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## IMPACT OF FLAX SEED POWDER ON THE HEALTH OF ADOLESCENT GIRLS IN AGRA DISTRICT.

Dr.Archana Singh(Associate Professor) Institute of Home Science, Khandari, Agra

Dr.Deepti Singh(Assistant Professor) Institute of Home Science, Khandari, Agra

**ABSTRACT:**Flaxseed or linseed has been used as food and medicine in many countries.It comes from the flax plant which grows into grass as an annual. It was used in various forms such as flour, oil and seeds. Flaxseed oil is considered healthy because it have many bioactive compounds in flaxseed. It helps to reduce body weight and good for hair health as it is a good source of alpha-linolenic acid (ALA), an omega-3 fatty acid,Proteins, fiber, and lignans specifically secolaricercinol diglucosides (ODS). ALA is good for baby's brain development and lowers blood lipids and heart disease.The effect of giving flaxseed powder on initially the mean of weight, hip ratio and BMI were found to be 59.47 kg,38.75cm and 24.93 which were decreased of 0.85 kg ,0.75and 0.31after one month taking it.Statistical test shows that the mean weight, mean hip ratio and BMI were found significantly decreased after one month.The effect of giving flaxseed powder on initially the mean of weight, hip ratio and BMI were 59.47,38.75 and 24.93 which were decreased of 1.93, 1.42 and 0.77 after two months. Statistical test shows that the mean weight was found to be significantly decreased after two months. Thus the giving flaxseed will affect the weight after two months of the respondents.

**KEYWORD:**Flaxseed,bioactive,alpha-linolic acid, weight, mean hip ratio and BMI.

### INTRODUCTION:

Flaxseed (*Linum usitatissimum* L.) is an oilseed used in industrial and natural health products. Flaxseed accumulates many biologically active compounds and elements including linolenic acid, linoleic acid, lignans, cyclic peptides, polysaccharides, alkaloids, cyanogenic glycosides, and cadmium. Most biological and clinical studies of flaxseed have focused on extracts containing  $\alpha$ -linolenic acid or lignan.

Benefits of flaxseeds for weight loss-

- Rich source of Omega 3 fatty acids:Flaxseeds contains Omega-3 (alpha linolenic acid) and Omega-6 (linoleic acid) which cannot be produced in the body, which are the essential fatty acids. They helps to reduce inflammation. Flaxseeds is also a fat burning compound.
- Makes you feel satiated:It is rich in fiber so we feel full for longer periods. It also helps increase metabolism, enhance digestion and motility.
- Protein helps lose weight:Proteins help lose weight faster.
- Metabolism-Boosting lignans

Lignans that are converted into enterolignans help prevent diseases such as heart conditions and also have anti-cancer properties. "Flaxseeds contain 8 times more lignans than sesame seeds. Lignans also lower glucose levels which contribute towards weight loss."

flaxseeds are more effective for reducing weight. This is because the whole flaxseeds make it difficult for the digestive system to absorb all the nutrients present in them. On the other hand, ground flaxseeds are easily absorbed and there are more chances that you get the essential fats, proteins and dietary fiber present in them.

### OBJECTIVE:

1-To study the profile of the selected respondents age 18-25 years.

2-To Know the anthropometric measurements of the selected respondents.

3-To know the effect on anthropometric measurement after giving flaxseed powder after one and two month the selected respondents.

### MATERIALS AND METHODS:

15 respondents selected randomly for knowing the effect of flaxseed powder on body weight, hip ratio and BMI after one and two months.

## RESULT AND DISCUSSION:

**1-Distribution of respondents according to age:**

AGE IN YEARS	RESPONDENTS	
	NUMBER	PERCENTAGE
19	3	20.00
20	7	46.67
21	5	33.33
TOTAL	15	100.00
MEAN	20.13	
SD	0.72	

Table1 reveals the distribution respondents according to their age out of total respondents , majority of them were of 20 years old, followed by 33.33% of 21 years and the minimum were of 19 years old.

Further analysis of the data from the above table highlights that the average age of the respondent was 20.13 years with the standard deviation of 0.72 years.

**2-Distribution of respondent according family monthly income:**

Family Monthly Income (In INR)	Respondent	
	Number	Percentage
0-25000	1	6.67
25000-50000	2	13.33
50000-75000	12	80.00
Total	15	100.00
Mean	50466.67	
SD	11418.50	

Table 2 shows that the distribution of respondent according to their family monthly income.Out of total respondent, majority of them (80.00%) were 50,000-75,000 monthly family income group followed by 13.33% were 25,000-50,000 monthly family income group and the minimum 6.67% were from 25,000 families monthly income group.

Further analysis of the data from the above table highlights that the average monthly family income was 50466.67 with the standard deviation of 11418.50.

**3. Distribution of respondent according to weight Before starting treatment:**

Weight(Kg)	Respondent	
	Number	Percentage
50-55	2	13.33
53-60	6	40.00
60-65	5	33.34
65-70	2	13.33
Total	15	100.00
Mean	59.47	
SD	3.90	

Table 3 highlights the distribution of . espondent according to weight before starting treatment.

Out of 15 respondents, majority of them (40.00%) were 53-60 kg weight, followed by 33.34% were 60-65 kg weight and minimum 13.33% were 50-55 kg , 65-70 kg in weight.

Further analysis of data from the above table shows that the mean weight of respondent was 59.47 with the standard deviation of 3.90.

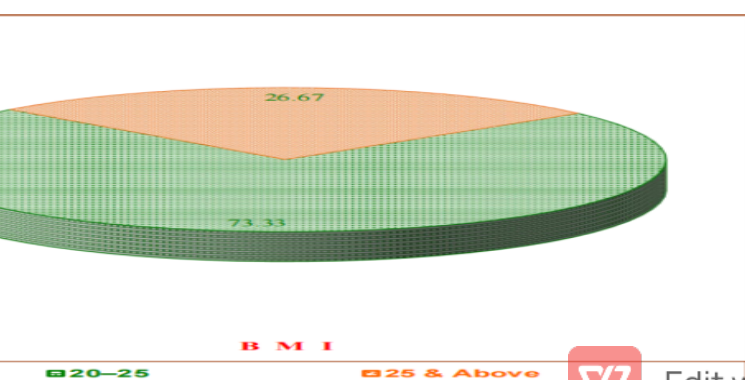
**4- Distribution of respondent according to BMI before starting treatment:**

Figure shows the distribution of respondent according to BMI before starting treatment.Majority of them (73.33%) were normal (20-25 BMI) and 26.47% were observed (25 above BMI).Further the average BMI of respondents was 24.62 with the standard deviation of 4.10.

## 5-Effect of giving flaxseed powder after one month on the body weight, HIP RATIO and BMI of the respondents:

Anthropometric Measurement	Before		After a month		Changes		Statistical value	
	Mean	S. D	Mean	S. D	Mean	S. D	t	P
Weight	59.47	3.90	58.62	3.86	-0.85	1.00	3.292	<0.05
Hip Ratio	38.75	3.68	38.00	3.80	-0.75	0.77	3.772	<0.05
BMI	24.93	4.12	24.62	4.10	0.31	0.47	2.994	<0.05

Above table reveals that the effect of giving flaxseed powder after one month on the weight, hip ratio and BMI out of total 15 respondents, initially the mean weight was 59.47 kg which was decreased of 0.85 kg after one month. Statistical test shows that the mean weight was found significantly decreased after one month. Thus, the given flaxseed effected the weight after one month of the respondents.

The study conducted by Katare et.al,2012, Mr. Rafiquel Islam,2014, Jessica Ms.2015, Nutr. J 2016, Monsen Mohammadi sartang,2017 Zahra heidari,2019, Katheine Marengo,2020 found That weight was loss after taking flaxseed powder among the respondents.

Out of total 15 respondents, initially the mean hip ratio was 38.75cm which was decreased of 0.75 cm after one month. Statistical test shows that the mean hip ratio was found significantly decreased after one month. Thus the giving flaxseed effected the hip ratio after one month of the respondents.

Similar findings were observed regarding the hip ratio of the respondents by the Katare et.al 2012, Mr. Rafiquel Islam 2014,,Mohsen Mohammadi Sartang,2017, Mihir Parikh 2019, Katherine Marengo 2020 that hip ratio was reduced after taking flaxseed powder after one month.

Out of total 15 respondents, initially the mean BMI was 24.93 which was decreased of 0.31 after one month.

Statistical test shows that the mean BMI was found to be significantly flaxseed will affect the BMI after one month of the respondent. The study conducted by Mr. Katare et.al 2012, Mr. Rafiaual Islam 2014,Monsen Mohammadi Sartang, 2017, Zahra Haidari 2019, Katheine Marengo, 2020 was found that BMI was decreased after taking flaxseed powder.

## 6. Effect of giving flaxseed powder after two month on the body weight, hip ratio and BMI of the respondents:

Anthropometric Measurement	Before		After Two Month		Changes		Statistical value	
	Mean	S. D	Mean	S. D	Mean	S. D	t	P
Weight	59.47	3.90	57.53	3.59	-1.93	1.34	2.687	<0.05
Hip Ratio	38.75	3.68	37.33	3.73	-1.42	1.01	1.610	>0.05
BMI	24.93	4.12	24.25	4.22	0.77	0.73	3.188	<0.05

Above table reveals that the effect of giving flaxseed powder after two months on the body weight, hip ratio and BMI. Out of total 15 respondent, initially the mean weight was 59.47 which was decreased of 1.93 after two months. Statistical test shows that the mean weight was found to be significantly decreased after two months. Thus, the giving flaxseed will affect the wight after two months of the respondent.

### CONCLUSION:

On the basis of the results obtained from the present study it can be concluded that the flax seed powder reduced the weight of the women.. Thus the giving flaxseed will affect the weight after one and two months of the respondent.

### BIBLOGRAPHY

- Athavale, V. B. (2004). Ayurveda: The Science of Living (Health and Vigour Forever) (Vol 10). Delhi. Chaukhamba Sanskrit Pratishthan, Varanasi.
- Bahorun, T, Troitin. f, Pommery, J, It Vasseur, J, & Pinkas, m. (1994) Antioxidant activities of eartaigus flansud 160, 323-828
- Berman f. A. (2000.) Herbs and Dietary supplementary in the prevention

and treatment of obesity and Cardiovascular disease Journal of the American society for prevention Cardiology 13 (12,24 -32.

- Blesken · R. (1992) Crataegus in Cardiology. Fortschritte der medizing, 110 (15), 290-292.
- Blaedon, L.T. & Szapary, P.O. (2004) flaxseed and weight gain risk. Nutrition Reviews 162 (1), 18-27
- Chauhan ,5,8 Aeri, B.T. (2013) Prevalena of cardiovascular disease in India and Research Publications, 3(10), 1-5.
- Dodin, S, Lemay, A, Jacques, H, Ligaon, fi forest J.C. I masse B (2005) The Effects of flaxseed dietary supplement. on lipid profile, Bone mineral Density and symptoms in menopausal women: A Randomized, Double-blind, wheat Gam Placebo-controlled clinical Trial. The found of clinical Endocrinology and metabolism, 9003) 1990-1397.
- Donovan, J. (2005). How fiber products. threat; diet and weight management. Retrieved from <http://www.webmd.com/diet/front-features/Fiber>
- Ezzati, My Lopez A.D. & Rodgers, A (2004). comparative Quantification of Health Risks. Clabal and Regional Burden of disease Attribute Attributable to major Risk factors. world Health Organization; Grenera.
- Ganorkar, P.M., & Jain, R.K (2013) flaxseed - nutritional punch international food Research Journal, 20(2), 519 -525.
- Good, m., and Halt, K. (1997) New Delhi & IBH publishing Research methodology 65-71.
- Hu, f. B., & willet, W.C (2002) optimal Diets for prevention of to Obesity Journal of the American medical Association, 208, 2884 2569- 2578
- Mohsen Mohammadi Sartang: The effect of flaxseed supplementation on body weight and body composition: A systematic review and meta-analysis of 45 randomized placebo-controlled trials June 2017;/Obesity Reviews 18(9)
- Katare C and Saxena S. (2014) Evaluation of Flaxseed Formulation as a Potential Therapeutic Agent in Mitigation of Dyslipidemia DOI:10.4103/2319-4170.126447
- Kamala Somasundaram(2019) What are Flax Seeds: Benefits and Side Effects
- [https://www.healthifyme.com/blog/Nutrients.Mihir\\_Parikh\\_et\\_al\\_\(2019\)Dietary\\_Flaxseed\\_as\\_a\\_Strategy\\_for\\_Improving\\_Human\\_HealthNutrients.2019\\_May;\\_11\(5\):\\_1171.](https://www.healthifyme.com/blog/Nutrients.Mihir_Parikh_et_al_(2019)Dietary_Flaxseed_as_a_Strategy_for_Improving_Human_HealthNutrients.2019_May;_11(5):_1171.)
- Sohan, E., Wei, L., & Derman, R. (1998). Whole flaxseed consumption lowers serum LDL-cholesterol and lipoprotein concentrations postmenopausal women. Science Direct, 18(7), 1203-1214.

