

## THE USE OF BELLY BINDING TO REDUCE DIASTASIS RECTI ABDOMINIS ON POSTPARTUM MOTHER

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### ABSTRACT

**Introduction:** The provision of care during the postpartum period is an important indicator in improving the quality of life of a good mother. Currently in developing countries, 70% of postpartum mothers do not receive postpartum care and the most common complaints are back pain, pain in the symphysis area, and a drooping abdomen. These complaints arise due to the condition of Diastasis Recti Abdominis (DRA) which is not handled properly. The impact of excessive DRA can cause urinary incontinence, fecal incontinence, pelvic organ prolapse, and other conditions related to pelvic area repair. Various kinds of treatment techniques and therapeutic exercises have been carried out to treat DRA, one of which is the use of belly binding as a non-pharmacological therapy to treat DRA. The purpose of this study was to determine the effectiveness of belly binding to reduce diastasis recti abdominis in postpartum mother. **Methodology:** This study was Quasi Experimental with One group Pretest Posttest Design. Thirty postpartum mothers at Anya Justianingrum, Amd.Keb were taken the Purposive Sampling technique on March-November 2020. DRA was measured using palpation of the degree of abdominal muscle stretch before and after treatment. Univariate, Bivariate analysis used T Dependent Test in order to meet the aim of study. **Research findings:** The results showed that belly binding effective in reducing DRA on postpartum mothers ( $p$  value = 0.000). **Conclusions:** It is recommended to use belly binding and abdominal exercises to treat DRA on postpartum mother.

**Keywords:** *Belly Binding, Diastasis Recti Abdominis, Postpartum*

### 1. INTRODUCTION

The provision of postpartum midwifery care is an important indicator in improving the quality of life of a good postpartum mother. Currently, 70% of postpartum mothers do not receive postpartum care in developing countries and the most common complaints are back pain, pain in the symphysis region, and a sluggish abdomen. These complaints arise due to the condition of Diastasis Recti Abdominis (DRA) that is not handled properly (El-Mekawy *et al.*, 2013).

DRA is a condition where the left and right abdominal muscles separate at the linea alba. The DRA examination was carried out by the mother lying down and slightly lifting her head, palpating the degree of stretching of the abdominal muscles by placing 2 fingers, namely the middle finger and index finger below the center to the symphysis pubis. The result will be normal if the gap is no more than 2 fingers wide (Sri *et al.*, 2015).

Several studies have shown that abnormal DRA conditions in postpartum



mother occur in 85% at the beginning of the puerperium and 35-39% at 6 months postpartum (Volkan *et al.*, 2011). Pelvic muscle strength is strongly influenced by a decrease in abdominal muscle function which is closely related to DRA and the impact is urinary incontinence, fecal incontinence, pelvic organ prolapse due to loss of pelvic muscle function. DRA plays an important role in the development, persistence, and occurrence of conditions related to pelvic area repair (Khandale and Hande, 2016).

DRA will have an impact on the weakness of the abdominal muscles, so that when the uterus is enlarged during pregnancy and childbirth it is not properly restrained by the abdominal muscles. This situation will cause uterine overdistension, which will have an impact on uterine atony so that postpartum bleeding will occur (El-Mekawy *et al.*, 2013).

The abdominal muscles play an important role in posture, trunk and pelvic stability, respiration, and abdominal muscle movement. DRA exerts harmful effects on the functions of the above organs. Various kinds of treatment techniques, with therapeutic exercises have been carried out to treat DRA (Khandale and Hande, 2016). The intervention aims to prevent and overcome various complications caused by DRA conditions.

Belly bindings are long strands of fabric measuring about 20-30 cm wide with lengths varying from 2-4 meters. Currently, belly binding has undergone many changes, starting from the type of fabric, the pattern of the fabric, to the comfort when used. Technological changes make the fabric

more flexible and absorb sweat but with a strong woven texture. In its use, belly bending functions as a stomach wrapper or stomach binder. The use of belly binding is not only to maintain beauty but also to shape the wearer's posture (www.cappa.net, 2018).

Based on the above background, the authors are interested in examining the effectiveness of the use of belly binding to reduce diastasis recti abdominis in postpartum women

## 2. METHODS

The research method used is a quasi-experimental design with One group Pretest Posttest Design. The research was conducted in March-November 2020 at PMB Anya Justianingrum, Amd.Keb. The sample in this study were postpartum mothers taken by purposive sampling. Primary data on respondent characteristics, DRA before and after treatment were obtained through a questionnaire. Data were analyzed by univariate and bivariate with T Dependent test.

## 3. RESULTS

The results of research on the effectiveness of the use of belly binding on the decrease in DRA at PMB Anya Justianingrum, Amd.Keb in March-November 2020 with a sample size of 30 respondents obtained the following results:

**Table 1. The Characteristic of Respondents**

Variable	Belly Binding	
	F	%
Age		
Risk	8	26,7
Not risk	22	73,3
Education		
Low	13	43,3
High	17	56,7
Occupation		

Work	17	56,7
Not work	13	43,3

The characteristics of respondents based on table 1 are 73.3% are in the age group that is not at risk, namely 20-35 years, 56.7% have higher education, 56.7% of respondents are working mothers.

**Table 2. Diastasis Recti Abdominis Before and After use Belly Binding**

Belly Binding	Mean	SD	Mean Diff	95% CI Confidence Interval	P Value	N
Before	1,60	0,621	0,867	0,705-1,029	0,000	30
After	0,73	0,521				

Based on table 2 above, the average DRA of mothers before being given belly binding from 30 respondents was 1.60 and after being given belly binding was 0.73. The difference in the mean before and after is 0.867 with a 95% confidence level and the Confidence Interval (CI) value is between 0.705 – 1.029 with statistical test results obtained p value = 0.000 so it can be concluded that there is a difference in DRA before and after being given belly binding.

immune system is still strong (Notoatmodjo, 2010).

The education level of the respondents is in the high group, namely SMA and PT. Education is an effort to behave by means of persuasion, persuasion, appeal, invitation, providing information, and giving awareness to a group of people or individuals. Education provides certain values for humans in opening their minds to accept new things and think naturally (Notoatmodjo, 2010).

#### 4. DISCUSSION

##### The Characteristic of Respondents

The characteristics of the respondents in this study were mostly in the reproductive age group between 20 -35 years. Age is very influential on the reproductive process, when viewed from a biological perspective, the age of 20-25 years is the best time to reproduce. At this age, the body's organs function properly and there are no degenerative diseases such as high blood pressure, diabetes, and others and the body's

In principle, education is a process to shape a person's personality into an independent person and able to analyze what he is facing. Education is a process of changing attitudes and behavior of a person or group of people in human endeavor through teaching and training efforts. Education is one of the variables used in the social structure model, it is known that individuals with different levels of education have different tendencies in understanding and acting on their health and also in terms of how to use health. The

higher a person's education, the less likely they are to receive information. So that more and more knowledge is possessed, so that less education will hinder the development of a person's behavior towards the good values he receives (Nursalam, 2008).

Most of the respondents are working mothers. Work is a person's service activities to get rewards in the form of material and non-material. Work can be a risk factor for one's health and have an impact on the body's immune system. Work has to do with a person's income to behave in determining the desired service (Ernawati, 2013).

### **The Effectiveness of Using Belly Binding to Decrease DRA**

The results showed that the average DRA of postpartum mothers before being given belly binding from 30 respondents was 1.60 and after being given belly binding was 0.73. The difference in the mean before and after is 0.867 with a 95% confidence level and the Confidence Interval (CI) value is between 0.705 – 1.029 with statistical test results obtained  $p$  value = 0.000 so it can be concluded that there is a difference in DRA before and after being given belly binding. DRA in postpartum women decreased during the use of belly binding.

During pregnancy, the abdominal wall is stretched for a long time, while the back contour changes due to the influence of gravity from the enlarged abdomen, as a result, pregnant women experience diastasis of the rectus abdominis muscles so that part of the abdominal wall in the midline consists only of peritoneum, thin fascia, and

skin. These changes can cause chronic pain in the buttocks, waist, and legs. Stretching on the abdomen causes the addition of new collagen tissue that forms red lines (striae gravidarum). After delivery, loose and sagging skin takes weeks or even months to tighten again and thinning striae lines are disguised (Estiani, 2018).

DRA occurs due to the influence of hormones on the linea alba and due to mechanical stretching of the abdominal wall. This case often occurs in multi-parity, large babies, polyhydramnios, abdominal muscle weakness and wrong posture. In addition, it is also caused by collagen disorders. As a result of abdominal pressure during pregnancy, the connective tissue becomes weaker and thinner. This will increase the load on certain parts of the body which can cause changes in posture and cause back pain (Volkan *et al.*, 2011).

The most common symptom of DRA is abdominal distension after delivery, other symptoms usually being lower back pain, poor posture, flatulence, constipation, and problems with the pelvic floor. The effects of diastasis recti can cause various problems such as pelvic pain, back pain, pelvic floor dysfunction (SPFD), urinary incontinence, prolapsed pelvic organs, hernia (in some severe cases), digestive problems, and in addition, diastasis recti can also damage posture. The therapy that can be done is the use of belly binding (Elloianza, 2018).

The use of belly binding is basically to help support and gently press the abdomen, especially until the organs and muscles of the mother's abdomen can return to their normal functions. Obstetrics and gynecology expert Sherry Ross said that

using jicama can also help overcome sagging and sagging skin in the stomach with light pressure. This pressure also helps the uterus to shrink more quickly. Belly binding if used properly can also help reduce pain, increase mobility, and stabilize the pelvic floor muscles (Rahayu, 2018).

The results of the study stated that the use of bengkung did not affect the health status of the mother, because the bengkung worked passively to disguise the stretchy belly of the mother after giving birth (Rahayu, 2018).

The use of belly binding is highly recommended for postpartum women because it is effective in reducing diastasis recti abdominis.

## 5. CONCLUSIONS

Belly binding is effective in reducing recti abdominis in postpartum mothers (p value=0.000). Health workers, especially midwives, are expected to be able to provide midwifery care in the use of belly binding for postpartum mothers to overcome DRA.

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