

The Effect of Self-Care on the Severity of Disability of Leprosy Patients in the Work Area Galis Health Center

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ABSTRACT

Background: People with leprosy tend to have dry skin due to damage.

Purpose: This study aims to analyze differences in the severity of disability in patients before and after self-care in the treatment group and the control group.

Methods: This research used a Quasy experiment pretest posttest with a control group design. The population was 52 respondents, with a sample of 34 respondents. The sampling technique used purposive sampling.

Results: The results of the study using the Wilcoxon test showed that there was a difference in the severity of disability in the treatment group with a p-value of $0,00 < 0.05$ and no difference in the severity of disability in the control group with a p-value of $0,105 > 0.05$. Based on the results of the Mann-Whitney test, it was found that there were differences in the severity of disability in the treatment group and the control group before and after self-care with a p-value of $0,00 < 0,05$.

Conclusion: The researcher suggests that sufferers can continue to improve efforts to prevent the severity of leprosy disability by taking regular self-care.

Keywords: disability, leprosy, self-care

Received August 10, 2022; Revised September 12, 2022; Accepted October 3, 2022

DOI: <https://doi.org/10.30994/jnp.v6i1.274>



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BACKGROUND

Self-care for people with leprosy aims to prevent the emergence and worsening of disability conditions (Kemenkes RI, 2019). The patient's low awareness of self-care can affect the patient's disease and physical condition. If you don't get proper treatment and treatment, it will cause the patient to experience skin and peripheral nervous system damage and can develop into permanent damage to the skin, nerves, face, hands and feet. This affects the severity of disability in people with leprosy (WHO, 2021). Leprosy is caused by *Mycobacterium leprae* which is obligate intracellular with an incubation period of approximately two to four years. Peripheral nerves as the first affinity, then can spread to organs other than the central nervous system (Menaldi et al, 2021).

WHO (2021) reports that from 161 countries in 2019, 202,256 new cases of leprosy were found in 118 countries (26.0 per million population). 96% were reported by 23 global priority countries, including 79% in India, Brazil and Indonesia with the number of new cases in Southeast Asia as many as 143,787 (70.4 per million population). In 2019, the prevalence rate of leprosy in Indonesia reached 0.74 cases/10 thousand population and the number of new cases was 6.51 cases per 100 thousand populations. A total of 17,439 new cases, 85 percent of which are multibacillary leprosy, Ministry of Health of the Republic of Indonesia, 2019). Leprosy in East Java in 2020 is 0.54 per 10,000 populations. but in 4 districts in Madura and 1 district in Situbondo, leprosy has not been eradicated (Dinas Kesehatan Jawa Timur, 2021).

Based on a preliminary study using the interview method with the person in charge of leprosy at the Galis Health Center which was conducted on January 14, 2022, data were obtained from 52 people with leprosy. Of the 10 respondents with leprosy, 8 out of 10 respondents with a percentage of 80% of respondents had never done self-care and only did pharmacological treatment. This is due to the low level of self-care for people with leprosy in the area. The low level of self-care is caused by the low level of education and knowledge about leprosy and how to carry out self-care, causing sufferers to be reluctant to take care of themselves. In addition, the lack of education and information is also one of the causes of sufferers not doing self-care (Susanto et al., 2013).

The impact of low self-care results in dry skin, wounds, the appearance of spots on the face, ears and nose. So that the severity of disability that can occur is peripheral neuropathy nerve damage, acute neuritis, silent nerve paralysis, autonomic neuropathy and pain in leprosy (Susanto et al, 2013; Widasmara, 2018). Based on these problems, researchers are interested in conducting an experimental study entitled "The Effect of Self-Care on the Severity of the Disabilities of Leprosy Patients".

OBJECTIVE

This study aims to analyze differences in the severity of disability in patients before and after self-care in the treatment group and the control group.

METHODS

The research design used was a quasi-experimental pretest posttest with a control group design, where one group as the treatment group was given the intervention, while the control group was not given the intervention. This research uses purposive sampling technique. The results of the study using the Wilcoxon test. Based on the results of the Mann-Whitney test.

RESULTS

Table 1.1 Frequency Distribution by Education

| No. | Education | Treatment group | | Control group | |
|-----|--------------------|-----------------|------|---------------|------|
| | | N | % | N | % |
| 1. | Primary School | 1 | 5.9 | 2 | 11.8 |
| 2. | Junior High School | 5 | 29.4 | 7 | 41.2 |
| 3. | Senior High School | 11 | 64.7 | 8 | 47.0 |
| | Total | 17 | 100 | 17 | 100 |

Source: Primary Data

The results of the study were based on the distribution of education of people with leprosy in the Galis Health Center working area for the period June-July 2022, in the treatment group most of the respondents had high school education as many as 11 (64.7%) respondents. While in the control group, almost half of them have high school education as many as 8 (47.1%) respondents.

Table 1.2 Differences in the severity of disability before and after self-care in the treatment group

| No. | Pre-test | Post-test |
|--------------------------|----------|-----------------------------|
| 1. | 89 | 93 |
| 2. | 71 | 82 |
| 3. | 74 | 89 |
| 4. | 89 | 95 |
| 5. | 83 | 97 |
| 6. | 93 | 98 |
| 7. | 69 | 83 |
| 8. | 87 | 93 |
| 9. | 88 | 95 |
| 10. | 86 | 94 |
| 11. | 90 | 94 |
| 12. | 89 | 95 |
| 13. | 82 | 94 |
| 14. | 86 | 97 |
| 15. | 79 | 87 |
| 16. | 90 | 97 |
| 17. | 87 | 95 |
| Negative Ranks | | 0 |
| Positive Ranks | | 17 |
| Ties | | 0 |
| Wilcoxon Signed RankTest | | Asymp sig. (2-tailed): 0,00 |

Source: Primary Data

In table 1.2 it is known that from the 17 respondents the treatment group before and after self-care has a difference with a negative ranking value of 0 respondents while a positive ranking of 17 respondents and a binding value of 0 respondents. The Wilcoxon-signed rating test gave a result of 0.00 (p-value <0.05), indicating a difference before and after self-care.

Table 1.3 Differences in the Severity of Disabilities Before and After Without Self-Care in the Control Group

| No. | Pre-test | Post-test |
|---------------------------|-----------------------------|-----------|
| 1. | 86 | 93 |
| 2. | 78 | 78 |
| 3. | 61 | 69 |
| 4. | 86 | 84 |
| 5. | 88 | 87 |
| 6. | 83 | 79 |
| 7. | 84 | 76 |
| 8. | 80 | 79 |
| 9. | 69 | 59 |
| 10. | 86 | 80 |
| 11. | 87 | 87 |
| 12. | 88 | 85 |
| 13. | 83 | 82 |
| 14. | 83 | 84 |
| 15. | 87 | 89 |
| 16. | 84 | 80 |
| 17. | 89 | 80 |
| Negative Ranks | | 11 |
| Positive Ranks | | 4 |
| Ties | | 2 |
| Wilcoxon Signed Rank Test | Asymp sig. (2-tailed): 0,00 | |

Source: Primary Data

In table 1.3 it is known that of the 17 respondents in the control group before and after not doing self-care, most of them experienced an increase in disability severity with a negative rank of 11 respondents, a positive rank of 4 respondents. respondents and bond as much as 2 respondents. The results of the Wilcoxon test showed a result of 0.105 (p-value > 0.05). This means that there is no difference before and after self-care.

Table 1.4 Differences in Severity Levels of Pre-test and Post-test.

| No. | Post-test (Treatment group) | Post-test (Control group) |
|-----|-----------------------------|---------------------------|
| 1. | 93 | 93 |
| 2. | 82 | 78 |
| 3. | 89 | 69 |
| 4. | 95 | 84 |
| 5. | 97 | 87 |
| 6. | 98 | 79 |
| 7. | 83 | 76 |
| 8. | 93 | 79 |
| 9. | 95 | 59 |
| 10. | 94 | 80 |
| 11. | 94 | 87 |
| 12. | 95 | 85 |
| 13. | 94 | 82 |

| No. | Post-test (Treatment group) | Post-test (Control group) |
|-------------------|------------------------------|---------------------------|
| 14. | 97 | 84 |
| 15. | 87 | 89 |
| 16. | 97 | 80 |
| 17. | 95 | 80 |
| Mean | 24,82 | 10,18 |
| Minimum | 82 | 59 |
| Maximum | 98 | 93 |
| Mann Whitney Test | Asymp sig. (2-tailed): 0, 00 | |

Source: Primary Data

Based on table 1.4, it is known that from 17 respondents the treatment group before and after self-care showed a decrease in the severity of disability with an average of 24.82. While the severity of the 17 respondents in the control group before and after not doing self-care, most of them did not show a difference in the severity of disability with an average of 10.18. Mann Whitney test results obtained results of 0.00 (p-value <0.05) so that H_a is accepted, it can be concluded that there are differences in the severity of disability in the treatment group and the control group before and after self-care.

DISCUSSION

Differences in the Severity of Disabilities Before and After Self-Care

Based on the analysis of the Wilcoxon test results, it was found that there were differences before and after self-care. This study is in line with the research of (Husen et al, 2017) which considers that self-care has a major effect on a person's physical disability due to leprosy. Wardani & Cen-drawirda's research (2018) states that there is a strong relationship between self-care and the incidence of leprosy.

Before self-care in the treatment group, 3 respondents experienced moderate severity, 6 respondents experienced mild severity and 8 respondents did not experience disability severity. Based on observation data, it is known that the respondent's skin is dry, cracked and has ulcers. This is caused by the reaction caused by leprosy and causes damage to the nerves that control and secrete sweat. If this is left unchecked, it will cause the severity of leprosy to become severe and cause infection.

Based on observations, the severity of the disability that occurred was because 17 respondents in the treatment group did not perform self-care. So that when the skin changes due to leprosy reactions, respondents just let it go and cause severe disability due to leprosy. The treatment that the researchers gave to 17 respondents in the treatment group was in the form of self-care by soaking hands and feet with dry, cracked and bruised skin and rubbing hard and rough skin after being smeared with coconut oil for 21 days. Removes and moisturizes the skin. Self-care can help moisturize dry, cracked and sore (ulcer) skin.

According to Wahyuliningtyas et al. (2018) which states that there is a difference between the treatment group that does self-care and the control group who does not. After self-care, respondents experienced a decrease in the severity of leprosy disability. Respondents who carry out self-care routinely by soaking their feet and hands, rubbing rough skin and applying oil (moisturizer) to the skin after soaking, will moisturize and maintain skin elasticity so that the severity of disability decreases. Leprosy or leprosy is a chronic infectious disease caused

by the bacterium *Mycobacterium leprae* (*M. leprae*) that has struck peripheral nervous and other body tissues. Personal hygiene is the act of maintaining cleanliness and quality of health a person's well-being, both physical and psychological.

Differences in the severity of disability before and after in patients who do not perform self-care

Based on the results of the study using the Wilcoxon test, it was found that there was no difference in the severity of disability both before and after treatment. This result is evidenced by Faruq's research (2018) which did not find a relationship between the degree of disability and self-care in leprosy patients who did not perform self-care. This study is not in line with Kusmitasari's research (2017) which found differences in pre and post treatment practices in the control group who received self-care counseling.

Based on the results of the Wilcoxon test on 17 control group respondents at the time of the pre-test, the data obtained that most of the respondents experienced mild severity as many as 12 respondents, 3 respondents did not experience severe severity, and a small number of others. experienced moderate severity as much as 1 respondent and severe severity as much as 1 respondent.

Respondents in the control group were not subjected to self-care treatment and only examined the severity of disability with the observation method that assessed the severity and disability experienced by the respondent. From the post-test results, it is known that 4 respondents experienced a decrease in disability severity and as many as 2 respondents did not experience an increase or decrease in disability. In the control group, almost half of them had high school education, as many as 8 (47.1%) respondents. This is one of the factors that affect the severity of disability. Higher education level affects knowledge when seeking medical help and affects disability severity. In Herawati's research (2019), it is stated that education affects the behavior and attitudes of people with leprosy in seeking information and assistance from health workers or services, and vice versa.

The post-test results showed that there was 1 respondent who experienced a moderate increase in severity because the respondent did not perform self-care. The respondent's skin condition has reaction spots around the peripheral nerves, cracked, dry, there are ulcers, pain on touch, numbness and decreased muscle strength. According to Siswanto et al (2020) and Widasmara (2018), people with leprosy will experience a dry skin surface with patches on the skin, shiny, dry skin surface, there are wounds, thickening of nerves, joint disorders, extremities, madarosis, loss of fingers and toes and accentuation of skin folds. Therefore, even though there was no difference before and after not doing self-care in the control group, respondents still had a risk of experiencing the severity of disability. This study is in line with Wardani & Cendrawirda (2018) which states that leprosy sufferers who do not perform self-care will exacerbate disability in sufferers. Herawati's research (2019) states that patients who do not perform self-care have a 12 times greater risk of experiencing grade 2 disability compared to patients who do self-care.

Differences in the severity of disability before and after in patients with self-care and without self-care.

Based on the results of the study obtained data that there are differences between the treatment group and the control group before and after self-care. In the treatment group, the average result was 24.82, which means there is a difference between before and after treatment. Meanwhile, in the control group, the average result was 10.18, which means there was no difference before and after no treatment was given. So, it can be concluded that H_0 is accepted. There are differences in the severity of disability before and after in patients who do and do not do self-care.

This is evidenced by the research of Wardani & Cendrawirda (2018), where Wardani & Cendrawirda stated that there was a relationship between sufferers who did self-care and those who did not. Research by Rismayanti et al (2017) states that patients who do not perform self-care are at 4,103 times greater risk than those who take care of themselves. This is because in the treatment group that did self-care, data were obtained based on observation sheets that experienced a decrease in severity. This is also in line with the research of Wahyuningtyas, Bakar, & Nadatien (2018) Wahyuningtyas, Bakar, & Nadatien stated that nerve damage that is treated and treated properly will not cause permanent disability with a record of ongoing nerve damage. less than 6 months. According to the Indonesian Ministry of Health (2019), self-care for people with leprosy aims to prevent the emergence and worsening of disability conditions.

In the treatment group, self-care was carried out with the aim of maintaining skin moisture and preventing the severity of disability due to nerve damage that plays a role in controlling and sweating. So that the skin is well hydrated and reduces the severity of defects caused by leprosy. This is in line with the research of Wahyu-liningtyas, Bakar, & Nadatien (2018) which states that nerve damage that is handled and treated properly will not cause permanent disability with a record of nerve damage lasting less than 6 months.

Meanwhile, the control group who did not perform self-care still experienced dry, cracked and sore skin. This is because the respondent's skin is not properly hydrated, causing dry, cracked skin and even wounds. Cracked skin and wounds can cause infection which causes wounds that do not heal and cause necrosis so that the severity of disability in patients increases. This study is in line with Wardani & Cendrawirda (2018) which states that cracked skin that is not treated properly can be an entry point for infection and cause severe disability.

CONCLUSION

There are differences in the severity of disability before and after self-care. There was no difference in the severity of disability before and after in patients who did not perform self-care. There are differences in the severity of disability before and after self-care is carried out and not carried out.

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