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# Paper

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## **Effectiveness Braden Scale and Norton Scale to Pressure Ulcer Risk In Dr. Ramelan Hospital Surabaya**

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### **Abstract**

Pressure Ulcer is skin integration damage caused by constant pressure and obstructed blood flow that most often lead to pressure ulcer, which included in the guidelines of pressure ulcer. Patients were required to bedrest for a long time at risk for developing pressure ulcer. Pressure ulcer it self can be prevented by using the pressure ulcer risk measurement scales like the Braden scale and Norton scale. This study aim to Effectiveness Braden Scale and Norton Scale to Pressure Ulcer Risk In Dr. Ramelan Hospital Surabaya. Design is analytic observational with cross sectional approach. Sampling technique using simple random sampling and the results obtained 30 patients bedrest. This study instrument use observation Braden scale and Norton scale. Data were analyzed using the Mann-Whitney test. Research found that effectiveness between Braden scale and Norton scale to the risk of pressure sores is 0.458 with significant values  $\alpha = 0.05$  for comparison. there's none of the most effective between the scale of the scale of Braden and Norton scale. Implication Norton scale and Braden scale are equally effective for measuring the risk of pressure ulcer. Recommendation for nurses will use the scale of the risk of pressure ulcer as prevention in patients.

**Keywords :** Pressure ulcer, Braden Scale, Norton Scale

### **INTRODUCTION**

Pressure ulcer is clinical manifestation of necrotic tissue, soft tissue which exposed pressure in long term and make circulation of nutrients inhibited then caused cell death (Maklebust, 2001). Nurses have been doing efforts to prevent Pressure ulcer by lean periodically but never measured how much the risk of Pressure ulcer in patients bedrest (Widodo, 2007).

The National Pressure Ulcer Advisory Panel (NPUAP) estimated that the prevalence rate or cases have been diagnosed is 15% while 7% from that is new cases or the incidence (NPUAP & EPUAP, 2009). The Incidence of Pressure

ulcer in Europe alone was 18.1% while in Japan is 4.18% (Matsui, 2011). The incidence of Pressure ulcer in Indonesia has reached 33.3% while this number already exceeds that of other ASEAN cities which only ranged from 2.1% to 31.3% only (Vonny, 2015), whereas according to the Ministry of Health Republic of Indonesia (2007) incidence of Pressure ulcer in Minimum Service Standards Hospital amounted to less than 1.5%. Based on the record PMKP Dr. Ramelan Navy Hospital on February 2nd, 2016 found the incidence of Pressure ulcer, especially in pavilion 7 at the period of 2015 as many as 4

out of 104 patients who are at risk of Pressure ulcer bedrest.

Indonesia patients who are hospitalized, especially in the surgical ward and interna have experiencing Pressure ulcer (Widodo, 2007). Pressure ulcer is a very serious problem, especially for patients who must be treated long term in the hospital with immobility. Some tools for risk assessment available for nurses with developed systematically to identify patients who have Pressure ulcer risk (Berman *et al*, 2008). Some measuring tools such as Norton and Braden have been developed to assist the risk assessment of Pressure ulcer, this scale is designed to be 'support tool' and assist nurses in nursing care properly for patients (Inavacare, 2011).

Pressure ulcer in many cases have been prevented by developing a number of measuring

instruments to see the risk of a patient may develop Pressure ulcer or not (Perry & Potter, 2009).

Nurses who implement this risk prevention of Pressure ulcer to patients can reduce number of incidence risk of Pressure ulcer (Moya, 2012). Pressure ulcer were suppressed significantly would make better quality of the hospital and nurses will considered as successful implement patients with bed rest in long term for reduce the risk of pressure sores (Maklebust, 2000).

## RESEARCH METHODS

Research design used in this study is a *cross-sectional*. The study population was 33 bed rest patients at pavilion 7 RSAL Dr. Ramelan Surabaya in May 2016. Sampling technique using *simple random sampling* and obtained 30 bedrest patients. Instrument uses Braden scale observation sheets and Norton scale observation sheets.

## RESULTS

### Analyses Univariate

Table 1 Respondents Characteristic Based on Nursing Diagnose at Pavilion 7 Dr. Ramelan Navy Hospital Surabaya at 2 May – 22 May 2016 (n = 30)

Nursing Diagnose	Frekuensi (f)	Prosentase (%)
Stroke	15	50.0
CVA Bleeding	4	13.3
CVA Infark	3	10.0
Vertigo	1	3.3
Hipertention	4	13.3
Others	3	10.0
Total	30	100

Table 1 found characteristics of respondents based nursing diagnoses of patients in the room 7 of 15 people (50%) suffered from stroke, 4 people for CVA Bleeding (13.3%), hypertension 4 people (13.3%), other diseases named as diabetes mellitus and diarrhea as many as three people (10%) and CVA infarck as many as 3 people (10%), vertigo as many as 1 (3%).

Tabel 2 Characteristics Respondents based from Prevention at Pavilion 7 in Dr. Ramelan Navy Hospital Surabaya in 2 May – 22 Mei 2016 (n = 30)

Prevention	Frekuensi (f)	Prosentase (%)
Lean periodically	9	30.0
Change clothes	4	13.3
Patient position	1	3.3
Use a layer	1	3.3
None	15	50.0
Total	30	100

Table 2. Characteristics of respondents based prevention ton table 2 is 15 people (50%) say do not take any precautions to prevent pressure sores, 9 (30%) said it had lean periodically, 4 (13.3%) said the replacement clothes once a day, 1 (3.3%) said that change position every hour, and 1 (3.3%) said use an extra layer.

### Analysis Bivariat Braden Scale

Tabel 3 Characteristics Respondents based Braden Scale for Pressure Sore Risk Assessment at 2 May – 22 May 2016 (n = 30)

Category	Frekuensi (f)	Prosentase (%)
Not Risk	12	40.0
Risk	9	30.0
Moderate Risk	6	20.0
High Risk	2	6.7
Very High Risk	1	3.3
Total	30	100

Risk distribution from scale of Braden based Table 3 shows that as many as 12 people (40%) categorized as not at risk, 9 (30%), including risk, 6 (20%), including the risk of being, 2 (6.7%) including high risk, 1 people (3.3%) including a very high risk.

### Norton Scale

Tabel 4 Characteristics Respondents based Norton scale risk assessment in 2 – 22 May 2016 (n = 30).

Category	Frekuensi (f)	Prosentase (%)
Low Risk	13	43.3
Moderate Risk	6	30.0
High Risk	7	23.3
Very High Risk	4	13.3
Total	30	100

Risk distribution from scale Norton by Table 4 shows 13 people (43.4%) belongs to the category of low risk, 6 (30%) including intermediate risk, 7 (23%) categorized as high risk, and 4 (13.3%) has very high risk.

## DISCUSSION

From Braden scale measurements points, nursing diagnoses have a big impact of pressure sore incidence. Patient with Diarrhea, Diabetes Mellitus and Vertigo didn't have a high risk, but also there's another diagnosis like CVA Infark and Bleeding include this category. Depends on fact in field show, from Braden's risk factor patient with Diarrhea still have a great mobility and didn't have any problem with their sensory-perception. They still can maintain skin moisture and change their clothes regularly. Also, nutrients still preserved because patient have a great appetite. Same as Vertigo patients who still mobilize actively and their perception sensory still work great.

Moisture skin and nutrients maintain very well. Diabetic patients maybe have a bit nervous breakdown, but facts shows patients didn't have any perception sensory disorder in their back and their activity also nutrients still maintain very well.

Stroke and Hipertension patients include in Braden's Risk category because in facts show a lot of Stroke patients experience paralysis like Hemiparase--partial body paralysis, patients still can move their body but muscle strength start decrease (NSA, 2016)--patient with this disorders have their perception-sensory still work but their activity point slightly disrupted and that's means they have a risk because their limited mobility and can't change their position independently, patients only lie down and will cause problem for their skin moisture, their friction and shear points will have a higher

number. In hipertension patients, they didn't experience any paralysis but pain in their head make they must lie down and if this factors connected to Braden's Risk Factor, Hipertension patients have a good perception-sensory but their Mobility will slightly decrease because of headache. Stroke patients mostly spending their time in their bed because of limitation mobility, pressure at their back will be increase and triggering another pressure risk

Norton scale didn't have Not Risk category, all bed rest patient even they didn't have high risk will include on Low Risk or category one. Same as Braden's, Diabetic, Vertigo and Diarrhea include in their lowest category. Diabetic itself is long term disease with a sign of high glucose levels. Reasons why patient with these diagnoses include in Norton's lowest level is because even these patients is bed-rest, but their physic condition is still good, their mental state is compos mentis which is they can communicate their uncomfortable and ask for help. Beside that, their still can actively mobilization which is they still can do everything on their own. These patients also didn't experience any incontinencia.

## Results

Based on study result, 30 patients by a median of respondents with Braden scale obtain 1.03 and Norton scale by 2.07. On a scale of Braden had a median result 1.00 (Risk), medium scale Norton has the result 2.00 (Medium Risk). It shows that the Braden scale average value lower than Norton. Braden scale median values show results of Risk

and Norton show results Medium Risk.

Besides the two is a scale that can be used to measure the risk of pressure sores, Braden and Norton scale were similarly measure the risk from patients mobility levels and activities. But there are also distinguish between Norton and Braden, such as the value used for the results of the risk of pressure sores. Another similarity between the scale of Braden and Norton are the total value, both equally argue that if a patient is worth a total of less than 10, patient will included in the Very High Risk category on a scale of Braden and Norton. In addition, both have differences in this pressure sore risk assessment. Norton scale looks more simple and concise for the assessment of pressure sores, is inversely proportional to the scale of Braden who has asses many aspects such as nutrition and Friction / Shear, they also accompanied by a detailed explanation. But Braden scale didn't have some point in the review on a scale of Norton, such as Mental Condition and Incontinence when the two points were also have important side for risk of pressure sores assesment. To apply, Braden scale is easier to use for measurement have an explanation for each item and allows the reviewer to equate with the patient's condition factually, while Norton scale simpler to have a lot of items that are similar to each other which will make the reviewer to give a value bias.

Based results of Mann-Whitney test for effectiveness between Braden scale and Norton scale to pressure sore risk at Pavilion 7 patients Dr. Ramelan Navy Hospitals Surabaya, results shows 0,458 with significant score  $\alpha = 0,05$  as compare. Based

statistic results,  $\rho 0,458 > \alpha 0,05$  meaning none of them is the most effective to scoring pressure sore risk.

## CONCLUSION

Braden Scale is effective for pressure ulcer risk assessment in patients at Navy Hospital Dr. Ramelan. Because the scale of Braden assess the risk of pressure ulcer in some aspects, such as for example Nutrition and Sensory Perception.

Norton scale is effective for pressure sores risk assessment in patients at Navy Hospital Dr. Ramelan. Because the Norton scale assesses the risk of pressure sores not only of the physical state of the patient, but also on the level of consciousness and incontinence may occur in patients.

Nothing is more effective than both the scale. Braden Scale and the Norton scale are equally effective and can be used to measure the risk of pressure sores in Room 7 Naval Hospital Dr. Ramelan Surabaya. None of this scale is effective more from each other. Neither Braden scale and Norton scale is effective and can used to pressure sore risk assessment at Pavilion 7 Navy Hospital Dr. Ramelan Surabaya.

## 7. REFERENCE

- Bell, Joy. (2005). Clinical Review: Are Pressure Ulcer Grading & Risk Assessment Tools Useful?. *Wounds UK*.
- Berman, Audrey dkk (2008). *Fundamentals of Nursing: Concepts, Process, and Practice, Eight Edition*. New Jersey: Pearson Education, Inc.
- Handayani, Ririn. Irawaty, Dewi. Pajaitan, Ria Utami. (2011).

- 5 Pencegahan Luka Tekan Melalui Pijat Menggunakan Virgin Coconut Oil. *Jurnal Keperawatan Indonesia, Volume 14, No. 3, November 2011: hal 141-148.* Diunduh pada 5 Desember 2015.
- Inavacare .(2011). *Preventing Pressure Ulcers – A clinical Guide.* United Kingdom.
- Kallman, Ulrika. Lindgren, Margareta .(2014). Literature Review: Predictive validity of 4 risk assessment scales for prediction of pressure ulcer development in a hospital setting. *Advances in Skin & Wound Care, (27), 2, 70-76.*
- Maklebust, JoAnn, Siegreen, Mary .(2001). *Pressure Ulcer: Guidelines for Prevention and Management.* USA: Springhouse Corporation
- Megawati, Nurmalya Vonny. Fatmawati, Atikah. Prasetyo, Budi. .(2015). *Best Practice and International Consensus: Pressure Ulcer Management In Indonesia.* <http://repository.poltekkesmajapahit.ac.id/index.php/pd/article/view/62>, diunduh pada tanggal 22 Desember 2015.
- Morison, J. Moya. .(2012). *Seri Pedoman Praktis: Manajemen Luka.* Jakarta: EGC
- National Pressure Ulcer Advisory Panel & European Pressure Ulcer Advisory Panel .(2009). *International Guideline: Pressure Ulcer Treatment Technical Report.*
- Potter, A. Patricia, Perry, Griffin Anne .(2009). *Fundamentals of Nursing, Seventh Edition.* Singapore: Elsevier.
- Sackley, Catherin., et al .(2008). The Prevalence of Joint Contractures, Pressure Ulcer, Painful Shoulder, Other Pain, Falls, and Depression in the Year After a Severely Disabling Stroke Dec 2008. *American Heart Association.*
- Wahyuni, Tri. .(2014). *Pengaruh Posisi Miring 30 Derajat Menggunakan Absorbent Triangle Pillow Terhadap Dekubitus Grade 1 pada Pasien Gangguan Penurunan Keadaran di Ruang ICU RSUD.* Program Studi S-1 Keperawatan STIKES Kusuma Husada Surakarta: Skripsi Dipublikasikan.
- Widodo, Arif. .(2007). Uji Kepekaan Instrumen Pengkajian Risiko Dekubitus Dalam Mendeteksi Dini Risiko Kejadian Dekubitus di RSIS. Vol 8. *Jurnal Penelitian Sains & Teknologi, Vol 8, No. 1, 2007 : 39 - 54.*
- Wound Ostomy and Continence Nurses Society .2011. *Position Statmenet: Pressure Ulcer Staging . diakses pada 25 Desember 2015.*
- Zakkiyah, Syifa .(2014). *Pengaruh Mobilisasi Progresif Level I: Terhadap Resiko Dekubitus dan Perubahan Oksigen pada Pasien Kritis Terpasang Ventilator di Ruang ICU RSUD Dr. Moewardi Surakarta .* Program Studi Magister Epidemiologi Program Pasca Sarjana Universitas Diponegoro Semarang : Tesis Dipublikasikan.



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