

Using early warning scores in acute illness assessment



**ASSIGN
BUSTER**

This Assignment is in two parts. Part one will describe how I undertook a literature search on my chosen topic of ' using early warning scores in acute illness assessment'. From this initial search and review of the literature I will select six articles and present them in an annotated bibliography. The purpose of this first part is to demonstrate my literature searching skills by identifying a suitable nursing topic and the key words I will use for my search. It will also demonstrate I can identify different types of literature sources like primary research studies, systematic reviews, narrative reviews, audits and general articles written about the topic I have chosen. . The second part of this assignment will identify a research based article from the six articles I have selected.

Part one

Topic: Using early warning scores to assist the nurse in identifying patient deterioration in acute illness

Key words: cute care- Critical care- early warning score- vital signs

Data bases searched: Cinhal; British Nursing Index

Number of articles/ literature sources = 402

Six articles were chosen as follows:

Article 1.

Mohammed, MA (2009) Improving accuracy and efficiency of early warning scores in acute care. British Journal of Nursing. 18(1) 18-24

This article is a report on an experimental study to compare the effectiveness of hand held early warning computer system with the traditional pen and paper method

Article 2.

Johnstone C, Rattray J and Myers L (2007) Physiological risk factors, early warning systems. British Association of Critical Care Nursing. 12(5) 220-231

This article is a general article that provides background information on the topic of why early warning systems can improve patient care

Article 3.

Preston R M and Flynn D (2010) Observations in acute care; evidence based approach to patient safety. British Journal of Nursing. 19(7) 442- 461

This is a narrative review of the literature on different issues affecting acute illness assessment and patient safety conducted by nurses in acute care.

Article 4

Odell M (2009) Nurses Role in detecting deterioration in ward patients- a systematic review. Journal of Advanced Nursing. 65(10) 1992-2005

This article reviews primary research studies that were conducted between 1992 and 2006.

Article 5.

Hughes LL (2009) Implementing a patient assessment framework in acute care Nursing Standard 24(3) 35-39

This article describes a service improvement initiative to improve patient assessment using an early warning score system over a 4 month period at a Hospital in Birmingham

Article 6

Wheatley I (2006) The nurses practice of taking level 1 patient observations. Intensive Critical Care Nurse 22(2) 115-21

This was a survey conducted to discover the nurses practices of taking clinical observations in acute settings. It uses an observation data collecting tool (words 470)

Part 2 Critique of one article

Wheatley I (2006) The nurses practice of taking level 1 patient observations. Intensive Critical Care Nurse 22(2) 115-21

Introduction

The aim of this critique is to identify the stages of the research process in the above article by Wheatley (2009). According to Preston (2010), being able to critically read research based literature is an important skill in reviewing literature sources that are presented in all academic assignments. This activity is an opportunity to examine the strengths and weakness of a research study in relation to the research process steps (Priest et al, 2007). The critique will consider the nature of the survey approach to research and

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to compare this to how Wheatley (2006) designed his project. As this article reports on a survey research study using an observational method, it is important to examine the key features of this research design. Therefore the strengths and weaknesses of the research process featured in this article will be discussed. This will include an appraisal of the sample size; data collecting tool and process of collection, the research findings and their relevance to nursing practice.

This article reports on a survey type study that utilises an observation data collecting tool. According to Pollit and Bek (2010) surveys are used widely in health care research and are effective for examining a wide number of problems. In this article by Wheatley (2006), the survey is used to discover what nurses actually do when they conduct clinical observations in a medical ward setting. The aim and research questions he identified in the article are clearly written and follow a positivistic, deductive paradigm that is appropriate in a quantitative research study of this type (Gerrish and Lacy, 2006). According to Lobiondo-Wood (2010) a positivistic paradigm considers that what can be seen can be measured. The findings are always presented in number formats. In this article Wheatley (2006) is using an observational tool to view the conduct of nurses undertaking clinical recording of vital signs. This tool would have been structured so that identified behaviours could be investigated. Although the data collecting tool was not presented in the article it is clear from the discussion that the tool set about to observe the accuracy of nurses recording blood pressure, temperature, respirations and pulse. The tool also identified which nurses undertook this activity and the time that they took to complete a set of observations for each patient.

Priest et al (2006) identify that all researchers need to plan their research studies on a sound review of the literature underpinning the research problem. According to Pollit and Bek (2006) the literature review will provide background information on the problem and will identify what research has already been conducted. In this article Wheatley has presented a review of the literature and it is clear that he has based his study on similar studies conducted in the past. His reference list provides a selection of different literature sources and includes 46 sources that are clearly focused on recording vital signs and 2 on research methodology. This clearly indicates that Wheatley (2006) has structured his study on a sound review of the literature.

The sample size in a survey research study has to follow the nature of the quantitative, positivistic approach (Pollit and Bek). This means that the sample size must be large enough to represent the general population it is representing. In this article, Wheatley (2006) has reported on observing 20 cases of nurses conducting observations. This is a very small sample size and statistically would not be considered a positive representation of a good research plan to have such a small for a survey project. However, Wheatley (2006) clearly identifies the limitations this posed to his study and explained that the small sample size was a convenience sample that was appropriate for his planned study. According to Polit and Bek, (2010) a convenience sample is acceptable as it represents the whole population. In this case, Wheatley (2006) has included all the nurses who work on one ward and found that in 18 out of 20 occasions he observed, it was the machine that dominated the recording of patients vital signs and that the time nurses

spent with the patient was dependent on how long it took the machine to do its job. In 16 occasions, nurses did not record the respiratory rate even when 4 patients were showing signs of respiratory distress like dyspnoea or coughing. Therefore, although 20 in a sample is not considered viable for a survey type project, the use of a convenience sample (Pollit and Bek, 2006) in this case, provides the reader with a strong indication that there are problems in how nurses undertake clinical observations as part of their acute illness assessment. However, for this finding to affect a change in future nursing practice more research using larger sample frames would be useful.

The data collecting tool and how data is collected in a study (Priest et al, 2007), is also another important step to appraise in a report on a research study. In this article, Wheatley (2006) has designed an observation tool using structured observations that included time taken to record vital signs; which nurse undertook the assessment (ie qualified or HCA); whether a machine or hand/touch methods were used to record pulse and respirations in particular; how vital signs were recorded on the observation charts. According to Polit and Bek (2006) a good research paper will show the reader how they structured their data collecting tools. In this article, it is clear to see what was observed by carefully examining the graphs and table charts Wheatley (2006) presented in his findings section. At the top or bottom of each chart he writes what behaviour/activity was recorded in his findings. For example, one chart on page 117 has the title which nurses performed the observations and you can see that of 20 only 2 observations were carried out by a qualified nurse. The other 18 were conducted by the HCA. What Wheatley doesn't do however in his article is consider if being observed in this study

changed the nurses behaviour. Polit and Bek (2010) note that in observation studies bias can occur through the 'Hawthorne effect'. This is an effect noted to occur when people realising they are being watched change their behaviour during that process. However, there is no indication this happened here and one can assume therefore, that the behaviour Wheatley (2006) observed was what would normally be expected in patient observation activities.

When appraising research papers, Ryan et al (2007) say an important step in this process is to review how well the researcher has presented his findings. In this article Wheatley (2006) has utilised descriptive statistics in a clear format that is easy for the reader to understand. He has used descriptive statistics to convey the findings in simple percentage and number format. For example, it is clear to see that most observations are carried out by HCAs (n = 18 or 90%). When numbers are expressed like this it clearly indicates the power of that finding (Polit and Bek, 2010). Another important finding is that in 4 cases nurses failed to record the respiratory rate even when patients were struggling to breathe. Although this is a small percentage (ie n = 4 / 20%), it is worrying to note that any nurse would fail to record the respiratory rate when a patient is clearly showing signs of distress. From these findings, Wheatley (2006) concludes that qualified nurses must take responsibility for taking and reviewing how vital signs are recorded in acute care settings if patient safety is to be safeguarded at all times.

Overall, the article by Wheatley (2006) is a good example of a research project using a survey method approach to study. Despite noting a small <https://assignbuster.com/using-early-warning-scores-in-acute-illness-assessment/>

sample frame that could indicate a bias to how the findings can be appraised, it is felt the findings are generally credible and should be appropriate to both inform nursing practice and promote patient safety in acute illness assessment. The steps of the research process are clearly identified throughout the article that demonstrates the researcher has understood how a survey research study should be competently planned for and undertaken and reported on.

(TOTAL 1870 WORDS)