



**PERSPECTIVES OF INTERN RADIOGRAPHERS ON RADIOGRAPHY INTERNSHIP IN
NORTHERN NIGERIA.**

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ARTICLE INFO

ABSTRACT

Keywords:

Perspective,
Internship, Intern
Radiographer,
Training.

Background: Internship training offers an important opportunity for personal development and career planning. However, there are many factors affecting the training such as professional obligation, welfare and the training efficiency.

Objective: The objective of this study was to assess the internship training and its standard in northern Nigeria.

Methodology: A well-structured questionnaire with six sections, A-F, that comprised of demographic data, challenges before the commencement of the training, general welfare, training and work experience, professional obligations and equipment status at the internship centers was distributed to all interns (n=74) enrolled in northern Nigeria using clustered sampling method with two hospitals selected from each of the three geopolitical zones, the validity and reliability was tested using Cronbach alpha reliability coefficient with greater than 0.7 been the acceptance level. The data obtained was summarized as frequencies, percentages and bar chart using SPSS version 20.0.

Result: Only of 63(85%) of interns completed the questionnaires and up to 54(76.1%) of the interns were satisfied with the internship training. However, faced many challenges with regards to welfare and professional obligation. Up to 46(77.8%) of the interns were not given a radiation monitoring device with 30(47.6%) not satisfied with the overall radiation protection. Furthermore 61(96.8%) were not given any vaccine prior to the commencement of the training. Also the study revealed that 46(73%) of the interns spent an average daily working time of 8hours and 29(46.0%) are not satisfied with the welfare in their hospitals

Conclusion: The study revealed that interns faced many challenges with regards to professional obligation, welfare and availability of some equipment which may lead to a setback in the standard of the training. However periodic monitoring of centers by the regulatory body may serve as the panacea for the training improvement and more studies are needed to explore in-depth dimensions of internship training program in Nigeria.

Introduction

Internship is the most important part of health sciences' education especially radiography in which students learn in a real situation and therefore develop their practical skills, treat patients, and deal with them based on scientific principles [1]. An intern is a graduate who has completed his/her degree programme and is licensed to practice in a supervised training posts [2] to acquire clinical and nonclinical skills so that he/she may be capable of functioning independently [3].

The main aim of internship training is to provide a period of clinical practice that enables the transition from student to professional practice based around the traditional working week during which the intern works in a supervised environment so that he/she may learn to make clinical decisions and have direct responsibility for patient care [2]. It also serve to offer an important opportunity for personal development and career planning [4].

Internship training in Nigeria for radiographers is regulated by the Radiographers Registration Board of Nigeria (RRBN) in which the prospective radiographers will undergo a 12-month compulsory apprenticeship scheme in an accredited hospital which serve as an integral part of the entire training programme [5] as clinical training is part of the requirements expected of every radiography student, for the award of Bachelor's degree [6]. However the hospital where the intern served is statutorily responsible for ensuring that all interns are adequately trained and grant Certificates of Experience to the intern who has successfully completed the training.

Furthermore, determinants of effective training associated with intern's satisfaction include a wide variety of factors such as; Quality of supervisors and supervision, adequate opportunity to experiential learning, conducive environment, good support system (hospital management, hospital staff), personal attributes, and reasonable workload [4]. Therefore clinical internships are basic parts of students' education and the intern has to achieve the defined standards of the training [1].

A study conducted by Obotiba in 2017 that aimed at identifying the major challenges faced by intern radiographers in northern Nigeria revealed that the

major challenges in this region are interrelated and include inherent in training/practice, and poor mentorship programed, which is similar to our study finding with regards to general interns satisfaction on poor mentorship within the department by other staffs'. [7]. It has also shown that the level of interns satisfaction with the training varies widely at the institute level and at different clinical rotations. While on the other hand, maltreatment and abuse of interns, which is very common worldwide, might have a negative impact on intern satisfaction and the outcome of internship in general [4].

Therefore, the purpose of the present study is to assess the intern's perceptions of their training with an emphasis on challenges before commencement of internship, the interns welfare, the training and work experience, professional obligation and equipment status at the training institutions.

Material and Method

This study was a descriptive cross-sectional one carried out from November 2019 to February 2020 which data has been gathered through the use of (n=75) a well-structured questionnaire with closed ended questions to assess the intern's perception on the one-year internship training. The participants included all consenting intern's radiographers that are undergoing training in an accredited health institution in Northern Nigeria during the training year of 2019 to 2020. A cluster sampling technique was adopted with two institutions randomly selected from each of the three geopolitical zones (clusters) in the North. A well structured questionnaire was used to collect data from the respondents consisting of six sections, A-F, that comprised of demographic data, challenges before the commencement of the training, general welfare, training and work experience, professional obligations and the equipment status at the internship centers. The questionnaires were administered to all interns who were within the inclusion criteria and consented to participate which was later retrieved. Also, the validity and reliability was tested using Cronbach alpha reliability coefficient with greater than 0.7 been the acceptance level. All the responses were recorded, grouped and analyzed based on the study objectives using the statistical package for social sciences (SPSS) 20.0 (IBM, New York, USA), where descriptive statistics such as frequency counts, mean, and percentage were generated and the results presented on tables.

Result

A total of 63 (100%) completed questionnaires were received. Out of which the highest 42 (66.7%) were found in the age range of 26-30 and the least 7 (11.1%) in age range of 31-35. The study demonstrated males dominance 39 (61.9%) as compared to females. Also, majority of the respondents 28 (44.4%) studied at UNIMAID with the least 6 (9.5%) from Foreign universities. Table 1 below shows the detailed demographic information of the respondents with ABUTH and JUTH having the same and highest number 14 (22.2) of respondents based on the training institution.

Majority of the respondents 27 (42.9%) waited for 1-3 month before the commencement of the internship training due to Prolonged time before induction by the RRBN after graduation as indicated in Table 2. Also Table 3 indicates that majority of the interns 36 (57.1%) were not provided with an accommodation, 46 (73.0%) spent eight hours as the average daily working time and 49 (77.8%) were placed on a salary grade of CONHESS 8/2. Most of the interns 51 (81.0%) were not given a health care access by their hospitals and

29 (46.0%) of the interns were not satisfied with the internship welfare.

Table 4 demonstrate the internship training working experience where majority 62 (98.1%) of the hospitals have lecture/seminar session on weekly basis. 30 (47.6%) of the interns spent 1 month under supervision before being allowed to work alone, 29 (46.0%) before being posted to call and 40 (63.5%) are satisfied with the level of the supervision. Furthermore 62 (98.4%) of the interns are posted to various units for work within the department. Table 5 shows the professional obligations of the training where 38 (60.3%) of the interns indicate that the hospitals organized an orientation program before the commencement of the training, 46 (73.0%) of the respondents were not given any mentorship guide with 49 (77.8%) and 61 (96.8%) not been given a radiation monitoring device and no any vaccine for disease prevention was given prior to the commencement of the training. Furthermore, Table 6 reveals the status of the equipment's in the various hospitals where all 6 (100%) the hospitals have CT with 4 (66.7%) accessible and 2 (33.3%) non-accessible.

TABLE 1: DEMOGRAPHIC DATA OF THE RESPONDENTS

Variable	Frequency	Percentage
Time elapsed between induction and commencement of internship		
1-3 month	27	42.9
4-7 month	18	28.6
8-12 month	8	12.7
Above 1 year	10	15.9
Cause of delay before the commencement of the internship		
Prolonged time before induction by RRBN after graduation	21	33.28
Scarcity of internship centers	5	7.9
High number of applicants	9	14.3
All of the above	19	30.12
None of the above	9	14.3

TABLE 2: CHALLENGES BEFORE COMMENCEMENT OF INTERNSHIP

Variable	Frequency	Percentage
Gender		
Male	39	61.9
Female	24	38.1
Age Range		
21-25 years	14	22.2
26-30 years	42	66.7
31-35 years	7	11.1

School/Institution attended		
BUK	25	23.8
UNIMAID	28	44.4
UNN	5	7.9
UDUS	2	3.2
UNICAL	7	11.1
FOREIGN	6	9.5
Internship training center		
AKTH, Kano	13	20.6
ABUTH, Kaduna	14	22.2
FTHG, Gombe	11	17.5
UMTH, Maiduguri	7	11.1
NHA, Abuja	4	6.3
JUTH, Jos	14	22.2

TABLE 3: GENERAL WELFARE

Variable	Frequency	Percentage
Are you provided an accommodation?		
Yes	27	42.9
No	36	57.1
What is your salary grade level placement?		
Conhess 7/3	1	1.6
Conhess 8/1	11	17.5
Conhess 8/2	49	77.8
Above Conhess 8/2	2	3.2
Are you given any health care access by the hospital management?		
Yes	12	19.0
No	51	81.0
What is the average working hours for a day?		
5 Hours	1	1.6
6 Hours	2	3.2
7 Hours	7	11.1
8 Hours	46	73.0
9 Hours	5	7.9
No specification	2	3.2
Rate the level of satisfaction of hospital management towards welfare		
Very Satisfied	4	6.3
Satisfied	27	42.9
Dissatisfied	29	46.0
Very Dissatisfied	3	4.8

Variable	Frequency	Percentage
Are there any seminar/lecture presentation in the department by interns?		
Yes	62	98.4
No	1	1.6
What is the time interval between the presentations?		
Weekly	57	90.5
1 Month	4	6.3
Above 1 Month	1	1.6
Not applicable	1	1.6

How long were you under supervision before being allowed to work alone?		
Less than 1 month	13	20.6
1 Month	30	47.6
2 Month	14	22.2
3 Month	4	6.3
Not applicable	2	3.2
How long from start of internship before being placed to work alone during call?		
Less than 1 month	10	15.9
1 Month	29	46.0
2 Month	16	25.4
3 Month	7	11.1
Not applicable	1	1.6
Rate the level of satisfaction with supervision and call		
Very Satisfied	4	6.3
Satisfied	40	63.5
Dissatisfied	18	28.6
Very Dissatisfied	1	1.6
Are you place on work to various units?		
Yes	62	98.4
No	1	1.6

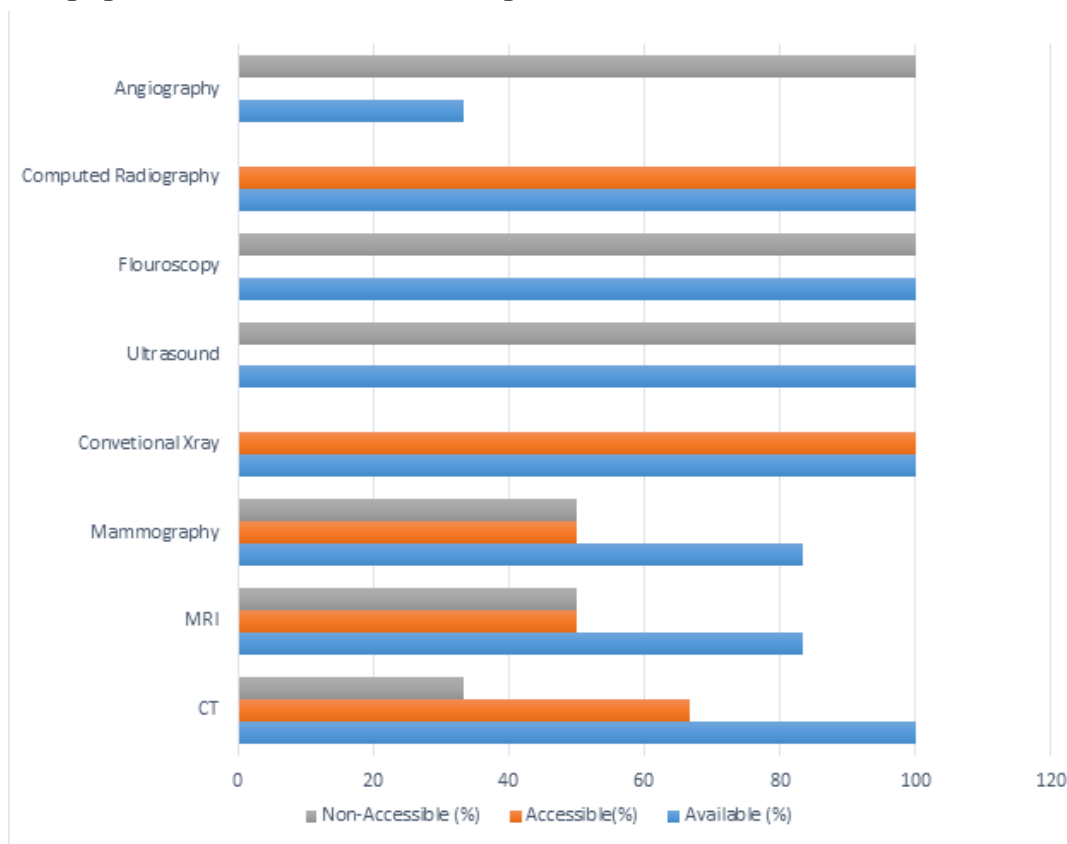
Table 4: Training and Work Experience

Variable	Frequency	Percentage
Are there any mentorship programme implemented in the department?		
Yes	17	27.0
No	46	73.0
Are there any orientation programme organized by management at the start of internship?		
Yes	38	60.3
No	25	39.7
Are you giving a radiation monitoring device?		
Yes	14	22.2
No	49	77.8
Are you provided with any vaccine for diseases such as hepatitis, e.t.c prior to your training?		
Yes	2	3.2
No	61	96.8
Rate the level of satisfaction with radiation protection.		
Very Satisfied	1	1.6
Satisfied	24	38.1
Dissatisfied	30	47.6
Very Dissatisfied	8	12.7
Rate the level of satisfaction with the level of health hygiene and safety in your hospital		
Very Satisfied	2	3.2
Satisfied	33	52.4
Dissatisfied	25	39.7
Very Dissatisfied	3	4.8

Table 5: professional Obligation

EQUIPMENT	Available (%)	Accessible (%)	Non-Accessible (%)
CT	100	66.7	33.3
MRI	83.3	50	50
Mammography	83.3	50	50
X-ray unit	100	100	0
Ultrasound	100	0	100
Fluoroscopy	100	0	100
Computed radiography	100	100	0
Angiography	33.3	0	100

Table 6: Equipment Status at the Internship Centers



Disussion

The primary purpose of internship is to offer practical work experience in the health facilities setup that serve as a transitional period where radiography graduates acquire the necessary skills and credentials needed to pursue their future careers [4]. The interns perception/experience serve as the important key concern for this research where it provides interns with the opportunity to reflect or present their views for the authority to understand and improve.

A study conducted by Obotiba *et.,al* 2017 that aimed at identifying the major challenges faced by

intern radiographers in this region are interrelated, which are inherent in training/practice, welfare and mentorship, though welfare is a bit optimal[7]. However based on the present study majority 29 (46.0%) are not satisfied with the welfare which may be associated with poor incentives, remunerations and motivation of the hospitals toward the interns.

The study finding is in agreement with a research conducted in Ghana by Kyei *et.,al* 2015 where majority of the respondent (59.6%) are of opinion that no monitoring devices are available therefore making personnel radiation protection very

poor[6]. Also as reported by the Australian institute of radiography (AIR) 2010., the rationale of professional development year was for the graduate practitioner in the first postgraduate year to acquire the guidance of more experienced practitioners in their field of Medical Radiation Science that last for 48 weeks full-time equivalent[9]. However from this study 46 (73.0%) of the respondent are of the opinion that there is no any mentorship programme implemented in the department.

In our study most of the interns spent an average working time of 8 hours daily which is similar to a studies reported by Andrew Ross et.,al 2018 that the prescribed working duration was 40 hours per week (i.e. 88 hours daily) and 60–80 hours' commuted over- time per month–[8]. A study conducted in Tunisia by Belguith A Set.,al 2018 reported that there is a need for improving the use of internship book, which is commonly used as end-of-training assessment tool and need for adoption of new and more efficient evaluation methods which is usually issued to prospective interns by the RRBN[10].

Another study by Nasrollah Jabbari et.,al 2012 revealed that the use of structured assessment for learners' clinical internship provide the chance to real assessment of practical and scientific skills, increasing learners' and teachers' satisfaction, doing purposeful educational programming, and finally improving the quality of education ""[1]. Also a study by Andrew et.,al 2018 shows that Some countries modified the duration of the internship programme and extended it from a one-year to a two-year programme due to concerns about the high rate of maternal mortality and poor anesthetic and clinical competencies among medically qualified Health care professionals. However from this study the training duration still remains for 12 months–[8].

Also the study finding is in contrast to a research by Bansalet.,al 2004 where the Interns reported no formal teaching/ training time table at departmental level; nobody was assigned the duty for responsible supervision, they were not allowed to do the clinical work, and required to do non-clinical assignments and casual evaluation[11]. As radiation protection remain an important area of concern in radiography 30(47.6%) of the respondent were not satisfied with the overall radiation protection in their training center's while

with regards to level of hygiene and safety majority of the participants 33(52.4%) were satisfied.

This study outline some of the following as some of the recommendation Early induction by the RRBN to allow early commencement of the training, Provision of accommodation, radiation monitoring devices, Reduction of working hours to 6/7 per day, Access to health care by the hospital, Allocation of mentors within the department and Proper monitoring and supervision by the RRBN.

Conclusion

The study revealed that majority of the interns faced many challenges on welfarism, training experience, professional obligation and equipment accessibility during the course of the training. However periodic monitoring and supervision by the regulatory body may serve as the panacea for training improvement.

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