



ANALYSIS OF DIASTASIS RECTI INCIDENCE IN POSTPARTUM WOMEN IN MOJOKERTO CITY

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ABSTRACT	Keywords
<p>Diastasis recti abdominis is a condition in which the rectus abdominis muscles separate in the midline at the linea alba. It is currently unknown whether this is a true separation or tissue relaxation. The purpose of this study was to analyze the incidence of distasis recti in postpartum mothers and assessing the severity of distasis recti experienced by the mother. Method research in study This is descriptive quantitative with use cross-sectional approach. Subject study determined by purposive sampling, namely integrated health post at the Community Health Center (UPT) Minister and UPT Puskesmas Kranggan. Election location This done with consideration postpartum mothers data cutoff until with June 2025 two community health center have coverage most postpartum mothers first and second in Mojokerto City. Data collection was carried out with observation inspection physical. Sample study This only conducted at 6 integrated health posts with amount sample amounting to 64 people. The data was analyzed in a way univariate. Research results Research results show that 56% of mothers postpartum experienced abdominal diastasis recti and 26% of them had moderate diastasis recti. The symptoms experienced by 67% of respondents were pain.</p>	<p>Analysis, Diastasis Recti Abdominalis</p>

INTRODUCTION

Postpartum or more known with postpartum period is period the time that begins when placenta exit and period This end when tools content return like normal conditions or like moment before pregnant (Fransiska, 2022); (Uillmi, Serilaila, & Marsofely, 2018); (Rohmana, Jayatmi, & Darmadja, 2020). The postpartum or puerperium period can grouped into 3 periods time namely early puerperium period, intermedial puerperium period, and remote puerperium period (Kirana, 2015); (Harianis & Sari, 2022); (Utami, 2018).

Early puerperium is period time moment Mother after give birth to allowed for do activity move on from place sleeping and walking; Intermedial puerperium is period when the organ or tools reproduction slowly Already back to normal, period This can ongoing during about 42 days or 6 weeks; Puerperium Remote is time or required period For can recover return in condition perfect, especially if a Mother experience complications moment pregnancy or moment childbirth.

When pregnancy and postpartum period, will happen change Good change

psychological and change physical. Besides it can also happen changes to systems body, as in the system musculoskeletal. One of the changes sistem musculoskeletal which can happen is occurrence muscle stretching stomach or abdominal muscles due to increase in uterine volume during pregnancy that can result in occurrence decreased muscle tone stomach. During around 5-6 months muscles stomach experience relaxation so that for can restore muscle tone like previously will need time months too.

Due to existence enlargement of the uterus, causing existence tension so the abdominal muscles don't can withhold prisoners said. As a results muscle rectus abdominis becomes separated or happen gap in the middle of the body line or on the linea alba. Condition occurrence stretch or separation This known with the term Diastasis Recti Abdominis. In postpartum mothers, DRA occurs because during pregnancy, the muscles stomach stretch so that lost little muscle tone. Wall muscle stomach will experience distensi prolonged at the time pregnancy that causes wall abdominal muscles still soft and a little slack. If after a number of Sunday recovery tissue, abdominal muscles remain atonic, then will there is separation or the occurrence of DRA. In conditions this, the stretching that occurs in the linea alba will filled with layer protector or peritoneum, fascia, and subcutaneous fat, as well skin (Estiani & Aisyah, 2018).

According to Estiani, et al. in 2018, the figures the DRA incident was said happen morehigh at the time third trimester of pregnancy and after the delivery process. Journal international show that the prevalence of DRA is between 35% - 100%. The prevalence worldwide is found the highest prevalence of DRA in postpartum mothers is in India with result 95.55%, besides That there are also in Portugal with found DRA occurred in 39% of postpartum mothers. And based on research conducted by Sperstad et al (2016) found prevalence of DRA in Norway at 6 weeks as much as 60.0%, 6 months 45.5%, and 12 months postpartum 32.6%.

However Not yet found prevalence Certain DRA incident in Indonesia because

Still limited literature and research regarding DRA in Indonesia. Factor risk DRA incidents include including age, height, average weight before pregnancy, addition current body weight pregnancy, how to delivery, and weight at the time of period pregnancy. Muscles The rectus abdominis plays a role in posture, stability pelvis, breathing, and movement stem body and to support the abdominal organs, so that the impact of DRA on post-partum mothers is can cause weakening abdominal muscles (Estiani & Aisyah, 2018).

Study This aim for identify and analyze factors that influence the incidence of diastasis recti abdominis (DRA) in postpartum women, and symptoms what women with DRA feel. With Thus, research This will give more knowledge deep about contributing factors against DRA, allowing development of better prevention and treatment strategies effective as well as increase maintenance post give birth to for women at risk experience or has experience condition this. Besides that, research this can also open door for study more carry on in understand more carry on about DRA and development more interventions advanced.

METHOD

This study used descriptive quantitative with use cross-sectional approach. Data were analyzed descriptive in a way univariate. Population study This is all over postpartum mothers at the UPT Puskesmas Minister and UPT Puskesmas Kranggan start January until June 2025 totaled 338 postpartum mothers. Subject study determined by purposive sampling, namely integrated health post at the Community Health Center Puskesmas Kranggan. Election location This done with consideration postpartum mothers data cutoff until with June 2025 two community health center have coverage most postpartum mothers first and second in Mojokerto City. Data collection was carried out with observation inspection physical. Sample study This only conducted at 6 integrated health posts with amount sample as many as 64 respondents postpartum mothers.

RESULTS

Table 1. Characteristics Respondents, based on Age, Education, Occupation and Income

Characteristics Respondents		n	%
Age	≤ 20 years	5	7.8
	20 to 35 years	48	75
	≥ 35 years	11	17.2
Education	Base	3	4.7
	Intermediate	36	56.3
	College	25	39
Work	civil servant	16	25
	Self-Employed / Trade	20	31.3
	Housewife/ Not Work	28	43.7
Income	< Minimum Wage	24	37.5
	Minimum Wage	28	43.8
	> Minimum Wage	12	18.7

Based on Table 5.4 above, it was found that the average age of respondents was 20 to 35 years, most of them have intermediate education, housewife too and most of them in minimum wage income.

Table 2. Overview of the Incidence of Diastasis Recti Abdominalis in Postpartum

DRA incident	n	%
No DRA	28	43.8
Light DRA	22	34.3
Medium DRA	10	15.6
Heavy DRA	4	6.3

The majority of respondents were no DRA

DISCUSSION

Diastasis Recti Abdominis is damage marked network with existence separation of the rectus abdominis muscles at the linea alba, the occurrence the will form known space as inter-recti distance (IRD) (Cavalli et al., 2021); (Michalska, Rokita, Wolder, Pogorzelska, & Kaczmarczyk, 2018). DRA can occur in men or women, will but most occurs in women, especially postpartum mothers (Michalska et al., 2018). Based on research by Estiani et al., 2018 using 41 samples namely postpartum mothers, obtained results that 19 respondents (46.3%) experienced incident Diastasis Recti Abdominis ≥ 2.5 cm where found existence factors that can influence

DRA incident, namely obesity in postpartum mothers. This because people with obesity or overweight usually own more Lots network adipose tissue in the cavity stomach, such as omentum and mesentery big, so that matter the can result in improvement content stomach and pressure on the walls stomach, the presence of pressure the can cause separation rectus abdominis in both sides. Besides that, obesity can happen at the same time with loss of muscle tone which causes abdominal muscles are not capable withhold the pressure that occurs so that factor the can result in the occurrence of DRA (Estiani & Aisyah, 2018).

Based on research conducted by Sperstad et al. in 2016 did not find connection between age, height, average weight before pregnancy, increase body weight during pregnancy, cesarean operation, weight baby moment birth, benign joint hypermobility syndrome, and the level of from exercise abdominal muscles and muscles base hips, lift weight and exercise general with DRA incident for 12 months postpartum woman.

This matter due to research this is the data collected For a number of factor like lift heavy collected through questionnaire and not measured in a way directly, and a number of researchers also discussed how much often postpartum mother lifting heavy or carrying children can cause stretch or DRA without provide live data For support hypothesis said, so that factors the No can proven can become factor possible risks cause DRA incident.

Based on the data shown in the research the obtained a number of factor tested risks own mark significance ($p > 0.05$), including factors age with p value (0.11), Body weight before pregnancy with p -value (0.54), increase current body weight pregnancy with mark significance ($p = 0.80$), weight baby born with value (0.32), Caesarean Section with mark significance ($p = 0.69$), and exercise general with mark significance ($p = 0.48$) so that factors the it is said No including factor risk of DRA (Sperstad, Tennfjord, Hilde, Ellström-Eng, & Bø, 2016).

Based on Research by Zulfiani et al. in 2021 showed results namely existence connection between age pregnancy with DRA where from 30 respondents obtained mark significance 0.011 ($p < 0.05$). Postpartum mothers aged her pregnancy is 38-39 weeks Own risk experiencing more DRA small 0.133 times If compared to with age 40-41 weeks of pregnancy. In the study This obtained results namely respondents with age 75 % of pregnancies at 40-41 weeks experienced DRA.

Pregnancy with old age has impact on strain or separation abdominal muscles that last until the birth process. Stretching muscles stomach that occurs in a way Keep going continuous and long - lasting as in pregnancy baby twin or pregnancy with polyhydraminone can influence size stretch or DRA degree. The intra-abdominal pressure that occurs during pregnancy or pregnancy will make addition wide gaps in the linea alba so can resulting in DRA. In the study This No find existence relationship to age, pregnancy /gravida, and heavy baby moment born with DRA incidents in postpartum mothers.

A number of journal international, one of them namely journal by Fei et al (2021), and Cardaillac et al (2020) found there is connection between age Mother with DRA. When increase age will there is change in a way progressive so that will cause decline function of body organs, tissues adipose and also connective tissue will the more Lots so that cause occurrence decline substantial and network contractile which then will own impact on weakening muscle. Weakening strength muscle own influence with DRA. No found connection between age with DRA due to amount respondents used different, if research conducted by Fei et al. (2021) and Cardaillac et al (2020) used more from 200 respondents with an average age of 36 years, the study This only using 30 respondents with an average age of 32 years. The difference results are also caused by differences method measurements taken where in the research This using Fisher's exact Test. Meanwhile study other use IRD measurement with Computed Tomography. In additions That study This No find

connection between heavy baby moment born and DRA is suspected Because only there is two newborn baby with weight > 4000 grams, while 28 mothers give birth to with heavy normal babies < 4000 grams (Kim, Lim, Lee, & Kim, 2012).

Based on research conducted by WU et al in 2021 found results namely there is connection between age, number pregnancy, BMI, and diabetes on DRA incident (Handayani & Nurjanah, 2021). Pregnancy is one of the risk factors for DRA, where the abdominal muscles will affected by enlargement uterus during pregnancy (Ardani, 2018).

The more Lots amount pregnancy experienced a women, will the more allows occurrence of DRA. Fracture in the part from fiber elastic can cause separation of the recti abdominis muscles to varying degrees. Besides that, DRA can also caused by an increase intra-abdominal pressure during period pregnancy. Based on research conducted by Liaw et al., in 2011, showed that postpartum women have around twice as much many IRDs compared women who don't give birth, so that pregnancy previously allows can causes DRA. In a study conducted by WU et al. in 2021, it was found that that there is correlation between index mass body mass index (BMI) with DRA where the morehigh BMI then will the more tall risk the occurrence of DRA.

This matter because people with overweight condition or obesity will own more Lots network adipose tissue in the abdominal cavity such as the greater omentum and mesentery, This cause improvement in content stomach and also the presence of pressure on the abdominal wall cause separation of the rectus abdominis in both side. Besides it is also obesity Can cause subtraction mass muscles. People with obesity in general have weakness in the abdominal wall including the rectus abdominis, so matter the can contribute in DRA incident.

In the research This respondents with overweight or overweight who experienced DRA as much as 33.1%, and respondents with obesity with DRA of 36.2%. In addition that too in research This found connection between diabetes and

DRA. In women with diabetes, 43.0% of them experienced DRA, and only 25.5% of respondents with DRA that does not have diabetes. Diabetes can contribute in damage mitochondria oxidative phosphorylation and hypercomplexation of rectus abdominis fibers (Ciarambino et al., 2022).

This can also be done cause transformation muscle and rectus abdominis recombination and then change structure muscle with reducing fast fiber and reducing slow fiber (Wu et al., 2021). Based on the data obtained from a number of literature, obtained results factors that can influence The incidence of Diastasis Recti Abdominis in postpartum women includes: age pregnancy (30%), overweight or obesity (60%), and diabetes (30%).

CONCLUSIONS

Based on results research, then can concluded that 56.2% of postpartum mothers experienced DRA, the most among them is a mild DRA as much as 34.3% there are a number of factors that can influence The incidence of Diastasis Recti Abdominis in postpartum women, including age pregnancy (30%), overweight or obesity (60%). Meanwhile For symptoms experienced postpartum mothers who experience DRA almost entirely feel symptom pain in the area back (94%)

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