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Research Article

**A RANDOMIZED SHORT-TERM STUDY TO MEASURE THE
ASSOCIATION BETWEEN BODY MASS INDEX AND
TESTOSTERONE SERUM AT THE AGE OF MATURITY**¹Amber Arshad, ²Fahad Nawaz, ³Arslan Ali¹Department of Community Medicine, Fatima Memorial Hospital²DHQ Gujranwala³Bahawal Victoria Hospital, Bahawalpur**Abstract:**

Objective: Purpose of the current research remained to measure connotation among serum testosterone stages also BMI in mature oldness set.

Methods: Our research was a short-term survey which was held in the timeframe of one year (December 2016 to December 2017) at Services Hospital, Lahore. Population extent remained 60-man medicinal scholars (who were 19-26 yrs.). Serum entire testosterone stages remained examined via Enzyme Related Immunofluorescent Assess system. Stature also heaviness of entire scholars remained restrained by means of standardized gauges. BMI = Mass in kg/ Tallness in square meters) remained considered aimed at every scholar. The encouraging and negative regulator trials remained exercised by every consignment to make certain excellence of fallouts.

Results: Serum entire testosterone stages reduction by an upsurge in BMI in men grownups whose ages were 19-26 yrs. Average serum testosterone stages of mature men with an average BMI of 22.53 ± 3.02 remained 7.93 ± 4.07 (ng/ml) ($p=0.001$). These with average BMI of 28.04 ± 2.31 serum testosterone stages remained 7.73 ± 3.05 (ng/ml) ($p=0.002$). In situation of 36.14 ± 3.33 BMI, stages remained 7.38 ± 1.20 (ng/ml) ($p=0.040$).

Conclusion: Inside mature oldness set serum entire testosterone stages remained expressively negative connected to BMI.

Keywords: Testosterone, BMI, Grownups.

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INTRODUCTION:

Testosterone remains key men androgen hormone that remains concealed via Leydig cells of the testis. Throughout adolescence testosterone acts the key part inside growth of men subordinates sensual features, inspiration of sensual conduct also purpose, beginning of semen construction. Inside grownup men testosterone stays compulsory aimed at preserving power physique also forte, overweight delivery, mandible weight, RBC manufacture, men hair design, libido, strength also spermatogenesis [1]. Neurobehavioral purposes remain exaggerated via testosterone [2]. Little gender steroid hormone absorptions consume opposing belongings on understanding, sensual purposes, mandible also figure conformation, glucose-3 breakdown, the excellence of lifetime, also reduced testosterone emission is the most important reasons of sterility [3]. The standard phase of testosterone in men is 310 - 1,210 ng/dL. Here remain numerous reasons for testosterone shortage. Hypogonadism may be of the hypothalamic-pituitary source or of the testicular source or else mixture of together [4]. Reduction in testosterone stages remains normally connected by the elderly. Overweightness might also be to testosterone lack in addition in few situations variations in steroid hormone stages dispose to overweightness [5]. BMI procedures figure overweight in addition is the amount of tallness also physique of the figure. This remains dependable pointer of figure plumpness. The adipose matter remains board for the act of gender steroids. Overweightness consequences in little androgen stages owing to abridged attentiveness of SHBG also owing to variations in gonadotrophins [6]. Investigators initiate that males' BMI remained the sovereign danger feature used for sterility [7]. Males by amplified BMI remained meaningfully extra expected to childless as compared to standard-mass males. Information recommends that the 22-pound upsurge in males' mass might increase accidental of sterility via around 12%. Enormous overweightness too fallouts in condensed semen sum also fruitfulness [8]. People of emerging nation is likely flattering progressively pretentious via internationally widespread of overweightness [9]. The nationwide illustrative review presented 26.1% of our people's strength to be overheavy rendering to Asian-specific BMI deadline worth of 24 kg/m² also 11.4% to remain overweight rendering to BMI limit value of 28 kg/m². Rendering to account via Pappas et al. on healthiness rank of our people's strength, the occurrence of overweightness in Pakistan aimed at phase set 26 to 66 is 14% aimed at men [10]. The current research remained prearranged to understand connotation among BMI also testosterone stages in

grownup phase set by way of slight facts is obtainable in our country in the phase set concerning undesirable belongings of BMI happening serum testosterone stages by way of understanding in central also ancient phase set. Impartial of the current research remained to amount suggestion among serum testosterone stages also BMI in a mature stage set.

METHODOLOGY:

Our research was a short-term survey which was held in the timeframe of one year (December 2016 to December 2017) at Services Hospital, Lahore. Every participant contributed his printed knowledgeable agreement. The entire of 66 early men, 33 as of every of primary also last year MBBS scholars remained comprised in current research. Eternities of scholars remained among 19-26 yrs. Scholars by recognized psychiatric disease or else on medicine alike tranquilizers, hypnotics, antidepressants, anxiolytics or else steroids remained excepted as of research. Tallness remained restrained on Harpendenstadio pulses, also mass remained unhurried on normal equilibrium ray or numerical balances by means of normal procedures, by participants wearing light clothing without shoes. BMI was calculated as weight in kilograms separated via rectangular of tallness in meters (kg/m²). Participants remained alienated hooked on 4 sets rendering to its BMI. The initial set comprised participants by its BMI in a variety of 19-26, another set contained participants with BMI in a variety of 26- 31, 3rd set with participants by BMI in a variety of 31-41 also 4 sets involved focus by BMI more than 41. Non-fasting body fluid population remained strained via venipuncture among 0801 to 1001 hrs. Serum remained detached also packed at -72 OC till they remained primary defrosted for examination of serum whole testosterone via enzyme connected glowing examine (ELFA) technique.

RESULTS:

Arithmetical Study remained completed via by means of SPSS aimed at the numerical implication. Information remained examined via measuring average standards lengthwise by Normal Aberration. Incidences remained measured in relationships of fractions for every score of BMI. Average standards remained associated by means of balancing trials T-test. The boundary of meaning remained customary at $p < 0.06$. The serum entire testosterone stages reduction by rising in BMI in mature men matured 19-26 yrs. Average serum testosterone stages of mature men with an average BMI of 22.53 ± 3.02 remained 7.93 ± 3.07 (ng/ml). These consuming average BMI of 28.04 ± 2.31 serum testosterone

heights remained 7.73 ± 3.05 (ng/ml). In the circumstance of 36.15 ± 3.32 BMI, stages remained 7.38 ± 1.20 (ng/ml).

Complete outcomes remain exposed in the given tabular data.

Table – I: Patients Distribution and P-Value

BMI	Total	Percentage	P-Value
Normal (19 – 26)	39	66.29	0.001
Score - I (26 – 31)	18	26.00	0.002
Score - II (31 – 41)	6	4.58	0.04

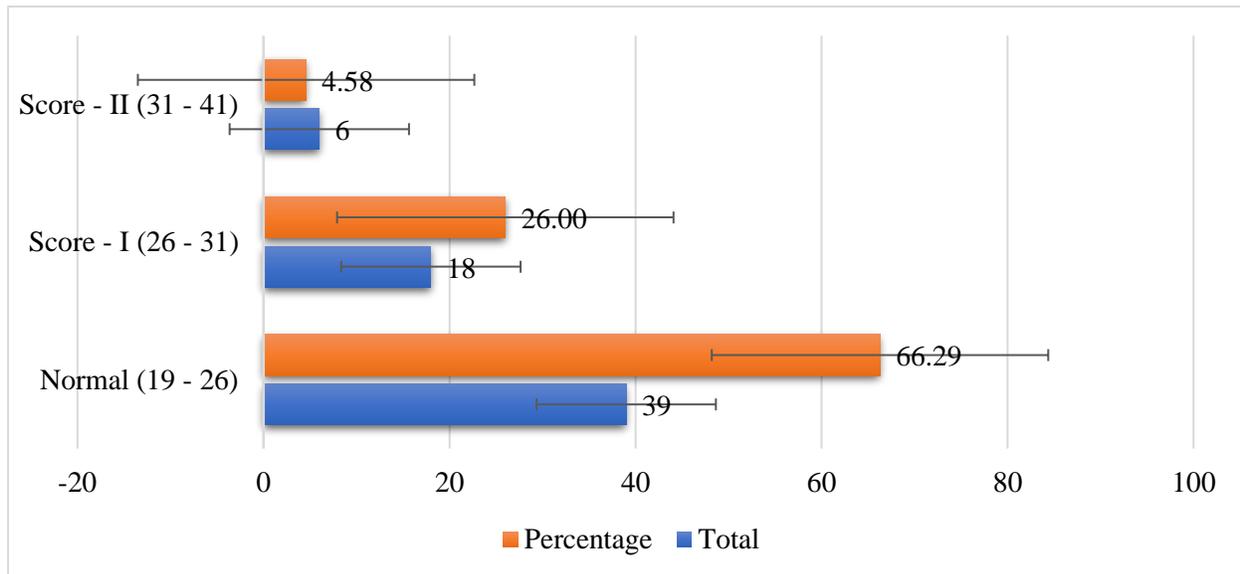
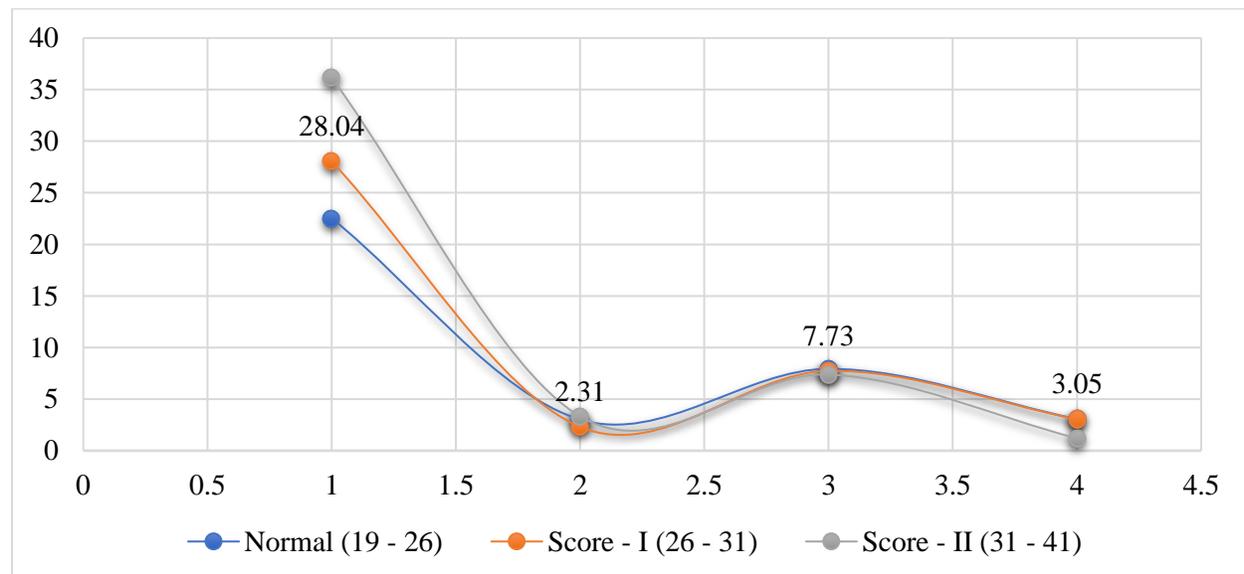
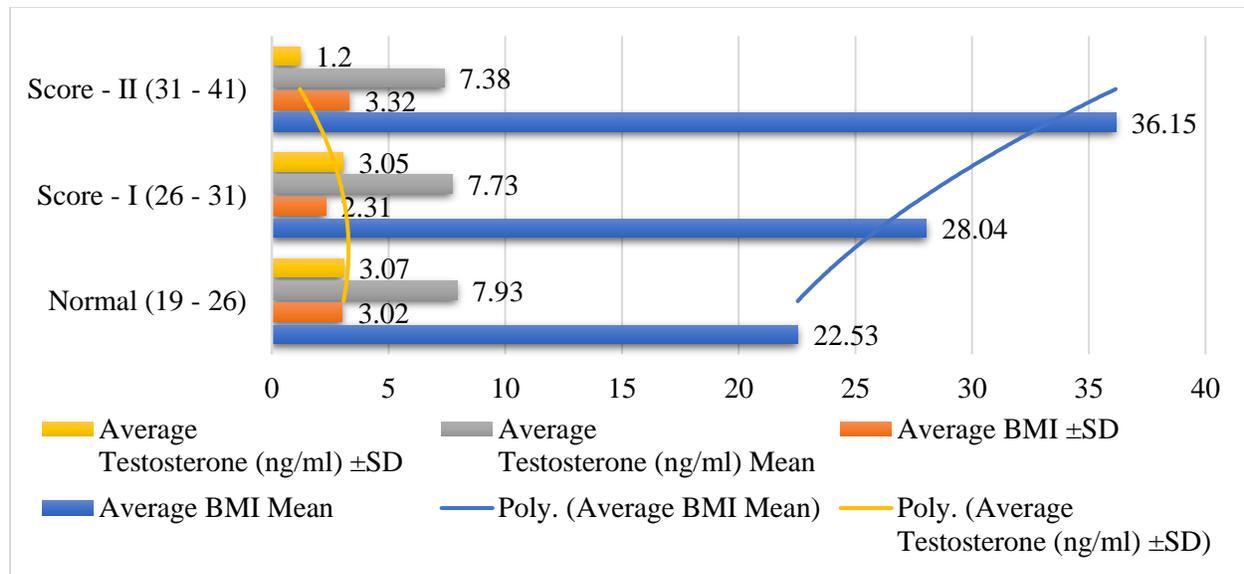


Table – II: Average Testosterone Stages besides BMI Of Mature Men

BMI	Average BMI		Average Testosterone (ng/ml)	
	Mean	\pm SD	Mean	\pm SD
Normal (19 – 26)	22.53	3.02	7.93	3.07
Score - I (26 – 31)	28.04	2.31	7.73	3.05
Score - II (31 – 41)	36.15	3.32	7.38	1.2



DISCUSSION:

Upsurge trendy occurrence of overheavy also overweightness remains developing by way of main fitness problematic international. Advanced also underneath advanced nations remain exaggerated via his fitness matter. Alteration in lifetime elegance in previous some eras is solitary of main underneath dishonest reasons of the fitness matter. Our peoples are too accepting morbid lifetime panache also inactive theatres just like tv, computer, audiovisual games besides enlarged ingesting of jumble nourishments. Bodily idleness too unwholesome nutritional customs remain indorsing wide-ranging of overweightness in those grownup phase set. The current research obviously displays testosterone

stages lessening by an upsurge in BMI. One research directed by Janko ska et al, on Poland population, presented comparable consequences. Janko ska et al branded inside earlier oldness set entire testosterone heights remained meaningfully damagingly connected to BMI. In yet another research directed by Behr et al, upon developed males presented that hypogonadal males by little serum testosterone heights had expressively developed stages of BMI. Testosterone shortage is one very main reasons of sterility also sterility is the thoughtful wedded problematic. Among 2 inside 7, also 2 in 12 pairs pursue medicinal assistance aimed at tricky of sterility. This is significant to distinguish that in 21-26% situations issue remains inside men companion.

Actions would remain occupied to teach the mature oldness cluster around fit lifetime chic. They must remain sophisticated around dangers of overweightness. Undeveloped pairs that stay heavy also impotent to consider must revenue severe actions to decrease its heaviness since researches have exposed that BMI remains the danger issue aimed at sterility in together elder also newer males also this research evidently displays a reduction in testosterone equal by a rise in BMI. Rise in BMI similarly effects phase connected deterioration of serum entire testosterone stages inside males. Failure in serum testosterone stages via phase is likewise additional in these males who BMI remains extra in association to these who BMI stays fewer. BMI must be measured by way of adapting aspect in male's enterprise hormone replacement treatment. Here stays not abundant information existing in our country concerning serum testosterone stages also BMI in the oldness set (19-26). Maximum of Worldwide researches completed on serum testosterone stages in mature also longstanding phase set propose a decrease in serum testosterone stages by a rise in BMI. The existing research similarly exposed substantial adverse association among serum testosterone stages also BMI in mature phase set.

CONCLUSION:

Inside mature phase set serum entire testosterone stages remained meaningfully destructively connected to BMI.

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