

Evaluation of personality Traits of 10-18 years adolescent boys - Overweight Vs Normal Vs Underweight and Impact of counseling.

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Abstract

The present study is an attempt to evaluate personality Traits of adolescent boys. We have compared personality trait of normal weight, overweight & underweight adolescent & effect of counseling on their personality. A random sample of 530 adolescent boys (one private English Medium and one Government Hindi Medium School) between the ages of 10-18 years during the period of August 2008 to August 2009 constituted the material for this study. Weight, Height and BMI and personality trait were evaluated. Overweight adolescent boys were found to be more abstract thinking, expedient, depressive, controlled, relaxed and sound follower. Post counseling they were found to be more concrete thinking, tense, conscientious and zestful. Normal weight adolescent boys were found to be more reserved, aggressive, concrete thinking, excitable, shy and relaxed on pre counselling data analysis. Post counseling data they were found to be milder and socially bold and this change was statistically significant. *Underweight* adolescent boys were found to be more reserved, concrete thinking, phlegmatic, aggressive, self reliant and relaxed. Post counselling data analysis showed statistically significant changes and they were found to be more abstract thinking, group dependent and sound follower. **Conclusion:** Adolescent psychological need should be assessed and there counselling should be done as per their need because personality pattern of overweight, underweight and normal weight adolescent varies.

Keywords: personality trait of adolescent, adolescent counseling, overweight adolescent.

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Introduction

The origin of the word adolescence is from Greek Latin word 'adolesere' which means 'to grow' or to grow to maturity [1]. It is the process of development from "childhood to adulthood" [2] or more narrowly the years between the onset of puberty and the attainment of maturity. It is a period of rapid and extensive series of anatomical, biochemical, emotional, psychosocial and secondary sexual changes in encompassing the age range from 10-19 years.

The pattern of these changes is in turn modified and individualized by genetic potential as well as environmental and socio-cultural influences.

Of many facts as overweight as well as underweight is associated with negative psychological effects. Thinking

becomes inflexible at a deviant bodyweight with the result that it becomes difficult to switch rapidly from topic to topic. It also becomes difficult to make decisions; concentration is almost always impaired, although adolescence may not be aware of this.

Counseling can make significant contribution in this context by prediction of psychosocial problems if any by allowing free discussion to bring out hidden conflicts, anxiety, guilt or anger and helps them to deal effectively with these problems and stressful life events. Pediatricians are in a unique position to understand and discuss the problems of teenagers.

Material and Methods

A random sample of 530 adolescent boys between the ages of 10-18 years during the period of August 2008 to

August 2009 constituted the material for this study.

A random sample was drawn from two different schools; one private English Medium and one Govt. Hindi Medium School reflecting students from all socioeconomic strata of society.

A formal request was made to the Head of these institutions for permission to carry out this study. Having ensured our acceptance, the students were approached in small batches of 40 students at a time in the absence of class teachers. They were requested to fill in a questionnaire after being explained that the object of the study was to determine their physical growth and personality traits.

Protection of individual identity and confidentiality of responses were ensured by maintaining anonymity by allotting code numbers to each subject. To avoid any deliberate distortion of responses they were promised that the result would be communicated to them after analysis.

Section I of questionnaire was designed to gather general information regarding age, sex, birth order, parental education, occupation, per capita income, Weight, Height and BMI.

Weight

The weighing scale used in this survey measuring in kilo grams upto an accuracy of 100gms. The zero error of the machine was regularly eliminated before taking the weight. Boys were made to stand barefoot on the centre of the platform, without touching anything and their weight recorded.

Height

The height was measured with an anthrop meter. It consisted of wooden platform 24"X18" to which 10" wide vertical plank was fixed, which could measure up to a tenth of a centimeter. A rectangular wooden head board was used. Boys with barefooted, were made to stand on the flat platform with the feet joined and making an angle of 45° with each other each other. Heels, buttocks, shoulders and back of head were made to touch the upright plank. The head was held comfortable erect, such that the lower borders of the orbits were in the some horizontal plane is the external auditory meatus.

The hands were made to hang at the sides in a natural manner. During the measurement, the child was asked to take a deep breath, relax the shoulders and stretch up to be as tall as possible. Top knots of Sikh boys were opened. The headpiece was moved down until it touched the child's head and keeping the headpiece in position the child was asked to get off the anthrop meter. The height of the child was then recorded.

Body Mass Index (BMI): It is calculated by formula given below

$$\text{BMI} = \frac{\text{Weight}}{\text{Height X Height}}$$

Weight in kg.

Height in meter.

Body Mass Index (BMI) Classification of children and adolescent

BMI Percentile for age	Weight status
<5 th percentile	Underweight
5 th – 84 th percentile	Normal weight
85 th – 94 th percentile	At risk for overweight
≥95 th percentile	Overweight

Overweight is defined as BMI 95th percentile or more³
Underweight is defined as BMI less then 5th percentile [3] (NCHS 2000).

Section II: of the questionnaire comprised the Hindi/English version of Jr : Sr : high school personality questionnaire (HSPQ) form A, modified Kapoor et al [4]. Originally conceptualized and constructed by Catell [5] and his co-worker. This is a standardized instrument which measures fourteen distinct dimensions or traits of personality, what catell described as "the primary sources traits of personality". HSPQ is a personality questionnaire which evaluates 14 personality characteristics with in-depth self-report inventory. The HSPQ addresses Warmth, Intelligence, Emotional Stability, Excitability, Dominance, Cheerfulness, Conformity, Boldness, Sensitivity, Withdrawal, Apprehension, Self-Sufficiency, Self-Discipline and Tension. HSPQ is useful in predicting and understanding human behavior. It is an effective tool for adolescents' behavior problems.

These have been found by psychologists to come near to covering the total personality.

The entire test took 90 minutes to be completed. After the pretest session, children were counseled by a senior faculty member in pediatrics with more than twenty years of experience in the field of counseling, essentially covering all problems prevalent in students revealed by pretest session.

The idea behind the group counseling was not to categorize students into normal and abnormal rather, it was based on fact that individual counseling would take them away from their adolescent peer group and may result in social isolation.

Personality Trait of adolescent boys are assess by 14 dimension of personality factor of HSPQ (Jr:- Sr. High School Personality Questionnaire).

Low Score descriptions	High Score description
<p>A. Reserved, detached, critical cool (Sizothymia)</p> <p>B. Less intelligent, concrete thinking (lower scholastic mental capacity).</p> <p>C. Affected by feelings, emotionally less stable, easily upset, (lower ego strength)</p> <p>D. Phlegmatic, deliberate inactive, stodgy. (phlegmatic temperament)</p> <p>E. Obedient, mild accommodating, conforming (submissiveness).</p> <p>F. Sober, prudent serious taciturn (desurgency)</p> <p>G. Expedient, evades rules, Feels few obligations (weaker superego strength)</p> <p>H. Shy, restrained, diffident, timid (Threctio).</p> <p>I. Tough-minded, self-reliant, realistic, no-nonsense (marria)</p> <p>J. vigorous, goes readily with group, zestful, given to action (Zeppla)</p> <p>O. Placid ,self-assured, confident, serene (untrobed odequacy)</p> <p>Q₂. Group dependent, A ‘joiner’ and sound follower (group adherence)</p> <p>Q₃. undisciplined, self-conflict, follows own urges, careless of protocol (Law integration)</p> <p>Q₄. Relaxed, tranquil, torpid, unfrustrated (low ergic tension)</p>	<p>A. outgoing, warm hearted, easy going, participating (affectothymia)</p> <p>B. More intelligent, abstract thinking, bright (higher scholastic mental capacity).</p> <p>C. Emotionally stable, faces reality, clam, mature (higher ego strength).</p> <p>D. Excitable, impatient, demandent, overactive (excitability)</p> <p>E. Assertive, independent, aggressive, stubborn (Dominance)</p> <p>F. Happy –go –lucky, impulsively lively, gay, enthusiastic</p> <p>G. Conscientious, persevering, staid, rule-bound (stronger superego strength)</p> <p>H. Venturesome, socially bold, uninhibited, spontaneous (parmia)</p> <p>I. Tender minded, dependent, over protected, sensitive (premsia)</p> <p>J. Apprehensive, worrying, depressive troubled (Guilt proneness).</p> <p>O. Doubting, obstructive, individualistic, internally restrained, reflective</p> <p>Q₂. Self-sufficient, prefers own decisions resourceful (self-sufficiency)</p> <p>Q₃ . Controlled, socially-precise, following self image. (high self- concept control)</p> <p>Q₄. Tense, frustrated, driven, overwrought (high ergic tension)</p>

Statistical Method

For section III : The completed answer sheets is the usual record for obtaining the score by applying the streamlined hand stencil key to these answer sheets, row scores were obtained. These raw scores were then entered in the tabular supplement with norms supplied with the booklet to get the n-sten scores (Normalized standard ten scores). Extreme care was taken in selecting the correct table.

The responses were re-assessed after 12 weeks of counseling and performance of students before and after counseling were compared.

The data of the present study were recorded into the computers and after its proper validation, check for error, coding and re-coding were complied and analyzed using the software SPSS 17 for windows. Appropriate univariate and bivariate analysis were carried out using the student t test for the continuous variable (age) and two- tailed Fisher exact test or chi-square (χ^2) test for categorical

variables. The comparison between three groups were done using ANOVA followed by Bonferroni test for multiple comparison.

All means are expressed as mean \pm standard deviation. The critical levels of significance of the results were considered at 0.05 levels i.e. $P < 0.05$ was considered significant.

Results

As per table 1 On pre counseling data analysis of the present study overweight adolescent boys were found to be more abstract thinking, expedient, depressive, controlled, relaxed and sound follower. Post counseling data analysis showed statistically significant change and they were found to be more concrete thinking, tense, conscientious and zestful

Table 1. Impact of counseling on personality traits of overweight adolescent boys

Pre counseling	Post counseling
A. Reserved	A.....
B. Abstract thinking	B. Concrete thinking
C.Emotionally less stable	C.....
D. Phlegmatic	D.....
E. Obedient, mild	E.....
F. Sober	F.....
G. Expedient	G.Conscientious,rule-bounded
H. Shy	H.....
I. Tender minded	I.....
J. Depressive	J. Zestful
O. Doubting	O.....
Q ₂ . A 'joiner' and sound follower	Q ₂
Q ₃ . Controlled	Q ₃ . Undisciplined, self-conflict
Q ₄ . Relaxed	Q ₄ . Tense

Table 2. Impact of counseling on personality traits of normal weight adolescent boys

Pre counseling	Post counseling
A. Reserved	A.
B. Concrete thinking	B.....
C. Emotionally less stable	C.....
D. Excitable	D.....
E. Aggressive	E. Mild, accommodating.
F. Sober	F.....
G. Rule-bound	G.....
H. Shy	H. Socially bold
I. Self-reliant	I.....
J. Zestful	J.....
O. Confident	O.....
Q ₂ . Group dependent	Q ₂
Q ₃ . Self-conflict	Q ₃
Q ₄ . Relaxed	Q ₄

Table 3. Impact of counseling on personality traits of under weight adolescent boys

Pre counseling	Post counseling
A. Reserved	A.....
B. Concrete thinking	B. Abstract thinking
C. Emotionally less stable	C.....
D. Phlegmatic	D.....
E. Aggressive	E.....
F. Enthusiastic	F.....
G. Rule-bounded	G.....
H. Shy	H.....
I. Self-reliant	I.....
J. Zestful	J.....
O. Confident	O.....
Q ₂ . Self-sufficient	Q ₂ . Group dependent
Q ₃ . Self-conflict	Q ₃
Q ₄ . Relaxed	Q ₄

As per Table 2 Normal weight adolescent boys were found to be more reserved, aggressive, concrete thinking,

excitable, shy and relaxed on pre counseling data analysis. On analysis of post counseling data they were found to be more mild and socially bold and this change was statistically significant.

As per Table 3 On pre counseling data analysis of the present study underweight adolescent boys were found to be more reserved, concrete thinking, phlegmatic, aggressive, self reliant and relaxed. Post counseling data analysis showed statistically significant changes and they were found to be more abstract thinking, group dependent and sound follower.

Discussion

A large number of studies conducted on different aspects of adolescents growth and development have revealed that slight variation from normal, as assumed by the adolescent have definite influence on his personality on both the sides that is negative as well as positive. When related to weight, underweight as well as overweight adolescents are found to have different personality traits as compared to the normal ones. Underweight adolescent boys as observed in the present study were found to be more reserved, easily upset as compared to overweight boys who were found to have higher sten score for abstract thinking, obedience, tender mindedness and had more self control and more relaxed. This could be explained by the belief that masculinity and weight is parallel i.e. underweight boys seem to believe that they are weak and less masculine.

The variation in personality traits as revealed by 14 P F H.S.P.Q. personality test endorse the above statement. On pre counseling data analysis of the present study *overweight* adolescent boys were found to be more abstract thinking, expedient, depressive, controlled, relaxed and sound follower. Post counseling data analysis showed statistically significant change and they were found to be more concrete thinking, tense, conscientious and zestful.

Normal weight adolescent boys were found to be more reserved, aggressive, concrete thinking, excitable, shy and relaxed on pre counseling data analysis. On analysis of post counseling data they were found to be milder and socially bold and this change was statistically significant.

These observations were almost in accordance with previous studies and not much of the difference were seen for personality patterns after counseling Grover [6], Tripathi [7] for normal weight adolescent boys and Avyact Agrawal [8] for adolescent girls).

On pre counseling data analysis of the present study *underweight* adolescent boys were found to be more reserved, concrete thinking, phlegmatic, aggressive, self

reliant and relaxed. Post counseling data analysis showed statistically significant changes and they were found to be more abstract thinking, group dependent and sound follower.

The observations of present study are in accordance with studies done in same department with similar issues and group counseling. In the study done by Abhilesh (2009) in boys, overweight adolescent boys were found to be more assertive, shy, doubting and less warm on pre counseling analysis. On post counseling they were more outgoing, happy go lucky, less assertive and less doubting. Underweight adolescent boys were more reserved, affected by feelings, excitable and tense on pre counseling analysis. On post counseling they were more outgoing emotionally stable and relaxed. In the study done by Singh¹⁰ (2009) in girls, overweight adolescent girls were more phlegmatic, assertive, taciturn, shy, tender minded apprehensive, doubting and uncontrolled on pre counseling analysis. On post counseling they were more excitable, happy-go-lucky, venturesome, tough minded, vigorous and controlled. Underweight adolescent girls were more reserved, affected by feelings, shy, tender minded, doubting and group dependent on pre counseling analysis. After counseling they were more outgoing, emotionally stable, venturesome, tough minded and controlled.

Studies done by Antio, Angelina[11]

Using the Temperament Character Inventory and Self reported weight and height, **overweight** boys were found to score *lower* on *Persistence* and *Self-Directedness* (scales related to conscientiousness) and *higher* on *Novelty Seeking* (*impulsive, curious, disorderly*).

Studies done by Antio Terracciano, Angelina [11] also found high Neuroticism, anxiety, anger and depression score among underweight individual

Conclusion

1. Overweight adolescent boys were found to be more abstract thinking, expedient, depressive and controlled on pre counseling analysis.
2. After counseling overweight adolescent boys were found to be more concrete thinking, conscientious and zestful and this was found to be statistically significant ($P<0.05$).
3. Normal weight adolescent boys were found to be more reserved, aggressive, concrete thinking, excitable and relaxed on pre counseling analysis.
4. After counseling normal weight adolescent boys were found to be more mild and socially bold and this was found to be statistically significant ($P<0.05$).
5. Underweight adolescent boys were found to be more reserved, concrete thinking, phlegmatic, aggressive and self reliant on pre counseling analysis.

6. After counseling underweight adolescent boys were found to be more abstract thinking and group dependent and this is found to be statistically significant ($P<0.05$).

However it, would be too early and dogmatic to comment on this alteration of personality traits from negative to positive side. Since the post counseling data was recorded only after 10 - 12 weeks after counseling, we do not know whether this effect is temporary or permanent. To sustain this change in the personality traits on the positive side, undoubtedly there is need for booster doses given periodically till they are out of this storm of their life.

Recommendations and limitations

Observation of our study has clearly showed that large numbers of adolescent boys are under great stress to the point of losing hope. They should be made to realize that these problems are wide spread. Simply they can not run away from so called unfriendly environment. Rather, physicians or counselor's role is to teach them "life skills" or coping strategy to survive and rise above these problems.

Counseling can make significant contribution in this context by prediction of psycho-social problem by allowing free discussion to bring out hidden conflicts, anxiety, for instant guilt or anger and helps them to deal effectively with these problems and stressful life events. Above all, counseling is a very cost effective method to develop life skills in the adolescents.

We recommended periodic evaluation of the personality traits of the adolescent boys in order to detect the harmful and negative traits so that it does not result in permanent scar on adolescent's mind and personality. Timely and periodic counseling of the adolescent boys is the need of hour. It does not need a big infrastructure or a large financial commitment. The emphasis on the physical health of every individual is justified. But we should also give equal importance to the psychosocial and emotional needs of these troubled adolescent boys.

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