

# Comparison of nursing research design



This assignment will critically evaluate two articles that are found in the data extraction table. Databases used to find the chosen articles were Cumulative Index of Nursing and Allied Health Literature (CINHAL) and Medline, Boolean operators were used throughout the search the words used were ‘ and’ ‘ or’ and ‘ not.’ Search terms and restrictions were used, the words and phrases used were pain management, hospital and critically ill adults. Search restrictions used consisted of full text, nursing, English language, also the date range used was 2012 to 2019. The Nursing and Midwifery Council (2018) state nurses should always practice in line with the best available evidence, they must make sure advice or information given is evidence-based and maintain the skills and knowledge which is needed for safe and effective practice. Different frameworks can be used to critique research articles, the framework which will be used within this assignment is the Holland and Rees (2010) critiquing research framework. This framework has been chosen due to its ability to access online and detail of the questions.

The aim or purpose of study is formulated so researchers and readers have a clear understanding about what is being researched (Parahoo, 2014). Both articles have a clear-cut aim to look at in which pain is assessed for those patients who are unable to communicate in the intensive care unit (ICU) setting. Statement of the aim in both papers clearly outlines why the research is being carried out and states what will be done with the findings.

Research design is as a strategy which answers the research question or aim, in qualitative research the design should be aimed at how to obtain the information in the best way for whom it is to be gained from and how long

the data collection occur (Polit and Beck, 2018). The qualitative design which can be found in article A is phenomenology, this focuses on the lived experience of individuals, this design matches the aim. The primary data source in phenomenological studies is in-depth conversations. These studies usually involve a small number of participants often ten or fewer according to Polit and Beck (2018), although in article A there were twenty participants.

A quantitative research design aims to provide numerical, statistical information that can show patterns or comparable variations (Holland and Rees, 2010; Ellis, 2013). Parahoo (2014) describes survey as; a research design which aims to gather descriptive, correlational data usually from large populations and by questionnaires, interviews and to a lesser extent observation. According to LoBiondo-Wood and Haber (2014) surveys have their advantages and disadvantages. The advantage of a survey is a lot of information can be gathered from a large population in an economical manner, also survey research can be surprisingly accurate. A disadvantage of carrying out a survey is the breadth rather than the depth of the information is emphasized.

Article A used semi structured interviews which are the most common type of interviews used in qualitative research (Holloway and Wheeler 2010). Within article A it is stated maximum variation sampling, member checking, peer questioning and cross-examination were used to ensure the trustworthiness, dependability and credibility of the data respectively. This tool worked well throughout the research as the semi-structured interviews acted as a guide on the subject, as key questions were predetermined before the interview. An advantage to this type of interview is it will allow probing of

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answers, also it will allow the participant to give a detailed account of experiences and feelings (Ellis, 2013).

Article B gathered data using a survey which was modified from one designed and used by Rose et al. (2012). The modified survey was evaluated for content validity by four faculty members at Liberty University with a background in critical care, these individuals had a lot of experience with working within the ICU. There is no rationale given for the choice of tool, there is also no mention of an alternative tool being considered.

Qualitative research aims to explore a conceptual and theoretical understanding of phenomena. Selected participants for this type of research should have experience of these phenomena by whatever ethical means are possible (Parahoo, 2014). Article A used a purposeful sampling method to select participants, this continued until data saturation. Polit and Beck (2018) state purposeful sampling can lead to bias, but it can also be a useful approach when the researcher wants a sample of experts. There were twenty participants involved in carrying out this research, the participants included nurses working within ICU. Subject selection was carried out with maximum variation in personal factors including, age, education level, duration of work experience and organisational role. According to Holloway and Wheeler (2010) maximum variation can include both genders, young and old and of different nationalities, article A included both men and women of different ages. There was no inclusion or exclusion criteria stated within article A. Polit and Beck (2018) state maximum variation sampling is usually the mode of choice in qualitative research as it is useful in illuminating the scope of a phenomenon and in identifying important patterns which may cut

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across variations. However, Holloway and Wheeler (2010) state maximum variation is not usually used in qualitative research.

Polit and Beck (2018) state the number of participants in quantitative research is a major concern. There were twenty-five participants in this study after administration. All participants were nurses with experience in the ICU setting, nurse's experience ranged from less than two to greater than ten years. The reason for choosing ICU nurses for the sample population is due to them having more experience taking care of nonverbal patients. There were thirty-one surveys distributed, only twenty-six were returned, one of the surveys was taken out due to personally identifiable information being included. There is no mention within this study of inclusion or exclusion criteria.

Article A's study was approved by the Ethics Committee of Mashhad University of Medical Sciences. Participants within article A were ensured of data confidentiality and autonomy, confidentiality and data protection. Within article B maintaining the anonymity of the data was considered crucial to encourage participants to answer the questions according to clinical practice. Data confidentiality, autonomy and data protection are all ethical considerations as outlined by the Royal College of Nursing (2009). Ethical considerations within research set out core principles to protect the dignity, safety and rights of the individuals who are taking part, the study should have potential benefit to the individuals themselves or future patients and be of non-maleficence (Holland and Rees, 2010).

Article A states a written consent was obtained from all participants before recording the interviews. Article B states participants in their study read the cover page of the survey, this provided necessary information for informed consent. A waiver of signed informed consent was obtained from both Liberty University's and the hospital's Institutional Review Board (IRB). Informed consent could be required, to ensure all those involved have a clear understanding about their role and are told they may discontinue at any time if they want (Heale and Shorten, 2016). Newson and Lipworth (2000) state it is good research practice and argue research should not be published if approval from a Human Research Ethics Committee (HREC) has not been obtained. Both articles are ethically vigorous due to article B being submitted to the IRB and the researcher undergoing formal IRB training. An IRB can approve the proposed plans, require modifications or disapprove them (Polit and Beck, 2018). Article A was also approved by the Ethics Committee of Mashhad University of Medical Sciences, both papers gained informed consent and mentioned confidentiality within their studies.

Data was analysed in article A using content analysis method which was performed in line with Graneheim and Lundman (2004). Sub-categories and codes were shown and explained in detail regarding what had been found using semi-structured interview, developing codes were considered as the outcomes for this study. All transcripts were reread throughout the open coding stage and checked several times and keywords, expressions, actualities, incidents, similarities and differences were all noted. Coding qualitative data is not an easy task according to Polit and Beck (2018), the researchers may have an issue deciding the right code and must re-read

many times to gain the theme of the material. Data for this study is in the form of verbal comments or statements from the participants. The researcher includes some of these comments and statements within the study, this is the researcher trying to provide evidence of credibility according to Holland and Rees (2010).

Article B's data analysis was carried out by using IBM SPSS 24 software which is a statistical analysis through a computer. Statistical analysis is used within quantitative research for three purposes, to describe the data, to test hypotheses and to give evidence regarding measurement properties of quantified variables (Polit and Beck, 2018). Analysis consisted of computing the frequency of certain attitudes, pain assessment practices or beliefs. A Spearman correlation coefficient was calculated to examine the correlation between years of experience of the participant and use of pain assessment tools, as well as between years of experience and perceived importance of the use of assessment tools in the pain assessment of nonverbal patients. Polit and Beck (2018) state Spearman's correlation is used for correlations between variables measured on an ordinal scale. All results are clearly presented within the articles results section, results are presented using tables.

Based on the findings found from both articles nurses heavy workload forced nurses to disregard some clinical practices and prevented them from the frequent use of pain assessment tools. Article B stated this highlights the need for tools that are simple, easy and quick to utilise in the clinical setting. Article A presents various categories from the findings to answer their aim these are; forgotten priority, organisational barriers, attitudinal barriers and <https://assignbuster.com/comparison-of-nursing-research-design/>

barriers to knowledge. Article A attempted to ensure the accuracy of the themes by peer checking the transcripts with two faculty members with a PhD in nursing who were not involved within the study. The ICU nurses in article A's study believed there was no need to use a pain assessment scale for patients receiving sedatives. It also found nurses do not use pain assessment scales due to receiving little information in undergraduate programs and training about pain assessment tools. The research found in relation to their aim is nurses do not use pain assessment tools as much as they should be within ICU settings. This shows easier, quicker pain assessment tools and further training is required for carrying out these assessments.

The researcher found in relation to their arm from article B that ICU nurses that participated in this study do use pain assessment tools as 92% of participants stated this. The participants do however, state there are barriers which can prevent them from carrying out the assessments. These barriers are nursing workload 50% stated this and patient instability 80% of nurses stated this. Nurses within article B also considered the use of pain assessment tools as important, compared to article B where nurses stated they did not see them as important for ICU patients. Due to the most common barrier being nursing workload, unit policy should support the use of assessment tools that are not only supported by research but are also quick and easy to use. It is important the barriers found within article B are evaluated to promote further compliance with the use of pain assessment tools.



Both articles agree with the barriers which prevent nurses carrying out pain assessment efficiently in nonverbal patients, they both have similar findings. A different search strategy would not be used next time as suitable articles were found. Both articles represent patient's values and expectations as they state throughout each article the importance of an efficient pain assessment, so the patient is pain free. Both papers have used the best research they could find when explaining why efficient pain assessment and management is important within the ICU setting.

The chosen articles are of equal quality and provide the same perspectives on pain assessment, they both find supportive findings to each other. One difference in findings is that nurses within article A felt the need for pain assessment tools in ICU patients was not necessary, whereas article B's participants stated their use to be important. Article A is conducted within Iran, Article B was conducted in the United States of America, both articles are carried out within the ICU setting. Article B showed limitations, one of the questions within the survey assessed the pain assessment tools used by the participant. It is also possible for the participants to not know the official name of the tool they use. The unfamiliarity with names of tools may affect the accuracy of the results obtained from this question. From using the Holland and Rees (2010) critiquing framework weaknesses for article A there was no mention within their article of limitations, the study was conducted well and answered the research question. Although article B was found to have limitations it did answer the research question. Both articles are relevant to practice due to the articles aiming to improve pain management and assessment in nonverbal patients.

## Questions – Appendix 1 and Data Extraction Table – Appendix 2.

1. Broad area of interest: Pain Management in patients within the intensive care unit.
2. Why is this relevant to your area of practice/field? According to the Royal College of Nursing (2015), assessing and managing pain are essential components of nursing practice. Pain is often categorised as acute or chronic, but it is a complex physical, psychological and social phenomenon that is uniquely subjective. A key fundamental of nursing care, patients continue to report unrelieved pain during procedures, after surgery, during episodes of acute illness, in the community and in care homes. The International Association for the Study of Pain (2012), state that poorly managed acute pain may result in the development of chronic pain which is known to have a strong association with anxiety, depression, quality of life and the ability to sleep, communicate and work. Despite advances in theories related to pain control, pain is still a major problem in critically ill patients admitted to intensive care units (Gordon et al., 2005).
3. Question you want to ask of the literature: How effective is the management and assessment of pain in the hospital setting for adults in the intensive care unit setting.
4. Search terms used: Words and phrases that were used follow as ‘ pain management, assessment, hospital, critically ill adults. Boolean operators that were used ‘ and’ ‘ or’ and ‘ not’.
5. Search restrictions: Full Text Online, Nursing and English language were used, and the date range was from 2013 to 2019 but as suitable

articles were hard to find within this date range it had to be changed to 2012 to 2019.

6. Databases used: Search engine provided by the University of Wolverhampton Summons and Databases available through the University of Wolverhampton such as Medline and Cumulative Index of Nursing and Allied Health Literature (CINAHL).
7. What sort of evidence have you found? One research paper is qualitative and the other quantitative. Qualitative and quantitative research can be achieved multiple methods. Article A is a qualitative study conducted by using content analysis, participants include 20 nurses working in intensive care units. Data was collected using semi-structured interviews and analysis was carried out using an inductive approach (Deldar, Froutan and Ebadi, 2018). Article B is a quantitative study carried out by using a survey which was conducted at a 385-bed hospital in Central Virginia. Intensive care nurses were selected as the sample population since they have more experience of taking care of non-communicative patients than other nurses in various other hospital units (Lovin, 2017). Out of the 31 surveys which were sent out to nurses, only 26 of these nurses participated in the study.
8. Why did you finally select the 2 articles to include in your table? The chosen two articles both look at challenges which nurses experience when carrying out non-verbal pain assessments on patients in intensive care units, although both articles are from different countries they are carried out within the same setting. Both articles link well to the choice of topic and are both from the perspectives of nurses. Whilst researching this choice of topic it was found that many studies carried

out are more than ten years old, there also was a lack of research recent research carried out within the United Kingdom. Therefore, this led to article B being chosen which was carried out in United States of America in 2017, article A was carried out in the United Kingdom in 2018. These articles were the most recent and linked to the specific choice of topic better than other articles that were found.

<u>Author</u>	<u>Title &amp; Date</u>	<u>Aim/Purpose, Research Question or hypothesis</u>	<u>Design of study &amp; methods of data collection used</u>	<u>Sample</u>	<u>How the data was analysed?</u>	<u>Findings</u>
Deldar, K, Frouta n, R, & Ebadi, A	Article A Challenges faced by nurses in using pain assessment scale in patients unable to communicate: a qualitative	The aim of the research which has been carried out is to achieve better and deeper understand of the existing nurses’ challenges in using pain assessment scales among	A qualitative study using semi-structured interviews and analysis which was done using an inductive approach.	Purposive sampling was used to select participant s. The participant s in this study included 20 nurses working in intensive	This study was conducted using content analysis method in line with Granehei m and Lundman (2004). The	The findings from this study show that there are various factors which could affect the use of pain assessment t and

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one of the significant barriers to the use of non-verbal pain assessment scales. The findings are presented as codes, subcategories, and categories using an inductive approach.

<p>Lovin, R. Article B Study of Nurses' Attitudes and Practices</p>	<p>The aim of this study is to show that current nursing practice in the area of pain</p>	<p>Data was gathered using a survey, modified from one</p>	<p>The participant s in this study were 26 intensive</p>	<p>Data was analysed using Internatio nal Business</p>	<p>This study found that the result was similar to previous research</p>
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