

The Effect of Wound Care Innovation (Moist Wound Healing Method) by Nurses on Wound Healing Duration and Hospitalized Satisfaction

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ABSTRACT

postoperative wounds requiring prolonged treatment. Inadequate wound care may delay healing, increase infection risk, and reduce patient satisfaction. Moist Wound Healing maintains a balanced moist environment to promote tissue regeneration and accelerate healing. This study aimed to analyze its effect on wound healing duration and patient satisfaction among hospitalized patients. A quantitative quasi-experimental one-group pretest–posttest study was conducted in the inpatient ward of RSUD M. Natsir Kota Solok, involving 35 respondents selected through purposive sampling. Data were collected through direct wound observation and a validated patient satisfaction questionnaire. Univariate analysis used frequency distributions, while Wilcoxon and Paired t-tests were used for bivariate analysis. Mean wound healing duration significantly decreased from 14.2 to 8.6 days after the intervention ($p < 0.001$), while patient satisfaction increased from 45.7% to 88.6% ($p < 0.001$). Thus, Moist Wound Healing significantly accelerates wound healing and improves patient satisfaction. Consistent implementation by nurses is recommended to optimize healing outcomes and healthcare service quality.

Keywords: Moist Wound Healing, Long Healing, Wound, Patient Satisfaction, Hospitalization

INTRODUCTION

Injuries are one of the global health problems that continue to increase cases every year, both acute and chronic injuries, which have a significant impact on the burden of health services in various countries. This condition not only causes physical suffering for patients, but also takes a long treatment time and health costs are not small for health care facilities. Recent estimates show



the number of patients with wound problems in the world reaches tens of millions of people, so wound care is one of the important focuses in modern nursing services. This large number of cases confirms that wound care is not just a clinical issue, but also a question of the efficiency of the health system as a whole (Mon, 2021).

The problem of injuries is also a serious concern in Indonesia, considering that data shows a high incidence of injuries both mild and severe in various regions. Data from the Ministry of health of the Republic of Indonesia recorded thousands of cases of injuries to the community, with most requiring intensive treatment at referral health care facilities such as hospitals. This high rate is closely related to the increasing prevalence of degenerative diseases such as diabetes mellitus, which is one of the main causes of chronic injuries in the community. This condition requires hospitals to have effective wound care standards in order to reduce the number of complications and shorten the patient's hospitalization period (Ministry Of Health Of The Republic Of Indonesia, 2022).

One of the types of chronic wounds that most require special attention is diabetic ulcers, where the duration of healing is greatly influenced by various factors, ranging from vascularity conditions, blood sugar levels, to wound care methods applied by health workers. Inaccuracies in the choice of wound care methods can prolong the healing period and increase the risk of further complications such as infection and even amputation. Research related to wound healing duration factors shows that this aspect of treatment becomes one of the important determinants that can be modified to speed up the healing process. Therefore, the selection of the right wound care method is crucial in an effort to suppress the long days of patient care in the hospital (Cahyaningtyas & Werdiningsih, 2022).

Conventional wound care that has been widely used, such as the use of dry gauze, is considered less than optimal because it is not able to retain moisture at the base of the wound so that the epithelization process and the formation of granulation tissue take place more slowly. In addition, dry gauze dressings tend to adhere to the wound tissue so that when changing the dressing, they can cause mechanical trauma, increase pain, and hinder the healing process. In response to these limitations, a modern wound care concept was developed that focuses on the principle of maintaining the balance of wound moisture (moist wound healing). This approach is supported by a variety of scientific evidence and current guidelines stating that a moist wound environment is able to accelerate cell migration, stimulate the formation of granulation tissue, support epithelization, facilitate autolytic debridement, and reduce trauma at the time of dressing change, thus providing better healing results than conventional methods (Zhang et al., 2023; Wound Healing Society, 2024).

Moist Wound Healing method works by creating an optimal moist environment on the wound surface so as to accelerate the process of epithelial cell migration, reduce pain during dressing changes, and reduce the risk of cross-infection. The application of this method requires a special understanding and skill from the nurse in choosing the type of modern dressing that suits the condition of the patient's wound. The correctness of the application of this technique ultimately

contributes to the success of the overall wound healing process, including in patients with diabetic wounds requiring intensive and ongoing care. Applied Studies in patients with Type 2 diabetes mellitus prove that the application of this method gives positive clinical results on the condition of the patient's wound (Setyowati, 2022).

Clinical evidence from various field studies has also strengthened the effectiveness of this method. A study in patients with gangrenous wounds in Lhokseumawe City General Hospital showed that the application of Moist Wound Healing techniques consistently able to accelerate the wound healing process with very satisfactory results, the effectiveness rate reached 100% in all respondents studied. The application of this method in practice is also proven to be able to provide more comfort for patients during the treatment process than conventional methods. This shows that the success of the Moist Wound Healing method can not only be observed from the physiological aspect of the wound, but also from the comfort felt by the patient (Alhuda & Sabil, 2023).

In addition to the physical aspects of the wound, the healing process of diabetic foot wounds with the Moist Wound Healing method is also reported to provide gradual improvement in the condition of granulation tissue and reduce excess exudate which is often an obstacle in the treatment of chronic wounds. The evaluation process carried out regularly is the key to success in monitoring the development of wounds over time. The accuracy of observation and nursing documentation also determine the effectiveness of interventions given to patients. Thus, the success of this method is highly dependent on the competence of nurses in conducting appropriate and consistent assessment and wound care measures (Primadani & Safitri, 2021).

The quality of nursing services, including in terms of Wound Care, has a close relationship with the level of patient satisfaction during treatment at the hospital. Patient satisfaction is one indicator of the quality of health care that reflects the extent to which the patient's expectations of the services received can be met. Patients who received effective wound care and minimal pain tended to report higher levels of satisfaction with overall nursing care. Therefore, the aspect of patient satisfaction cannot be separated from the evaluation of the success of a clinical treatment method, including the Moist Wound Healing method (Utomo, Widjanarko, & Shaluhiyah, 2023).

Several determinants of inpatient satisfaction have been identified through various studies, including quality of service, communication of health workers, and comfort during the treatment process. These factors are interrelated and form the patient's perception of the quality of care received during the treatment period. The mismatch between patient expectations and the reality of the services provided can reduce the level of satisfaction, even having an impact on the patient's decision to return to using the same hospital services in the future. Thus, the evaluation of the determinant of patient satisfaction is important as the basis for improving the quality of nursing services in hospitals (Liliweri. dkk, 2025).

The relationship between nursing service quality and inpatient satisfaction has also been proven in several studies in regional hospitals, where the improvement of nursing service quality is consistently directly proportional to the increase in patient satisfaction. Nurses as health workers



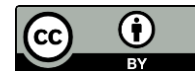
who most often interact directly with patients have a strategic role in shaping patient perceptions of the overall quality of hospital services. This interaction includes direct nursing actions such as wound care, education, to therapeutic communication during the treatment process. Therefore, appropriate and Evidence-Based Nursing measures, including Moist Wound Healing methods, have great potential in improving hospitalized patient satisfaction (Yuliar, Sumarni, & Latip, 2021).

In addition to the technical aspects of wound care, therapeutic communication nurses also contribute to the level of patient satisfaction during treatment in the inpatient unit. Research shows that patients who get good communication from nurses tend to feel more comfortable and satisfied with the services received, including in the context of Wound Care actions that often cause anxiety for patients. The combination of technical skills and communication skills of nurses is a determining factor in the success of nursing services as a whole. This further confirms that the application of modern wound care methods needs to be accompanied by a good communication approach so that the impact on patient satisfaction can be optimal (Ramadia, Rahmaniza, & Maulidi, 2022).

Although various studies have proven the effectiveness of the Moist Wound Healing method on wound healing, as well as the relationship of nursing service quality with patient satisfaction separately, there are still limited studies that specifically examine the effect of the application of the Moist Wound Healing method on both variables simultaneously, namely the length of wound healing and hospitalized patient satisfaction in the same study design. Most previous studies have tended to focus on just one variable, both from the clinical aspect of wound healing and from the aspect of independent patient satisfaction. This research gap is an opportunity as well as an urgency to conduct a more comprehensive study, especially in regional referral hospitals that serve patients with various injury cases from a wide coverage area. This condition is increasingly relevant given the importance of a thorough evaluation of the impact of a nursing intervention, both from the clinical side and from the side of the patient's experience (Utomo, Widjanarko, & Shaluhayah, 2023).

Hospital M. Natsir Kota Solok is one of the regional referral hospitals owned by the West Sumatra provincial government with Class B classification, which serves patient referrals from six districts/cities in the West Sumatra region, including cases with complex wound care needs. As a Regional Referral Hospital, RSUD M. Natsir has a high volume of inpatients with various clinical conditions, including patients with postoperative wounds and chronic wounds that require intensive and ongoing care. Preliminary study conducted by researchers in the hospitalized unit of RSUD M. Natsir found that some nurses still apply conventional wound care techniques, while complaints related to the length of the wound healing process and the level of patient comfort during treatment are still quite often found. This condition is an important basis for researchers to further examine the effect of the application of Moist Wound Healing methods on wound healing time and patient satisfaction in the hospital.

Based on the description above, the researchers were interested in conducting research on the effect of the application of the method of Moist Wound Healing by nurses on the length of



wound healing and patient satisfaction hospitalized at RSUD M. Natsir Kota Solok. This interest is based on the limited number of similar studies that integrate clinical aspects and aspects of patient satisfaction simultaneously, especially in the West Sumatra region. In addition, the results of this study are expected to make a real contribution to the hospital in developing a standard policy of evidence-based wound care operational procedures, in order to improve the quality of nursing services on an ongoing basis. Thus, this research is not only beneficial academically, but also has applicative value that can be directly felt by nurses, patients, and hospital management in an effort to improve the quality of Health Services.

METHODS

This type of research is quantitative with quasi-experimental design, using one group pretest-posttest design approach, where researchers assess the condition of the wound and the level of patient satisfaction before (pretest) and after (posttest) application of the method of Moist Wound Healing without using a comparison group. The study was conducted in the surgical inpatient unit of RSUD M. Natsir Kota Solok with a sample of 35 respondents selected using purposive sampling techniques based on inclusion and exclusion criteria that have been set. Inclusion criteria in this study included patients with acute or chronic injuries (postoperative wounds, diabetic ulcers, or pressure sores) who were hospitalized for at least 3 days, aged 18-65 years, in a state of full consciousness (*compos mentis*), and willing to be a respondent to the study. The exclusion criteria include patients with wounds that have severe infection/sepsis, patients with cognitive impairment that does not allow filling out the questionnaire independently, as well as patients who refuse or resign before the intervention process is completed. The data collection technique is done in two ways, namely direct observation of the wound condition using the wound assessment tool sheet to assess the progress and duration of wound healing every 2-3 days during the treatment period until the wound is declared healed or the study is completed. The duration of wound healing in respondents varied, with the fastest healing time of 10 days and the longest 28 days. The results of the reliability test showed the value of Cronbach's Alpha = 0.89, which indicates that the instrument has excellent reliability. Wound care interventions are performed using the principle of Moist Wound Healing in accordance with the standard operating procedures (SOP) of modern wound care which uses hydrocolloid dressings for wounds with mild-moderate exudate and calcium alginate for wounds with moderate-severe exudate. Dressing changes are carried out every 2-3 days or sooner if the dressing is saturated with exudate.

This study has paid attention to the ethical principles of Nursing Research which include informed consent, anonymity, and confidentiality. Prior to data collection, researchers provide explanations to prospective respondents about the objectives, procedures, benefits, and risks of the study, then ask for written approval before the respondents participate. The collected Data were analyzed univariately using a frequency distribution to describe the characteristics of the respondents, the condition of the wounds, and the level of patient satisfaction before and after the intervention. Furthermore, bivariate analysis was conducted using the Wilcoxon test to assess the



difference in wound healing time and the paired t-test to assess the difference in patient satisfaction levels before and after the application of the Moist Wound Healing method, with a significance level of $p < 0.05$.

RESULTS

1. Distribution of Respondent Characteristics

The characteristics of the study respondents, which include age, sex, type of injury, level of education, and comorbidities of diabetes mellitus, are presented in the following table.

Table 1. Distribution of Respondent Characteristics (n=35)

Characteristics	Categories	Frequency (f)	Percentage (%)
Age	18-30 years old	8	22,9
	31-45 years old	13	37,1
	46-65 years old	14	40,0
Gender	Men	19	54,3
	Girls	16	45,7
Types Of Wounds	Postoperative wounds	15	42,9
	Diabetic ulcers	14	40,0
	Pressure sores	6	17,1
Education Level	Elementary (SD-SMP)	12	34,3
	Secondary (SMA)	15	42,9
	College (College)	8	22,9
Comorbid Diabetes Mellitus	Yes	16	45,7
	No	19	54,3

Based on Table 1, the majority of respondents are in the age group of 46-65 years (40.0%) and male (54.3%). The most common type of wound was postoperative wounds (42.9%), followed by diabetic ulcers (40.0%). Most of the respondents have a secondary level of education (42.9%), and almost half of the respondents (45.7%) have comorbid diabetes mellitus, which clinically contributes to a slowdown in the wound healing process.

2. Distribution of Wound Healing Duration and Patient Satisfaction Rate Before and After Intervention

A univariate analysis was performed to describe the distribution of wound healing duration and patient satisfaction levels before and after application of the Moist Wound Healing method, as presented in the following table.

Table 2. Distribution of Wound Healing Duration and Patient Satisfaction Rate Before and After Intervention (n=35)

Variable	Category	Pretest (f/%)	Posttest (f/%)
Duration Of Wound Healing	Fast (<10 days)	5 (14,3%)	27 (77,1%)
	Long time (≥ 10 days)	30 (85,7%)	8 (22,9%)
	Mean $\pm$ SD	14.2 $\pm$ 3.1 days	8,6 $\pm$ 2,4 hari
Patient Satisfaction	Not Satisfied	9 (25,7%)	0 (0,0%)
	Quite Satisfied	16 (45,7%)	4 (11,4%)
	Satisfied	10 (28,6%)	31 (88,6%)

The results in Table 2 showed that before the intervention, the majority of respondents (85.7%) experienced a long wound healing time of the old category (≥ 10 days) with an average of 14.2 $\pm$ 3.1 days, while after the intervention, the majority of respondents (77.1%) experienced a rapid wound healing category (<10 days) with an average decrease to 8.6 $\pm$ 2.4 days. In the variable of patient satisfaction, before the intervention only 28.6% of respondents were in the category of satisfied, while after the intervention increased significantly to 88.6%. This distribution descriptively showed an improvement in wound condition and increased patient satisfaction after the application of the Moist Wound Healing method.

3. Effect of Application of Moist Wound Healing Method on Wound Healing Duration and Patient Satisfaction

Bivariate analysis was conducted to test the difference in wound healing time and patient satisfaction before and after the application of the Moist Wound Healing method using the Wilcoxon test and Paired t-test, as presented in the following table.

Table 3. Effect of Application of Moist Wound Healing Method on Wound Healing Duration and Patient Satisfaction (n=35)

Variable	Pretest (Mean $\pm$ SD)	Posttest (Mean $\pm$ SD)	Uji Statistik	Z Value/ t	p-value
Duration of Wound Healing (days)	14,2 $\pm$ 3,1	8,6 $\pm$ 2,4	Wilcoxon Signed Rank Test	Z = -5,145	0,000
Patient Satisfaction Score	62,4 $\pm$ 8,7	85,3 $\pm$ 6,2	Paired t-test	t = 15,732 (df=34)	0,000

The results of the Wilcoxon Signed Rank Test showed a value of Z = -5.145 with p = 0.000 ($p < 0.05$), which means there is a significant difference between the length of wound healing before and after the application of the Moist Wound Healing method, with an average decrease in the length of healing from 14.2 days to 8.6 days. Paired t-test results on patient satisfaction variables showed a value of t = 15.732 (df=34) with p = 0.000 ($p < 0.05$), which means there is a significant difference in patient satisfaction scores before and after the intervention, with an average increase



in scores from 62.4 to 85.3. Thus, statistically it can be concluded that the application of Moist Wound Healing method by nurses has a significant effect on accelerating the duration of wound healing and increasing patient satisfaction in inpatients at RSUD M. Natsir Kota Solok.

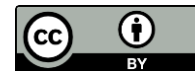
DISCUSSION

1. Distribution of Wound Healing Duration and Patient Satisfaction Rate Before and After Intervention

The results in Table 2 showed that prior to the application of the Moist Wound Healing method, the majority of respondents (85.7%) were in the category of long wound healing time (≥ 10 days), with an average wound healing time of 14.2 ± 3.1 days. This condition illustrates that most patients experience a long wound healing process before being given a wound care intervention with the principle of moisture. This data is also in line with the initial condition of the respondents wounds, most of which came from postoperative wounds and diabetic ulcers, types of wounds that clinically require longer healing time than superficial wounds. This pretest finding is important to see the extent of changes that occur after the application of the Moist Wound Healing method at the posttest stage.

The majority of respondents were in the age range of 46-65 years, which is an age group with a higher risk of experiencing a slowdown in wound healing due to the physiological aging process. In this age group there is a decrease in fibroblast proliferation, collagen synthesis, angiogenesis, and tissue regeneration so that the inflammatory phase tends to last longer than at a younger age. These conditions cause wounds to be more prone to delayed closure and complications if not treated with the right treatment methods. The application of the Moist Wound Healing method provides an optimal wound environment through the maintenance of balanced moisture so as to support epithelial cell migration, granulation tissue formation, and angiogenesis processes. Thus, although the majority of respondents were in the age group that physiologically has the ability to heal slower, Moist Wound Healing approach is still able to support the wound healing process more effectively than conventional wound care.

In addition to age, almost half of the respondents (45.7%) had comorbidities of diabetes mellitus, which is known to play a major role in slowing wound healing. Chronic hyperglycemia in diabetic patients leads to impaired microcirculation, decreased tissue perfusion, leukocyte dysfunction, reduced production of growth factors, as well as decreased collagen formation so that the inflammatory process lasts longer and the risk of infection increases. In these conditions, the principle of Moist Wound Healing helps maintain a moist wound environment that supports autolytic debridement, increases growth factor activity, facilitates keratinocyte migration, and maintains the viability of the tissue around the wound despite impaired microvascular perfusion. Therefore, in respondents with diabetes mellitus in this study, the Moist Wound Healing method has the potential to reduce healing barriers caused by microvascular disorders and accelerate the formation of granulation and epithelialization tissue compared to conventional wound care.



The results of this study are in line with research conducted by Liang et al. (2023) who conducted a meta-analysis of 13 studies with a total of 866 respondents. The study showed that the use of moist wound dressing significantly accelerates wound healing time, reduces the number of infections, reduces the frequency of dressing changes, and is more effective than the use of conventional gauze dressings. The similarity of the results confirms that the principle of maintaining wound moisture is able to create an optimal environment for epithelial cell migration, granulation tissue formation and angiogenesis, thereby accelerating the healing process even in patients with risk factors such as old age and diabetes mellitus. Thus, the findings of this study further strengthen the evidence that the application of the Moist Wound Healing method is an effective approach in accelerating wound healing while improving the quality of patient care.

This finding is in line with a study conducted on postoperative wound patients at Kabanjahe Hospital in Karo Regency, which found that wound care using conventional methods tended to result in slower wound healing scores compared to modern methods of dressing. The study showed that conventional wound care with dry gauze requires a longer epithelization time due to the condition of the wound that tends to dry and easily experience mechanical trauma when changing dressings. This reinforces the argument that the duration of wound healing in the pretest conditions of this study is very likely to be influenced by conventional wound care practices that have been applied before the intervention is given. The consistency of these findings in various hospital settings confirms that wound care methods are an important determinant in determining the duration of healing (Wake Up, Sari, & Nazara, 2021).

Researchers assume that the length of the wound healing period in the conditions preceding the intervention is influenced not only by the type and severity of the wound itself, but also by the limitations of the application of moisture-based wound care methods in the inpatient room where the study was conducted. Comorbid factors such as diabetes mellitus experienced by almost half of the respondents were also suspected of contributing to the slowdown in the healing process, considering that microvascular disorders and neuropathy in diabetic patients can clinically slow tissue regeneration. This condition shows the importance of a thorough evaluation of wound care practices applied before the application of Moist Wound Healing methods is carried out consistently in the inpatient room.

These results are consistent with studies conducted on gangrenous wound patients at Lhokseumawe City General Hospital, which found that the application of Moist Wound Healing techniques was consistently able to accelerate the wound healing process with a high level of effectiveness in all respondents studied. The study confirms that maintaining wound moisture in a balanced manner can accelerate the formation of granulation tissue and epithelization compared to conventional wound care. The suitability of the results on various types of wounds, both diabetic ulcers, postoperative wounds, and gangrenous wounds, reinforces the generalization that the Moist Wound Healing method is effectively applied across types of wounds. This further confirms the importance of standardizing the application of this method as part of evidence-based wound nursing care in hospitals (Alhuda & Sabil, 2023).



In the variable patient satisfaction, the results showed that before the application of the method of Moist Wound Healing, most respondents were in the category of quite satisfied (45.7%) and dissatisfied (25.7%), while only 28.6% of respondents were satisfied with the wound care services received. The low level of satisfaction in the pretest condition was in line with the length of the wound healing process experienced by the respondents, which likely influenced their perception of the overall quality of Nursing Services. This condition can also be related to the patient's experience during conventional wound care, which tends to cause discomfort due to the more frequent frequency of dressing changes. Low patient satisfaction at this early stage is an important indicator that there is significant room for improvement in inpatient wound care services.

This finding is in line with a study in elderly patients with diabetes mellitus who received conventional wound care, which found that discomfort due to pain during dressing changes was one of the main factors in low patient satisfaction with the wound care services received. The study confirms that methods of treating wounds that cause repeated trauma tend to decrease patients' perception of the overall quality of nursing care. The physical discomfort experienced by patients during the conventional wound care process also reinforces the argument that the comfort aspect is one of the important components in the formation of patient satisfaction in the inpatient room. This suggests that improvements in wound care methods directly have the potential to improve patient experience and satisfaction during the treatment period (Amanda, Iksan, & Wahyuningsih, 2021).

Theoretically, patient satisfaction can be explained through the gap approach between the patient's expectations and perceptions of the service received, as stated in the SERVQUAL model which includes dimensions of reliability, responsiveness, assurance, empathy, and physical evidence. Patients will be satisfied if the service received matches or even exceeds their expectations, while the discrepancy between expectations and the reality of the service will cause dissatisfaction. In the context of wound care, patients' expectations of speed of healing and lack of pain during treatment become one of the important dimensions that affect their perception of the overall quality of Nursing Services. Low satisfaction with the pretest condition can be understood as a result of the gap between the patient's expectations of the speed of healing and the reality of the healing process that runs slowly in conventional methods (Kiran & Suneetha, 2025) .

The results of the study on posttest conditions showed a very significant increase in the level of patient satisfaction, where the majority of respondents (88.6%) were in the satisfied category, and no more respondents were found in the dissatisfied category after the application of the Moist Wound Healing method . This increase in the proportion of satisfied categories from 28.6% to 88.6% indicates a very large change in patient perceptions of the quality of Wound Care Services received during the treatment period. This change is in line with the improvement in the clinical condition of the wound, which is also found in the variable duration of wound healing, which indicates an association between the success of Clinical Interventions with increased overall patient satisfaction. This finding reinforces that the application of the Moist Wound Healing

method has an impact not only on the physiological aspects of the wound, but also on the subjective experience of the patient during treatment.

Based on the results of the overall univariate analysis, it can be concluded that there are consistent improvements in both variables of the study, namely a decrease in the duration of wound healing and increased patient satisfaction after the application of the Moist Wound Healing method. Researchers assume that these two changes are closely interrelated, where the acceleration of the wound healing process directly has a positive impact on the perception and experience of patients during hospital treatment. The consistency of the results on these two variables confirms that the Moist Wound Healing method is not only beneficial from the clinical side, but also provides added value in terms of patient experience, which ultimately contributes to improving the overall quality of Nursing Services. This finding is an important basis for the RSUD M. Natsir Kota Solok to consider the application of Moist Wound Healing method consistently and continuously as part of the standard operational procedures for wound care in the inpatient room.

2. Effect of Application of Moist Wound Healing Method on Wound Healing Duration and Patient Satisfaction

Wilcoxon Signed Rank Test results in Table 3 showed a value of $Z = -5.145$ with $p = 0.000$ ($p < 0.05$), which means there is a significant difference between the length of wound healing before and after the application of the method of Moist Wound Healing. The average duration of wound healing decreased from 14.2 days in the pretest condition to 8.6 days in the posttest condition, with an average decrease of 5.6 days. The p value that is far below the threshold of 0.05 indicates that the changes that occur are not caused by chance, but are the result of the intervention of Moist Wound Healing methods that are consistently applied by nurses. These results statistically prove that the application of Moist Wound Healing method has a significant effect on the acceleration of the wound healing process in hospitalized patients in RSUD M. Natsir Kota Solok.

The statistical significance found in this study can be explained through the physiological perspective of wound healing, where the moist environment maintained through the Moist Wound Healing method markedly accelerates the transition of wounds from the inflammatory phase to the proliferation and remodeling phase. The study comparing the effectiveness of modern and conventional wound care in diabetic wound patients found that the group receiving modern treatment with the moisture principle showed a statistically faster healing process than the conventional group. This reinforces the scientific basis that the decrease in the average length of wound healing in this study is not only descriptive, but also has a strong physiological Foundation and has been empirically tested in various wound patient populations. Thus, the statistical test results in this study reinforce the existing scientific evidence regarding the superiority of the Moist Wound Healing method over conventional methods (Irwan. dkk2022).

Researchers assume that the significance of the Wilcoxon test results in this study illustrates the real effectiveness of the application of Moist Wound Healing methods performed consistently by nurses, not solely because of the natural healing process of the wound itself. Consistency of



wound evaluation frequency every 2-3 days using the wound assessment tool is thought to contribute to the accuracy of detection of changes in wound condition, so that interventions can be adjusted quickly if needed. Researchers also suspect that the homogeneity of the characteristics of respondents in terms of age range and type of injury helped strengthen the consistency of statistical test results obtained, given the variation of clinical characteristics that are too wide potentially widen the variability of data. This condition demonstrates the importance of the combination of the precision of intervention methods and the consistency of clinical monitoring in achieving statistically significant results.

Paired t-test results on patient satisfaction variables showed a value of $t = 15.732$ ($df=34$) with $p = 0.000$ ($p < 0.05$), which means there is a significant difference in patient satisfaction scores before and after the application of Moist Wound Healing methods. The average patient satisfaction score increased from 62.4 in the pretest condition to 85.3 in the posttest condition, with an average increase of 22.9 points. This very large t value accompanied by a p value well below 0.05 indicates that the improvement in patient satisfaction is a direct effect of the given intervention, not a random variation in the measurement. These findings statistically prove that the application of Moist Wound Healing method not only has an impact on the clinical aspects of wounds, but also has a significant effect on improving inpatient satisfaction.

The significance of increased patient satisfaction in this study can be analyzed through the gap theory (gap) between patient expectations and perceptions as described in the SERVQUAL approach, where the narrowing of the gap directly contributes to an increase in satisfaction scores that can be measured quantitatively. When the patient feels that the results of the treatment, in this case the acceleration of wound healing and the reduction of pain during the dressing change, match or even exceed their expectations, it will statistically be reflected in a significant improvement in the satisfaction score. The Paired t-test used in this study was precisely able to capture these changes because the satisfaction score data is continuous and normally distributed, so that the test results can accurately represent changes in patient perception. Thus, the Large t value in this study illustrates that the narrowing of the gap between expectations and service reality occurs consistently in almost all respondents (Kiran & Suneetha, 2025).

The researchers assume that the magnitude of the T -value in the Paired t-test indicates that the increase in patient satisfaction occurs evenly in almost all respondents, not just in a small percentage of patients with certain clinical conditions. Researchers also suspect that the involvement of patients in the wound evaluation process periodically contributes to a sense of involvement and attention, which can psychologically reinforce a positive perception of the services received. In addition, the consistency of the therapeutic communication approach accompanying wound care measures throughout the study is thought to reinforce the statistically significant improvement in patient satisfaction found. This condition confirms that the success of clinical intervention needs to be accompanied by a humanistic approach in the provision of nursing care so that its impact on patient satisfaction can be optimal.

When these two bivariate test results are analyzed simultaneously, there appears to be a close relationship between improvement in the clinical condition of the wound and improvement in patient satisfaction, both of which show strong statistical significance with a value of $p = 0.000$. This pattern indicates that the success of an intervention on one clinical variable can have a parallel impact on non-clinical variables such as patient satisfaction. This illustrates that the Moist Wound Healing method has a multidimensional impact, not only on physical healing, but also on the patient's subjective experience during treatment. This linkage is one of the important findings that reinforces the urgency of applying this method thoroughly in the inpatient setting.

This link between improved clinical outcomes and increased patient satisfaction was also confirmed by a study of inpatients at Cicendo Eye Hospital Bandung, which found that the quality of care that had a direct impact on improving patients' health conditions was significantly related to the level of patient satisfaction statistically. The study confirms that patients tend to judge the quality of care based on the real results they feel, rather than solely based on administrative processes or physical facilities alone. The suitability of the relationship patterns in these two studies reinforces the argument that clinical outcomes are one of the strongest predictors of inpatient satisfaction that can be proven statistically. This further confirms the importance of evidence-based nursing interventions as a strategy to improve patient satisfaction simultaneously with the improvement of clinical conditions (Sari & Fatimah, 2022).

Researchers assume that the consistent relationship between improved clinical outcomes and increased patient satisfaction in this study illustrates that the method of Moist Wound Healing is not only biomedical effective, but also aligned with the principles of patient-centered nursing care (patient-centered care). Researchers also suspect that the factor of patient confidence in the competence of nurses in applying more modern methods of wound care helped strengthen the patient's positive perception of the overall services received. This condition confirms that the application of consistent evidence-based methods can be an effective strategy in achieving two goals at once, namely improving clinical outcomes and increasing patient satisfaction simultaneously.

The selection of Wilcoxon test for wound healing duration variable and Paired t-test for patient satisfaction variable in this study is based on the data distribution characteristics of each variable, where the old wound healing data tend not to be normally distributed so that it requires a non-parametric test, while the patient satisfaction score data normally distributed so that it can be analyzed using a parametric test. The accuracy of statistical test selection is important to ensure the validity of the interpretation of research results, considering that errors in the selection of test types can result in biased or inaccurate conclusions. Research on wound healing duration factors confirms the importance of considering the characteristics of clinical data that are often not normally distributed due to variations in wound conditions between patients. Thus, the combination of both types of statistical tests in this study was in accordance with the rules of quantitative research methodology and provide results that can be scientifically accounted for (Cahyaningtyas & Werdiningsih, 2022).



Based on the results of the overall bivariate analysis, it can be concluded that the application of the Moist Wound Healing method by nurses has a significant effect on accelerating the duration of wound healing and increasing patient satisfaction in inpatients at RSUD M. Natsir Kota Solok, as evidenced by the value of $p = 0.000$ in both statistical tests used. Consistent significance in these two variables provides strong empirical evidence that this method is effectively applied as part of the standard operational procedures for wound care in the inpatient setting. Researchers assume that this success is the result of a combination of the technical accuracy of the application of the method by nurses, consistency of monitoring the condition of the wound, as well as a good communication approach to patients during the treatment process. These findings are expected to be the basis of policy for the hospital to implement the method of Moist Wound Healing on an ongoing basis, accompanied by regular training for nurses to improve the quality of nursing services as a whole.

CONCLUSIONS

Quasi-experimental quantitative research with one group pretest-posttest design approach was conducted on 35 respondents in RSUD M. Natsir Kota Solok to analyze the effect of Moist Wound Healing method on wound healing duration and inpatient satisfaction. The results showed that the average duration of wound healing decreased from 14.2 days to 8.6 days, while the level of patient satisfaction increased from 45.7% (quite satisfied) to 88.6% (satisfied). The Wilcoxon test and Paired t-test proved that both differences were statistically significant ($p=0.000$; $p<0.05$), so it was concluded that the application of Moist Wound Healing method by nurses has a significant effect on accelerating wound healing and increasing inpatient satisfaction.

This study has limitations, namely not using a control group so that the changes that occur cannot be fully ascertained purely due to intervention, a relatively small number of samples and from one location, limiting generalization of results, and uncontrolled confounding variables such as nutritional status, blood sugar levels, and patient compliance that also affect wound healing. Further research is suggested to use a design with a control group, a larger and varied sample, and control the confounding variables more strictly. Based on the results of the study, RSUD M. Natsir Kota Solok is advised to prepare a wound care SOP based on Moist Wound Healing which includes wound assessment, selection of modern dressings, frequency of dressing changes, and documentation of wound development. In addition, it is necessary to conduct in-house training for nurses to improve the competence and uniformity of evidence-based wound care practices, so as to support the improvement of service quality and patient satisfaction.

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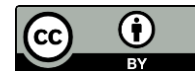
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