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Radiographers' knowledge, attitude and challenges on pain management

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Abstract

Introduction Pain, an unpleasant sensory and emotional experience linked with tissue damage, is the most common medical complaint, and diagnostic imaging plays a major role in the multidisciplinary approach to pain management. Integral to the diagnostic radiographers' role is good communication skills, appropriate patient care, and competent patient positioning of patients especially patients in pain in the process of producing accurate radiographic images of diagnostic quality.

Purpose The aim of the study was to investigate the attitude and knowledge base of the diagnostic radiographer and outline policies and challenges with regard to pain management at the research site.

Method A descriptive survey method was used in the administration of a questionnaire to 29 practicing radiographers.

Results Twenty-eight (97%) of the questionnaires were returned though not all questions were completed by all the respondents. The results of the study established that there is limited knowledge of pain management among this cohort of radiographers. The analysis revealed that 71% of the radiographers surveyed had no formal training on the subject and 50% of the respondents accessed the internet as a source of information on pain management. The study also showed the absence of pain management policies in the study sites.

Conclusion The recommendations of this single site study are that regular in-service training programmes should be implemented for radiographers on this specific topic. Appropriate policies on pain management should be developed in order to enhance radiographers' knowledge of pain and improve the quality of care to the patients attending this regional hospital.

Keywords

Pain management; diagnostic radiographer; diagnostic imaging; patient care

Introduction

Pain can be classified as acute or chronic^[1] and is the most common complaint in medicine. It is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage^[2]. Pain management is a method of reducing pain to tolerable levels and can be simple or complex care. The management approach is described as adequate if the patient experiences some degree of pain relief^[1]. Pain management in diagnostic imaging requires that a healthcare team has awareness of pain and employ a wide range of skills and techniques (such as communication skills; care before, during and after the procedure and the different ways to position patient in pain).

A study conducted by Cornuelle^[3] identified communication as an important part of a radiographer's role. Since radiographic imaging procedures are relatively short in duration, a radiographer must be able to establish a good rapport with a patient fairly quickly in order to

achieve procedural cooperation. Radiographers in diagnostic imaging must have good communication skills and be aware of pain when they care for patients before, during and after procedures. Consideration of pain during the positioning phase is of particular importance.

A good diagnostic result requires accurate patient assessment^[4] including the assessment of the characteristics and physical basis of pain which according to Cleary^[5] is an important element of proper pain management.

Purpose

The study aimed at investigating and understanding the knowledge, attitude and challenges of radiographer in patients' pain management with the view of improving the overall multidisciplinary task of patient pain management strategies.

Methodology

A descriptive survey design was employed using the convenience sampling method. The target group were all

practising radiographers at the diagnostic imaging department of a large hospital in Ghana. Twenty nine (n=29) radiographers were invited to participate in the study but only 28 returned completed questionnaires. Three radiographers were conveniently selected for a pilot study which was conducted to test the reliability and validity of the measuring instruments. The research tool was a questionnaire since it provided easy access to data needed to answer the research question. The questionnaire was carefully designed to avoid ambiguity, bias, long and boring sentences. It was a Likert scale that included both closed and open-ended questions and was self-administered. There were five sections to the questionnaire i) demographics, ii) knowledge on pain management and assessment, iii) attitude towards pain management, iv) pain management policies, and v) challenges facing radiographers. The data were analysed using the Statistical Package for Social Sciences (SPSS) version 16 software programme. The results are presented

in the form of graphs, tables and charts. Approval for the study was obtained from the research ethics committee of a higher education institution. The ethics approval was supported by written permission for the study to be conducted at the study site. All participants gave prior informed consent to participate in the study.

Results

The respondents included all grades of radiographers in the age range of 21-50 years.

Knowledge on pain assessment

In all 23/28 (82%) (Table 1) had heard about pain management at some point during their professional practice. The source of information on pain from the internet was 14/28 (50%). Twenty-five percent (n=7) of the respondents indicated that in their opinion radiographers have a role in pain management. However, 93% (n=26) were of the view that the management of pain requires a multidisciplinary approach.

Attitude towards pain management and its policies

When asked about the assessment of pain, 36% (n=10) indicated that the use of appropriate positioning could help to alleviate the pain during the procedure. Also 36% (n=10) felt that good communication skills are necessary for assessing pain whereas 25% (n=7) of the respondents specified that asking questions, ob-

servation and palpation are useful modes of assessing pain in patients.

Challenges of pain assessment

In all, 71% (n=20) indicated they had received no training in pain management (Table 2). However, 64% (n=18) were of the view that radiographers' role in pain management should be emphasised whereas 75% (n=21) indicated that in their opinion radiographers have no role. Only two (7%) had any knowledge of the availability of a policy for pain management in the hospital and 26 (93%) expressed the need for pain management policies in the hospital.

Discussion

Knowledge on pain management

Although 82% (Table 1) of the respondents have heard about pain management, only 29% had received some training on this topic. This is consistent with the findings of Eraut, et al.,^[6] indicating that formal education and training provides only a small part of what is learned at work by professional staff. The knowledge that the respondents had was found to be limited and lacked any specific training in pain management. Therefore as part of continuous professional development, training in the area under discussion is recommended.

Gunnardortiv, et al.,^[7] confirmed that continuing education could be provided through seminars (conferences), journals

(articles) and the internet (including information sites and on-line programmes) as indicated by 50% of radiographers in this study who used the internet as their source of information on pain management. The internet is a key source of education among staff and is widely accessed to fill the knowledge gaps, particularly where formal training did not cover a specific area that is found to be needed in professional practice. It is however necessary that radiographers learn how to discriminate the peer reviewed and evaluate information from the poor quality information that is available on the internet^[7].

From the findings of this study 93% of the respondents were of the view that all health workers are involved in pain management. However, 25% think it is the role of a radiographer. This was found to be consistent with Ferrier's^[8] findings that indicated healthcare professionals worldwide have been very committed to the management of pain until a final treatment is administered to a patient for relief. Taylor et al.,^[9] and Davies^[10] also indicated that a team of healthcare professionals is often needed in patient care, especially in pain management. Ineffectiveness from any health worker at the time needed could compromise the overall approach to pain management.

Attitude towards pain management and its policies

Table 1: Respondents who have heard about on pain management.

Response	Number and percentage of respondents per professional rank					Total
	Radiographer	Senior radiographer	Principal radiographer	Chief radiographer	Technical officer	
Yes	4	4	1	2	12	23
% of Total	14.3%	14.3%	3.6%	7.1%	42.9%	82.1%
No	2	0	0	0	3	5
% of Total	7.1%	.0%	.0%	.0%	10.7%	17.9%

Table 2: Training in pain management respondents

Training in pain management	Number and percentage of respondents per professional rank					Total
	Radiographer	Senior radiographer	Principal radiographer	Chief radiographer	Technical officer	
Yes	0	1	1	1	5	8
% of Total	0.00%	3.60%	3.60%	3.60%	17.90%	28.60%
No	6	3	0	1	10	20
% of Total	21.40%	10.70%	0.00%	3.60%	35.70%	71.40%
Total	6	4	1	2	15	28
% of Total	21.40%	14.30%	3.60%	7.10%	53.60%	100.00%

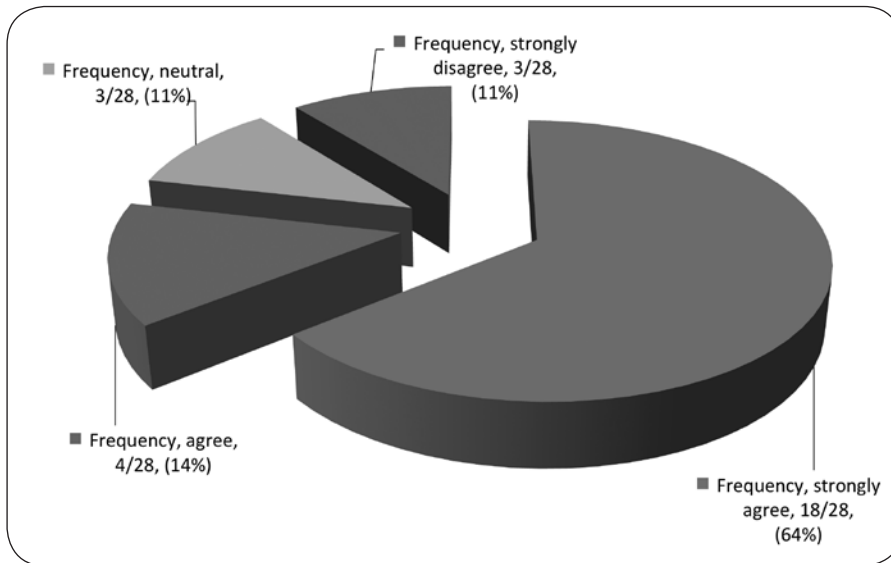


Figure 1: Emphasis of radiographers' role in pain management.

The study revealed that there is the need to emphasize the role of radiographers in pain management as 64% (n=18) were of this opinion (Figure 1). This is in line with Purandare^[11] who found that some healthcare professionals exhibit high levels of interest in pain management. The study demonstrated that most respondents have no knowledge of an available pain policy in the hospital and all were therefore in favour of acquisition of a policy on pain management. This confirms the finding of Kyei and Engel-Hills^[12] in a similar study conducted in the same hospital.

Though Cleary^[4] expressed that diagnostic imaging has a defined role in a patient with pain, it is unclear whether radiographers at the study site are aware of their role. With reference to the University of Florida Hospital policy procedure^[13], the policy guides health workers to provide a consistent and systematic approach in the assessment, treatment and documentation of patients who report with pain^[13]. Therefore for a regular and methodical standard of taking care of patients for imaging, protocols should be put in place as a guide at the study site.

Several policies have been outlined in this study and suggested to aid in radiographer's pain management. One of these is that there should be regular update training sessions for new radiographers recruited into clinical practice which will bridge the gap between the radiographers and allow regular flow of knowledge. Also, there should be organized seminars

on pain assessment and pain management to enable radiographers to improve their knowledge, skills and techniques in handling urgent and severe cases such as trauma. Again, standard protocols for assessing patients should be aligned before commencement of any diagnostic procedures. Policies concerning pain management should be documented and made available to all personnel in the radiology department.

Challenges in pain management

The study revealed that radiographers, as members of the multidisciplinary team, face several challenges in their effort to manage patients' pain. The challenges noted in the findings of this study were inadequate immobilizing devices, poor communication, appropriate positioning technique, inadequate education and time. These findings contribute immensely to the ineffectiveness of some radiographers as most of these challenges could have been dealt with if there were adequate immobilizing devices as well as training of staff on pain management. Personnel in the radiology unit could also help reduce patients' pain if they have appropriate and modern radiographic equipment that will enable them to produce quality images for good diagnosis and treatment. Most of the equipment used at the study site is very old thus the quality of images is affected.

Shrestha and Poulos^[14] explained that good communication between the health workers and patients could reduce pain levels. Folley, et al.,^[15] explained that

poor communication between patients and healthcare professionals could lead to under assessing by radiographers. Although Tabar, et al.,^[16] were of the view that pain can be reduced in mammography by immobilizing devices like cushions on the compression paddle, these immobilizing devices were found to be inadequate at the study site.

Continuous education activities could improve the radiographers' knowledge about pain and pain management, however the study findings indicated that education is a challenge in this hospital. Seminars, lectures and academic meetings were not organized to update the staff on such specific subjects as pain management.

Conclusion

The results of this paper indicate that a relatively large number of radiographers (71%) had no formal training in pain management but that 30% had received some form of training. Additionally, some of the radiographers who had formal training were those that had qualified more recently and also had the least number of years of working experience in managing and accessing various types of pain in their clinical practice or profession. It is apparent that most radiographers at the study site lack the requisite knowledge and training to properly assess and manage pain as part of their role.

The study established that there is lack of knowledge and formal training on pain management among most radiographers. Indeed, the topic of pain management is hardly emphasised in the radiology department because doctors and nurses are seen as the only health personnel capable of reducing patients' pain to tolerable levels. Communication, care of patient and appropriate positioning skills by radiographers were established as essentials in pain management in this study.

Diagnostic imaging establishes or confirms the pathological diagnosis and direct medical, surgical or radiological investigation. Appropriate knowledge, skills and attitudes towards pain, pain assessment and its management are needed to provide quality health care for patients. This must be based on the best available evidence to prevent patients from suffering harm.

References

1. Smeltzer, C. S. Bare, B.G. & Hinkle J. L.eds (2008). Brunner & Suddarth's Textbook of Medical-Surgical Nursing, 11ed, Lippincott Williams & Wilkins, 259-277.
2. Miguel, R. & Moffitt, L.H (2000). Understanding and Managing Cancer Pain: *Cancer Control* 7 (2).
3. Conuelle, D.C. (1998). Primary care research on low back pain: the state of the science. *Spine*, 23(1):4.
4. Cleeland, C. S., Nakamura, Y. & Mendoza, T.R. (1996). Dimensions of the impact of cancer pain in a four country sample: new information from multidimensional scaling. *Pain*, 267-273.
5. Cleary, F.J. (2000). Cancer Pain Management: *Assessment of pain* 7(2):1
6. Eraut M., Alderton, J., Cole, G. & Senker, P. (1998). Learning from other people at work. In F. Coffield (Ed.), *Learning at work*. Bristol: The Policy Press, 3(1).
7. Gunnarsdorttir, Donovan & Ward (2003). Interventions to overcome clinician and patients related barrier to pain management. *Nursing Clinic of North America*, 38 (1):419-434.
8. Ferrier, R. (2006). Quality of life: quality control, methods for managing pain, <http://www.rt-image.com/0710 Quality Control> [Accessed on 22/08/2009].
9. Taylor, C., Lillis, C. & Lemone, P. (1993). The art and science of Nursing care: Fundamentals of Nursing, 2nd editions. Lippincott, 214-218.
10. Davies, P. (1993). Diagnosing hearing loss in Children. *Nursing Standard*, 7(1) 23.
11. Purandare, L. (1997). Attitudes to cancer may create a barrier to communication between the patient and caregiver. *European Journal of Cancer Care*, 6(1):92-99.
12. Kyei, K. A. & Engel-Hills, P. (2011). Pain assessment: The role of the radiation Therapist, *The South African Radiographer*, 49 (1):1-4.
13. University of Florida Hospital (2005). Pain Management Committee, Policy Procedure No. 600-146: 1-4.
14. Shrestha, S. & Poulos, A. (2001). The effect of verbal information on the experience of discomfort in mammography. *Radiography*, 7(1):271 7th editions.
15. Foley, K. M. (1998). Pain assessment and cancer pain syndromes. In: Doyle, D, Hanks, G.W, MacDonald, N. (editors). *The Oxford Textbook of Palliative Medicine*, 2nd edition. Oxford: Oxford Medical Publications, 310-311.
16. Tabar, L., Lebovic, G.S., Hermann, G.D., Kaufman, C.S., Alexander, C & Sayre, J (2004). Clinical assessment of a radiolucent cushion for mammography. *Acta* 45(2): 154, 8th edition.