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The correlation between age, parity, breastfeeding status, weight gain, and contraception with body image among 9-month postpartum women

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Abstract

The postpartum period is a critical transitional period for the mother, baby, and family physiologically, emotionally, and socially. Maternal body satisfaction deteriorates from 1 to 9 months postpartum. Dissatisfaction with the body or negative body image is associated with several factors including weight gain and poor mental health. This study aims to analyze the correlation between age, parity, breastfeeding status, weight gain, contraception, and body image in 9-month postpartum women. This study applied the Multidimensional Body-Self Relations Questionnaire-Appearance Scale (MBSRQ-AS) to assess the level of body image. There are 50 9-month postpartum women included in this study. The Majority of 9-month postpartum women were having positive body image (72%). Body image at 9-month postpartum women was correlated with breastfeeding status ($p<0.05$). Although there is no correlation between age, parity, weight gain, contraception, and body image in 9-month postpartum women ($p>0.05$). From this study, it can be concluded that there is no significant correlation between age, parity, weight gain, contraception, and body image among 9-month postpartum women in the midwifery private practice place, Surabaya.

Keywords: Body Image; Age; Parity; Breastfeeding Status; Weight Gain; Contraception

1. Introduction

The postnatal period is the period that begins right after the baby is born and lasts up to six weeks (42 days) [1]. The postpartum phase is the time after the birth of the child, beginning with the discharge of the placenta and ending when the physiological and anatomical modifications of the body return to their pre-pregnancy state [2]. The birth of the fetus marks the beginning of the postpartum period; however, it is unclear when this period ends, and some experts argue that women may continue to experience postpartum symptoms for up to a year after giving birth [3]. There are several phases in the postpartum period: immediate (up to 6 weeks after delivery), brief (7 weeks to 3 months after delivery), and short (7 weeks to 3 months after delivery)[3].

The postpartum period is a transitional period where there are physical and psychological changes in the mother that can have adverse consequences for her life [4]. Failure to recover from the physiological changes experienced with each pregnancy can lead to the gradual accumulation of fat mass and may result in metabolic disorders later in life [5, 6]. This cycle of weight gain between pregnancies leads to a body mass index (BMI) that gets higher with each pregnancy [7].

Research shows that about half of women can regain their pre-pregnancy weight by 12 months postpartum, although this is highly dependent on factors such as maternal age, socioeconomic status, pre-pregnancy BMI, stress, and breastfeeding [8–11]. Education level, duration of breastfeeding, activity, and pre-pregnancy obesity are associated with persistent weight gain [5]. Maternal factors associated with higher weight gain during pregnancy and postpartum are pre-pregnancy body mass index, education, socioeconomic status, age, parity, breastfeeding, dietary intake, physical

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activity, sedentarism, sleep hygiene, and psychological stress [12]. Hormonal contraceptives could theoretically lead to weight gain if they cause fluid retention and increased body fat, although no studies have yet proven a clear link between hormonal contraceptives and large weight gain [13].

The physical changes experienced by mothers in the postpartum period can cause anxiety about the image of themselves no longer looking attractive to their husbands, which can be one of the causes of postpartum blues experienced by 80% of women after childbirth [14]. About 50-70% of psychological disorders are experienced by postpartum women [15]. Post partum blues if not handled properly can result in postpartum depression which affects around 10% of new mothers[14]. The prevalence of postpartum depression was 2.32% [16].

Many women in pregnancy and postpartum experience conflicting feelings related to body image [17]. If a mother feels she has a negative body image perception, then she is less likely to breastfeed her baby and has a negative attitude [18]. Negative maternal attitudes can include a lack of sensitivity in parenting, emotional disturbance in parenting, and can cause feelings of fear and stress in the baby [19]. From the factors that affect body image as described above, this aims to re-examine several factors that are thought to be associated with body image in 9-month postpartum women.

2. Material and methods

This cross-sectional study was designed to investigate the correlation between six variables, age, parity, breastfeeding status, weight gain, contraception, and body image among 9-month postpartum women midwifery private practice place. The target population of this study was 9-month postpartum women. A total of 50 nine-month postpartum women participated in this study. This study used a sample calculation of the correlation coefficient based on previous research to determine the sample size. From the results of these calculations, the minimum number of samples that must be met is 42 postpartum women at 9 months. In this study, the sample obtained was 50 so it met the minimum number of samples. The inclusion criteria in this study were 9-month postpartum women and there were no exclusion criteria in this study.

This study applied two research instruments. The first instrument was the Multidimensional Body-Self Relations Questionnaire-Appearance Scale (MBSRQ-AS) by Cash and Pruzinsky which has been translated and used in of Kurniawan's research to assess the level of body image [20, 21]. This scale comprises five points: (1) appearance evaluation, (2) appearance orientation, (3) body areas satisfaction, (4) overweight preoccupation, and (5) self-classified weight. This study's questionnaire comprised around 34 questions with five checklist options: strongly disagree, disagree, neutral, agree, and strongly agree. Each answer was given a score that accumulated into the final score. A total score under 104 indicated negative body image, 104 and 127 indicated normal body image, and more than 127 showed positive body image. The MBSRQ-AS questionnaire in this study was divided into 28 favorable and six unfavorable questions. Each answer to favorable and unfavorable questions had a different score measurement.

This research took place between August and September of 2023. Ethical clearance for the study was obtained from the Research Ethics Committee of the Faculty of Medicine, Universitas Airlangga, Surabaya (ref no: 247/EC/KEPK/FKUA/2023). The questionnaire was created and distributed using a paper-based questionnaire. This study used Statistical Package for the Social Sciences (SPSS) and Microsoft Excel to analyze statistical data. The frequency of dependent and independent variables was distributed by using univariate analysis.

3. Results

Fifty 9-month postpartum women at midwifery private practice place were included in this study. As shown in Table 1**,** the respondents were on average 29.6 years old. Most of the respondents were multiparous women (62%). Most of the respondents were breastfeeding mothers (70%). Almost all respondents experienced weight gain (80%) and most of them were users of hormonal contraceptives (74%).

Table 1 Frequency distribution of respondents

Indicator	Sub Indicator	Frequency	Percentage (%)
Age	16-20	1	2
	21-25	11	22
	26-30	16	32
	31-35	15	30
	36-40	7	14
Parity	Primiparous	19	38
	Multiparous	31	62
Breast-feeding status	Breast-feeding mother	35	70
	Not a breastfeeding mother	15	30
Weight gain	Yes	44	88
	No	6	12
Contraceptive Type	Without Contraception	6	12
	Hormonal Contraception	37	74
	Non-Hormonal Contraception	7	14

The level of body image among 9-month postpartum women is shown in Table 2. Most respondents with normal body image category were 36 respondents (72%). While the number of respondents with negative and positive body image had the same amount (14%).

Table 2 Level of body image

Level	Category	Frequency	Percentage (%)
Level of Body Image	Negative	7	14
	Normal	36	72
	Positive	7	14

The correlation between age, parity, breastfeeding status, weight gain, contraception, and body image was analyzed using Fisher's Exact Test as shown in Table 3.

Table 3 Cross Tabulation and analysis of age, parity, breastfeeding status, weight gain, contraception, and body image

		Self-Esteem						Total		P *value*
		Negative		Normal		Positive				
		n	%	n	%	n	%	n	%	
Age	16-20	0	0	1	100	0	0	1	100	0.268
	21-25	4	36	7	64	0	0	11	100	
	26-30	0	0	11	69	5	31	16	100	
	31-35	2	13	11	74	2	13	15	100	
	36-40	1	14	6	86	0	0	7	100	
Parity	Primiparous	3	16	13	68	3	16	19	100	1.000

	Multiparous	4	13	23	74	4	13	31	100	
Breast-feeding status	Breast-feeding mother	1	2	27	78	7	20	35	100	0.001
	Not a breastfeeding mother	6	40	9	60	0	0	15	100	
Weight gain	Yes	7	16	32	73	5	11	44	100	0.364
	No	0	0	4	67	2	33	6	100	
Contraceptive Type	Without Contraception	2	33	4	67	0	0	6	100	0.099
	Hormonal Contraception	5	14	28	76	4	10	37	100	
	Non-Hormonal Contraception	0	0	4	57	3	43	7	100	

4. Discussions

The age of postpartum women in this study ranged from 20 years to 40 years with an average age of 29 years. In this study, women who had a positive body image were most numerous in postpartum women aged 28 years. While negative body image with the highest number of postpartum women aged 22 years and 34 years. Research conducted by Pliner, Chaiken, and Flett (1990) states that as women age, their attention to their appearance will decrease [22]. However, only a small number of studies have investigated the influence of age and gender on body dissatisfaction, importance of appearance, and body appreciation [23]. The lack of evidence that age has an effect on body dissatisfaction is reinforced by the results of this study. The relationship between age and body image based on a non-parametric test, Fisher's Exact Test correlation with the results of the analysis showing that the p-value: 0.268 which means that there is no relationship between age and body image of 9-month postpartum women. Thus, it is evident that age does not affect women's body satisfaction.

The postpartum women in this study were mostly multiparous women who had more than one child. Multiparous women in this study had a more positive body image compared to primiparous women. The relationship between parity and body image based on a non-parametric test, Fisher's Exact Test correlation with the results of the analysis showing that the p-value: 1.000 which means that there is no relationship between parity and body image. Multiparous postpartum women had the experience of undergoing pregnancy, childbirth and the postpartum period before, but the very dynamic nature of body image can continue to change in response to new experiences that depend on how a person perceives the new experience [24].

Most of the respondents in this study breastfed their children. In this study also postpartum women who breastfeed have a more positive body image compared to postpartum women who do not breastfeed. The results of the analysis Fisher's Exact Test showing that the p-value: 0.001 which means that there is relationship between breastfeeding status and body image. The results of this study are in line with research conducted by Schalla, Witcomb, and Haycraft (2017) which states that women who breastfeed will have a more positive body image than those who do not breastfeed [25]. This is because breastfeeding can cause feelings of pride and satisfaction, thus increasing women's focus on body function and reducing focus on appearance problems [25].

Almost all postpartum women in this study experienced weight gain, of which a small proportion had a negative body image. However, most of the respondents who experienced weight gain had a normal body image. Weight gain does not affect body image if postpartum women have a high level of satisfaction with body shape and weight, body appreciation, and functional appreciation [26]. This is evidenced by the results of the analysis Fisher's Exact Test showing that the p-value: 0.364 which means that there is no relationship between weight gain and body image.

Most of the postpartum women in this study were hormonal contraceptive acceptors and most of them had a normal body image. Post partum women who were hormonal contraceptive acceptors in this study also accounted for the highest number of respondents with negative body image. The relationship between contraceptive type and body image based on a non-parametric test, Fisher's Exact Test correlation with the results of the analysis showing that the p-value: 0.099 which means that there is no relationship between age and body image of 9-month postpartum women. Thus, it is evident that contraceptive type does not affect women's body satisfaction. Theoretically hormonal contraceptives can cause weight gain if they cause fluid retention and an increase in body fat, although no studies have proven a clear link between hormonal contraceptives and large weight gain [13]. Changes in body size such as persistent overweight can lead to negative body image [27].

The postpartum period is a particularly vulnerable time for many women who experience negative feelings about their bodies after pregnancy. Postpartum moms will return to body image concerns after childbirth related to the continuation of the body change process, and the fact that the body may take time to regain its pre-pregnancy weight and shape or that its current appearance may be permanent. Body image concerns have been reported to be high among postpartum women and it can be a significant source of psychological distress [27, 28].

Changes in body size such as persistent overweight can cause negative effects for postpartum mothers such as depression which can be caused by negative body image [27]. Postpartum mothers with positive body image are reported to have a higher increase in body shape and weight satisfaction, body appreciation, and functional appreciation [26]. Depressive symptoms and negative affect are very common during the postpartum period and there is literature suggesting that body dissatisfaction may increase the risk of depression in new mothers. These depressive symptoms may contribute to body dissatisfaction by increasing negative attributions and evaluations related to weight and body shape and reducing the likelihood of women engaging in positive body-related activities including physical exercise and self-care [17].

5. Conclusion

From this study**,** it can be concluded that there is no correlation between age, parity, weight gain, contraception, and body image among 9-month postpartum women in the midwifery private practice place, Surabaya. There is correlation between breastfeeding status and body image. Although the results of body image measurements are dominated by postpartum women who have a normal body image, there are still women with a negative body image. this can be used as an evaluation for health workers to provide education about the physiological and psychological changes that occur in the postpartum period so that they can know that the changes that occur are normal so that they can minimize the onset of negative body image.

Compliance with ethical standards

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Disclosure of Conflict of interest

No potential conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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