

# PREVALENCE OF CENTRAL OBESITY AMONG POST PARTUM WOMEN – A CROSS SECTIONAL OBSERVATIONAL STUDY.

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## Abstract

The postpartum period is a part of women's life where she may undergo nutritional, social and psychological challenges. The aim of this cross-sectional observational study was to determine the prevalence of central obesity among postpartum women. A sample of 30 postpartum women was selected according to specific criteria, and their waist circumference and waist-to-hip ratio were assessed to diagnose central obesity. The results showed that 83.3% of the sample had a high risk of central obesity, while 16.7% had a low risk. Analysis by age groups revealed that those under 25 had a 66.7% high risk and 33.3% low risk, whereas those over 25 had a significantly higher risk with 94.4% high risk and 5.6% low risk. This suggests that postpartum women over 25 are at a significantly higher risk of central obesity. Furthermore, 25 samples demonstrated a significant risk based on BMI, while 5 samples showed a low risk. Overall, the data collected underscored the substantial prevalence of central obesity among postpartum women.

In conclusion, this study highlights the high prevalence of central obesity in postpartum women, with factors such as age, BMI, waist circumference, and waist-to-hip ratio showing correlations with this condition. These findings emphasize the importance of addressing central obesity during the postpartum period to mitigate its potential negative health impacts. Further research and interventions focused on managing central obesity in this population are warranted to promote better postpartum health outcomes.

Keyword: Central obesity, postpartum, waist circumference, hip circumference, waist to hips ratio.

## INTRODUCTION

An excessive build up of abdominal fat, especially from excess visceral fat is supplied by the portal blood system, therefore having too much fat here might cause fatty deposits to leak into the bloodstream and cause health issues. The risk factors and morbidity of obesity-related disorders as type 2 diabetes, hypertension, dyslipidemia, and cardiovascular diseases are independently predicted by excess abdominal fat. Abdominal fat and waist circumference (WC) have a favourable correlation. Thus, the waist circumference is a useful, practical, and straightforward measurement method that can be used to identify those who are more likely to get the aforementioned diseases [1,2].

According to estimates from 2013, the prevalence rates of overweight and obesity among females over 20 in Kenya were 34.1% and 8.8%, respectively, while in Eastern Sub-Saharan Africa, they were 23.7% and 15.2%, respectively [3]. Obesity rates in Kenya increased from 6.4% in 1993 to 15% in 2014 [4]. According to research, the prevalence of obesity is rising more rapidly among women than males and in urban than rural parts of sub-Saharan Africa [5]. The prevalence of obesity and overweight among women in Kenya aged 15 to 49 increased from 25% in 2008 to 33% in 2014, and it was highest in Nairobi, where it went from 41% in 2008 to 48% in 2014 [6].

When compared to general obesity measures [7] particularly WC in women [8] central obesity measures have been demonstrated to predict risk of NCDs. Independent of total obesity, central obesity endangers people's cardio-metabolic health [8]. In obese or overweight individuals, weight regulation is strongly advised in order to maintain health and reduce the risk of developing certain chronic conditions [8]. A number of disease, such as cardiovascular problems, neurological problems like stroke, diabetes, hypertension, fatty liver, gallstones, gout, osteoarthritis, sleep apnea, skin conditions like fungal infections, varicose veins and some cancers are statistically more likely to develop in people who are centrally obese. This study determined the central obesity among postpartum women. Some studies have linked physiological processes like childbearing and the increased prevalence of central obesity in women.

## METHODOLOGY

It is the cross sectional observation study 30 sample of postpartum was selected. The selected participants was assessed with waist circumference and waist size compared to hip size for diagnosing central obesity. Central obesity has been demonstrated that one of the most reliable indications for estimating abdominal obesity measurement standards. Measurement should be conducted in the morning before having breakfast. **Waist circumference:** View the patient from the

front. Locate the narrowest point between ribs and iliac crests. Ensure that the tape measure is at the same height around the waist. Measure and state the measurement correctly to the nearest centimetre. **Hip circumference:** View the patient from front. Locate the greater trochanter. Hip measurement is taken at widest lateral extension of the hips. Ensure that the tape measure is horizontal. Measure and state the measurement correctly to the nearest centimetre. Calculate waist / hip ratio to 2 decimal places. Women 0.85-1.7 (high risk) and <0.85 (low risk). Inclusion criteria: After delivered 1 year women. All instruments were validated earlier. Exclusion criteria: Cardiovascular disease, Diabetes, Skin conditions like fungal infections. As per the selection processes the selected participants are assessed in two stages. First they are assessed with waist circumference and then waist size compared to hip size. The collected data were recorded for statistical analysis.

### STATISTICAL ANALYSIS AND INTERPERTATION

Statistical analysis was used to tabulate the data that had been gathered. The participants' average age was 30 and their percentage was 96. (Table1). Waist circumference, waist to hip ratio, and risk category were used to determine the prevalence of central obesity (Table 2). The BMI participants had a mean value of 22.884 and a frequency of 25 and 5, respectively (Table3). According to statistical analysis, central obesity is

more significant in postpartum women. Analysis of 30 sample postpartum women revealed 83.3% of high risk and 16.7% of low risk central obesity prevalence. Comparing age groups, those under the age of 25 had 66.7% high risk and 33.3% low risk, while those over the age of 25 had 94.4% high risk and 5.6% low risk. In relation to this, postpartum women over the age of 25 had a significant risk of central obesity. 25 samples had significant risk compared to BMI, while 5 samples had low risk. Data collection indicates that central obesity was substantially more prevalent in postpartum period.

**Table 1: This table shows that the total percentage of central obesity among 30 postpartum women. In this high risk was 83.3 percentage and low risk was 16.7 percentage. Table 1 proved that central obesity is high risk in postpartum women.**

	Frequency	Percent	Valid Percent	Cumulative percent
Valid High risk	25	83.3	83.3	83.3
Low risk	5	16.7	16.7	100.0
Total	30	100.0	100.0	

### This table shows about the age groups:

			Prevalence		
			High risk	Low risk	Total
Age group	<25 Years	Count	8	4	12
		% within age group	66.7%	33.3%	100.0%
	25 years and above	Count	17	1	18
		% within age group	94.4%	5.6%	100.0%
Total		Count	25	5	30
		% within age group	83.3%	16.7%	100.0%

**Table 2: This table shows that percentage of BMI in postpartum women. BMI also included in Central obesity, mostly overweight will leads to Central obesity in postpartum women.**

[\$Dataset] Prevalence	N	Mean	STD. Deviation	STD. Error mean
BMI				
High risk	25	22.884	3.2321	6464
Low risk	5	18.700	4.8780	2.1815

### DISCUSSION

The research on central adiposity in postpartum women is scarce. The majority of studies under consideration used varied definitions of central obesity and focused on the general population. Despite these, the study's high incidence of CO (83.3%) is concerning. Prevalence of CO in this study, as determined by WC, is higher in postpartum women comparison to other studies among women. Depending on the criteria utilised, this study's prevalence of central obesity ranged from 16.7% for moderate risk to 83.3% for high risk. In this study, postpartum women have a high prevalence of central obesity.

BMI in clinical care practises for NCD prevention and management. This study discovered a strong positive correlation between central obesity and this. This result is in line with the outcomes of past investigations. [9-21]. Furthermore, retention could lead to abdominal obesity if this gestational weight is not eliminated.

### CONCLUSION

The study determined that central obesity is highly prevalent among postpartum women, although it had limitations such as a small sample size, short duration, and single-center focus. It found correlations between central obesity and factors including age, BMI, waist circumference, and waist-to-hip ratio. Despite these limitations, the study underscores the significance of addressing central obesity in postpartum women due to its potential health implications. Further research with larger and more diverse samples, longer duration, and multi-center approaches is needed to validate and expand upon these findings.

### AUTHOR CONTRIBUTION

Dr.velkumar vasudevan: project concept, guiding.  
Nanthinimanikandan: introduction, methodology, data

collection, manuscript writing. Mr.Ehzumalai: statistical analysis.

### CONFLICT OF INTEREST

No conflict of interest.

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