

Pressure Injuries: Literature Review

Jessica Runde

Lakeview College of Nursing

N434: Evidence-Based Practice

Professor Katie King

June 27, 2024

Pressure Injuries: Literature Review

Pressure injuries are a common problem in the health field. This literature review is written to help the reader understand more about pressure injuries and how to avoid them. There are many risk factors and symptoms that are included with pressure injuries. This review will inform the reader of the factors and side effects. There are also many ways a patient or a nurse can help manage pressure injuries. These prevention strategies will also be discussed. Pressure injuries are significant to treat right away before they develop into further, severe stages; therefore, it is crucial to understand the prevention strategies, risk factors, symptoms, and different types of treatment for these injuries.

Nurses' Knowledge to Pressure Ulcer Prevention in Public Hospitals in Wollega: A Cross-Sectional Study Design

Pressure injuries can become a severe issue for patients if they are not treated adequately and appropriately. Many different types of preventive measures can be taken to avoid pressure injuries. Nurses must help implement these measures when caring for a patient. This article conducted a study to address the nurses' knowledge of preventing pressure injuries. The prevention of these injuries is nonpharmacological and easy to implement. Nurses are responsible for avoiding the formation and worsening of pressure injuries when caring for a patient (Ebi et al., 2019). With the best patient care from the nurse, the patient will not have to deal with the pain that comes with pressure injuries (Ebi et al., 2019). The money spent on pressure injuries should also be taken into consideration. The price of preventing versus treating a pressure ulcer is widely differentiated as treatment doubles (Ebi et al., 2019). This research article can assist and teach nurses how to prevent pressure injuries within their patients.

Key Points

The researchers of this study found that nurses need a better understanding of preventing pressure injuries (Ebi et al., 2019). This research study aims to identify the amount of knowledge a nurse has about pressure injuries. The researchers of this article used a quantitative method to conduct the study. Within the study, 212 nurses were randomly chosen from multiple hospitals to complete a three-part questionnaire (Ebi et al., 2019). The first part of the data collection asked about the participants' demographics (Ebi et al., 2019). This is not only related to their body characteristics but also to their education and years of working in the health field (Ebi et al., 2019). The second part was a 26 multiple-choice test on the Pressure Ulcer Knowledge Test Tool (Ebi et al., 2019). There were six different categories of this test: "etiology and development (6), classification and observation (5), risk assessment (2), nutrition (1), preventive measures to reduce the amount of pressure (7), and preventive measures to reduce the duration of pressure (5) items" (Ebi et al., 2019, para. 21). The final part of the data collection was multiple factors listed that may make it difficult for the nurse to complete interventions to prevent pressure injuries (Ebi et al., 2019). The nurses could answer 'yes' or 'no' to these factors. All of the data collected was then inserted into a computer. The goal for the p-value of the study was set at < 0.05 (Ebi et al., 2019). The responses to part one showed that most participants were males in middle adulthood, held a diploma, and had multiple years of nurse work. The results also showed that nurses with more training and clinical experience did better on the questionnaire (Ebi et al., 2019). After completing the questionnaires, the researchers identified some of the barriers the nurses experience when trying to prevent pressure injuries. The data was still significant even though it showed the nurses' poor understanding of pressure injuries. This now helps the researchers

identify the nurses' knowledge level of the injuries and the barriers that intervene with the care of patients.

Assumptions

This research article has data that provides assumptions about the author's thinking. This study has data to show the amount of knowledge a nurse has on pressure injuries. The results showed that the nurses who participated in the study needed a better understanding of the details pressure injuries entail (Ebi et al., 2019). The results showed that "only 18 (8.5%) of nurses scored above the mean score (answered 13 out of 26)" correctly on the Pressure Ulcer Knowledge Test (Ebi et al., 2019, para. 31). During the study, the researchers were also able to find some barriers the nurses face when preventing pressure injuries. These barriers consisted of "shortage of pressure-relieving devices (117, 55.25%), lack of staff/heavy workload (116, 54.7%), lack of training (110, 51.9%) and lack of multidisciplinary initiative (101, 47.6%)" (Ebi et al., 2019, para. 37). Both of these findings show that there is a lack of understanding, and this can be crucial for the development of pressure injuries.

Deficit/Conclusion

Additional research is still necessary, but this article provides evidence regarding the barriers a nurse faces when preventing pressure injuries and the amount of knowledge a nurse portrays. The decreased knowledge of pressure injuries is the leading cause. Formation of pressure injuries can result from inadequate care of the patient. The author had an appropriate line of reasoning. With the results from this study, researchers now know that nurses need a better understanding of pressure injuries to help prevent them from happening. If nurses fail to accept the line of

reasoning, it will be impossible to establish ways for nurses to gain more knowledge on pressure injuries.

Predictors of Superficial and Severe Hospital-Acquired Pressure Injuries: A Cross-Sectional Study Using the International Pressure Ulcer Prevalence™ Survey

Pressure injuries that are acquired in a hospital have been a common problem. This can fall on the nurses for not giving their patients the best care possible. Many different risk factors can cause a pressure injury in a hospital facility. The number of pressure injuries acquired in a hospital has decreased throughout the years (Kayser et al., 2019). This article has conducted research to identify if all stages of hospital-acquired pressure injuries have declined (Kayser et al., 2019). There are two main types of pressure injuries listed in this article: “superficial (stage 1 and 2) and severe (stage 3, 4, deep tissue, and unstageable) pressure injuries” (Kayser et al., 2019, para. 1). This article will show if both superficial and severe hospital-acquired pressure injuries have decreased over time. The research conducted in this article will also show the reader if there is a difference between the risk factors for superficial pressure injuries and severe pressure injuries (Kayser et al., 2019). The results of this study can show the nurses what changes need to be made to stop hospital-acquired pressure injuries.

Key Points

This research study was conducted from 2011-2016 (Kayser et al., 2019). The method used to collect the data for this study was the International Pressure Ulcer Prevalence™ survey that patients participated in to fill out (Kayser et al., 2019). The 216,626 participants were all patients who received care from hospitals throughout America (Kayser et al., 2019). The surveys the

participants filled out collected information on factors that could contribute to the cause of a hospital-acquired pressure injury. These risk factors included “age, weight, height, length of stay, unit, number of linen layers on the bed, support surface, incontinence status, incontinence management systems in use, ambulatory status, and Braden score” (Kayser et al., 2019, para. 20). The next part of the survey only qualified patients if they received a hospital-acquired pressure injury. These questions asked for information related to pressure injury (Kayser et al., 2019). All the data from the International Pressure Ulcer Prevalence™ survey was collected through a computer to find the results. The results showed that “superficial hospital-acquired pressure injuries declined significantly from 2011 to 2016” (Kayser et al., 2019, para. 7). On the other hand, the hospital-acquired severe pressure injury numbers stayed the same (Kayser et al., 2019). The survey also showed that “risk factors for superficial and severe injuries were highly similar” (Kayser et al., 2019, para. 37). All the risk factors contributed to the formation of both superficial and severe pressure injuries (Kayser et al., 2019). The p-value for hospital-acquired superficial pressure injuries was <0.001 (Kayser et al., 2019). Meanwhile, the p-value for hospital-acquired severe pressure injuries was $P=0.26$ (Kayser et al., 2019). This data was significant because it gave the author and readers knowledge of the evidence they found from the conducted study. It showed the common risk factors that will help the nurses make changes when caring for patients. It also showed that hospital-acquired severe pressure has much room to improve the numbers.

Assumptions

This research article has the evidence to show the assumptions underlying the author’s thinking. The data from the survey results showed that there are many different risk factors

associated with both severe and superficial hospital-acquired pressure injuries (Kayser et al., 2019). The researchers also found that superficial pressure injuries declined over time, while severe ones did not (Kayser et al., 2019). The study showed that there were six main risk factors for hospital-acquired severe pressure injuries: “ambulatory status, having a fecal management system, having an ostomy, presence of fecal only incontinence, presence of a Foley catheter, and presence of a combination of fecal and urinary incontinence” (Kayser et al., 2019, para. 36). With the evidence showing that there was no decline in hospital-acquired severe pressure injuries from 2011-2016, a change needs to be made (Kayser et al., 2019). This allows nurses to know the six leading causes of these pressure injuries and complete better patient care.

Deficit/Conclusion

Pressure injuries are a severe problem in healthcare today. When they are hospital-acquired, it is in the nurse’s hands for not providing adequate care to the patient. When a patient develops a pressure injury, it results in “poorer health outcomes, diminished quality of life, and high costs of healthcare” (Kayser et al., 2019, para. 12). The author’s line of reasoning in this research study was valid. With the evidence from this research article, nurses can implement more interventions when caring for patients at a high risk of developing a pressure ulcer. If nursing fails to accept the line of reasoning, hospital-acquired severe pressure injuries will continue to develop over the years.

Hospital-Acquired Pressure Injuries in Critical and Progressive Care: Avoidable Versus Unavoidable

Pressure injuries are acquired in a hospital often, especially in the critical and progressive care units (Pittman et al., 2019). Nurses need to understand the actions that they can take to prevent pressure ulcer formation when caring for their patients. This article shows results from a research study conducted to determine whether certain patients with pressure injuries are avoidable or unavoidable (Pittman et al., 2019). The study only consisted of patients cared for in the critical or progressive care units (Pittman et al., 2019). Patients receive extra care in these units due to their severe health circumstances. Therefore, they should be receiving the best care from nurses. Although many hospital-acquired pressure injuries are avoidable through proper care, this study has evidence to show whether some pressure injuries acquired in a hospital setting are unavoidable, no matter the care provided.

Key Points

This research study was conducted using 165 participants who were all patients in the critical care unit or the progressive care unit between 2012 and 2015 (Pittman et al., 2019). The patients were asked to give information on themselves. The data the researchers collected when completing this study was “demographic information, Braden Scale scores, clinical risk factors, and preventive interventions” (Pittman et al., 2019, para. 3). After the data was collected, the responses were then analyzed by the Pressure Ulcer Prevention Inventory (PUPI) to determine whether the hospital-acquired pressure injuries were avoidable or unavoidable (Pittman et al., 2019). The results found that there are multiple scenarios where hospital-acquired pressure

injuries (HAPIs) are unavoidable due to certain risk factors. If the participants answered 'yes' to all parts of the PUPI, the pressure injury was considered unavoidable, no matter the care provided. The "unavoidable HAPIs were defined as those that developed in spite of consistent documentation of evidence-based preventive interventions" (Pittman et al., 2019, para. 28). Of the 165 participants in the study, 41% of the HAPIs formed were unavoidable (Pittman et al., 2019). To determine the avoidable versus unavoidable hospital-acquired pressure injuries, the p-value was set at <0.5 (Pittman et al., 2019). The research conducted in this study was significant. It provided the researchers with the results that they wanted. It showed that in critical and progressive care units in a hospital, there are some cases where hospital-acquired pressure injuries are unavoidable, even with all the care implemented (Pittman et al., 2019).

Assumptions

The results of this research study support the assumptions underlying the author's thinking. The author assumes that there are HAPIs that are unavoidable in the progressive and care units in a hospital. The results showed that 41% of the participants' hospital-acquired pressure injuries were unavoidable (Pittman et al., 2019). After the data was all collected and combined, it showed that patients with congestive heart failure, chemical sedation, systolic blood pressure below 90, or who were given a vasopressor had avoidable pressure injuries (Pittman et al., 2019). Meanwhile, patients "who had a bowel management system were more likely to have an unavoidable HAPI than those who did not" (Pittman et al., 2019, para. 21). The study also showed that if a patient had a previous pressure injury, the prevention of a HAPI was likely unavoidable (Pittman et al., 2019). Although some HAPIs were found to be unavoidable, it is

still necessary to provide the best quality of care for patients to avoid those HAPIs that are avoidable.

Deficit/Conclusion

Patients in the critical or progressive care units of a hospital are at an extremely high risk of developing a hospital-acquired pressure injury. According to Pittman et al. (2019), in paragraph 6, “Rates of such injuries have been reported to range from 2.8% to 53.4% in critical care units, compared with 2.0% to 8.3% in medical-surgical units.” The author of this article had a proper line of reasoning. This study provides research to show that some of the HAPIs are unavoidable. Nurses and healthcare professionals are still required to implement all interventions to avoid hospital-acquired pressure injuries. If nursing fails to accept the line of reasoning, then those pressure injuries that are avoidable in a hospital setting will still be formed.

Conclusion

Pressure injuries are a common problem that affects multiple people. All these articles have provided evidence-based research to provide more information on pressure injuries and their formation. The first article performed a study to show how much knowledge a nurse has on preventing pressure injuries. This article showed many interventions nurses can implement when caring for patients to avoid pressure injuries. The other two articles provide information on hospital-acquired pressure injuries. All these articles above show the many factors that put patients at risk for developing a pressure ulcer. These studies can improve the quality of life for patients by keeping them free of pressure injuries. These studies can also positively change nursing practice by providing knowledge on ways to prevent pressure injuries in patients. Pressure injuries can improve evidence-based practice and quality improvement efforts as well.

With continuous evidence-based practice implemented on pressure injuries, the quality of patient care will be improved. Healthcare can benefit from the information provided in these research articles. Several people are affected by pressure injuries, and with the risk factors and interventions listed, the formation of these injuries in patients will decline. This will result in an improved quality of life for many people.

References

- Ebi, W.E., Hirko, G.F., & Mijena, D.A. (2019). Nurses' knowledge to pressure ulcer prevention in public hospitals in Wollega: A cross-sectional study design. *BMC Nursing, 18*, 20. <https://doi.org/10.1186/s12912-019-0346-y>
- Kayser, S.A., VanGilder, C.A., & Lachenbruch, C. (2019). Predictors of superficial and severe hospital-acquired pressure injuries: A cross-sectional study using the International Pressure Ulcer Prevalence™ survey. *International Journal of Nursing Studies, 89*, 46-52. <https://doi.org/10.1016/j.ijnurstu.2018.09.003>
- Pittman, J., Beeson, T., Dillon, J., & Cuddigan, J. (2019). Hospital-acquired pressure injuries in critical and progressive care: Avoidable versus unavoidable. *American Journal of Critical Care, 28*(5), 338–350. <https://doi.org/10.4037/ajcc2019264>