A study to observe measurable differences post bariatric- metabolic surgery through body analysis data

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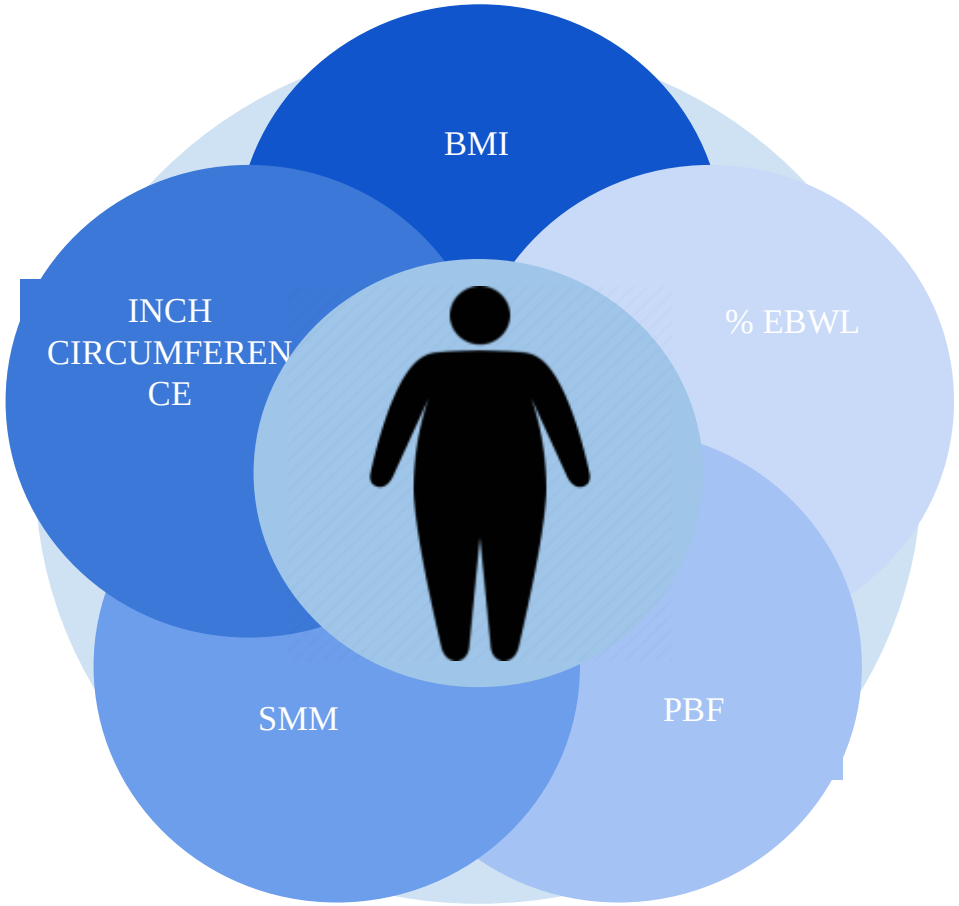
The post-surgical period is crucial for understanding the changes that occur in patients' body composition and overall well-being. The weight loss in kilograms (Kgs.) and body anthropometric changes (inches) gives a straight picture of the measurable differences in overall body composition. The use of BMI & inch measurements & body composition provides more anatomical & meaningful changes post surgery (Buchwald et al).

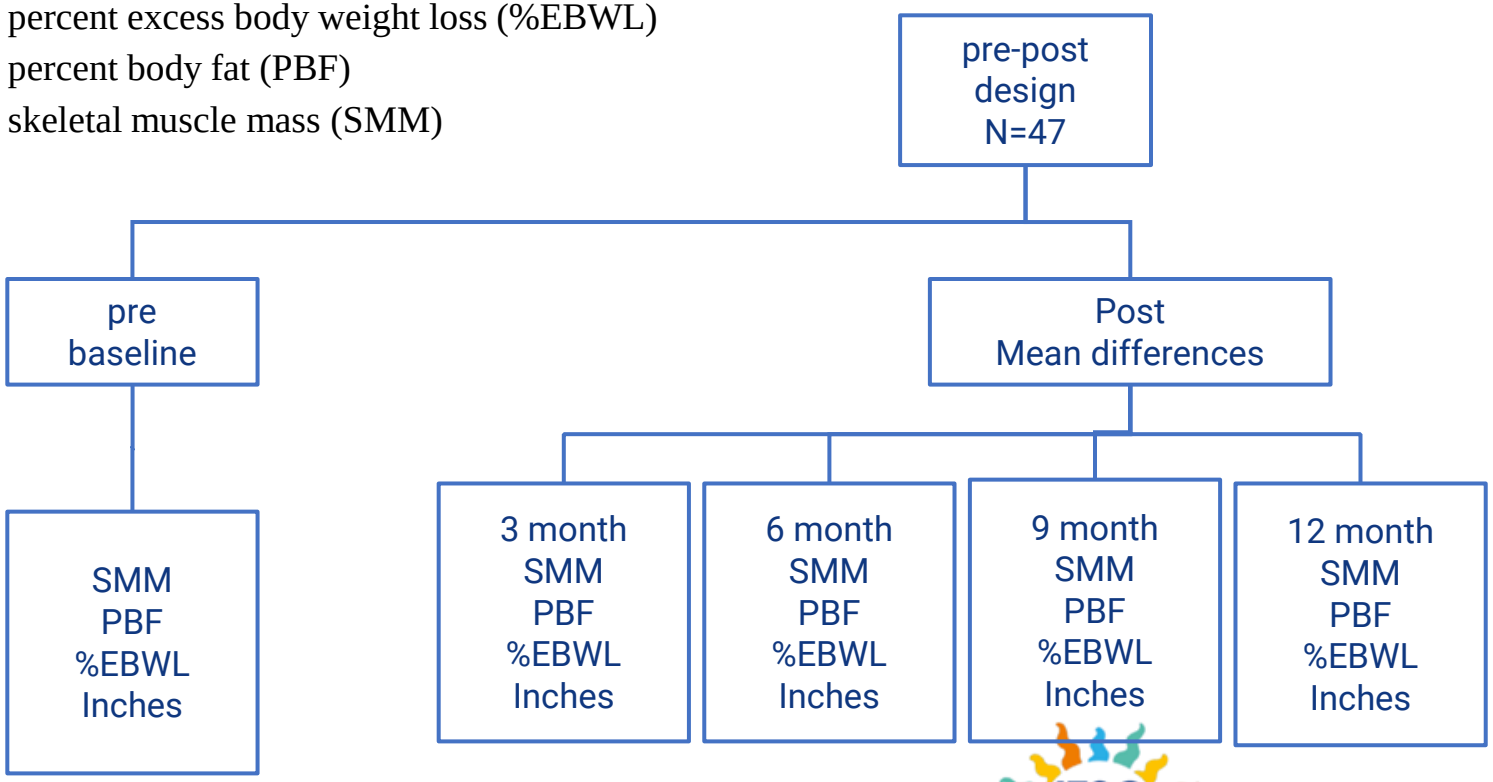
The impact of bariatric-metabolic surgery on body image and anthropometric measures is important because it goes beyond the commonly used Body Mass Index (BMI) as a sole indicator of progress.

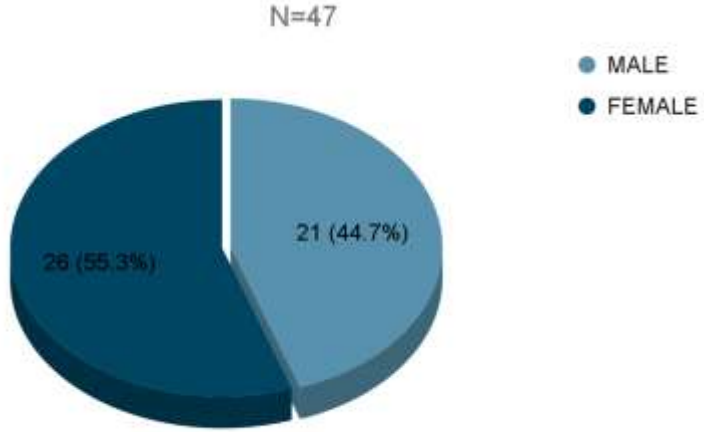


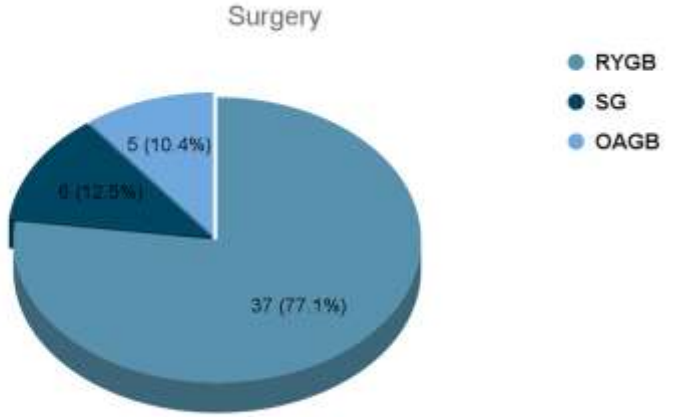
Method: A one group pretest-posttest design was used to study 47 adults (n=47) before and at every three months upto one year after bariatric-metabolic surgery. The overall sample included these surgeries: Roux-en-Y Gastric Bypass (RYGB; n=37), Sleeve Gastrectomy (SG; n=6), One-Anastomosis Gastric Bypass (OAGB; n=5). self-report body image measures (BMI, PBF, SMM,%EBWL) and anthropometric measure were analyzed using mean. differences in outcomes.

Various dimensions of body image were assessed using body composition analysis and body impedance analysis (BIA) (BIA - InBody370S) for over a period of one year.

- body inch measurements
- percent excess body weight loss (%EBWL)
- percent body fat (PBF)
- skeletal muscle mass (SMM)

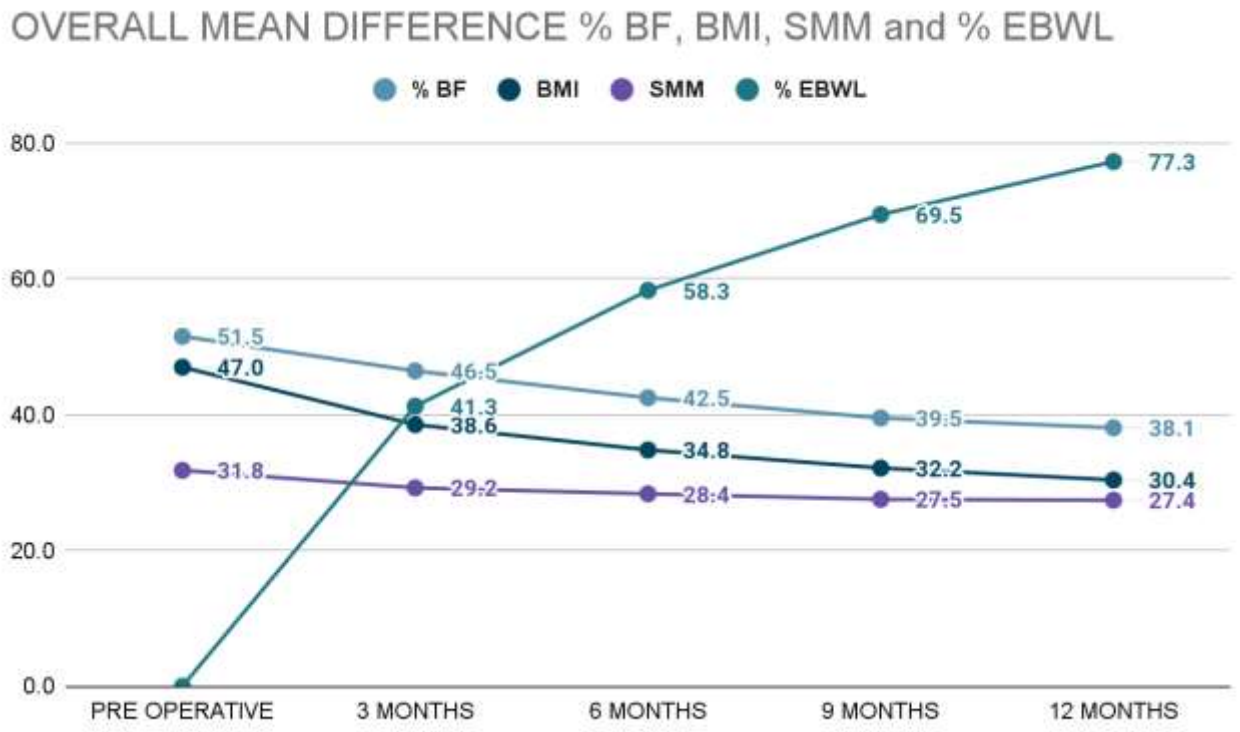






Results: Observable difference was seen in mean difference in preoperative & post operative PBF, BMI, SMM, % EBWL - was 13.6, 16.7, 4.4, 77.3% over the period of a year.

	pre operative	3 months	6 months	9 months	12 months
PBF	51.6 ± 4.9	46.5 ± 4.9	42.5 ± 5.5	39.5 ± 6.3	38.0 ± 6.3
BMI	47.1 ± 7.6	38.55 ± 6.7	34.82 ± 5.7	32.16 ± 4.6	30.4 ± 4.3
SMM	31.82 ± 6.0	29.24 ± 5.3	28.36 ± 5.7	27.55 ± 5.3	27.42 ± 5.0
%EBWL		41.28 ± 15	58.33 ± 14.3	69.51 ± 13.2	77.31 ± 14.1



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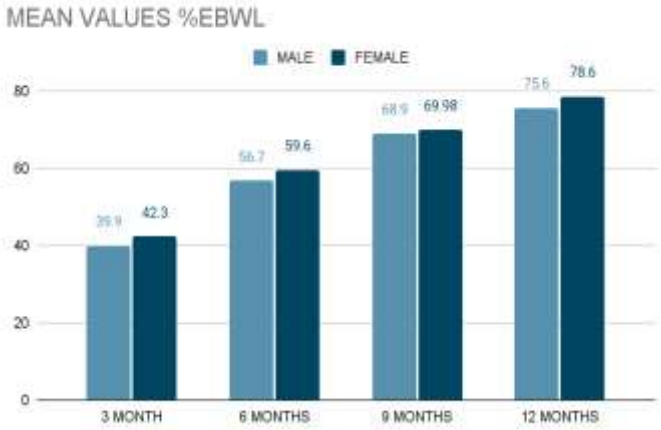

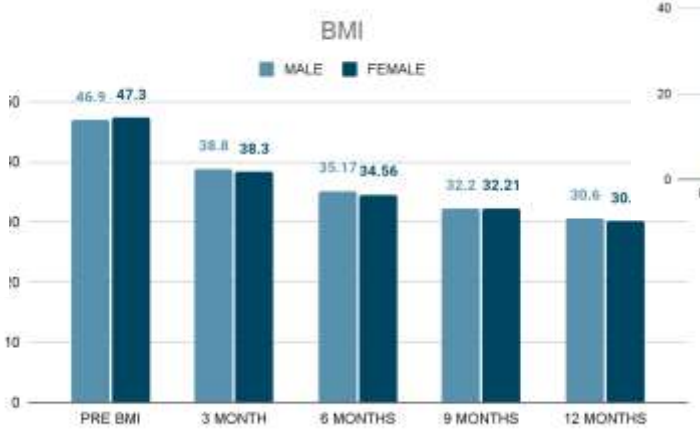

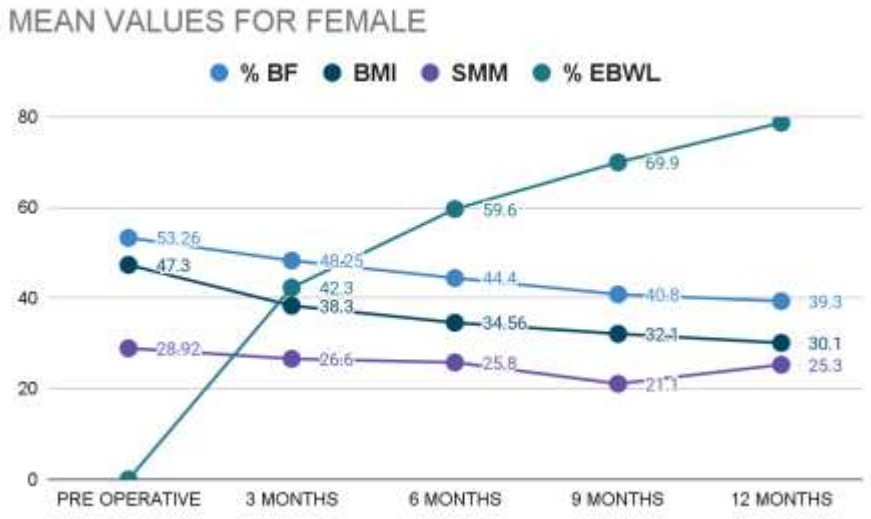

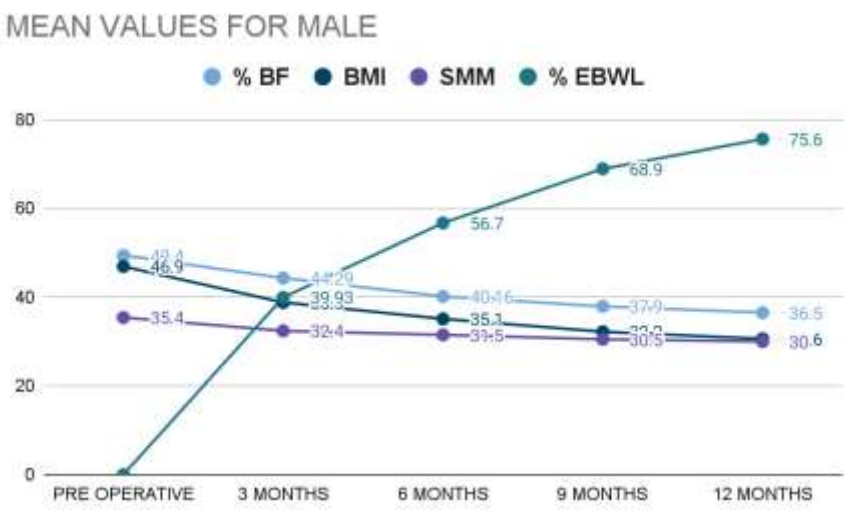

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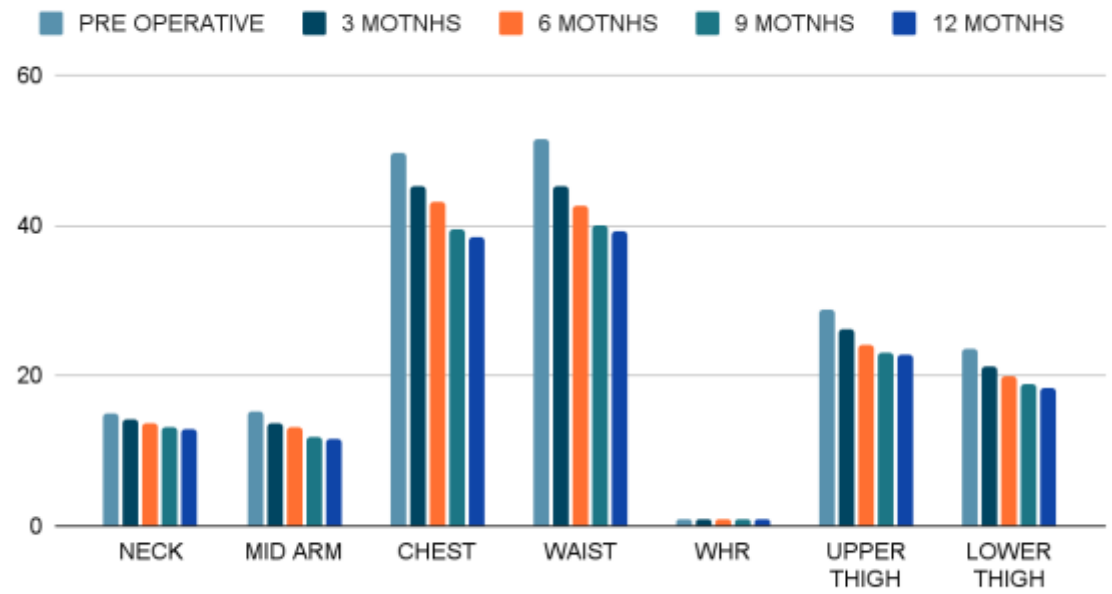
INCH MEASUREMENT CHANGES IN FEMALES



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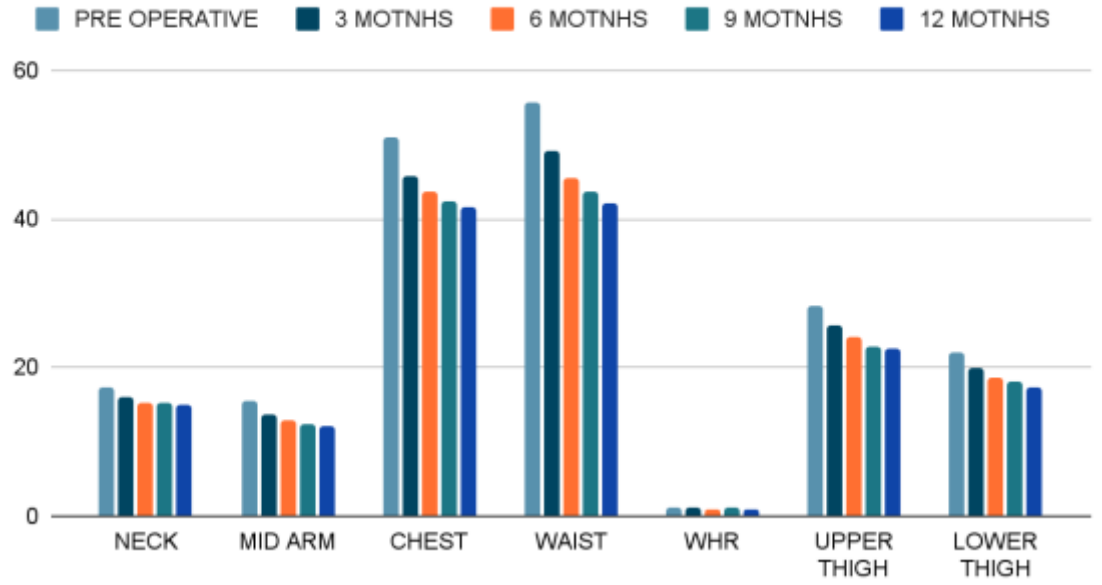
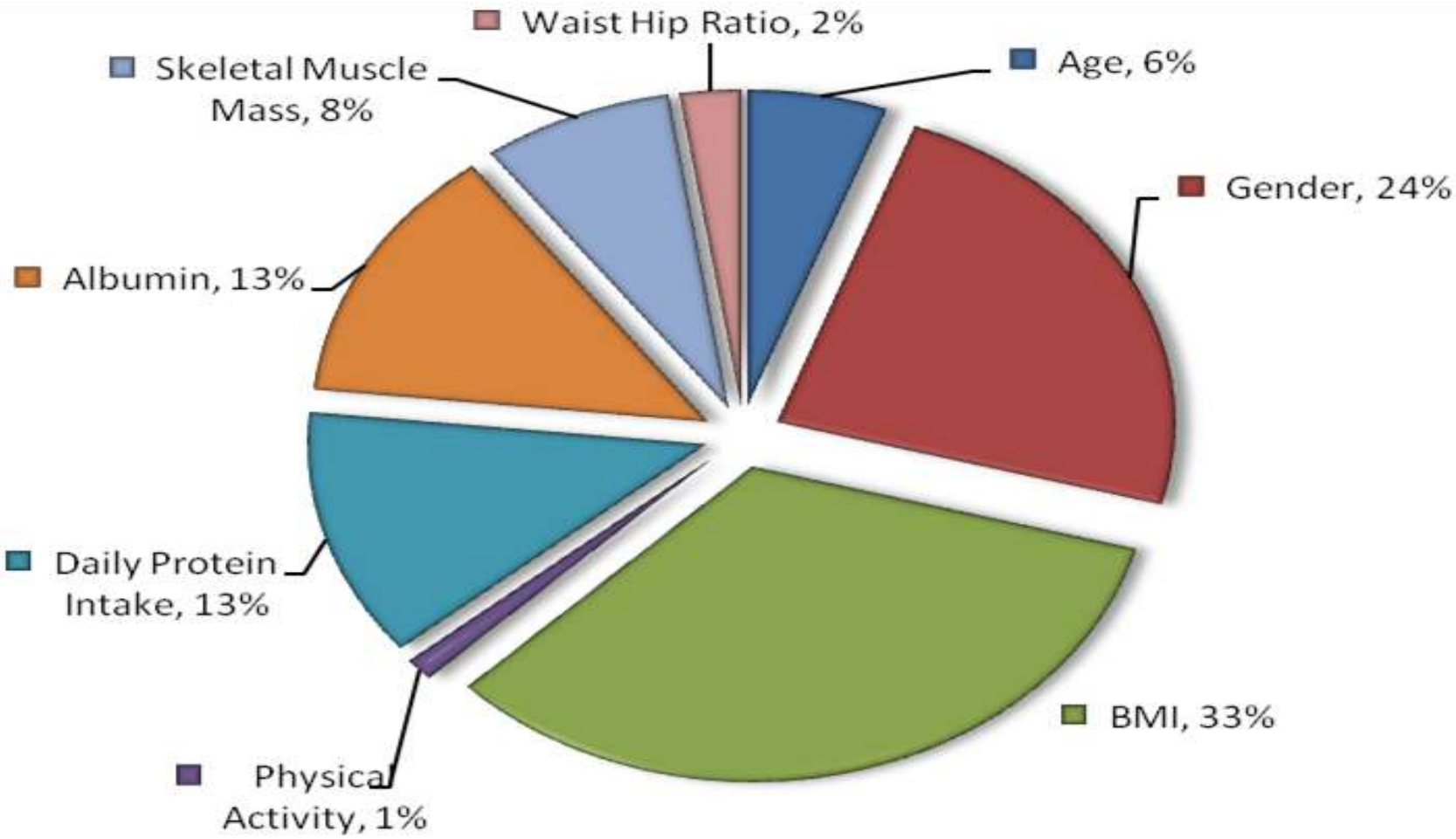
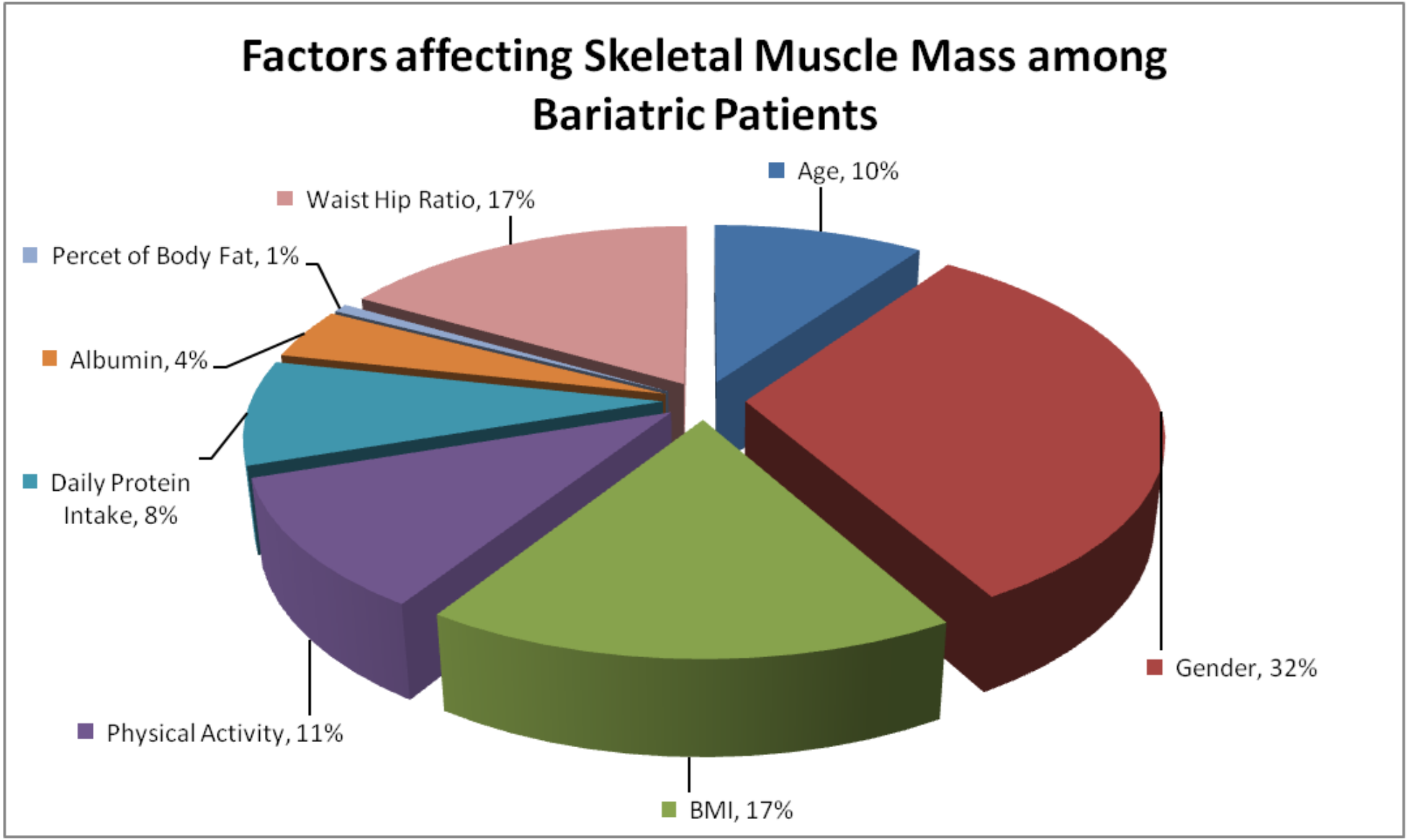


FACTORS AFFECTING PERCENTAGE OF BODY FAT AMONG BARIATRIC PATIENT



Factors affecting Skeletal Muscle Mass among Bariatric Patients



Conclusions:

Changes in body image and anthropometric measures were clinically significant. Body change outcomes, not just BMI should be measured at bariatric surgery patients' clinical appointments. Initial 3,6 months post surgery are of importance as changes are observed.

There was no significant difference in mean WHR .

Significant mean difference was seen in SMM in pre to 3 months and in PBF it was seen for 3 and 6 months.

Introduction to exercises (30-40 min 5 days/week, ASMBS) with protein intake (1-1.5g .IBW kg, ASMBS) is important for muscle loss prevention.

Limitations -

This study had a small sample sample size. Comparisons within the three surgeries were not made, given the small number of two surgeries SG,OAGB.

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