

# EFFECT OF EXERCISE BASED PROGRAMME VS MESSAGE BASED PROGRAMME BY SELECTED MALE CLINICIAN CLIENTS FOR IMPROVEMENT OF ANTHROPOMETRIC MEASUREMENTS

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**ABSTRACT:** *The purpose of the present study was to compare the effectiveness of 12 weeks exercise based programme vs massage based programme by selected male clinician clients for improvement of anthropometric measurements. For this purpose, a total of 20 (Twenty) male clinician clients were randomly chosen for the present study. These subjects were divided into two equated programme groups consisting of 10 (Ten) subjects in each and acted as exercise programme group - I and massage programme group - II respectively. Anthropometric measurements i.e., body weight, chest girth, waist girth, right arm girth, left arm girth, right thigh girth, left thigh girth and hip girth were selected as a dependent variables and 12 weeks exercise based programme vs massage based programme were considered as independent variables. The data was analyzed by applying one way analysis of variance to draw appropriate conclusions and to find out the effect of 12 weeks exercise based programme vs massage based programme on body weight, chest girth, waist girth, right arm girth, left arm girth, right thigh girth, left thigh girth and hip girth among selected male clinician clients. The significance level was set at 0.05. The results indicated that there was significant difference found in exercise programme group - I selected male subjects on waist girth in comparison to massage programme group - II. Whereas, body weight, chest girth, waist girth, right arm girth, left arm girth, right thigh girth, left thigh girth and hip girth among selected male clinician clients were found insignificant in both the groups namely exercise programme group - I and massage programme group - II respectively. The findings of this study showed that 12 week exercise based programme was an effective treatment technique to improve a male's waist girth in comparison to massage based programme.*

**Keywords:** *Exercise, Massage, Programme, Clinician, And Anthropometric Measurements*

## INTRODUCTION

These days' fitness and spas are considered a comfortable, protected and soothing retreat where one can enrich the mind, improve health and fitness, and nourish the spirit and soul, forgetting the mundane worries of the world. It not only enables you get the best from your body and make the most of your lifestyle. It also encompasses the concepts of wellness, personal harmony and quality of life. "A couple of years ago, a spa in India meant a health club with a steam room and a sauna room," not any more. Spas around towns in India are the rage. They give the comfort of a five-star hotel and a treatment that exclusively caters to your needs and characteristics. All for a price. Most of them have fitness club, a yoga and aerobic studio. Treatments include wraps, hydrotherapy baths, facials, massage, meditation exercise and an exclusive diet.

Now the days, in fact many products and programs for weight adjustment have been used by people including obesity patients. However, it is proved that most of them are not only costly and ineffective but also carry a side effect on those who try to lose weight in such a short period of time (Jung, 1998). And repeated failing to lose weight cause severe weight change and health problems (Goodrick et. al. 1991). There is strong evidence to suggest that the risks of mortality and morbidity associated with obesity can be reduced with weight loss. A 10 kg weight loss was associated with a 20–25% fall in total mortality, 30–40% fall in diabetes related deaths, and 40–50% fall in obesity related cancer deaths (Jung, 1997). A relatively modest weight loss of 5–10% of pretreatment body weight has been associated with significant improvements in concomitant medical disorders, such as type 2 diabetes, hypertension, and cardiovascular disease, in addition to an increase in life span (Goldstein, 1992; Dattilo et. al. 1992; & Wing et. al. 1987). In severely obese patients who lost 20–30 kg following surgical banding gastroplasty, hypertension and diabetes were cured in 89% and 43% of patients, respectively (Sign, 1996). Weight loss can also prevent the progression to type 2 diabetes. Two recent studies have shown that modest weight loss in overweight subjects with impaired glucose tolerance resulted in a 58% reduction in incident diabetes (Tuomilehto et. al. 2001 & Diabetes Prevention Program Research Group, 2002). The ongoing prospective Swedish obese subjects study had recently examined the effect of a large,

longstanding and intentional weight reduction on the incidence of several cardiovascular risk factors (Sjostrom et. al. 1999). After two years, the incidence of diabetes was reduced 32 times and that of hypertension by 2.6 times in the surgically treated group compared with the control group. After eight years, there was still a fivefold reduction in diabetes incidence (Torgerson et. al. 2001).

It was also reported that correction of daily habit (e.g. diet and exercise) is effective to solve obesity problem. But the latest report tells that successful weight control or self-efficacy in obesity-management is more important prospect factor (Clark et. al. 1996; Fontaine et. al. 1997; Roach et al., 2003; Matin et. al. 2004). Synthesizing these results from previous studies, self- consciousness about unhealthy eating habit and behavior in obesity, cultivation of confidence and advisable weight control by usual exercise and diet are important for solving the obesity problem.

However, weight management has always been an issue of debate. There is, invariably, confusion about which exercises or training programme or methods of treatment are best suited for particular group for weight loss, weight gain, and weight maintenance. The above discussion leads to the present research study to identify and compare the 12 weeks exercise based programme vs massage based programme used in improving anthropometric measurements by selected male clinician clients.

**METHODOLOGY**

For this purpose, a total of 20 male clients who were regularly participating in a branded commercial fitness and SPA clinics were randomly chosen for the present study. These subjects were further divided into two equated treatment programme groups consisting of 10 subjects in each and acted as exercise programme group - I and massage programme group – II respectively. The age of the subjects were ranging from 30 years to 40 years of ages. The average age was being 35 years. Body weight, chest girth, waist girth, right arm girth, left arm girth, right thigh girth, left thigh girth and hip girth were selected as a dependent variables and 12 weeks exercise based programme vs massage based programme were considered as independent variables. Exercise programme group – I selected male subjects were exposed to combination of cardio, strength and floor exercises’ four times a week for 45 minutes session per day as prescribed and monitored by their respective clinics for a period of 12 weeks (84 days). While, the massage programme group – II male clients underwent their respective prescribed massage based treatments two times a week for 45 minutes session per day. Before the administration of exercise and massage based programme by their respective joined fitness and SPA clinics, the anthropometric measurement i.e., body weight was measured in kilograms to nearest 0.01 grams by using electronic digital portable weighing machine. However, chest girth, waist girth, right arm girth, left arm girth, right thigh girth, left thigh girth and hip girth were respectively measured in centimeters to the nearest 0.01 by using steel tape at their respective venue on both the groups namely exercise programme group - I and massage programme group – II respectively to collect pre test data. After the completion of 12 weeks again the same selected anthropometric measurements were conducted to collect the post training data. One way analysis of variance was computed to analyze the data and the significance level was set at 0.05.

**FINDINGS**

The findings of the study are given below:

| Variable                                 | Groups  | Sum       | of | df | Mean    | F     |
|--|---------|-----------|----|----|---------|-------|
| Exercise Programme Group – I Body        | Between | 88.610    |    | 3  | 29.537  | 0.630 |
|  | Within  | 1688.606  |    | 36 | 46.906  |       |
|  | Total   | 1777.216  |    | 39 |         |       |
| Massage Programme Group – II Body        | Between | 22.955    |    | 3  | 7.652   | 0.018 |
|  | Within  | 15276.023 |    | 36 | 424.334 |       |
|  | Total   | 15298.978 |    | 39 |         |       |
| Exercise Programme Group – I Chest Girth | Between | 12.788    |    | 3  | 4.263   | 0.812 |
|  | Within  | 188.916   |    | 36 | 5.248   |       |
|  | Total   | 201.704   |    | 39 |         |       |
| Massage Programme Group – II Chest       | Between | 21.615    |    | 3  | 7.205   | 1.629 |
|  | Within  | 159.205   |    | 36 | 4.422   |       |
|  | Total   | 180.820   |    | 39 |         |       |
| Exercise Programme Group – I Right Arm   | Between | 1.585     |    | 3  | 0.528   | 0.762 |
|  | Within  | 24.954    |    | 36 | 0.693   |       |
|  | Total   | 26.539    |    | 39 |         |       |
| Massage Programme Group – II Right Arm   | Between | 4.329     |    | 3  | 1.443   | 1.464 |
|  | Within  | 35.489    |    | 36 | 0.986   |       |
|  | Total   | 39.818    |    | 39 |         |       |

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|  |                |                 |           |               |               |
|--|----------------|-----------------|-----------|---------------|---------------|
| <b>Exercise Programme Group – I Left Arm</b>   | <b>Between</b> | <b>1.585</b>    | <b>3</b>  | <b>0.528</b>  | <b>0.762</b>  |
|  | <b>Within</b>  | <b>24.954</b>   | <b>36</b> | <b>0.693</b>  |               |
|  | <b>Total</b>   | <b>26.539</b>   | <b>39</b> |               |               |
| <b>Massage Programme Group – II Left Arm</b>   | <b>Between</b> | <b>4.267</b>    | <b>3</b>  | <b>1.422</b>  | <b>1.436</b>  |
|  | <b>Within</b>  | <b>35.647</b>   | <b>36</b> | <b>0.990</b>  |               |
|  | <b>Total</b>   | <b>39.914</b>   | <b>39</b> |               |               |
| <b>Exercise Programme Group – I Waist</b>      | <b>Between</b> | <b>49.864</b>   | <b>3</b>  | <b>16.621</b> | <b>2.961*</b> |
|  | <b>Within</b>  | <b>202.052</b>  | <b>36</b> | <b>5.613</b>  |               |
|  | <b>Total</b>   | <b>251.916</b>  | <b>39</b> |               |               |
| <b>Massage Programme Group – II Waist</b>      | <b>Between</b> | <b>53.490</b>   | <b>3</b>  | <b>17.830</b> | <b>0.257</b>  |
|  | <b>Within</b>  | <b>2495.814</b> | <b>36</b> | <b>69.328</b> |               |
|  | <b>Total</b>   | <b>2549.304</b> | <b>39</b> |               |               |
| <b>Exercise Programme Group – I Hip Girth</b>  | <b>Between</b> | <b>11.445</b>   | <b>3</b>  | <b>3.815</b>  | <b>0.862</b>  |
|  | <b>Within</b>  | <b>159.243</b>  | <b>36</b> | <b>4.423</b>  |               |
|  | <b>Total</b>   | <b>170.688</b>  | <b>39</b> |               |               |
| <b>Massage Programme Group – II Hip Girth</b>  | <b>Between</b> | <b>21.876</b>   | <b>3</b>  | <b>7.292</b>  | <b>0.495</b>  |
|  | <b>Within</b>  | <b>530.720</b>  | <b>36</b> | <b>14.742</b> |               |
|  | <b>Total</b>   | <b>552.596</b>  | <b>39</b> |               |               |
| <b>Exercise Programme Group – I Right</b>      | <b>Between</b> | <b>10.719</b>   | <b>3</b>  | <b>3.573</b>  | <b>1.572</b>  |
|  | <b>Within</b>  | <b>81.825</b>   | <b>36</b> | <b>2.273</b>  |               |
|  | <b>Total</b>   | <b>92.544</b>   | <b>39</b> |               |               |
| <b>Massage Programme Group – II Right</b>      | <b>Between</b> | <b>7.191</b>    | <b>3</b>  | <b>2.397</b>  | <b>0.326</b>  |
|  | <b>Within</b>  | <b>264.737</b>  | <b>36</b> | <b>7.354</b>  |               |
|  | <b>Total</b>   | <b>271.928</b>  | <b>39</b> |               |               |
| <b>Exercise Programme Group – I Left Thigh</b> | <b>Between</b> | <b>10.019</b>   | <b>3</b>  | <b>3.340</b>  | <b>1.600</b>  |
|  | <b>Within</b>  | <b>75.156</b>   | <b>36</b> | <b>2.088</b>  |               |
|  | <b>Total</b>   | <b>85.175</b>   | <b>39</b> |               |               |
| <b>Massage Programme Group – II Left Thigh</b> | <b>Between</b> | <b>9.361</b>    | <b>3</b>  | <b>3.120</b>  | <b>0.423</b>  |
|  | <b>Within</b>  | <b>265.663</b>  | <b>36</b> | <b>7.380</b>  |               |
|  | <b>Total</b>   | <b>275.024</b>  | <b>39</b> |               |               |
|  |                |                 |           |               |               |

**Table No. 1.0. One way analysis of variance of initial, fourth, eighth, and twelve weeks of Exercise Programme and Massage Programme on Body Weight, Chest Girth, Waist girth, Hip Girth, Right Arm Girth, Left Arm Girth, Right Thigh Girth and Left Thigh Girth of Male Participants**

\*Significant at 0.05 level. 'F' 0 .05 (3, 36) df = 2.87 N = 10

Table no. 1.0 exhibits the one way analysis of variance of initial, fourth, eighth and twelve weeks of exercise and massage programme on body weight, chest girth, hip girth, right arm girth, left arm girth, right thigh girth and left thigh girth of male clinicians clients group differs insignificantly, as the obtained F value of exercise programme group – I body weight(0.630), chest girth (0.812) , right arm girth (0.762), left arm girth (0.762), hip girth (0.862), right thigh girth (1.572) & left thigh girth (1.600) and massage programme group – II body weight (0.018), chest girth (1.629), right arm girth (1.464), left arm girth (1.436), hip girth (0.495), right thigh girth (0.326) & left thigh girth (0.423) among the participants is much lesser than the required value of 2.87. at 0.05 level of confidence. However, the waist girth variable in exercise programme of male clinicians group differs significantly, as the obtained F value 2.961 among the participants is much higher than the required value at 0.05 level of confidence. Moreover, the analysis of variance of initial, fourth, eighth and twelve weeks of massage programme on waist girth of male participants group differs insignificantly, as the obtained F value of massage programme group – II on waist girth (0.257) among the participants is much lesser than the required value of at 0.05 level of confidence

#### **DISCUSSION**

Outcomes of this study indicated that the selected variables (i.e., chest girth, right arm girth, left arm girth, right thigh girth, left thigh girth and hip girth) for improvement of anthropometric measurement in male clinician clients had not improved by both the treatment programmers' namely exercise based programme and massage based programme respectively. Whereas, the analysis was further exhibited that anthropometric measurement waist girth variable had improved in exercise programme of treatment in comparison to other treatment programme. This improvement could be due to the stimulation exercise methods of training programme which generates actively functioning ability of contraction and relaxation of abdomen deep core stabilizer muscles areas in the body namely, visceral region involving trunk flexion & extension, trunk lateral flexion & medial extension, trunk lateral & medial rotation, hip flexion & extension and combined motions of pelvic girdle

joints instead of static functioning ability movement of other treatment programme methodology technique application i.e. massage based programme. However, **Azeem et. al. 2010** also evaluated the effect of exercise on the body mass index and anthropometric measurements of overweight students of KFUPM, Saudi Arabia and the results of the present study indicates the similar findings that the effect of exercise programme on body weight and anthropometric measurements also showed significant difference in the reduction of the overweight male students body weight and circumference of the waist and hip girth.

#### **CONCLUSION**

The results showed that there was a significant improvement shown by the exercise programme group – I selected male clinician clients on waist girth only in comparison to other treatment programme selected subjects namely massage programme group - II. Therefore, it is concluded that exercise based programme was an effective training tool to improve a male subjects.

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