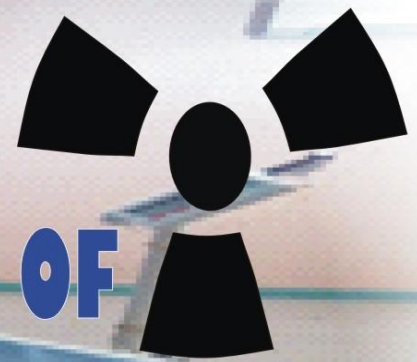


JOURNAL OF THE ASSOCIATION OF RADIOGRAPHERS OF NIGERIA

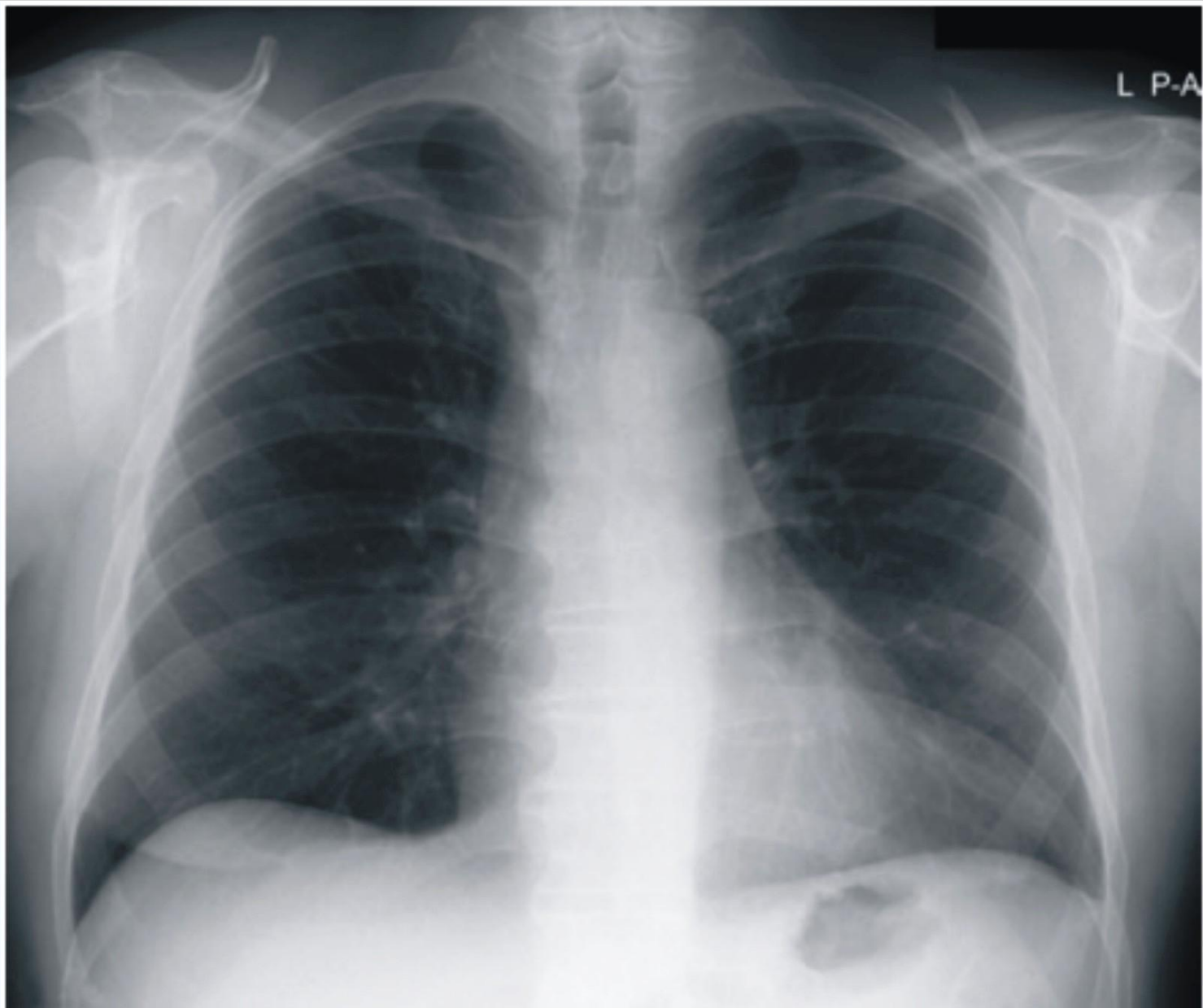


ISSN: 1115- 7976

Vol 31, Issue 1, November, 2017

The Official Journal of The Association of Radiographers of Nigeria

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Journal homepage: www.jarnigeria.com

Contributions of Practicing Radiographers to Research in Nigeria

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Received: 14th June, 2017. Received in revised form: 12 September, 2017. Accepted: 16 October, 2017

ABSTRACT

Background: Research has been identified as a key component that ensures high level of professionalism among health practitioners, especially in the field of imaging science. A measure of research engagements among professionals, particularly practicing radiographers, for the attainment of international standard is very important, which has not been so far ascertained in the country.

Objectives: To assess the contributions of practicing radiographers to research, and to determine the extent to which research findings are being integrated into the current day practice.

Methods: A 16-item, self-administered, structured, paper-pencil and web-based questionnaire was used to assess 113 practicing radiographers with work experience graded from < 1 year to > 25 years. Respondents were recruited via volunteerism. A 68.0% (n = 77) return rate was recorded for questionnaires. Data obtained were recorded, grouped and tabulated. **Results:** A good proportion (98.23%) of the respondents identified the need for research in the improvement of current day clinical practice. About 33.63% conducted research while 10.62% published their findings in peer-reviewed journals. Also, 91.15% of the respondents read Radiography journals while 73.79% applied the results in their day-to-day clinical practice.

Conclusion: The results obtained in the present study showed that research activities among practicing Radiographers in Nigeria is low, despite the claims of improved application of research results into practice. More efforts by academic mentors and relevant authorities is desirable to encourage younger radiographers to venture into research.

Keywords: Evidence-based practice, Nigeria, practicing radiographers, imaging, Research

Introduction

A Radiographer is a trained health professional who performs medical imaging by producing high quality images used to diagnose and treat injury or diseases[1]. Radiographers can be loosely categorized as academia group and clinical group. The modern day Radiographer therefore, needs to be well trained and versatile to function effectively in the diverse and rapidly-changing healthcare sector [2]. In order to cope with the increased responsibilities of the modern day clinical imaging practice, the National Health Services of the United Kingdom(UK) in the year

2000, announced the establishment of consultant radiographer practitioner status, whose primary functions are research and evaluation[3].

Research can be viewed as a process of arriving at dependable solutions to problems through planned and systematic collection, analysis and the interpretation of data with resultant increase in man's knowledge and understanding [4]. This has been identified as an important building block for Radiographers and other health care professionals to expand their domain and knowledge base [5].

Research in Radiography provides input into various activities such as knowledge generation, the provision of core radiographic practice, evidence-based radiography, improvement in patient care and ensuring a high level of professionalism [6]. However, evidence-based practice (EBP) is an approach in the healthcare delivery system where professionals use the most appropriate information available to make clinical decisions for the patients [7].

Currently, EBP is the trend in healthcare with emphasis on quality assurance necessary for radiographers to always participate more in research activities, evaluate their findings and base their practice on current, relevant and the best possible outcome [8]. To this end, continuous professional development in Medical Radiation Science (MRS) is relevant to ensure that professionals are updated about the evidence-base in the field [9].

However, questions have been raised about the viability and sustainability of the MRS evidence-base going forward due to low publications, citation counts and h-index (the number of articles with a particular number of citations) [9]. Since research is the main focus of EBP as well as advancement of knowledge in the medical imaging profession, it therefore becomes very important to regularly study and note the contributions practicing Radiographers to research in the medical imaging profession in Nigeria.

Material and Methods

This was a prospective, non-experimental study that involved the use of a pre-tested and validated, 16-item paper and web-based self-structured questionnaires. This instrument was used to obtain responses from 113 practicing radiographers with work experience graded from <1 year to >25 years. The respective work environments covered government owned facilities, private diagnostic centres as well as other non-governmental establishments in the country. The questionnaires returned were 77 (68.0%). Data obtained were recorded, grouped and tabulated (Tables 1 and 2).

Simple percentages were used to present the results obtained.

Results

The results of this survey revealed that while over 80% of respondents recognize the role of research in EBP, and over 90% read articles in Radiography and Imaging Science journals, only about 33% have conducted any research in the field. Out of this some 12% have published their findings in a peer-reviewed journal. This result is notwithstanding the fact that a greater majority (98%) of the respondents agreed that research is key to improving standards in imaging practice. For respondents who had not conducted research, excessive workload (34.67%) and lack of encouragement (18.67%) were the two major reasons.

For those who had conducted research but had not published their findings, the major factors were insufficient funds (38.46%) and poor encouragement (30.77%). Also, reasons for the non-integration of research findings into imaging practice as inferred by the respondents were that most research findings were actually poor (18.52%), and also that research findings were difficult to adapt to local conditions (25.93%). Some details of responses are shown in Table 1. A comparison of research activity amongst radiographer was made between the present study and previous ones as shown in Table 2.

Discussion

The practicing radiographers (respondents) have had some forms of research education and participated in research as one of the requirements for obtaining a degree in Radiography. However, the results of the present study showed that only 33.63% of the respondents participated actively in research after graduation while only 10.62% published their findings in peer-reviewed journals. These findings reflect the observations in Table 2, that for most radiographers, the only research undertaken was for a course requirement.

This paucity of research participation and publication in Radiography was observed in the present study as well as among Medical Radiation Scientists (MRS) worldwide [9]. This is a source of concern considering the fact that the advancement in best practice depends on accelerating research participation for the

generation and improvement of knowledge in practice. Our findings also revealed that the respondents identified the importance of research in the improvement of the imaging practice and the role of research in EBP as reflected in Table 1 to be 98.23% and 87.62%, respectively.

Table 1: Respondents' views on research

Questions	Responses	
	Yes	No
Have you heard about the role of research in evidence-based practice?	99 (87.62%)	14 (12.38%)
Do you think research can improve the current standard in imaging science?	111 (98.23%)	2 (1.77%)
Have you conducted any research (not as a course requirement) in Radiography?	38 (33.63%)	75 (66.37%)
If you have conducted research, have you ever published in a peer-review journal?	12 (31.57%)	26 (68.42%)
Do you read articles in Radiography journals?	103 (91.15%)	10 (8.85%)
Do you apply the results of published research in your practice?	76 (73.79%)	27 (26.21%)

Table 2: Studies on research activity among radiographers

S/N	Authors	Study Group	Year	Region	Research Activity (%)
1.	Challen	Radiographers	1996	UK	21.0
2.	Ohagwu	Radiographers	2010	Nigeria	36.1
3.	Benard	Radiographers	2013	Ghana	10.0
4	Present study	Radiographers	2016	Nigeria	33.6

The major reasons cited for not participating in research in the present study, were excess workload (34.47%) and lack of encouragement (18.67%). However, personnel who had conducted research but did not publish their findings cited insufficient funds (38.46%) and inadequate

encouragement (30.77%). These results agree with the earlier published reports [2, 10] citing lack of motivation, encouragement and insufficient funds as reasons for the low research output from the Ghanaian and Nigerian Radiographers, respectively.

The results also showed that most of the respondents read Radiography journals (91.15%) while about 73.79% integrated research results into their daily practice. These findings however, appear to contradict an earlier work where it was inferred that there was poor integration of research findings into practice [2]. The latter appears to match our findings which demonstrate that respondents were unable to adapt and integrate research findings to local conditions (25.93%) claiming poor research results (18.52%) as reason. Our results however, differed from the preceding work which put it that high workload and no interest to try new things were the major reasons for not integrating published research findings in practice.

Conclusion

From the results obtained in the present study, research activity among practicing Radiographers in Nigeria was low, despite the claims of improved application of research results into practice. Further research is required to confirm this.

Acknowledgement: The authors are grateful to all Radiographers in and outside the country who participated in this survey, for their time and contribution.

Authors declare no conflict of interest.

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How to cite: Esop JE, Paulinus SO, Egbe NO. Contributions of Practicing Radiographers to Research in Nigeria. *J Assoc Rad Niger*, 2017; 31 (1): 45– 48