

## Understanding Research Articles

Using an academic voice & APA formatted citations/references, respond to each of the following learning objectives in this grid, & the questions on page two. **Each response should be between 150-350 words & entered into the table grid below.** See assignment rubric on page three of this document for specific details on how points are awarded. Important, this is *not* a paper, enter your responses to the grid below\*\*

Learning Objective	Response
1. Select one research (quantitative or qualitative) article from the two provided (see discussion questions area for the article choices).	I chose the article “Nasal Pressure Injuries Due to Nasal Continuous Positive Airway Pressure Treatment in Newborns” by Tian Dai, Limin Lv, Xiaojuan Liu, Jin Chen, Yalan Ye, and Lixuan Xu.
2. Explain how the selected research is qualitative or quantitative.	The research article I selected is a prospective observational study, which is a type of quantitative research. Quantitative research is research that collects and analyzes data to test or confirm theories and uses closed questions for research (Streefkerk, 2021). In the article I chose, the authors are trying to “calculate incidence, severity, and risk factors” (Dai et al., 2020). The key work is “calculate”. Qualitative research is used to understand thoughts, feelings or concepts through interviews, open-ended questions, and literature reviews (Streefkerk, 2021). There is nothing to necessarily calculate in qualitative research.
3. Based on the selected research type, respond to the questions below.	Write response here
Answer questions 1-8 from page two based on selected research type	<p>1) Determine if the Institutional Review Board (IRB) approval/informed consent obtained. If the research was done outside of the United States, the review body may go under a different name.</p> <p>This observational study was performed at the First Affiliated Hospital of Xiamen University in Xiamen, China. Being outside of the United States, their study proposal was “reviewed and approved by the Ethics Committee of the First Affiliated Hospital of Xiamen University” (Dai et al., 2020) and the parents or legal guardians provided consent. In the United States, any biomedical research project involving human subjects is reviewed by the Institutional Review Board [IRB] (Center for Drug Evaluation and Research, 2019). The IRB serves as a guard for human rights and welfare during the research. Outside of the United States, different countries may have different types of review boards. For this article, the authors stated that their Ethics Committee at the hospital reviewed their research proposal and approved it. Per the Wikipedia page about ethics committees (2021), an ethics committee is one that is responsible for ensuring human research is carried out ethically in accordance with national and international law. By receiving approval for their</p>

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	<p>proposed research topic from the ethics committee at the hospital, Dai et al.’s research seems to be credible and ethical.</p>
	<p>2) Describe the problem and purpose of the research.</p> <p>According to the article, Dai and his or her fellow researchers are staff members working in the neonatal intensive care unit (NICU) at The First Affiliated Hospital of Xiamen University. Throughout their work in the NICU, they realized that some of their patients were getting pressure injuries from the nasal continuous positive airway pressure [NCPAP], which is a common means of respiratory support that they use for those in distress (Dai et al., 2020). This positive pressure can be delivered either by nasal prongs or a mask. During the team’s collaboration, they found limited studies on pressure injury occurrences, and when they compared a few of the studies they did find, those studies did not correlate with each other and had a wide range [20% to as high as 100% (Dai et al., 2020)] of incidences of pressure injury. The team decided to conduct their own research to see if the pressure ulcers were because of no standard definition/classification of pressure injury rather than a wide range of actual incidences (Dai et al., 2020).</p>
	<p>3) Discuss the research question(s).</p> <p>Dai et al. (2020) hypothesized that “medical device-related pressure injuries are prevalent in newborns”. The team came to this theory based on where they work (NICU) and from reading studies by other researchers. They realized that there were limited studies on pressure injuries in newborns who required the NICU, and after researching, they decided to propose their own research topic and find out the prevalence of injuries. From the research reviews, they found that there was a wide range of possible pressure injuries [20% to as high as 100% (Dai et al., 2020)]. They also considered the possibility that there was not a standard definition of a pressure injury which could be where the wide prevalence range came from.</p>
	<p>4) Explain in your own words a summary of the literature review used in the selected article.</p> <p>There was not a section that was specifically listed as “literature review”, but from reading the article, I can see that the researchers found a few articles. One that they references was a researcher named Fischer and his colleagues adopted a classification system based on information from the National Pressure Ulcer Advisory Panel and that data from the board</p>

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	<p>showed there might be more than 30 cases of injury per 1000 days in adult patients (Dai et al., 2020). The researchers also reviewed a study by Robertson and colleagues that reported 7 cases of injuries in a small sample of very low-birth-weight newborns over a 6-month period (Dai et al., 2020). Per Dai and fellow researchers, the Robertson study showed around a 20% rate of injuries in newborns. Dai and colleagues reviewed another study by Fujii and colleagues that showed that 86% of nasal pressure injuries were from positive airway pressure (Dai et al., 2020). Dai and his fellow researchers also wrote about do Nascimento and colleagues, who found 100% nasal injury rate in 147 preterm newborns (Dai et al., 2020). After the researchers reviewed these articles, they hypothesized that pressure injuries from medical devices are prevalent in newborns. They decided to look at their own NICU to test their theory.</p>
	<p>5) Identify the study design, including sample, setting, &amp; data collection methods.</p> <p>The study design was a prospective observational study, which means that the observers do not intervene in the research, they merely observe (Song &amp; Chung, 2010). The setting for this research was the NICU at the First Affiliated Hospital of Xiamen University in Xiamen, China. The sample included all newborns who required the NICU and respiratory support after birth. The researchers collected information on NICU admits between March 20, 2017 and February 28, 2018. Out of the 461 admissions in that time frame, there were a total of 32 who were excluded because they did not need respiratory support for longer than 24 hours (Dai et al., 2020). The total sample size was 429 newborns who required NICU and respiratory support. The data was extracted anonymously from the electronic medical record by computer engineers. Those engineers “were responsible for the operation and maintenance of electronic medical records” (Dai et al., 2020). One research nurse collected the information twice a week. The information was collected using a form, which included the date, severity, treatment, and outcomes. The pressure injury incidence was calculated using two formulas – the cumulative incidence, which is a percentage (calculated by taking the number of newborns with injuries/total number in sample x 100) and the incidence density, which is person per 1000 days (calculated by taking the number of newborns with injury/number of days newborns were followed x 1000) (Dai et al., 2020).</p>
	<p>6) Describe the data collection tool used; is this tool validated?</p> <p>The collection tool used for this study was a form that the team had developed for their</p>

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	<p>specific research. This form included information such as “sex, birth weight, gestation, hospital stay days, and NCPAP treatment duration” (Dai et al., 2020). This data was pulled from the electronic medical record anonymously using only medical record numbers (Dai et al., 2020). This data also included information such as occurrence date, stage of injury, treatment methods and outcomes. Information was collected two times per week by one nurse. When the team decided how to analyze their research, they decided on a <i>P</i> value of .05 to be statistically significant. Their research had <i>P</i> values of less than .05, which shows statistical significance. I feel this tool is validated because, even though their results are slightly lower than other studies, they still had statistically significant results. Also, the researchers state in their limitations area that they were limited by a single NICU setting, so they could not generalize across the NICU populations (Dai et al., 2020).</p>
	<p>7) Summarize study results, including strengths &amp; limitations.</p> <p>The results from this study show that, out of the 429 newborns who needed the NICU/NCPAP support, 149 developed pressure injuries. They also found that if a newborn was less than 32 weeks gestationally were at a higher chance to develop injuries (<i>P</i> value of .017) (Dai et al., 2020). They also found out that birth weight and length of stay were not associated with an increased risk for developing injuries. The authors stated that there was no change in the way their nurses practiced in the NICU. There were protocols in place prior to the start of the study that were maintained through the study. They also treated all the newborns with the same type of NCPAP devices, with a change between nasal prongs and a mask depending on the nurse’s assessment. Also, prior to this study, part of the protocol included provisions to pick nasal prong size based on the infant, alternating prongs and masks, and using prophylactic dressings (Dai et al., 2020). Since these were considered routine, they were not counted as an investigational intervention (Dai et al., 2020). I feel a strength for this study is that there was only one person collecting the data. It was also stated in the paper that the information was collected twice per week. The article did not state if the collection days were the same each week, or if the dates varied depending on when that nurse worked. I feel another strength for this research is how the data was siphoned out of the medical record. There is no way to know which newborn is going to get what medical record number. I feel that helps the information be anonymous and random, which I feel helps a study since the researchers cannot pick which patients are in or out of the study. A limitation that the authors stated was that this study took place in one NICU with consistent types of NCPAP devices (Dai et al., 2020). I agree</p>

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	<p>with the author. Another facility might have a lower rate of pressure injuries because they have different devices or more of a variety of devices that they can use to help avoid injuries. They also did not have an extremely low birth weight newborns, so they were unable to assess that data. The authors also state that a potential weakness in their study is that there was a research nurse who was assessing and documenting the pressure injuries, which could have led the staff to have more attention on the newborns and their practices for preventing injuries.</p>
	<p>8) Formulate answer(s) to the question: Why is this research important to the body of WOC nursing knowledge?</p> <p>I feel this research is important to the body of WOC nursing knowledge because it showcases how much wound care is needed throughout all stages of life. Working in an outpatient clinic, I see mostly older patients. If a younger patient comes in, it is usually a small burn on a toddler’s hand that heals fairly fast. By reading and dissecting this article, it truly shows, to me, how important WOC care is for everyone. The researchers in this article stated that there are limited studies that are similar to theirs. This article adds to a very small pool of research about newborns and pressure injuries. This addition will, hopefully, help other researchers in their pursuit for knowledge. Research such as this will also help nurses in their practices by providing us with evidence-based information to help our patients have the best outcomes.</p>
<p>References See the course syllabus for specific requirements on references for all assignments.</p>	<p>Center for Drug Evaluation and Research. (2019, September 11). <i>Institutional review boards (IRBs) and protection of human subjects</i>. U.S. Food and Drug Administration. <a href="https://www.fda.gov/about-fda/center-drug-evaluation-and-research-cder/institutional-review-boards-irbs-and-protection-human-subjects-clinical-trials">https://www.fda.gov/about-fda/center-drug-evaluation-and-research-cder/institutional-review-boards-irbs-and-protection-human-subjects-clinical-trials</a>.</p> <p>Dai, T., Lv, L., Liu, X., Chen, J., Ye, Y. &amp; Xu, L. (2020). Nasal Pressure Injuries Due to Nasal Continuous Positive Airway Pressure Treatment in Newborns. <i>Journal of Wound, Ostomy and Continence Nursing</i>, 47(1), 26–31. doi: 10.1097/WON.0000000000000604.</p> <p>Ethics committee. (2021, February 23). In <i>Wikipedia</i>. <a href="https://en.wikipedia.org/wiki/Ethics_committee">https://en.wikipedia.org/wiki/Ethics_committee</a></p> <p>Song, J. W., &amp; Chung, K. C. (2010). Observational studies: cohort and case-control studies. <i>Plastic and reconstructive surgery</i>, 126(6), 2234–2242.</p>

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	<p><a href="https://doi.org/10.1097/PRS.0b013e3181f44abc">https://doi.org/10.1097/PRS.0b013e3181f44abc</a> Streefkerk, R. (2021, February 15). <i>Qualitative vs. quantitative research: Differences &amp; methods</i>. Scribbr. <a href="https://www.scribbr.com/methodology/qualitative-quantitative-research/">https://www.scribbr.com/methodology/qualitative-quantitative-research/</a>.</p>
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**\*\*Once you have entered all of your answers into the above grid, save your work with the name of the assignment and your last name in the file title. Upload to the corresponding dropbox in the classroom.**

Select just one (not both) of the articles from the week two DQ assignment thread, determine if the article is qualitative or quantitative then answer the corresponding (e.g. qualitative or quantitative) questions below:

### Qualitative Research Questions

**Enter your 150-300 word response to each of the 8 questions for the corresponding research type into the grid on page one of this form.**

1. Determine if Institutional Review Board (IRB) approval/informed consent obtained. If the research was done outside of the United States, the review body may go under a different name.
2. Discuss the purpose statement.
3. Discuss the research design.
4. Explain in your own words a summary of the literature review used in the selected article.
5. Identify the data collection method(s).
6. Analyze the results of the research study.
7. Identify conclusions and implications for further research.
8. Formulate answer(s) to the question: Why is this research important to the body of WOC nursing knowledge?

OR

### Quantitative Research Questions

**Enter your 150-300 word response to each of the 8 questions for the corresponding research type into the grid on page one of this form.**

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1. Determine if Institutional Review Board (IRB) approval/informed consent obtained. If the research was done outside of the United States, the review body may go under a different name.
2. Describe the problem and purpose of the research.
3. Discuss the research question(s).
4. Explain in your own words a summary of the literature review used in the selected article.
5. Identify the study design, including sample, setting, & data collection methods.
6. Describe the data collection tool used; is this tool validated?
7. Summarize study results, including strengths & limitations.
8. Formulate answer(s) to the question: Why is this research important to the body of WOC nursing knowledge?

### Points criteria:

Criteria	Under performance <3 points per criteria	Basic 3 – 3.9 points per criteria	Proficient 4.0 – 4.4 points per criteria	Distinguished 4.5 – 5 points per criteria
<b>Required content objectives</b>	Content objectives are missing or sparsely covered.	Content objectives are not consistently addressed. Demonstrates minimal understanding of content.	Content objectives consistently addressed. Demonstrates understanding of content.	Content objectives consistently addressed. Demonstrates mastery of content.
<b>Academic writing standards</b>	Writing lacks scholarly tone & focus. Sparse content. Multiple grammatical, spelling, & factual errors. Reliance on bullet points rather than effective writing in speaker notes. 4 or more direct quotes per project.	Writing is unclear and/or disorganized. Inconsistent scholarly tone. Inadequate depth of content. Grammatical and spelling errors. No more than 3 direct quote of less than 40 words per project.	Writing demonstrates general exploration of content. Responses are clearly written using scholarly tone. Few grammatical and/or spelling errors. No more than 2 direct quote of less than 40 words per project.	Writing demonstrates comprehensive exploration of content. Responses are clearly written using scholarly tone. Rare grammatical and/or spelling errors. No more than 1 direct quote of less than 40 words per project.
<b>APA formatting</b>	References and citations have	References and citations have	References and citations have	References and citations have

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<b>Criteria</b>	<b>Under performance</b> <b>&lt;3 points per criteria</b>	<b>Basic</b> <b>3 - 3.9 points per criteria</b>	<b>Proficient</b> <b>4.0 - 4.4 points per criteria</b>	<b>Distinguished</b> <b>4.5 - 5 points per criteria</b>
	multiple errors or are missing.	errors.	few errors.	rare errors.