

Kegel Exercises For Perineal Wound Healing In Postpartum At The Driyorejo Gresik Health Center

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ABSTRACT

Infection during the postpartum period is due to delays in healing of perineal wounds. Kegel exercises are exercises to strengthen the pelvic floor muscles, help prevent urinary incontinence problems and can stretch the perineal tissue. The aim of the research was to determine the effectiveness of Kegel exercises in healing perineal wounds in postpartum mothers at the Driyorejo Gresik Community Health Center. This research method uses Pre-Experimental Designs. The research design uses One Group Pretest-Posttest Design. The research sample was 30 postpartum mothers with perineal wounds in the Driyorejo Gresik Health Center working area in March 2024. Respondents underwent a pre-test on day 1 and a post-test on 7 days postpartum. Data were collected using questionnaires and observation sheets using the REEDA score. Data analysis was carried out using the Chi Square test. The results of the study showed that the mean of REEDA score before being given Kegel exercises was 11.54 and after doing Kegel exercises was 4.32. The statistical test also results showed that there was a difference in REEDA scores before and after Kegel exercises ($p=0.016$). There was a difference in the healing time for perineal wounds before and after Kegel exercises were given ($p=0.007$).

Keywords: Kegel Exercises, Perineal Wound Healing, Postpartum

1. INTRODUCTION

Postpartum is a condition where the reproductive organs recover as before pregnancy. During the postpartum period, it is necessary to carry out care to help the involution process, for example mobilization, diet, micturition, defecation, lactation, breast care and perineal care. Almost 90% of vaginal births experience perineal tears, either with or without episiotomy.¹ Episiotomy induced inflammatory signs such as redness, edema, ecchymosis and pain occur in the first 24 hours and may remain beyond the period of hospitalization and can be objectively measured using redness, edema, ecchymosis, discharge and apposition (REEDA) scale developed by Davidson. This scale has been used in recent studies that have investigated interventions aimed at assessing perineal suture technique, postpartum perineal tear and the effect of laser irradiation on perineal pain. Proper care immediately after delivery or stitching can help reduce edema and bruising and prevent infection.

Infections that often occur in mothers after giving birth are infections of the perineum.² The incidence of infection in mothers is 20% while perineal wound infections account for 11%. Infections in the postpartum period can be caused by delays in perineal wound healing. Wound healing in women giving birth is influenced by various factors, including early mobilization, diet, and personal hygiene.³ Several factors influence the healing process of post-partum mothers' perineal wounds, namely the characteristics of the mother giving birth, early mobilization process, nutritional status, wound grade and how to treat it.⁴ Effective mobilization is carried out by postpartum mothers in accelerating the healing process of perineal wounds with Kegel exercises.⁵

Kegel exercises are exercises to strengthen the pelvic floor muscles before delivery. The aim is to strengthen the pelvic

floor muscles, help prevent urinary incontinence problems, and can stretch the perineal tissue as the baby's birth canal. The Kegel exercise procedure can be remembered and carried out along with activities related to the mother's daily activities. Like when the mother sits in the bathroom after urinating and this is a relaxing position to contract these muscles, and when the mother wants to sleep and under any circumstances. Doing Kegel exercises regularly can help flex the mother's perineal tissue to welcome childbirth.⁶

Based on a preliminary study conducted at the Driyorejo Gresik Community Health Center, it was found that many postpartum mothers knew that Kegel exercises had an effect on childbirth but did not yet know the benefits of Kegel exercises on healing perineal wounds and that the average length of healing for perineal wounds was more than 7 days. Therefore, researchers are interested in conducting research on "The Effectiveness of Kegel Exercises on Healing Perineal Wounds in Postpartum Women at the Driyorejo Gresik Community Health Center".

2. METHODS

This research was experimental research in the form of Pre-Experimental Designs. The research design is One Group Pretest-Posttest Design. In this design there is a pretest before treatment and a posttest after treatment. This research was conducted at the Driyorejo Gresik Community Health Center. This research was carried out from March 1 to April 25 2024. The population in this study were all postpartum mothers with perineal wounds in the Driyorejo Gresik Health Center working area in March 2024, totaling 42 people, the total population of postpartum mothers with perineal wounds was 30 respondents. The inclusion criteria for this study were postpartum mothers who were willing to be respondents, first day postpartum mothers with grade I-II perineal

tears, mothers who gave birth in the Community Health Center area, postpartum mothers who did not abstain from eating during the observation process, postpartum mothers with episiotomy wounds without complications. Meanwhile, exclusion criteria include postpartum mothers with ruptured wounds, mothers who are unwilling to be research subjects, mothers with diabetes mellitus, and mothers who experience complications during labor (mothers with bleeding). Respondents underwent a pre-test on day 1 and a post-test on 7 days postpartum. Data were collected using questionnaires and observation sheets using the REEDA score. The instrument used to assess the condition of the wound is an observation sheet using the REEDA scale (Redness, Edema, Ecchymosis, Discharge, and Approximation). The scores range from 0 to 15, a lower score indicates better healing at the episiotomy site and higher score shows poor healing processes. The test reliability coefficient of the REEDA scale has been demonstrated to be $r=0.70$. Interpretation of the total score on the REEDA scale:

- 1) cured: 0
- 2) moderately healed: 1 to 5
- 3) somewhat recovered: 6 to 10
- 4) not cured: 11 to 15⁷

Furthermore, wound healing time is categorized into fast and slow.

- 1) Fast, if the perineal wound heals < 7 days
- 2) Slow if the perineal wound heals > 7 days

The data analysis used is univariate analysis using frequency distributions and percentages displayed in table form and bivariate analysis using Chi Square test.

3. RESULTS

The results of the study are described in tables 1 and 2. Table 1 shows the characteristics of the activity participants, most of whom were aged 20-35 years, namely 40%, 53% had a high school education, 43.3% were housewives and primiparous parity was 46.7%.

Table 1.

Age	f	%
< 20 years	9	30
20-35 years	12	40
> 35 years	9	30
Education		
Elementary school	1	3.3
Junior high school	9	30
Senior high school	16	53.3
College	4	13.3
Type of work		
Housewife	13	43.3
Laborer	7	23.3
6 months	8	26.7
Private employees	2	6.7
Government employees		
Parity		
Primiparous	14	46.7
Multiparous	5	16.6
Grandemultiparous	11	36.7
Total	30	100

Table 2 shows the REEDA scores of activity participants before and after being given Kegel exercises. The results of the study showed that before being given Kegel exercises, the average REEDA score was 11.54 and was categorized as not cured. After doing Kegel exercises, the average REEDA score was 4.32 which was categorized as moderately healed. Chi square test results showed that there was an influence on the REEDA score before and after being given Kegel exercises ($p=0.006$).

Table 2
The Differences of REEDA Scores Before and After Kegel Exercises

REEDA Scores	Mean	Min	Max	SD	p value
Before	11.54	10	7	1.125	0.016
After	4.32	12	5	0.764	

Based on table 3, it is known that perineal wound healing assessed on day 1 (before treatment) showed results of 63.3% perineal wound healing in the slow category and 36.7% in the fast category. Perineal wound

healing assessed on day 7 (after treatment) showed results of 43.3% perineal wound healing in the slow category and 56.7% in the fast category. Chi square test results showed that there was a difference in perineal wound healing before and after being given Kegel exercises (p=0.006).

Table 3
Differences of Perineal Wound Healing Before and After Kegel Exercises

Perineal wound healing	Before		After		P value
	f	%	f	%	
Slow	19	63.3	13	43,3	0.007
Fast	11	36.7	17	56,7	
Total	30	100	30	100	

4. DISCUSSION

The differences of REEDA scores before and after kegel exercises

Based on table 2, before being given Kegel exercises, the REEDA scores of all activity participants were >5 and categorized as poor wound healing. REEDA score measurements before Kegel exercises were carried out on the first day postpartum with the perineal wound still wet. This condition causes discomfort felt by every mother who gives birth spontaneously with perineal wounds.⁸ Healing of perineal wounds begins with the formation of new tissue covering the perineal wound within 6-7 days postpartum.

After doing Kegel exercises, the REEDA score obtained by the activity participants was 0, which means good wound healing. The results of this service activity support the theory that pubococcygeal muscle movements in Kegel exercises in the form of contracting and stretching movements can improve blood and oxygen circulation to the muscles and tissues around the perineum. This causes perineal wounds to heal quickly due to the oxygenation effect.⁹

Previous research conducted on 249 people (181 people had an episiotomy and 68 people did not have an episiotomy), these

results showed an episiotomy rate of 73% (CI 67-78) as reported elsewhere.¹⁰ The results showed that the mean total REEDA score for women who had episiotomy was significantly higher than in those who did not have both on day 1 and day 14 with p-values <0.0001 and <0.0001 respectively.⁷

The results of this research support research conducted on 30 people who did Kegel exercises, showing that the average REEDA score on the first day was 10.67 points and on the 14th day the average was 4.27 points.¹¹

The differences of perineal wound healing before and after kegel exercises

Based on table 3, it is known that perineal wound healing assessed on day 1 (before treatment) showed results of 63.3% perineal wound healing in the slow category and 36.7% in the fast category. Perineal wound healing assessed on day 7 (after treatment) showed results of 43.3% perineal wound healing in the slow category and 56.7% in the fast category.

These results are also in line with previous research which revealed that the effect of Kegel exercises occurred within 2 weeks after the intervention to help improve circulation in the perineal area, accelerate episiotomy wound healing and reduce the incidence of hemorrhoids. The average length of healing time for perineal wounds in the Kegel exercise group was 6 days with a minimum limit of 5 days and a maximum of 7 days faster than in the mobilization group with an average number of days of 7 days, with a minimum limit of 4 days and a maximum of 9 days.

Posttest in this research on the 7th day, activity participants also entered the letting go phase, which means participants were independent in caring for themselves and their babies. This independence will cause participants to mobilize frequently, thereby speeding up the healing of perineal wounds. This supports the statement that 72.7% of postpartum mothers who mobilize will experience good perineal wound healing

compared to mothers who do not mobilize.¹³

Fast wound healing in this activity occurs in the 20-30 year age group. It is assumed that wound healing occurs more quickly at a young age than at an old age, because the function of uniting skin cells after childbirth which occurs in the elderly has decreased due to age.

Kegel exercises will be able to have a good influence on the healing of perineal wounds. By carrying out instructions for implementing Kegel exercises, they can improve physical abilities, especially if carried out correctly and with direction.¹⁴ Kegel exercises can strengthen the pelvic floor muscles, especially the pubococcygeal muscles, so that women can strengthen the muscles of the urinary tract and vaginal muscles which has the effect of accelerating the healing process of perineal wounds.^{9, 14}

5. CONCLUSION

Community service activities in the form of Kegel exercise education as an effort to speed up the healing of postpartum mothers' perineal wounds which are carried out for 7 days can reduce the REEDA score and speed up the healing of perineal wounds. This activity also provides additional information to postpartum mothers about the benefits of Kegel exercises so that they can continue to be applied after the perineal wound has healed.

It is recommended that primary care providers provide Kegel exercise education to postpartum mothers on the first day to speed up the healing of perineal wounds and strengthen the muscles and tissue around the perineum. It is also hoped that the results of this service can be used as a reference in providing counseling to postpartum mothers to do Kegel exercises as a non-pharmacological alternative to speed up the healing of perineal wounds resulting from a torn birth canal.

6. REFERENCES

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