Perhaps, a major reason for this challenge might be explained by the fact that the working environment for newly qualified diagnostic radiographers is unpredictable. This view was also supported in an extant study which revealed that the clinical environment of newly qualified radiographers is high pressured, target driven work where speed and efficiency is often in conflict with patient care.<sup>(10)</sup>

In the present study, findings from the study showed that not being able to perform special exams unaided as well as not being able to prioritize exams according to urgency were the major clinical challenges that newly qualified radiographers were experiencing in the selected hospital. Perhaps, a major explanation for this could be that they have not yet had enough time to gain experience and confidence in performing these exams. Another reason could be that they do not have access to the right equipment or resources to perform the exams effectively. In Nigeria, there may be additional challenges related to the healthcare system, such as a lack of resources, inadequate training facilities, or low levels of pay. These challenges may make it even more difficult for newly recruited radiographers to perform their jobs effectively. Thus, it is important to acknowledge the challenges that newly recruited radiographers may face, so that they can be provided with the right support and training to do their jobs effectively.

### Communication and technical challenges for newly qualified radiographers in their early clinical practice

The study also showed that there are communication and technical challenges for newly qualified radiographers in their early clinical practice in selected hospitals in Southwest Nigeria. This finding quite agrees with the assertion in an extant study which revealed that recently qualified health workers, including radiographers, struggle with workplace integration. In the aforementioned study, it was revealed that there are also undocumented complaints received from various heads of departments and radiologists regarding recently qualified radiographers' ability to fully assume their professional roles. Other authors have also reported



similar findings. These include the studies of Lewis et al.<sup>(8)</sup>, Obotiba et al.<sup>(20)</sup> and Kumsa et al.<sup>(21)</sup> amongst others.

In the present study, the findings from the study showed that effective communication with patients and careers as well as with members of the team were the major communication challenges for newly qualified radiographers in their early clinical practice in the selected hospitals. There are major reasons why this communication challenge is peculiar to newly qualified radiographers in the study area. Firstly, newly recruited radiographers may lack the experience and confidence to communicate effectively with patients and team members. Secondly, they may not have had the opportunity to develop strong communication skills during their training. And thirdly, they may be dealing with cultural or language barriers that make communication difficult. This view was also supported in a study that conducted by Kumsa et al.<sup>(21)</sup>

In the same vein, the study also revealed that not been able to take remedial actions for poor quality radiograph as well as restriction from access to some machines was the major technical challenges for newly qualified radiographers in their early clinical practice in the selected hospitals. In the Nigerian context, newly recruited radiographers may face technical challenges for a variety of reasons. Firstly, there may be a lack of high-quality equipment and infrastructure available. Secondly, there may be inadequate maintenance of equipment, leading to breakdowns and disruptions in service. And thirdly, there may be a lack of technical support available when issues arise. This view was also corroborated in the study by Obotiba et al.<sup>(20)</sup>, who revealed that access to machines is definitely a major technical challenge for newly recruited radiographers in Nigeria. Perhaps, this could be due to the fact that there may be a lack of access to newer, more advanced machines, or there may be long wait times for the machines that are available. This can have a big impact on patient care and can make it difficult for radiographers to do their jobs effectively. Other authors have also reported similar findings.<sup>(1,5,22)</sup>

#### **Workload and welfare challenges for newly qualified radiographers in their early clinical practice**

The study also revealed that there were several workload and welfare challenges that newly qualified radiographers experience in their early clinical practice. In this study, findings from the study showed that majority of the respondents reported that assignment being too much work as well as poor supervision of new radiographers by superiors were the major workload challenges that newly qualified radiographers experience in their early clinical practice. Perhaps, the major reason for the workload challenge that the respondents in this study experience might be due to a well-documented shortage of radiographers in many parts of Nigeria. This shortage is due to a number of factors, including a lack of qualified radiographers, inadequate training and education opportunities, and limited career advancement opportunities. The shortage of radiographers has a big impact on the quality of care that patients receive, as well as on the working conditions of radiographers themselves. Impliedly, when there are not enough radiographers available, the remaining staff must work harder to meet the demands of the job. This can lead to burnout, frustration, and dissatisfaction among the staff. It can also lead to errors and mistakes, which can negatively impact patient care. Also, there may be a lack of qualified and experienced radiographers available to supervise new radiographers, leading to heavier workloads for those who are supervising. All of these factors can contribute to a heavy workload for newly recruited radiographers. Other authors such as Ohagwu et al.<sup>(23)</sup> and Kasita et al.<sup>(24)</sup> amongst others, have reported similar findings.

In the same vein, the findings from the study showed that delay in salary as well as difficulty in finding internship placement were the major welfare challenges that newly qualified radiographers experience in their early clinical practice. These findings are indeed a complex and multi-layered issue as previous studies have shown that a delay in salary can cause financial stress and insecurity for newly qualified radiographers, who may have taken on debt in order to complete their training. This can make it difficult for them to focus on their work and provide the best possible care for patients. In the same vein, difficulty in finding an internship placement can lead to a delay in gaining full qualification and becoming a registered radiographer. This can further impact the individual's career and earning potential. One possible solution to the delay in salary issue is to improve the systems and processes in place for paying radiographers. This may involve streamlining paperwork, increasing transparency, and improving communication between radiographers and the relevant authorities. For the difficulty in finding an internship placement, there could be efforts made to increase the number of available placements, or to make the application process more streamlined and accessible. Other authors have reported similar findings. These include the studies of Asare<sup>(26)</sup> and Seyama-Ginindza<sup>(26)</sup> amongst others.

#### **Objective four: Difference in challenges for newly qualified radiographers in their early clinical practice**

The study also revealed that there were no significant different in the experience of challenges for newly qualified radiographers in their early clinical practice. In other words, the newly qualified radiographers, regardless of whether they were interns, Corp members or radiographers all had similar experience of the challenges in their early clinical practice. These findings seem to support the reason why urgent solutions



should be initiated or provided for newly qualified radiographers in their early clinical practice. This will go a long way to help them address the effect of these challenges as part of efforts to harmonise practice through the training and development of newly qualified radiographers in their early clinical practice in Southwestern Nigeria. A similar view was reported in the studies conducted by<sup>(20,21,23)</sup> amongst many others.

## CONCLUSION

Newly qualified radiographers' faces numerous challenges such as technical, communication, workload, poor supervision as well as welfare challenges. There were no statistically significant relationships between the challenges faced by newly qualified radiographers in their early clinical practice and their categories. The study, therefore, recommends the need to create a formal mentorship program for newly qualified radiographers, to provide them with guidance and support. There is also need to provide opportunities for continued professional development for newly qualified radiographers, such as workshops or courses. Also, more staff should be employed so that the workloads are evenly distributed among the radiographers on staff.

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## **CONFLICT OF INTEREST**

The authors declare that there is no conflict of interest.

## **AUTHORSHIP CONTRIBUTIONS**

All authors have read and approved the manuscript. Each author participated sufficiently in this submission and the roles of the authors are: UIE, AEO, SA and OMP were the main researchers, drafted the manuscript, responsible for data capturing. UIE, SA, OMP, EEE, EGM, NVK, OAC and RM carried out presentation and interpretation of results. AEO, OMP, SA, EEE, NVK, OAC and RM gave recommendations on the review of the literature and also provide critical comments on the research work.



## APPENDIX

DEPARTMENT OF MEDICAL RADIOGRAPHY  
COLLEGE OF MEDICINE LEAD CITY UNIVERSITY,  
FACULTY OF HEALTH SCIENCES, IBADAN, OYO STATE.

## PROJECT QUESTIONNAIRE

Dear Respondent,

My name is **Usoro I. Edet**, a Lecturer alongside some final year students of the above named department and school. We are carrying out a research on **"Evaluation of the Challenges Encountered by Radiographers in Their Early Clinical Practice in south west Nigeria"**. I hereby solicit your support to kindly fill this questionnaire, I promise it wouldn't take too much of your time. All Information provided is confidential and will be used strictly for the purpose of the research.

## Instructions:

- The Respondents are the Interns, Corpers and those in their first Three years of practice.
- Tick [ ☐ ] in the appropriate boxes.

## SECTION A; PERSONAL INFORMATION:

SEX: male [ ☐ ] female [ ☐ ]  
AGE: 20-25 [ ☐ ] 26-30 [ ☐ ] 31-35 [ ☐ ] 36-40 [ ☐ ] 41 and above [ ☐ ]  
STATUS: Intern Radiographer [ ☐ ] Corper Radiographer [ ☐ ] Radiographer-1 [ ☐ ]  
YEAR OF GRADUATION: 2017 [ ☐ ] 2018 [ ☐ ] 2019 [ ☐ ]  
2020 [ ☐ ] 2021 [ ☐ ] 2022 [ ☐ ] 2023 [ ☐ ]  
YEAR WORK STARTED: 2017 [ ☐ ] 2018 [ ☐ ] 2019 [ ☐ ]  
2020 [ ☐ ] 2021 [ ☐ ] 2022 [ ☐ ] 2023 [ ☐ ]  
PLACE OF WORK: \_\_\_\_\_  
STATE \_\_\_\_\_

## SECTION B

Work Schedule, interns/Corpors/permanent staff .....years duration.  
Shifts period.... Permanent morning [ ☐ ] Permanent afternoon [ ☐ ] Alternate morning/afternoon [ ☐ ]  
Call hours \_\_\_\_\_  
Daily work routine hours covers from \_\_\_\_\_ to \_\_\_\_\_  
Duration of working under supervision \_\_\_\_\_  
Area of posting (modality).... CT [ ☐ ] MRI [ ☐ ] Conventional X-ray [ ☐ ] Mammogram [ ☐ ] ultrasound [ ☐ ]  
others please specify \_\_\_\_\_  
Period of posting... daily [ ☐ ] weekly [ ☐ ] monthly [ ☐ ]  
How many days off in a week ( apart from weekends) \_\_\_\_\_  
Any incentives.....Yes [ ☐ ] or No [ ☐ ]  
Departmental seminar/clinical meetings? Yes [ ☐ ] or No [ ☐ ]  
Does your work favour personal growth? Yes [ ☐ ] or No [ ☐ ]  
Any inspiration or encouragement from senior colleagues? Yes [ ☐ ] or No [ ☐ ]

## SECTION C; CHALLENGES

- Dear radiographer, please kindly tick appropriately.

Communication Challenges	Strongly disagree	Disagree	Agree	Strongly agree
Effective communication with patients and careers.				
Effective communication with members of the team.				
Language barrier between new radiographer and patient and careers.				
Clinical Challenges				
Cannot prioritize exams according to urgency.				
Cannot book a patient for specials unaided.				
Cannot perform special exams unaided.				



Cannot plan exams using request form and departmental protocol.				
Cannot work accurately at an appropriate speed.				
<b>Technical Challenges</b>				
Cannot manipulate equipment safely and effectively.				
Cannot take remedial actions for poor quality radiograph.				
Restriction from access to some machines.				
<b>Workload Challenges</b>				
Assignment of too much work.				
Poor supervision of new radiographers by superiors.				
<b>Welfare Challenges</b>				
Did you find it hard to get internship placement.				
Was accommodation provided.				
There was delay in salary.				
Was given orientation about area of specialization.				

Please state other challenges encountered as a Radiographers in your early clinical practice:

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