



IMPACT OF LIFESTYLE AND DIETARY PATTERN OF ADOLESCENTS ON THEIR HEALTH

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Abstract : Adolescence is a phase of “stress and storm” with many psycho-social and proximo-distal development of an individual. During this stage of vigorous changes in the body nutrition plays an important role in the growth and development. The adaptations of packed foods and aerated drinks have altered the choice of adolescents. The more intake of junk food than traditional or home cooked food has affected their hormonal imbalances. The research reviewed about the eating habits of adolescents and their impact on the health with regards to their lifestyle management.

IndexTerms - Adolescents, Health, Hormonal imbalances, Psycho-social development, Proximo-distal development.

I. INTRODUCTION

“Our bodies are our gardens- Our Wills are Our Gardeners.”

By William Shakespeare

India has the largest number of adolescents in the whole world, 253 millions according to 2011 census. Adolescents are also known as Young People ranging from the age group from 10-19 years of age. The health of adolescents and their lifestyle plays a very important role globally. In India every fifth person is an adolescent. The demand of adolescents is changing from time to time. Their perspective towards health is influenced by many of the external factors like peer pressure, role models, income status and even religious and cultural aspects. The period is considered to be an increase in rapid growth and development among young people. There is marked change in body's physical and psychological structure of adolescents. Adolescents tend to spend most of their time in leisure activities like, playing video games, internet surfing watching TV and sometimes vandalizing things. During this period the major change in eating pattern is observed either in the form of binge eating or skipping of meals. This attitude towards health leads to various changes in the body's growth and development. The drastic change in eating habits also has a negative impact on their social and mental wellness. Adolescents during this phase also engage themselves into some sort of delinquent activities just to please their peers by risking their life and proving their self-esteem. They might get involved in smoking and drinking activities which further more deteriorate their health. Lifestyle incorporates both cultural and social behavior of adolescents.

Health has always played a major role in the growth and development of the individuals. **W.H.O. states that health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.** Adolescence is a stage where eating habits and cognitive skills are changed drastically. With the rapid urbanization and use of information technology by the adolescents have changed their lifestyle more into a sedentary one. The poor nutrition leads to either over nutrition or under nutrition. Dietary habits are directly proportional to the development of health among adolescents.

Menarche is of the key feature during this stage. The inappropriate dietary habits causes either delay in menstrual cycle or sometimes even absence among the adolescents girls further resulting in the improper physical, mental and social wellness. The irregularities in menstrual cycle also cause symptoms like stress causing depression. Lack of sleep due to stress tends to add on the negative health. The constant use of TV and other online mode activities for leisure also add into more sleepless nights. The disturbed sleep triggers various hormonal imbalances and lack of development of the cognitive skills. The mindset of living healthy lifestyle decreases as the age of adolescents increases.

The dietary habit changes that have been seen during adolescence phase is Anorexia Nervosa (Complete fasting) and Bulimia Nervosa (binge eating followed by vomiting) also leads in to the deficiency of nutrients in among young people. This change in eating pattern affects the development of the reproductive system among adolescent girls. The excess indulgence in to sedentary lifestyle of both adolescent boys and girls also leads to some of the metabolic disorders like diabetes, hyperlipidemia, elevated blood pressure and other health complications associated with the obesity. The one of the most leading factor that causes malnutrition is social media addiction. The addiction leads to the hormonal imbalances which further results in the elevation of stress among youths. During this stage there is complete alteration in the thought process of adolescents i.e. formation of new values, beliefs and the goals and standards of their life. The youth are more prone towards being self-reliant, self direction and even self- centered. This change in their mindset has an impact on their

dietary patterns. They start to follow any specific kind of nutrient rich diet which makes them susceptible to more of deficiency diseases/disorder. During adolescence nutrition is one of the most crucial part as they are more vulnerable towards improper eating habits leading to decrease in the qualitative growth and development. During this phase both macro and micro nutrients plays important role in the growth and development.

Adolescence stage is broadly divided into 3 parts: - Early, Middle and Late adolescence (12-14; 14-17; 17-19 respectively). Each phase of the adolescence have its own distinctive characteristics. Early adolescents are less matured but they usually find themselves to be more confident and independent to make their own choices. Followed by the middle adolescence during this phase they tend to get more attention on their image, physique among their peer groups as well as society. The major priority during this phase is that adolescents develop a sense of competitiveness among their peer groups. They tend to prove themselves better from each other. Late adolescents have much more clearer insight about their goals and values as they are more intended towards the younger adulthood. They are more independent towards their lifestyle. They are able to express their thoughts in a more stable way than the above two phases of adolescents. Adolescents must have an approach towards health-care centers, health education, and nutrition knowledge for their healthy living. Healthy adolescents are the future of country. Malnutrition in adolescents leads to their impairment in the growth and developmental process. Gender biasness is one of the component causing malnutrition among adolescents.

The major challenges faced by the adolescents are identity formation that is completely different from their parents and family. They wanted to have complete different spectra about their thoughts and feelings. Adolescents have firm belief about not following their parents' pathway.

The one of the alarming fact during this phase is teenage pregnancy. According to National Family Health Survey 03 2005-2006 stated that there is prevalence of 16% of pregnant adolescents at the age of 15-19 years of age. This sudden change in the body has a psycho-physical impact on adolescents. The early pregnancies have an adverse impact on the health status of the adolescents like anemia, low birth weight babies, low absorption of breast milk.

Mostly adolescents are intended towards health compromising activities rather than uplifting their health, programs need to be started for the adolescents to decline the negative impact of leisure time on the health status of the young people (Singh,A.P. and Misra,G. 2012). Globalization have also influenced the young people mindset by involving them in various leisure time choices by making this stage more vulnerable towards media and technology (Call K.T.*et.al.*, 2003). According to rural and urban segregation urban adolescents tends to spend more time in various sedentary activities while rural adolescent spend more time in watching T.V. and other religious activities (Singh,A.P. and Misra,G. 2015). Furthermore, there is high incidence of tobacco, smoking, High sugar content foods, less physical activity and alcohol consumption among adolescents leads to malnourishment and more susceptible to any disease or infirmity (Santh,B.*et.al.*,2018). The major concern during the period of adolescence is physical activity and anti-social behavior that have negative impact on the health. The knowledge of adolescents should be improved by various health policies as adolescents are most vulnerable stage (Marconcin,P.*et.al.*, 2021). The research given by (Goel,M.*et.al.*,2016) stated that there is a prevalence of hypertension among adolescents due to improper eating habits leading to obesity, faulty body mass index and even the family history of adolescents is also one of the key element responsible for elevated blood pressure. (Jain,B. and Pathak,S. 2016) evaluated that adolescents are more prone towards eating in canteen even if they carry their packed lunch boxes due to high peer-pressure. The increase intake of aerated drinks and more of carbohydrate diets leads to obesity, overweight and decrease in the basal metabolic rate.

Nutrition education is directly proportional to nutrient intake among adolescents. The eating pattern of adolescents with their respective families also affects their nutritional status as stated by (Dixit,S.*et.al.* 2013). Furthermore, it was stated that lack of nutrition knowledge and education about the dietary intake of nutrients among adolescent girls lead to anemia (Hemalathaa,R. and Mary,P.A. 2013). (Man,C.S.*et.al.* 2020) evaluated the association of unhealthy diet pattern is dependent upon the locality of the adolescents school and society. The study included that the adolescents knowledge about their weight and ethnicity were the causes of their intake of unhealthy diets. A healthy puberty is dependent upon the intake of well-balanced during the middle and late childhood. The improper diet leads to early puberty and other hormonal changes Soliman,A.*et.al.* (2014). The higher use of technology has severe ill-effects on the health status of the adolescents. Eating less than the required form leads to stunting or thinness (Kahssay M.*et.al.*, 2020). An intervention based on knowledge, attitude and behavior towards the nutritional status have a great impact on the changing mindset of the adolescents. Eating right and healthy education can be imparted to adolescents through intervention techniques in order to minimize the incidence of malnutrition during this stage of life (Shapu R.C.*et.al.*, 2020).(Melo G.R.D.A.E.*et.al.*, 2017) suggested that an intensive use of ICT tools in the process of educating adolescents about healthy eating habits have a significant impact on their cognitive development. Innovative technologies with 3D images and videos would help in the better understanding among the youth about their overall health development. (Penzez G.N.*et.al.*, 2022) reported in the study that healthy lifestyle sessions should be introduces to adolescents time to time in order to have a healthy adult. The sessions should be carried out in school premises to shape their physical, mental and social health. The health promotion helps the adolescents to curb themselves from the unhealthy lifestyle. (Oddo V.M.*et.al.*, 2022) investigated in the study that intervention package is immensely associated with nutritional knowledge given during school. The school based program has a great impact on the adolescent eating habits. Government and the stakeholders should set-up intervention program at school level as it targets the greater number of adolescents. The program should focus the healthy eating environment of school food which further develops the positive behavior of adolescents towards their healthy life. (Bharti R.*et.al.*, 2021) did a study on "Effectiveness of a Nutrition Education Intervention focused on Iron among School Children in National Capital Region and Mumbai".. The result revealed that the educational intervention have positive impact in strengthening the knowledge and attitude of children on their health. The reports of the study were that there was increased in information from 21.5% to 32.20% among children. Nutritional Literacy is a new window to combat malnutrition.

(Hargreaves D.*et.al.*, 2021) evaluated in the study that adolescents growth and development is a pivotal point in the lifespan. The findings suggested that the intervention program have a great impact on the treatment of deficiency diseases and disorders. (Akseer N.*et.al.*, 2017) evaluated in the study that there is impact of socio-demographical region on the health status of adolescents. The availability of food and necessary commodities alter the health status of the youth. Sedentary lifestyle and improper diet leads to various metabolic disorders among the adolescents. (Khan D.S.A.*et.al.*, 2022) concluded that there was a prevalence of double burden malnutrition among children 5-15 years of age. The dietary intake among children and early adolescents are not up to the required allowances. The results revealed that 25.1%, 23%, 24% 12.5% 11.4% and 6.95 were in the category of underweight, stunting, wasting, thinness, overweight and obesity respectively. (Belay E.*et.al.*, 2019) focused that around children were found stunted due to absence or less sanitation availability in the houses which ultimately leads to increase in infectious diseases among the adolescents thus deteriorating their health status. (Aiga

H.*et.al.*, 2019) did a study a Cross Sectional Study in Rural Madagascar that revealed 34.9% of stunting, 36.9% of underweight and 11.2% of thinness was present among school aged children. It concluded that the higher number of family members and inadequate food resources leads to greater risk of under-nutrition. The change in dietary pattern and the availability of resources would results in a better health status among children. (Ahmad S.*et.al.*, 2018) investigated that the prevalence of protein- energy malnutrition have a double burden the health status of adolescents. Inadequacy of macro-nutrients results in the thinness and obesity among youth. The change in health related programs for adolescents in India would help in coping up from the stage of malnutrition. (Norris S.A.*et.al.*, 2021) conducted a study on “Nutrition in adolescent growth and development”. The findings indicated that the early adolescence nutrition plays a crucial role in the growth and development of adolescents with a healthy puberty, muscle and fat mass development. The study stated the changes in the eating pattern of children leads to various deficiency diseases and psycho-physiological disorders. (Gowda A.N.B.L.*et.al.*, 2018) conducted a study on “Nutritional Status and its influencing factors among Adolescents. The data was obtained through anthropometric measurements, clinical method and dietary assessment. The result revealed that 32.3% samples were in the category of thinness and 25.8% were in the stunting category. The prevalence of malnutrition was high amongst below poverty line families, high birth rate families and even large family size. (Savale P. and Kurre B. 2018) investigated on “Obesity and its Prevalence among School Going Adolescents” that there is high prevalence of obesity in school going girls. Obesity is significantly correlated with factors including eating patterns (desire for non-vegetarian / fried food, aerated drinks), lifestyle, and a family history of Type-2 diabetes mellitus.

CONCLUSION

Healthy diet is a key to growth and development of adolescents. During this stage of development improper diet leads to various health related disease and disorders. The self-obsessed behavior of adolescents has an impact on the eating pattern of adolescents. An educational intervention program should be provided to the adolescents for their better physical and psychological health. This stage is marked by both peer pressure and identity formation which further results into stress and eating disorders. Thus, the social, emotional, psychological, physical, lifestyles are some of the major factors determining the health status of the adolescents. (Anand D. and Anuradha R.K. 2016) emphasized in their study “Malnutrition status of adolescent girls in India: A need for the hour” that adolescent girls suffers from various nutritional as well as non nutritional problems in their day to day life due to lack of knowledge, ignorance, poverty which further results in their deprivation of health and making them unfit for the daily activities. The low levels of iron were found due to lack of essential nutrients which results to the prevalence of anemia from one generation to another.

SUGGESTIVE FINDINGS

This micro-review article sums up the findings about the impact of healthy diet on the growth and development of the adolescents. The intervention programs for the adolescents should be designed on the 2 major spectra i.e. educationally and nutritionally. The authorities should adopt the techniques in order to make adolescents understand about their pubertal growth for healthy maternal.

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