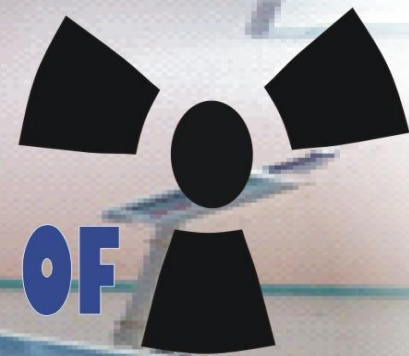


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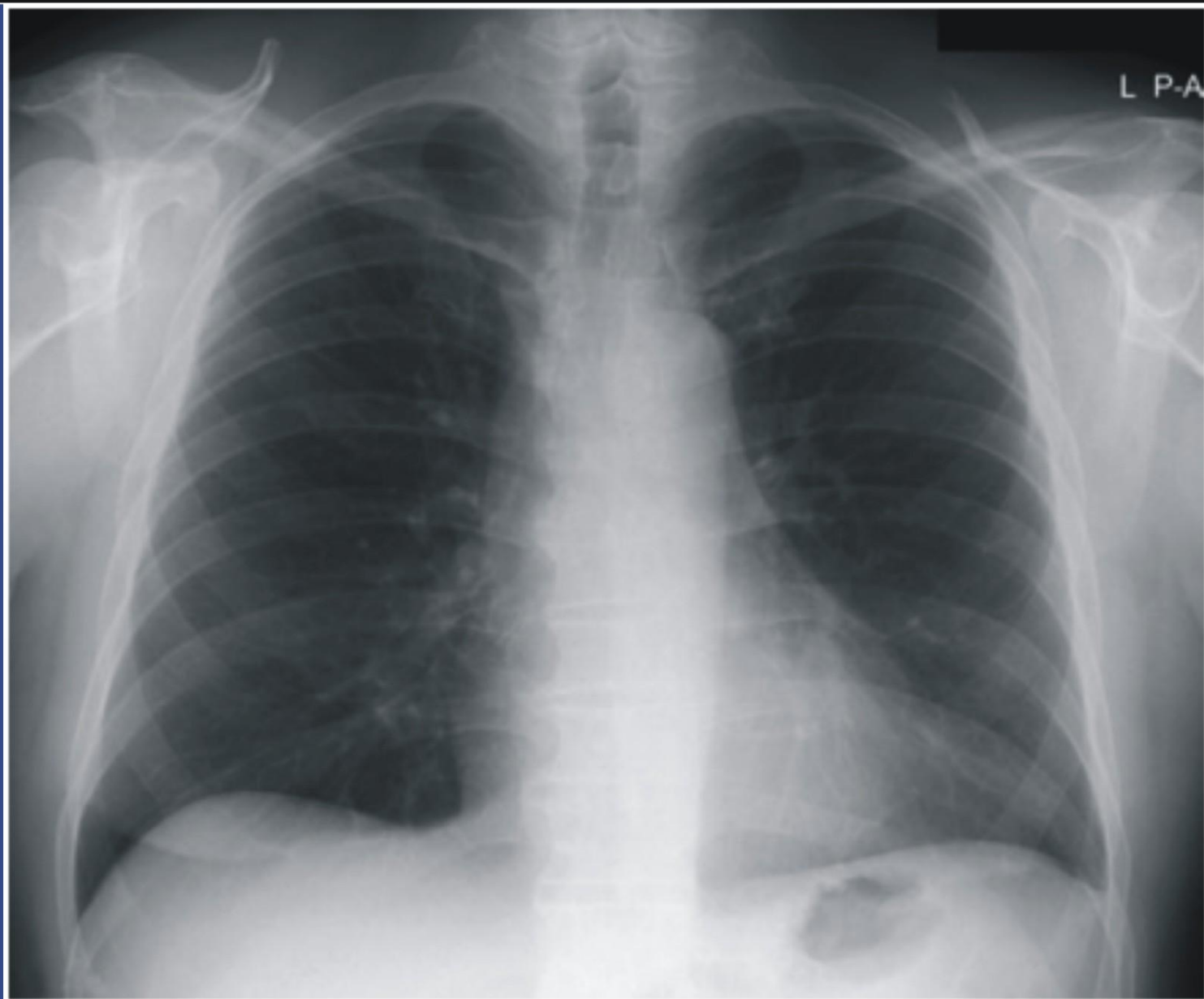


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Radiography Profession: Regulation, Practice and Challenges in Northern Nigeria

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ABSTRACT

Objective: To determine the impact of regulatory body of the Radiography profession, ascertain the major challenges, its causes and suggesting ways to mitigate them in northern Nigeria.

Method: A cross-sectional survey was conducted among Radiographers in Northern Nigeria with practice experience of 10 years+, for a period of 3 months (January-March 2015). A semi structured 18-item questionnaire was used to elicit data concerning demography, regulation, major challenges, and suggestions to mitigate these challenges. Data was analyzed using SPSS version 16.0 and descriptive statistics were used in the analyses.

Results: A total of seventy (70) questionnaires were distributed and 66 (93%) were returned. There were 42(63.6%) male respondents and 24 (36.4%) female respondents with ages ranging from 30 to above 60 years. A good number of the respondents (42) had B.Sc. degree as highest qualification; representing 63.6% while those with Masters degree and above made the remaining 13.6%, numbering 9. About 27 (40.9%) rated the efforts of the regulatory body as good. The major challenges noted were: few Universities offering Radiography at undergraduate and post graduate level, low level of manpower, limited scope of practice, frequent equipment breakdown and inactive professional body. Possible causes suggested included poor recognition of the profession, systemic failure, lack of unity in the Radiology unit. The recommendations made to overcome these include; an active and strong regulatory body visible in all the geopolitical zones and states, provision of scholarship schemes, unionism, and improvement towards education and training.

Conclusion: Persistent challenges confront the radiography profession. Radiographers are aware of these challenges and possible causes. There is need for the professional body (RRBN) to improve on its regulatory duties to mitigate the persistent challenges in radiography profession in Nigeria.

Keywords: Challenges, Radiography, Regulation, Practice, Profession

Introduction

Radiography is a very important arm of modern medical practice and has been recognized in many countries as one of the profession allied to medicine [2]. In 1987, decree no. 42 was promulgated which accorded Radiography full professional status like medicine, nursing among others [2]. A Radiographer in Nigeria is a person who is professionally trained and qualified, registered and licensed by the Radiographers Registration Board of Nigeria, RRBN [3].

With rapid advances in technology and vastly improved training and education, the scope of radiography has in the last two decades or thereabouts expanded in many countries and the role of radiographers has changed significantly as the demand for radiography services has increased markedly and the work also become more complex [4]. The expanding frontiers of radiography practice have ensured that the role of radiographers does not stop at obtaining

diagnostics images but also include making useful clinical interpretation of the images [5].

Despite being a profession in upward swing, Radiography is encountering a lot of professional challenges in Nigeria among which is shortage of manpower to provide radiography services to a populous country like Nigeria [5]. Rose [6], proposed certain qualities of a profession to include;

- Educational background
- Adherence to the code of ethics
- Participation in the professional organization
- Continuing education and competency
- Communication and publication
- Autonomy and self-regulation
- Community service
- Use, development, and evaluation of theory
- Research involvement

Radiography, as a profession is well recognized in Nigeria for many decades now and the Radiographers Registration Board of Nigeria (RRBN) is the professional body saddled with the duty of training and regulating the practice of Radiography in Nigeria, However over the years, so many unqualified and non-licensed persons (quacks) have been seen in some centers (private and public) dispensing the delicate ionizing radiation to the Nigerian populace without proper knowledge of its risks and benefit [7]. Thus, this study is aimed at determining the impact of regulatory body towards radiography profession in Northern Nigeria, ascertain the major challenges, its causes and suggest ways to mitigate them.

Material and Methods

A cross-sectional survey was conducted from January to March, 2015 among Radiographers in some public and private hospitals in Northern Nigeria. A semi structured 18 item self administered questionnaire was used to elicit information concerning demography, regulation, major challenges, and ways to mitigate them. The focus was on radiographers with practice experience not less than ten (10), as it was

assumed that they would have gained experience over time and may be willing to divulge information without any bias or prejudice.

Informed consent was sought from the participants after explaining the scope of the study to them. They were allowed to make informed choices either to participate in the study or not and acceptance to participate in the study was considered as consent. Participants were allowed to withdraw from the study anytime they felt they did not want to continue participating anymore. Data was analyzed using SPSS version 16.0 and descriptive statistics like mean, percentages and frequency were used for the analyses.

Results

As shown in table 1, a total of 70 semi structured questionnaire were distributed across Northern Nigeria, 66 of the questionnaire were retrieved giving a response rate of 94.3%. These comprised 42 males (63.6%) and 24 females (36.4%). The ages of the respondents ranged between the age range of 31-60 and above. Qualifications possessed by the respondents were DCR/DIR 15 (22.7%), B.Rad. 42 (63.6%), and M.Sc and above with 9 (13.6%). Majority of the respondents (27) representing 40.9% had working experience between 10-15 years, while 24 of them (36.4%) had had 16-20 years of experience and 15 (22.7%) had a working experience of 21 years and above. About 39 (59.1%) were employed in a tertiary health care centre, while 27 (40.9%) were employed in secondary health care centre.

The respondents were distributed as follows: North central zone 51 (77.3%), North west zone 9 (13.6%), and North east zone had 6 (9.1%). Most of the respondents 27 (40.9%) were Principal Radiographers.

A significant number of the respondents 60 (90.1%) rated the effort of the regulatory body to be good. All 66 (100%) were aware of the professional code of conduct and were of the opinion that Radiography profession was being regulated in Nigeria by the RRBN. Majority of respondents rated their practice as good as shown in Table 2.

The major challenges faced by radiographers, Possible cause of these challenges, and suggested ways to mitigate them are summarized in Tables 3, 4 and 5 respectively.

Discussion

Radiography profession in Nigeria is encountering myriads of challenges among which is shortage of manpower to provide radiography services to a populous country like Nigeria [5]. In this study, majority of the respondents had B.Sc degree as their highest qualification while those with M.Sc and above were few. This tallies the findings of Luntsi et al [8] who found that majority of the respondents had B.Sc. as highest qualification and that there were fewer participants with MSc and above. This implied that majority of the Radiographers in Northern Nigeria had B.Sc as their highest qualification. This could be because institutions offering postgraduate programmes are not readily available in northern Nigeria, as post graduate radiography programmes in Nigeria as at the time of data collection was only offered in University of Nigeria (UNN) Enugu, Enugu State and Nnamdi Azikiwe University (UNIZIK) Anambra State which are located in the southern part of the country.

Majority of our respondents 60 (90.1%) rated the effort of the regulatory body to be good, and all the respondents 66 (100%) agreed that radiography profession is being regulated in Nigeria by the RRBN. This result agrees with Akpan [7] and Ugwu et al [9] who opined that effort should be made by the profession to develop radiographers working in the clinical areas and making them to enjoy their chosen profession and equally suggested that without advancement, upgrading and updating in the education of a profession, it would end towards professional limbo or ultimate obsolescence. This implies that in spite of the effort of RRBN towards repositioning radiography at the top of health profession in Nigeria, more still need to be done on enforcing implementations by relevant stake holders.

On the effort of RRBN in regulating education and training, 27 (40.9%) commended positively. This

result is similar to the findings of Dubin (1971) cited in Utin [1] where he stated that the Student Affairs Division of the North Atlantic Treaty Organization (NATO) held a Symposium in England in 1970 and came out with a conclusion that without advancement, upgrading and updating in the education of a profession, it would end towards professional limbo or ultimate obsolescence. The research findings agrees with a research conducted by Ugwu et al [9] who found that our facilities were not adequate enough to stimulate effective teaching and learning. This opined that adequate effort towards education and training by RRBN will show a rapid flare of light in the status of the profession in Nigeria.

The regulatory body can take a giant step by developing a postgraduate scholarship scheme for its first class products from the various Universities across the country to pursue postgraduate studies either abroad/and or locally in order to develop manpower need of the profession in the academia. Also, the RRBN could promote the Institute of Radiography to a professional postgraduate school where radiographers can acquire professional postgraduate degrees for advancement in their career pathways.

All the respondents agreed to be aware of the professional code of conduct provided by RRBN, how important the professional code of conduct was and equally agreed that the professional code of conduct has enhanced radiography practice in Nigeria. These findings are similar to that of Luntsi et al [8] on the status of professional ethics among radiographers in North Eastern Nigeria who found that there was high level of knowledge and compliance to professional ethics among Radiographers in the study area. However, they suggested that more needed to be done on continuous professional development as regards to professional ethics. This could be because no radiographers in this part of the country have been subject to litigation before.

Numerous challenges confronting the profession were enumerated by the respondents. These findings are in agreement with those of

[7,10,12,13, 14] where they stated in their various studies that radiography is mothered with lots of challenges in Nigeria. This entails that despite radiography profession attaining full professional recognition in 1987 with RRBN as the regulatory body in Nigeria, the profession still faces lots of persistent challenges in Nigeria. This calls for adequate attention from RRBN to invoke its powers and enforce all the necessary regulations to empower radiographers to overcome these challenges.

The cause of these persistent challenges as were enumerated in this study, were similar to those reported in Eze et al [10] and Adejo [13] who reported the causes of the challenges persistent in the profession as were a problem of the attitude of practitioners towards their self esteem, professional image and quest for quick money. This calls for a drastic measure among the stakeholders and the regulatory body in order to mitigate these persistent challenges. The respondent's opinions on ways to overcome the challenges were centered basically on the regulatory body.

Table 1: Demographic Profile of the respondents

Demographic	Items	Frequency	Percentage (%)
GENDER	MALE	42	63.6
	FEMALE	24	36.4
	TOTAL	66	100
AGE RANGE	31-40	45	68.2
	41-50	9	13.6
	51-60	12	18.2
	61 AND ABOVE	0	0
	TOTAL	66	100
	DCR/DIR	15	22.7
EDUCATIONAL QUALIFICATION	B.RAD	42	63.6
	M.SC AND ABOVE	9	13.6
	TOTAL	66	100
YEARS OF EXPERIENCE	10-15	27	40.9
	16-20	24	36.4
	21 AND ABOVE	15	22.7
	TOTAL	66	100
	TERTIARY HEALTH CENTRE	39	59.1
TYPE OF HOSPITAL OF PRACTICE	SECONDARY HEALTH CENTRE	27	40.9
	PRIMARY HEALTH CARE CENTRE	0	0
	TOTAL	66	100
	NORTHWEST	9	13.6
GEOPOLITICAL ZONE	NORTHEAST	6	9.1
	NORTHCENTRAL	51	77.3
	TOTAL	66	100
	SENIOR RAD.	18	27.3
RANK	PRINCIPAL RAD.	27	40.9
	CHIEF RAD.	6	9.1
	NOT SPECIFIED	15	22.7
	TOTAL	66	100

KEY *DCR= Diploma College of Radiography London *DIR= Diploma Institute of Radiography *B.RAD = Bachelor of Radiography *M.Sc = Master of Science

Table 2: Impression of Respondents about RRBN and their compliance to code of Practice

Information	Rating	Good	Poor	Total
Adequacy of regulation by RRBN	Frequency	60	6	66
	Percentage	90.9	9.1	100%
Radiographers	Frequency	63	3	66
Compliance to Code of Conduct	Percentage	95.5	4.5	100 %
Aware of Professional Code of Conduct		Yes	No	
	Frequency	66	-	66
	Percentage	100	0.00	100 %

Table 3: Major Challenges of Radiography Profession

Challenges	Frequency	Percentage (%)
Antagonism about role extension by the radiologist	7	10.6
Few university offering post graduate programmes	5	7.6
Poor remuneration	3	4.5
Low level of manpower	4	6.1
Lack of scholarship scheme in the profession	2	3.0
Frequent equipment breakdown	10	15.2
Limited scope of practice	5	7.6
Inactive professional body	3	4.5
Lack of cooperation between radiographers	2	3.0
Board concerns with money (high licensing fee)	4	6.1
Limited continuous clinical based courses and training	6	9.1
Lack of professionalism	3	4.5
Lack of manpower	4	6.1
Presence of quacks in the profession	6	9.1
Issues with nomenclature (Rad/MIS)	2	3.0
Total	66	100

Key

Rad: Radiographer

MIS: Medical Imaging Scientist.

Table 4: Major Causes of these Challenges

Major causes	Frequency	Percentage (%)
Fear by the radiologist of a possible takeover of role	4	6.0
Lack of lecturers for postgraduate courses	3	4.5
Lack of proper job assessment by the government	2	3.0
Few universities offering radiography programmes	11	16.7
Poor leadership in the profession	5	7.5
Inactive professional body	4	6.1
Lack of unity in the radiology unit	5	7.6
Specialization is uncommon	3	4.5
Procurement of inefficient equipment	6	9.1
Lack of unity among radiographers	3	4.5
Insufficient financial support	5	7.6
Lack of motivation and communication	6	9.1
Exorbitant continuous professional training	3	4.5
Systemic failure	2	3.0
Poor recognition of the profession	2	3.0
Weak regulatory body	2	3.0
Total	66	100

Table 5: Ways to Overcome these Challenges

Ways to Overcome these Challenges	Frequency	Percentage (%)
The regulatory body should improve towards education and training.	5	7.6
The regulatory body should provide scholarship scheme.	4	6.0
Radiographers should improve and upgrade educational level locally/abroad.	3	4.6
Procurement of up to date x-ray equipment.	2	3.0
The regulatory body should get strong and active.	2	3.0
Radiographers should unite and cooperate with each other.	5	7.6
Professional ethics should be well practiced.	5	7.6
Financial support from the regulatory body.	3	4.6
Up to date training and retraining courses should be established.	4	6.0
Regulatory body should ensure radiographers are treated based on global practice.	5	7.6
Specialization should be encouraged.	5	7.6
Radiography training should be less expensive.	5	7.6
The educational curriculum should be review.	6	9.1
The regulatory body should subsidize CPD fees.	6	9.1
Unity between elderly radiographers and young radiographers.	3	4.5
Subsidized registration and licensing fee.	3	4.5
Total	66	100

Key *CPD: Continues Professional Development

These findings are similar to that of Adejoh [13], who opined that for Radiography profession to improve, there is the need for more schools, higher qualifications, self-confidence and enlargement of skill base by the Radiographers. This also concurs with the findings of Griffith [15] who suggested the possible way forward as greater leadership, development of greater research strategies, greater empowerment and developing new working paradigms. Radiographers should realize that the profession is taking a new phase shift where radiographers are assuming new professional status of consultancy and come to terms with the ideas of these change, unite to forge a formidable professional base for the future of the profession.

Conclusion

Findings from this study revealed that radiographers are aware of the challenges militating against their profession and have valid ideas on how the challenges could be tackled. Also, there is need for increased effort by the regulatory body towards mitigating the persistent challenges facing the profession over the years

Recommendations

- The regulatory body (RRBN) could improve on its duties by: Encouraging radiographers to improve and upgrade their educational level, making their presence available in the six geopolitical zones/ States, making sure that the professional ethics is well practiced by constant monitoring of practice in all hospitals/ diagnostic centers.
- Radiographers should be encouraged to engage in continuous professional development programmes like attending conferences, seminars in order to keep abreast with the current trend in the profession.

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