



\*

:

( - )

-

:

( - : - : : )

( )

{=< } { - / } { - / } (BMI)

(% / )

{ <BMI}

./ % / % /

. (p<0.02)

(% / )

(% / )

/ % / (WHR)

% / % / % /

{ <BMI}

. (P<0.04)

WHR BMI

:

( ) \*

:

% /

II

( )

% /

% /

% /

( )

Leptos

( )

( )

)

(

:

(BMI =Body Mass Index)

WHR= Waist to Hip )

( )

(Ratio

WHR

( )

/

( - )



$p = 0.01, r )$   $(= 0.113$   
 $P = 0.01, r )$  WHR  $(= 0.183 - )$   
 $(= 0.209 - - -$   
 BMI= 25 - ] - - - - -  
 [ BMI= 30 -39.9 ] % / [ 29.9 (   
 % / [BMI>40] % / .  
 % / .  
 $( P=0.02 )$   $( )$  :  $( )$  .  
 $( )$   $( )$  .  
 [BMI>30] : .  
 $( )$   $( P=0.04 )$  .  
 : .  
 [BMI>30]  
 % / % / % / .  
 $( )$   $( p=0.0001 )$  .  
 $( WHR )$  :  
 / %/  
 $( )$  /  $\pm$  /  
 $( )$  .  
 $( )$  % /  $( )$   
 :  $( )$  % /  $( )$  % /  
 % /  $( )$  % /  $( )$   
 $( )$  % /  $( )$   
 $P = 0.01, r )$  BMI  $( p=0.01, r=0.105 )$

(WHR)

/ WHR ( ) Dobbelsteyn ( )

( ) Ito

/ WHR ( )

( )

% /

( ) Bouchard

( - )

( )

( ) Guillaume

( )

( )

% /

% /

BMI



(BMI)

-

	- /	- /	/ - /	/		
(,)	(,)	(,)	(,)	(,)		( )
(,)	(,)	(,)	(,)	(,)		
(,)	(,)	( )	( )	( )		
( )	(,)	(,)	(,)	( )		
(,)	( )	(,)	(,)	(,)		
P=0.02			NS			

= ( )

(BMI)

-

*	* - /	/ -	/ - /	/		
(,)	(,)	(,)	(,)	(,)		
(,)	(,)	( )	(,)	(,)		
(,)	(,)	(,)	(,)	(,)		
(,)	(,)	(,)	( )	(,)		
	( )	(,)	(,)			
(,)	(,)	(,)	(,)	(,)		

\* = ( )

P=0.04))

**(BMI)**

-

	- /	/ -	/ - /	/		
	( , )	( , )	( , )	( , )		
( , )	( , )	( , )	( , )	( , )		
( , )	( , )	( , )	( , )	( , )		
( , )	( , )	( , )	( )	( , )		
P=0.0001		NS				

= ( )

**(WHR)**

-

>= ,	, >		
( , )	( , )		( )
( , )	( , )		
( , )	( , )		
( , )	( , )		
( , )	( , )		



- Appetite ; **32** : 405 – 19 .
- Guillaume M, Lapidus L (2001), Backers F, Lambert A, Bjorntop P. *Int J Obes* ; **25** : 652- 61.
- Int J obes Relat Metab Disord 2003 ; **27** : 232 – 7 .
- Int J obes 1996 ; 19 : S5 – S9 .
- Ito H, nalasuga K, ohsgma A, etal . Krauses Food , natrition and Diet theropy . 10 th ed . USA , W.B.
- Lapidus L . , Bengtsson C . , Larsson B, etal.
- Laqnatra I . Nutrition for weight Management . In: Mahanlk , Escott – Stump(ed.s).
- Pishdad GR . overweight and obesity in adults aged 20- 75 in southern Iran . Int J obes 1996 ; 963 – 5 .
- Saunders Co , 2000, pp: 486 – 516 .
- Sweden. Br Med J 1984; 289: 1257-61.
- The Canadian Health surveys .
- Tretment of obesity : an overview . Diabetes Metab Rev 1988; 4:653-79.
- World Health organization . Obesity : Preventing and managing the global epidemic .
- World Health organization ; Geneva 1998.
- A comparative evaluation of waist circumference , waist – to – hip ratio and body mass index as indicators of cardiovascular risk factor . Annu Rev Nutr 1988; 8: 259- 277 .
- Ayatallahi SMT.(1992) Obesity in school children and their parents in southern Iran . *Int J obese* ; **16** : 845 – 50 .
- Azizi F,(2001) Allahverdian S, Mirmiran P, Rahmani M, Mohammadi F Dietary factors and body mass index in a group of Iranian Adolescents ; Tehran Lipid and Glucose Study . *Int J Vitam Res* ; **71** : 123 – 7 .
- Bary Ga and Gray Ds.
- Bouchard C. perusse L . Heredity and body fat .
- Detection of cardiovascular risk factor by indices ot obesity obtained from anthropometry and ualenergy x- ray absorptiometrg in Japanses individuals .
- Distribution of adipose tissue and risk of Cardiovascular disease and dieth: a 12 year follow up of particepants in the population study of women in Gothenburg.
- Dobbelstegn CJ , Joffers MR , MACLEAN DR, Flomrdew G and the Canadian Health Surveys Research Group .
- Familial trends of obesity through three generation : the Belgian – Luxembourg child study .
- Fisher JO ,(1999) Birch LL. Restricting access to foods and children eating.

# The study of obesity among rural mothers in Gorgan districts in 2004

Gholamreza Veghari M.Sc.<sup>1</sup>

Obesity is a health and nutritional problem in the world, so it must be attended. This study is cross sectional- descriptive and sampling is component (cluster and simple sampling). 2854 mothers of the children under 5 years were chosen. After necessary education, 20 persons recorded the data by using a questionnaire. They measured the weight and height by scale and waist and hip by meter. Pregnant women were deleted in this study. Economical status were categorized based on 10 instruments that are necessary for living (Low  $\geq 3$ , Moderate = 4-6 and Good = 7-10). Three groups were compared in this study: Fars (native), Turkman and Sistani.

The mean of the age is 28.2 year. Body Mass Index (BMI) in ranges of ( 25-29.9), (30-39.9) and ( $\geq 40$ ) is 28.3%, 15.9% and 0.5% respectively. This index BMI $>25$  among Fars, Turkman and Sistani women is 64.3%, 43.4% and 32.9% respectively. In three groups statistical different is significant ( $P < 0.02$ ). Waist to Hip ratio (WHR) criteria in 39.1% women were higher than 0.8 and this index in Turkman women is more than the other groups women. In women with low, moderate and good economical status is 34.7% , 50.8% and 55.9% respectively. This different isn't significant. The rate of prevalence of obesity in literate women is more than illiterate women. This statistical different is significant ( $p < 0.04$ ).

On the whole, this study indicates obesity is a healthy problem in rural women of Gorgan districts. There is a relation between prevalence of obesity and improvement of economical status. Therefor education of optimal nutrition and changing women's food habit is very important.

**Key word:** *Obesity, Women, BMI, WHR ,Village, Gorgan*

---

1 . Gorgan-Golestan university of medical sciences-School of medicine.