



## Application Of The Braden Scale Instrument in Detecting Risk of Decubitus

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**Abstract.** Decubitus wounds are wounds caused by prolonged pressure on a prominent surface area of the bone. Nurses play an important role in preventing the incidence of decubitus, especially by carrying out an early assessment of the risk of decubitus, namely by using the Braden Scale. Objective: to determine the risk of decubitus injuries using the Braden Scale. Method: This type of research is quantitative research with a descriptive research design. The sample in this study was 20 people using a non-probability accidental sampling. Inclusion criteria for this research were patients treated in hospital. Islam Malahayati Medan for more than 2 days of treatment, young elderly, middle elderly and old elderly patients. Data analysis in this study used SPSS 25 for Windows for descriptive statistics. Results: There were 7 people (35%) in the no risk category, 6 people (30%) in the mild risk category, 2 people (10%) in the moderate risk category and 4 people (20%) in the high risk category and 1 person (5%) severe risk category. Suggestion: Hospitals need to include the Braden Scale assessment format in the inpatient assessment format to detect the risk of decubitus injuries and carry out assessments on patients every day while the patient is hospitalized.

**Keywords:** Braden Scale, Decubitus Ulcer, Patient.

### 1. INTRODUCTION

Pressure sores are a common phenomenon frequently encountered in bed rest patients, with a high incidence rate. Decubitus is local tissue necrosis that tends to occur when soft tissue is compressed between bony prominences and external surfaces over a long period of time (Potter & Perry, 2011).

The prevalence of pressure ulcers in Indonesia reaches 40%, the highest among other large ASEAN countries. According to Bujang, Aini & Purwaningsih (2014), the incidence of pressure ulcers in acute care is 5-11%, in long-term care is 15-25%, and in home care. care) of 7-12% (Bujang et al., 2014).

The prevalence of decubitus in Indonesia is still quite high, research results in several government hospitals in Indonesia show that the incidence of decubitus in bed rest patients is 15.8% to 38.18% (Okatiranti, Sitorus, & Tsuawabeh, 2013). To reduce the incidence of decubitus Nurses play an important role in preventing the emergence of pressure ulcers by early detection of the emergence of pressure ulcers using appropriate assessment instruments. Currently, there are several instruments that can be used to detect early onset of pressure ulcers by assessing the degree of risk of developing pressure ulcers such as the Braden Scale, Norton Scale, etc. (Yustina et al., 2021).

To facilitate early assessment of the risk of pressure ulcers in patients, Braden and Begstrom (1989) developed the American Braden scale in the area of home care. The Braden Scale consists of six subscales, on five subscales (sensory perception, activity, mobility, nutritional status, humidity, friction and shifting) (Kozier, 2010).

According to Mizan et al (2016) the instrument most commonly used by hospitals in Indonesia is the Braden Scale. Because the Braden scale has been widely tested for validity and reliability in various types of hospitals and patients. Based on research by Giorgieva (2021) regarding assessing the risk of decubitus wounds using the Braden Scale, as many as 50.83% of respondents experienced decubitus wounds which were quite risky, 26.67% were at high risk, and 14.17% were at moderate risk, and only 8.33% were at risk. light (Giorgieva, 2021).

Malahayati Islamic Hospital is one of the hospitals in Medan City. one of the hospitals that will develop. Therefore, researchers are interested in conducting research on the application of the Braden Scale in detecting pressure sores in inpatients at Malahayati Islamic Hospital, Medan.

## **2. METHOD**

This type of research is quantitative research with a descriptive research design. With the aim of determining the risk of decubitus injuries using the Braden scale. Research Location at Malahayati Islamic Hospital, Medan. The sample in this study was 20 people using a non-probability sampling technique, namely accidental sampling. The inclusion criteria for this research were patients who were hospitalized. Islam Malahayati Medan more than 2 days of treatment, elderly patients, bedrest patients, patients willing to become respondents proven by providing informed consent. The data collection process in this research uses the Braden Scale instrument where the Braden Scale has subscales, namely: sensory perception, humidity, activity, mobility, nutrition, friction and tearing. Data analysis in this study used univariate analysis to determine the frequency distribution of the risk of decubitus injuries at the Malahayati Islamic Hospital, Medan.

### 3. RESULT

The data of respondent will be presented in table 1 to describe the category of respondent data age category

**Table 1**  
**Respondent Data According to Age Category**

No	Respondent	F	%
1	Young elderly	8	40
2	Middle elderly	9	45
3	Elderly	3	15
<b>Total</b>		25	100

**Table 2**

**Braden Scale in Detecting the Risk of Pressure Ulcers in the Inpatient Room at RSIM  
Malahayati Medan**

No	Klasifikasi	F	%
1	No Risk	7	35
2	Mild Risk	6	30
3	Medium Risk	2	10
4	High Risk	4	20
5	Severe Risk	1	5
<b>Total</b>		20	100

### 4. DISCUSSION

From Table 1, it shows that the age of vulnerable respondents is 8 young elderly people, 9 middle elderly people, 3 elderly people. With a total of 20 respondents. The majority of respondents were middle elderly, namely the age range 70-79 years. According to the World Health Organization (2020), the age division of the elderly consists of young elderly 60-69 years, middle elderly 70-80 years, old elderly over 80 years.

According to Revis (2015), age is an intrinsic factor that causes pressure ulcers because in old age there is a decrease in elasticity and vascularization, thereby increasing the risk of pressure ulcers. As a result of the aging process, elderly people generally experience loss of muscle elasticity, decreased serum albumin levels, decreased inflammatory response, and decreased cohesion between the epidermis and dermis. This risk increases because in the elderly there is a decrease in the body's physiological abilities, including reduced tolerance to pressure and friction, reduced subcutaneous fat tissue, reduced collagen and elastin tissue, and decreased efficiency of capillary collaterals in the skin. The elderly's ability to feel painful sensations due to pressure decreases as a result of decreased sensory perception.

From Table 2, there were 4 people (20%) in the high risk category and 1 person in the severe risk category where the respondent's medical diagnosis was a diagnosis of a neurological disorder, namely hemiparase caused by ischemic stroke. Hemiparase is a condition where the patient experiences weakness on one side of the patient's body, where this condition causes the patient to experience limitations in activities.

Risk assessment is the main step that is immediately carried out at the beginning of the treatment period, when the risks have been assessed then the preventive measures that will be given will be appropriate. Risk assessment for wounds can use the Norton, Braden, Waterlow Scale, and Gosnell Scale instruments (Richardson et al., 2017).

Risks Prevention of pressure ulcers is very important to reduce pain, affect the patient's quality of life emotionally, physically, socially, and even reduce the risk of death in patients, as well as preventing increased length of stay and increasing treatment costs (Whitty et al., 2017). Interventions in skin care are an indicator of the quality of nursing services provided. Nurses regularly observe damage or impaired skin integrity in patients (Potter et al., 2016).

The results of research (Kale et al 2014) regarding the use of the Braden Scale is effective in predicting the incidence of pressure ulcers in bed rest patients treated in hospital where, the level of validity of the Braden scale remains better with a sensitivity value of 88.2%, specificity 72.7%, positive predictive value 27.3%, and negative predictive value 11.8% at a cut of point 15, and the area under the ROC curve is 0.880. These results show that the Braden scale has a good balance between sensitivity and specificity. And also the Braden scale has proven to be effective in predicting the incidence of pressure ulcers.

The results of this study are in accordance with Giorgieva's (2021) research on assessing the risk of decubitus wounds using the Braden Scale, that as many as 50.83% of respondents experienced decubitus wounds which were quite risky, 26.67% were at high risk, and 14.17% were at moderate risk, and only 8.33% are at mild risk (Giorgieva, 2021).

## **5. CONCLUSION AND RECOMMENDATION**

The conclusion in this study was that there were 7 people (35%) in the no risk category, 6 people (30%) in the mild risk category, 2 people (10%) in the moderate risk category and 4 people (20%) in the high risk category and 1 person ( 5%) severe risk category. The application of the Braden Scale can be applied in hospitals to prevent decubitus wounds early and determine the next steps and plans in treating patients to prevent decubitus wounds, especially in patients in the moderate, high and severe categories.

The researcher's suggestion to hospitals is that hospitals need to include the Braden Scale assessment format in the inpatient assessment format in detecting the risk of decubitus wounds in the inpatient room and conducting assessments on patients every day while the patient is hospitalized.

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