Nurse Education Today 33 (2013) 998–1002

Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/nedt

Passed without a stroke: A UK mixed method study exploring student nurses' knowledge of stroke ☆

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ARTICLE INFO

Article history:
Accepted 30 July 2012

Keywords:
Knowledge
Nurse education
Stroke
Student nurse

SUMMARY

Aims and Objectives: To evaluate third year student nurses' knowledge and experiences of stroke education. To identify how student nurses can develop their understanding of stroke and its application to clinical nursing practice.
Background: Stroke is an international health issue and a major cause of morbidity and mortality in many countries throughout the world. Nurses have a significant role to play in reducing death and disability in people who have suffered a stroke and it has been suggested that some nurses may not be educationally prepared to meet the challenges of this complex condition.
Design: This evaluative study was based on a mixed method evaluative design. These quantitative and qualitative approaches involved the implementation of focus groups and questionnaires.
Method: The following outcomes were measured during students' final year of their nursing studies: students' profiles and an assessment of students' knowledge of stroke.
Results: There was a mixed picture of student nurses' knowledge of stroke; a lack of awareness of some fundamental aspects of stroke including common symptoms, complications, risk factors and the long term treatment. Reassuringly, students expressed decisively the importance for nurses to be equipped with a sound foundation of stroke knowledge for clinical practice.
Conclusions: All nursing students should have experience of being in contact with people who have had a stroke — and at present this does not always happen. A national intervention study is now suggested with a view to providing stroke education which is proportionate to its significance as a major health issue.
Relevance to Clinical Practice: Nurses draw upon their fundamental clinical skills to care and treat patients who have survived a stroke. Additionally, stroke survivors also require enhanced knowledge and this is recognised in the growth of specialist stroke nurses. Improving stroke mortality and morbidity is the responsibility of all of us involved in nurse education — introducing creative evaluative interventions could hold the most promising way forward.

Introduction

Stroke can be a devastating condition and has been described as 'an earthquake in the brain' (Johnson, 2007). Whilst internally the damage may be catastrophic, affecting for example movement, sight, speech and sensation it can also have a destructive impact on the way that the individual concerned makes sense of their social world. Thus, not only is the person affected by stroke but also all those in their life can be touched by the condition. With medical and technological advances we are now aware that this damage can be limited with early intervention from specialist expertise. Not only can lives be saved but also disabilities can be reduced. Through an increased knowledge of brain function, restoration of blood flow and rehabilitative approaches in specialist services the outcome of stroke can be positively affected (Goldstein and Rothwell, 2010).

'Stroke is a cause of poverty and is caused by poverty' (Bonita and Beaglehole, 2007, p. 2871). This sobering sentiment reflects the breadth of the consequences of stroke. Equally, there remains a growing concern with the disparity of service provision in relation to variations in geographical locations, often referred to as 'a postcode lottery' (Whitehead, 1991). Contemporary reports continue to identify the disparity of service provision (Care Quality Commission, 2011). Whether specialist services are provided in stroke units and if early scanning and interventions are available are matters of great significance. However, there are other important contributions to the overall delivery of services for survivors of stroke, including increasing public awareness, level of skills of paramedics, medical technology and nursing knowledge. It is the latter aspect of levels of nursing knowledge that this current study is concerned with.

Background

Stroke is the third most common cause of death in the developed world, only exceeded by coronary heart disease and cancer. Three

☆ The author acknowledges a grant from the University of Chester which supported this study.
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0260-6917/$ – see front matter © 2012 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.nedt.2012.07.021

million women and 2.5 million men worldwide die from stroke every year (Mackay and Mensah, 2004). Nurses have a significant role in reducing mortality and disability in their patients (Booth et al., 2005). Stroke is the third cause of death in England and the biggest single cause of disability in adults (Care Quality Commission, 2011). Additionally, Redfern asserts 'stroke is complex requiring input from professionals, patients and carers,' and goes on to argue that 'Identifying and developing appropriate intervention components to meet these complex needs is difficult' (Redfern et al., 2006, p. 2410). Against this backdrop, the call for introducing stroke consultants (Burton, 2000) is persuasive and if sufficient evidence is put forward it may become normal practice.

Two categories were identified from the literature, which are relevant to this study and these are stroke education for nurses and the clinical role of nurses in relation to stroke and these are reviewed below.

Education

Literature relating specifically to student nurses and stroke education is limited and more commonly the papers have focused upon stroke education within the context of continuing professional development. However, three articles have been identified that employed different methods of intervention to develop nurses' knowledge of stroke which report positive results; a US study using technology in supporting continuing education (Carter et al., 2009) describes 'the stroke best practices for nurses project' which was designed to meet the learning needs of 'busy working nurses' and delivered a mini-course that implemented three technologies: web-based learning site, web casting (live and archived), and two-way interactive video conferencing. Using technology to teach stroke is an example of one of many subjects being taught this way. As the implementation and evaluation of web based learning continue to grow throughout nursing programmes it is important that the experience and attitudes of healthcare students to the expanding use of e-learning are measured in line with advances in computer technology (Wilkinson et al., 2009).

Concept mapping is an established educational strategy used to develop students' critical skills. Wilgi and McConnell (2008) implemented Castellino and Schuster's (2002) Concept Map Care Plan Evaluation Tool — an intervention study to measure novice graduate nurses' critical thinking and clinical decision-making skills. The rise in the post-mean map score suggests that this tool could be used by nursing educators to improve critical thinking and identify areas where there is a deficiency in theoretical and clinical knowledge (Wilgi and McConnell, 2008).

Lastly, evidence-based ischaemic stroke care (John, 2007) is a report of a pilot study of 20 emergency nurses, who completed a 10-item multiple choice test on evidence-based ischaemic stroke care. Results showed that those nurses who had participated in continuing education on evidence-based ischaemic stroke care within the last 12 months scored significantly higher than those nurses who did not read literature on evidence-based ischaemic stroke care. The findings have implications for ischaemic stroke patients cared for by emergency nurses. John concludes that "Only when research evidence is utilized in practice can we provide high quality care for our patients" (John, 2007, p. 207).

Clinical Role

The complexities of stroke care are reflected in the role of the nurse which according to Burton 'remains elusive' (Burton, 2000, p. 174). This section considers four papers which investigated the clinical role in relation to stroke.

A systematic review of 95 qualitative studies of stroke (McKevitt et al., 2004) recorded the 'human experience of stroke, identification of needs as perceived by patients and their families, differences in priorities between patients and professionals, and barriers to best-quality care' (McKevitt et al., 2004, p. 1500). The authors suggested that the papers revealed that these qualitative studies identified the effects of stroke on caregivers and individuals and how services were organised and delivered. The authors also alluded to the multifaceted nature of stroke and how this leads to problems in delivering a good quality service. One of their conclusions was that greater collaboration to maximise best quality care is required between all those involved in different aspects of treatment from clinical scientists to service.

A review paper (Jones et al., 2007) reported on the literature discussing how the physiological parameters affect outcomes after stroke and the implications of this evidence for monitoring. The authors reviewed 61 relevant studies and concluded that the magnitude of monitoring physiological parameters in the acute phase of stroke, which included recording of blood pressure, oxygen saturation (including consideration of positioning), blood glucose and body temperature in the acute phase of stroke, "adds support to the recommendation that monitoring should play a key role within nursing care" (Jones et al., 2007, p. 578).

There are a number of papers demonstrating a deep concern by nurses to address the specific challenges that stroke patients present. For example the work of Medin et al. (2011) highlights the eating difficulties of stroke patients, particularly women and they suggest implementing structured observation of meals and assessment of patients' food consumption. Low self-esteem was identified by Chau et al. (2011) as a possible barrier for stroke patients to participating in rehabilitation. The researchers introduced the Chinese version of the State Self-Esteem Scale and found this assessment could be helpful in assessing self-esteem in stroke patients.

Methods

Design

This evaluative study was based on a mixed method design which included a combination of qualitative and quantitative approaches. The rationale for utilising focus groups followed by questionnaires is argued by Robson, who asserts 'focus groups can help prepare for the main collection phase, for example as a precursor to the development of a more structured instrument' (Robson, 2011:296). This view is supported by Field (2011) who argues that focus groups are useful at the preliminary stage of a project and can inform the questionnaire.

Data Collection

Two methods of data collection were used:

(a) Two focus groups of six participants provided the first data collection phase. The focus groups required the student nurses to discuss their knowledge, experiences and perceptions of stroke.
(b) A survey using a questionnaire to evaluate student nurses' knowledge of stroke. Questions based upon themes extracted from the focus groups were used to formulate the survey.

Population and Sample

From a total population of 151 third year Diploma in Higher Education (Adult Nursing) student nurses in their final weeks of study in a university in the North West of England, the researchers employed purposive sampling (Speziale and Carpenter, 2007) to recruit a non-random sample of 12 focus group participants, five pilot questionnaire participants and a 117 questionnaire participant students for this research study.

Research Process

The research was introduced to the students during their final period of university study. The participants were introduced to the