

# [Research methods: critics of a qualitative and quantitative paper on pressure sor...](https://assignbuster.com/research-methods-critics-of-a-qualitative-and-quantitative-paper-on-pressure-sore-ulcer/)

The author of this essay will critically appraise tow nursing articles. A qualitative paper published in the Journal of Advance Nursing (JAN) which will be referred as ‘ article one’. A quantitative paper published in the Journal of Wound Care which will be referred as ‘ article two’ in this essay. Both articles are wound care related. In order to examine the strength and weakness of the articles, the author of this essay will use a set of tools using a methodological analysis. Therefore demonstrate an understanding of the research process and relate to professional practice.

There are several types of wounds for examples: postoperative, leg ulcer, diabetic and pressure sore (Sussman, 2012). Wounds can be acute or chronic in nature (Waugh & Grant, 2006). The process of healing is divided in three phases: inflammation, proliferation and remodelling (Waugh & Grant, 2006). The result of these biological process results in the replacement of a normal skin (Hawkins & Abrahamse, 2006). If the healing does not follow its normal process due to the presence of the debris. This will increase the level of bacteria and will lead to infection in the inflammation phase.

This can contaminate the wound predispose to bacterial invasion in the blood and/or death of tissues (Sussman, 2012). Wound care in nursing is important, because it involves specifics treatments and care due to a complex healing process. To began with the article critique, Parahoo (2006) states that an abstract should briefly states the study aim, design, methods, sampling and main funding. Looking at both articles these are apparent. Looking at article one title and aim, it is apparent that, it is a qualitative study as words such as ‘ quality of life’ and ‘ inpatient perspectives’ are used.

According to Cormack et al (2006), it is imperative to make title and aims explicit as it will draw the reader attention to the precise area of the study. The reader recognises the use of phenomenological approach in the article aim. This type of study falls under qualitative study. It attempts to interpret phenomena in terms of the meaning people make of them, by gathering from a small number of subjects an in-depth study of the phenomena (Lincoln, 2000). Qualitative approach does not show the frequency of something happening or count the instance of something which does not test hypothesis (Burn, 2004).

Unlike quantitative study, it does not need participants to be randomly selected (Burn, 2004). In this article it is clear that qualitative study was the right methodology in order to understand participants’ experiences pressure ulcer. In article two, words such as ’randomised clinical trial’ and ‘ compare’ are used in the objective. Randomise Control Trial or (RCT) is the experimental approach used. According to Stolberg et al (AJR, 2004) research, RCT falls under quantitative research. Quantitative research follows scientific methods which intends to measure facts (Silverman, 2005).

The aim in this study is to compare two dressings by a clinical testing. If done properly RCT is said to be at the stop of the research hierarchy, as it is considered to be the best proof of evidence since results are more likely to be accurate (Parahoo, 2006). A hypothesis or prediction is made by the researcher(s) at the start of a study which relate an independent variable to a dependant variable. A null hypothesis was established in the abstract’s summary as no difference was found between the two dressings. Cormack et al (2006), suggest that hypothesis should be capable of testing and use experimental approach.

In this study the hypothesis appear to be testable. Although the reader of these articles feels that the methodologies used were appropriate in both articles, for Streubert and Carpenter (1999), the choice of methods depends on the questions being asked. Nevertheless both articles aim seems realistic and relate to the topic being investigated. Researching the literature using SPICE for the qualitative study helped to focus on the question researched (Beecroft, 2006) and reduce the finding. 11 articles were identified on CINAHL instead of 7916 using a Boolean phrase ‘ pressure ulcer’.

Using the same method with PICO for article two the quantitative research, only one result was found. Using a peer review search for both articles there was no peer-review of article two. According to Traynor & Rafferty (2000) a peer review practice make possible to maintain journals credibility. And help to judge of the trustworthiness of the published material (Parahoo, 2006). To conclude the database supported the finding of the searches. The keys words in the abstract were relevant as there aid for the literature research.

In addiction it offered up to date information on the subject. Both articles used up-to-date journal to perform their literature search using primary sources materials for referencing. Primary sources are original research articles written by the person who conducted the study and present original thinking, report or share new information (Paterson, 1993). Although both journals used journal, not all journal publish the original research according to Cormark et al (2006). What follow is a critical evaluation of the literature review.

A good literature review is considered to prepare the ground for new research (Beck and Pilot, 2012), discuss previous work if necessary in order to explore the depth of the articles (Smith, 1997) and justify the need for news research to take place (Munhall, 2006). This allow the reader to be aware of what already exist about the phenomenon studied (Manen, 1990). And helps to conclude that, the background information appear adequate (Beck and Pilot, 2012). Literature reviews is not extensive in both articles and does nor have a section entitled literature review.

However both articles provided arguments to demonstrate the need for their study. Articles one offered an overview about existing evidence on the problem being addressed. Added to that, it gave a critical review, of patient living with pressure ulcer and their quality of life. However the reader does not see the gaps to be filled which justify the need to carry out the research as there is no new information added to what already exist. And article two offered a comparison between alginate and hydrofiber dressing as there was no previous test done on the two dressings following post-hip replacement.

The reader does see the gaps to be filled which justify the need to carry out this research as there was no existing information on the subject. The assessment of literature review is an important component of evidence based practice according to Culham (1998). Sampling size is determined by the number of people who takes part in a study (Crookes and Davies, 1998). Both articles show participants selection. Article one explains how clinical nurses taking part in the study were recruited as well as the 23 participants. This shows that the researchers determined the number of participant needed for the research (Beck, 2008).

The sample size is small; however, this is not a concern as the researchers developed depth and rich description of the phenomenon of pressure ulcer effects on patients’ quality of life rather than just using sampling technique. The target population was limited to patient who had between grade 2-5 pressure ulcer at different anatomical. According to Streubert and Carpenter this is purposive sampling. Purposive sampling is a selection of people to participate in a research based on a specific phenomenon of interest. The researchers also included the sample variables which included participant age, sex and reason for admission.

This shows that the researchers paid particular attention to represent the general population. Although the sampling size seems appropriate to the aim of the research, the research rate was not recorded, therefore it is difficult to know how significantly different are the people who took part in the study from the one who refused to take part. Lastly there is a limitation of the sampling strategy as it is not a random sampling. Consequently the possibility to generalise to a wider population is restricted. In article two patients were randomly allocated for the dressing group.

The total sample was 200 participants but each comparison group only had 100 participants. A random allocation means that participant have similar chance of belonging to a group of study because the characteristics of participants are spread across each group at the beginning of the comparison. This helps to obtain a statically significant difference between the dressings of the comparison group. If randomisation is done properly it reduces serious confounding variable which is a known or unknown imbalance affecting the study outcomes.

Furthermore to conclude that the difference between the effectiveness of the dressings are unlikely to be due to chance. In order to detect this deference a probability or power calculation is needed. A too larger size will lead to a type 1 error which is called a ‘ false positive results’. This weakens external validity. A small sampling size will lead to potentiality of a type 2 errors also called ‘ false positive negative results. This weakens internal validity. In this study, the sample selection technique matched with the methods to be used in RCT and the approach to the sampling size and selection (cormark, 2000).

The chances that selection bias was avoided in the clinical trial as participant in the alginate and hydrofiber control group were randomly allocated. The methodology of single blinding was used as participants were blinded. This could have helped to overcome potential bias as double blinding was not possible due to the fact that nurses could differentiate the two dressings in appearance. Jadad (1998) argue that randomization and the double blinding procedure gives randomized control trial it gold standards. Data collection is a way to collect research information.

The validity and reliability of he data is collected give to the research finding it credibility (Hek et al, 2002). The data collection methods used in articles used in article one is a semi-structured interview. According to Barriball and While (1994), semi-structured interviews provide the opportunity for patient to express their experience. This is good as it gives to the reader a depth explanation of the effect of pressure ulcer on participants’ quality of life. The fact that participants were also encouraged clarifying their understanding for the questions during the interviews enhances the trustworthiness of the findings.

Furthermore researchers also stated that interviewed were tape-recorded. This helped to produce a credible finding. The semi-structured interview and the means for recording the interview seemed appropriate for this study. The researchers used two data collections, this triangulation strategy confirm a depth investigation of the finding. However the questions addressed by the interviewers were not provided in the article. Patients’ researchers and interviewers’ relationship were made clear.

According to Burn and Groove interviewee can be influenced by the way of being listening to, eyes contact, initiating topics, determining response or interrupting. A good explanation of data procedure limits possibilities for bias according to (Burn, and Groove, 2008). Unfortunately there were also no mention in the article of the length of time spent during the interviews and how many times participants were interviewed. If interview times were short, this could reduce the amount of information obtained. In article two, it is clear how wound were measured and which tools was used.

The tools used were from an international classification of diseases. This is a known tool; therefore it increases the credibility of the data finding, as it gives validity and reliability of the data collected. Added to this the researchers’ mentioned that a daily observation was done using an evaluation form and that photos were taken before and after applying the dressings. It is good to show in pictures an objective proof of the skin damage; however as the wound had a primary and secondary dressing it is difficult to know what really caused the skin damage.

Both essay also state the sitting were interviews were conducted. There seems appropriate to minimise of disturbance. According to Guerrish and Lacey (2010) the lack of comfort can influence data collection and alter findings. No issue seems to have risen in both articles. Articles one study mention that the study was approved by three Ethical Committees, and that consent was gained from all participants. Participants were informed of the study aims. They were informed that they could stop the interview at any point without giving any reason.

Finally, participants were re-assured of confidentiality by anonymity and that their decision if decided stop will not affect any aspect of their care. Ethical consideration in article 2 is a requirement which need to be obtained by the ethical committee clearance before undertaking clinical trials. This includes: consent form, participant privacy and confidentiality. Data analysis is defined by as a way to reduce, organise and give meaning to data (Crookes and Davies (1998). In article 1, the researchers’ states how the data were transcript and who analysed them. Details of their analysed data were provided in the report in table 4.

From the reader judgement the presentation of data is explicit as the reader understands the results. According to Burn and Groove (2008), this increases the credibility of the finding. The article states that data analysis was done by two nurses to enhance the rigour of the report. However the paragraph is too short to identify how good is the analysis, as there is only a specific number of sampling of themes and subheading identified in the table. Often when looking at patient experience it is important to provide a lot of information about what patient said and how the information was selected.

The researcher did not discuss the saturation of data. In article two, the researcher stated that all data were analysed by a statistical program package. Analysis package can aid the researcher according to according to Carmak, (2000) the approach should be appropriate to the type of data collected. The reader does not think that there is enough information in both articles to make a judgement about how good or subjective the researcher analysis were, to make the data analysis as objective as possible. The reader wonder to what extend this can affect the outcome.

The following will interpret result and outcome of the research. In article one the finding results were clearly presented and discussed. The researchers provided results of some good evidence of participants’ statements and there is a coding system to identify which patient said what. The finding was not generalized due the small sampling size. The researchers recognize that ethics clearance was not granted to check patient medical records in regards to their deseases which limit the certainty of participant morbidity. Spilsbury et al 2006).

There was no real conflict of ideas in this case. The finding appear to be reliable and credible although no new idea generated from the study findings In article two the results claim a p-value of 0. 02 for the alginate dressing and for the Hyfrofiber a p-value of 0. 05. p-value lower than 0. 05 is considered to be statistically significant . The Alginate dressing appeared to show a lower proportion of blister in patients’ skin compared to the Hyfrofiber which showed larger skin damage.

P-value by its own has limitation, to deduct that p-value is statically significant in the study; researchers need to show the confident interval estimation in order to certainly claim what they claimed. Since this estimation is absent, the validity of the results is questionable. In addition, in the clinical staff-evaluated outcome measures section of the report, it is written that ‘ no difference between the p-value of the dressings was found and a similar p-value of 1 was shown, this makes the degree of reliability questionable due to the inconsistency in accuracy .

Finally it is written in same section that ‘ no skin damage was found under any of the dressings and that nearly all skin damage were located at 92. 3%, at the edge of the film dressing and steri-drap covering the skin’. This shows that the blisters were caused by other elements then the dressings. Based on these facts and the recommendation statement which favour the choice of one dressing, the reader question the extent of the report subjectivity and interest?