

African Journal for Physical Activity and Health Sciences (AJPHEs), Vol. 22 (1:1), March 2016, pp. 98-107.

Factors impacting on radiographers' emigration and career exiting in KwaZulu-Natal, South Africa

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(Submitted: 15 October 2015; Revision accepted: 04 March 2016)

Abstract

The world health organisation has raised concerns on the continued global shortage of radiographers. The shortage in South Africa is hard hit by the emigration of these professionals to other parts of the world. The changing health care requirements and disease burdens have raised the need for the health professionals globally. According to records from Kwazulu-Natal (KZN) department of health on the 8th August 2013, there were 427 vacancies in the year 2008, 445 vacancies in 2009, 447 in 2010, 79 vacancies in the year 2011 and 81 vacancies in 2012 for radiography in KZN. Some vacancies in 2011 and 2012 were frozen hence low number of vacancies. This study aimed at exploring the factors that impacted on emigration and career exiting of radiographers in KZN. A quantitative, descriptive survey design was used. The online questionnaire was completed by radiographers that had emigrated and those had left the profession. The findings showed that certain factors impacted on emigration and career exiting of radiographers. In order to stem this problem it is suggested that there is a need for career pathing, recognition of all qualifications obtained in radiography as well as a reduction of working hours so as to reduce social isolation and the harmful effects of radiation. These could help to improve the negative perception of radiography profession hence improving retention of professionals in the province.

Keywords: Radiography, radiographer, emigration, career-exiting.

How to cite this article:

Thambura, J. & Amusa, L.O. (2016). Factors impacting on radiographers' emigration and career exiting in KwaZulu-Natal, South Africa. *African Journal for Physical Activity and Health Sciences*, 22(1:1), 98-107.

Introduction

Radiography is one of allied professions that is rapidly growing in medicine (Ohagwu, Nwanko & Eze, 2012). Radiographers are employed by government and private hospitals.

In South Africa, Radiography is offered at eight higher educational institutions. Namely; Durban University of Technology, University of Pretoria, Medical University of South Africa, University of Johannesburg, Central University of

Technology, Nelson Mandela Metropolitan University, Tshwane University of Technology and Cape Peninsula University of Technology (CPUT). The undergraduate qualifications are either a three-year diploma or a three years bachelor's degree. In addition, there are postgraduate qualifications such as; honours degree, B-Tech degree, Master's degree, M.Tech, D-Tech degree, Doctoral degree or Ph.D. in Radiography. Many radiographers in South Africa are leaving the public service for private practices employment and to other countries (Society of Radiography of South Africa, 2008). Radiographers are also changing to other profession (Makanjee, Hartzer & Uys, 2005). The KwaZulu-Natal (KZN) Department of Health reported that in 2010, there were 1,621 vacant radiography posts in South Africa with 436 of these in the KZN province, giving a vacancy rate of 49% for the province (Annual Performance plan, 2010). The 49% vacancy was a great shortage of the professionals in healthcare system.

Recruitment and retention should meet the population needs to better service delivery (Page & Willey, 2007). In 2004, there was drastic increase in the number of vacant posts in both therapeutic and diagnostic radiography in Hertfordshire, United Kingdom due to poor retention strategies (Vosper, Price & Ashmore, 2005). The health strategic framework on improvement of quality healthcare might not have been realised due to retention challenges (Makanjee, Hartzer & Uys, 2005). This study aimed to investigate the perceived factors causing retention challenges in the radiography profession leading to emigrating and exiting of the professionals and factors to improve the retention strategies. This study is also relevant and significant for the Department of Health and Department of Public Service Administration – especially as the government is strategising to implement the National Health Insurance initiative, which is intended to improve public health service delivery.

Methodology

Research design

A descriptive survey with a cross-sectional design was used to select the participants (Brink, 2010). The researchers used this method to reach the targeted number of respondents. The data were also collected at that given time across the targeted population.

Target population and sample selection

The study focused on radiographers who had previously worked in KZN province and emmigrated as well as those who left the radiography profession.

This study engaged the four disciplines of radiography profession: diagnostic radiography, nuclear medicine, radiotherapy and diagnostic ultrasonography.

Convenient sampling method was used to select the participants. Due to inaccessibility of the respondents the snowball method was used; where the researchers were introduced to the respondents by either a colleague or a known mutual friend.

Instrumentation and data collection procedure

Ethical clearance was obtained from Durban University of Technology. Prior to data collection, the study was approved by the Provincial Ethics Committee at KwaZulu-Natal Department of Health. The researchers compared the content of the questions asked in accordance with the questionnaire and the objectives of the research by conducting a pilot study to ensure the reliability of the instrument. The questions were then adjusted to ensure that the answers to the questionnaires were relevant to the questions asked. In addition, the researchers consulted experts in the field on the content of the questionnaire and its validity. The questionnaire also included a letter of information and consent which was sent to both radiographer emigrants and those that left the radiography profession. The online link for the questionnaire had questions on demographic details and questions on the variables. There was tracking of completed questionnaires. A follow-up emails was sent on a regular basis as a reminder to the respondents. Responses were kept anonymous and confidential.

Data analysis

The data were analysed with SPSS version 21.0.8. Descriptive statistics using frequency, cross-tabulation and bar graphs were used to represent the data and the results.

Results

The number of both emigrants and those who left the profession was slightly lower than the statistically acceptable number. The 19 radiographers that had left the professions were contacted, and 16 (84 %) responded. Emigrants ($n=29$) were also contacted and 20 (69 %) responded. The 81.2 % ($n=13$) respondents were female and 18.8%, ($n=3$) were males: All of the emigrant respondents were female.

Demographic variables of the respondents

This illustration shows the age at which the respondents left radiography profession or emigrated.

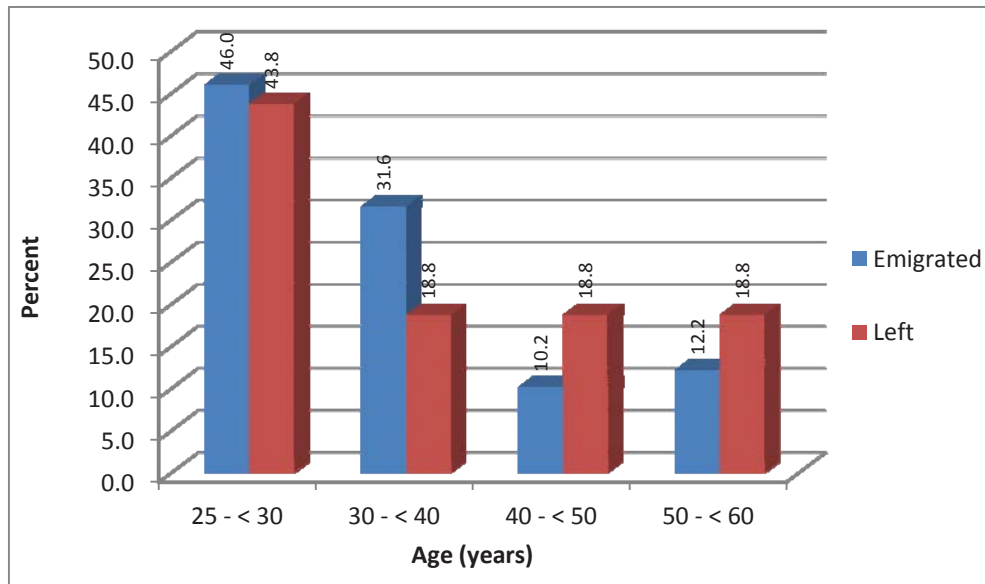


Figure 1: Age of the respondents

Radiographers that left the profession: Majority of emigrants who had left the profession was between the age of 25 and 30 years. There appear to have almost a similar trend of both emigrants and those who left the profession. In both cases, majority were below 40 years old.

Duration of employment of radiographers

This section shows the experience of the radiographers that had left the profession and those who had emigrated before leaving work at KZN.

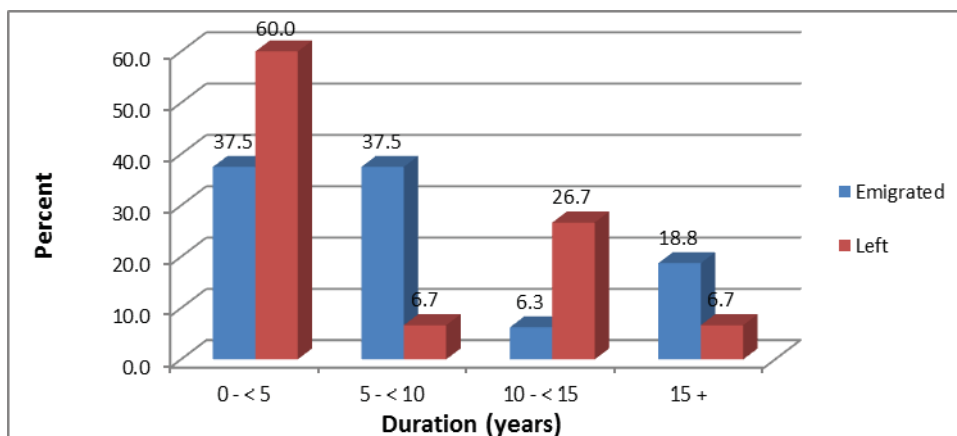


Figure 2: Work experience of the emigrant and radiographers that left the profession

In the category of the radiographers that left the profession, majority left with an experience below 5 years. Similarly, majority that emigrated left with an experience below 10 years.

Qualifications of the respondents

This section compares the qualifications of the emigrants and the radiographers that left the radiography profession at the time they worked in KZN.

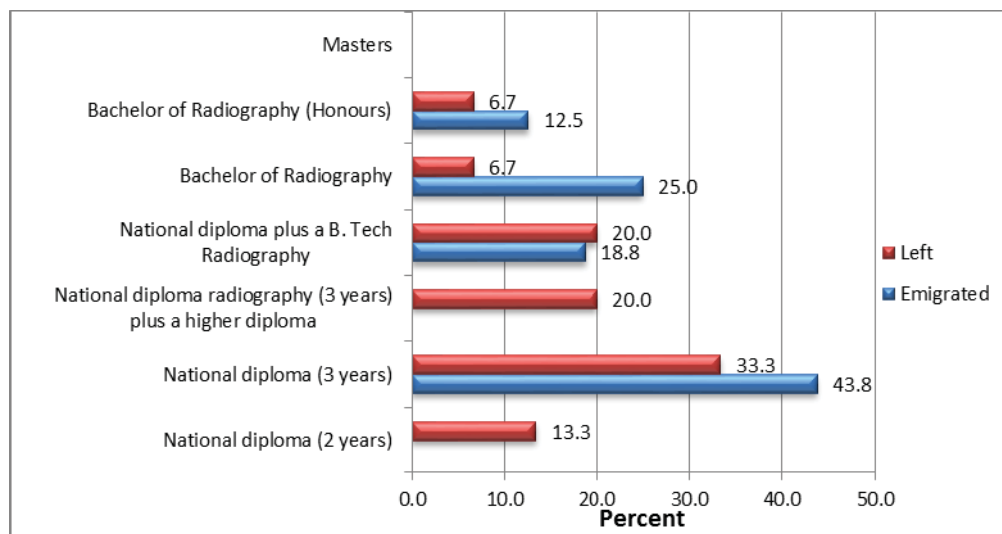


Figure 3: Qualifications in Radiography

Radiographers that left the profession: It is noted that 31%, ($n=5$) of the respondents that left the profession had a three year National Diploma and 18%, ($n=3$) had a B-Tech:Radiography plus a National Diploma.

Radiographers that had emigrated: Nine (45%) of the emigrants had obtained a 3 year National Diploma and 25%, ($n=4$) had a 3 year Bachelor of Radiography. This section established if the salary, working condition and stress at work had impact on the emigration or career exiting of radiographers.

Table 1: Expectations of radiographers in KZN

Expectations	Left the profession		Emigrants	
	%	N	%	N
Better pay	45.5	5	68.8	11
Good working conditions	36.4	4	18.8	3
Stress free working environment	18.2	2	100.0	16

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Radiographers that left the profession: Five (45.5%) respondents expected good pay, four (36.4%) expected good working conditions and two (18.2%) stated that they had expected stress free environments.

Radiographers that had emigrated: The majority of emigrant radiographers (68%) expected better pay while 18.8% expected good working conditions.

Radiography and other careers

This section compared lifestyle of radiographers and other occupations and professions the radiographers would opt to change to. Their views about radiography as a profession are shown in figure 4.

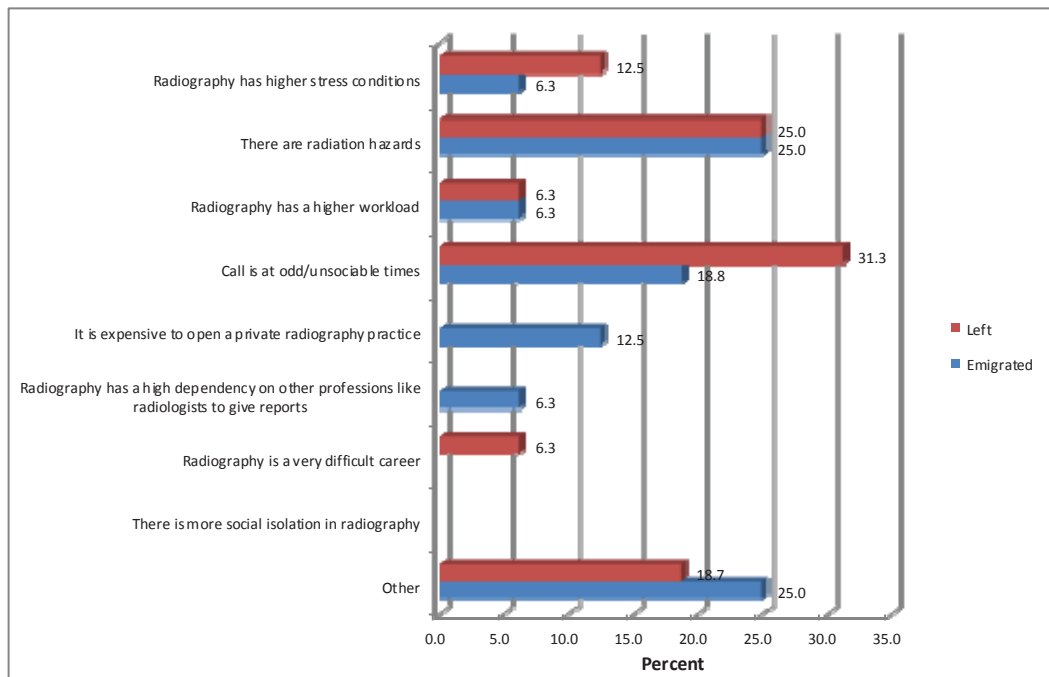


Figure 4: Comparison between radiography and other careers of choice.

Radiographers that left the profession: In spite of radiography being their original career of choice, respondents identified negative aspects. Five (31.3%) participants stated that radiographers have calls at odd/unsociable times and four (25%) stated that radiography has radiation hazards. The fact that radiography has higher workloads and is a very difficult career was mentioned by one (6.3%) participant. Three (18.7%) participants identified factors such as poor remuneration, demoralisation from peers and understaffing as being negative aspects of radiography compared to the careers they had moved to.

Radiographers that had emigrated: Four (25%) of the emigrants stated that there were radiation hazards in radiography, while 18.8% ($n=3$) identified calls at odd hours as being negative factors. Three (12.5%) said it is expensive to open a private radiography practice, while one identified a high dependency on other professions and one more respondent mentioned the heavy workloads. Four participants stated other factors such as lack of career outlet and professional development as well as poor remuneration as negative aspects of radiography.

Discussion

The majority of emigrants were between ages 25 and 30. It can be deduced that most of the emigrants had left South Africa soon after graduating and completion of community service. This trend happens in other countries, for example in 2008 young radiographers in Nigerian had emigrated (Ugwu, Ahamfule & Nwobi, 2008). Emigration at a young age would lead to loss of young professionals in the profession, which would result in a severe shortage of radiographers after the majority of the working age group retires which is a highly productive age group. Productivity decreases after the age of 50 (Skirbekk, 2003). It could be speculated that the high rate of emigration within this young age group may be associated with the fact that young people had less family commitments or long term credit maintenance which would influence emigration. It was revealed that the emigration of KZN radiographer took place among those with ten years of experience which meant that the very productive age was not retained. This could be the cause of the compromised service delivery and the shortage of radiographers in KZN.

This study has also revealed that majority of radiographers that had emigrated and those who had left the profession were in possession of only three years diploma qualification. School et al. (2005) found that lack of career pathing, social and personal isolation were the main reasons for poor recruitment and retention of radiographers in South West Victoria, Australia. This is also evident in KZN. Radiographers in KZN expected the profession to offer good pay, good working conditions and a stress free working environment. The emigration and career exiting influenced the expectations that were not met. If employee's expectations are not met, it can negatively affect the level of satisfaction. A significant number of the radiographers had emigrated (68.8%). The emigration could have been caused by the dissatisfaction at the work place. Vosper, Price and Ashmore (2005) found that although there was job availability in England, newly qualified radiographers could not recommend radiography as a profession. Similarly in Nigeria, Ohagwu, Nwankwo and Eze (2012) found that very few students had radiographers who they could look up to as a role model in the profession. This was due to negative factors such as poor societal recognition, poor lifestyles, a negative professional image of radiographers, dress code as well as a lack of confidence and professional pride. Lovegrove and Price (2002)

confirmed that the shortage of radiographers in U.K was due to lack of resources for training, lack of career recognition and progression. The salary could also be a factor as it was found by Chan (2007) who also reported that low morale and poor financial rewards were the challenges in attracting radiographers in Australia. The finding at KwaZulu-Natal agrees with of the findings at United Kingdom and that in Nigeria.

Contrary to radiography being a career of choice, both radiographers that emigrated and those that left the profession identified factors such as; poor remuneration, overdependency on other professions, the high workloads and understaffing, lack of opportunities for career and professional development, and high stress levels which could be the factors that motivated KZN radiographers to consider changing to other careers . Vosper ,Price and Ashmore (2005) found out that radiography graduates in UK would not recommend radiography because of poor remuneration, poor professional image, poor respect from other hospital staff, ungrateful patients and insufficient staff number in departments, although there were job availability. Simiarly, comprehensive report compiled in Northern Ireland described radiography as a career lacking opportunities for professional progression (Northern Ireland, 2002). Radiographers in Ireland also remained static in their grading system for a number of years with no progression opportunity which was a discouragement. There was also career path limitation and poor profession representation which meant lack of inclusion in decision making and in communication processes. This is consistent with the findings of the present study, where it was found that there is high dependency on other professions. The radiography profession in KZN was highlighted as having more social isolation and very difficult career to study compared to other professions that radiographers may have opted to. The respondents identified other factors such as radiation hazards, high risk of contact with nosocomial infections, lack of remuneration as well as lack of recognition of additional qualifications in the profession progression (such as certification of specialities like CT and MRI). Radiographers worked under high stress levels due to long hours of working with high risk equipment that produces harmful radiation and always dealt with ill and stressed patients. These conditions exposed the radiographer to fatigue and sometimes infertility due to radiation. (Rajan, 2012).

Although radiography is perceived as having more disadvantages than other prospective professions of choice, the pay is not comparable. It can be concluded that there was a need for career pathing and recognition of all qualifications obtained in radiography as well as a reduction of working hours so as to reduce social isolation and the harmful effects of radiation. These could help to improve the negative perception about radiography as a profession.

Limitation of the study and conclusion

This study was carried out only in KZN province; therefore the findings cannot be generalised. A similar study can be carried out in other provinces to confirm the results.

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