

EDITORIAL

Double Burden of Nutritional Disorders amongst Adolescents and Strategies required for combating itUmesh Kapil¹, Neha Sareen²

Department of Human Nutrition, All India Institute of Medical Sciences, New Delhi

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Corresponding Author

Address for Correspondence: Dr. Umesh Kapil, Department of Human Nutrition, All India Institute of Medical Sciences, New Delhi

E Mail ID: umeshkapil@gmail.com

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Adolescents are the future generation of any country and their nutritional needs are critical for the well-being of the society. In India, approximately 20% of the population consists of adolescents (1). Presently, the dietary inadequacy exists due to poverty and it is the main cause of under-nutrition. However simultaneously, we have affluent population groups, which have high consumption of foods rich in fats and calories, leading to over-nutrition and obesity. Thus, India is facing double burden of Nutritional disorders amongst adolescent in which we have under-nutrition at one end of the socio-economic spectrum and over-nutrition at the other (1).

Over-Nutrition amongst Adolescents

Over the last three decades there has been a substantial change in the life style of adolescents in the middle and high Income groups. With availability of cooking gas, piped water supply and other labour saving gadgets and universal presence of transport, there has been a substantial reduction in physical activity and energy expenditure. This is further accompanied with physically passive behavior amongst adolescent such as TV viewing, working or playing games on a computer, talking on the telephone, etc. This passive behavior is often accompanied with adverse dietary practices like snacking/ consuming high fat or high sugar foods (2). The scientific evidence from National Monitoring Bureau (NNMB) repeat surveys do indicate that there has been significant reduction in under-

nutrition along with simultaneous increase in obesity and over nutrition in the past four decades (3).

Under Nutrition amongst Adolescents

Adolescent growth and development is closely linked to the diet they consume during childhood and adolescence. Adequate nutrition of any individual is determined by two factors (4). The first is the adequate availability of food in terms of quantity as well as quality, which depends on socioeconomic status, food practices, cultural traditions, and allocation of the food. The second factor is the ability to digest, absorb, and utilize the food. This ability can be hampered by infection and by metabolic disorders. The NNMB surveys has documented that almost half of the adolescents of both sexes were not getting even 70% of their daily requirements of energy (3). The adolescent girls (AGs) of poor communities need highest priority. Most of the AGs are drop out of schools after the first few years of schooling and are engaged in minor chores in their houses helping their parents; and waiting for menarche to arrive. Invariably thereafter, they are 'trapped' into marriage and start their reproductive lives. These are the mothers-to-be, a crucial segment of the population, who will not only usher in the next generation, but also shape it. Today, most adolescent girls of poor communities enter marriage, totally unprepared for the task of motherhood and child rearing. Adolescent girls, today, not being reached by the health and welfare services as not

being children, as not being pregnant, and as not being old. The high rate of malnutrition in girls not only contributes to increased morbidity and mortality associated with pregnancy and delivery, but also to increased risk of delivering low birth-weight babies (1). This contributes to the intergenerational cycle of malnutrition. On the basis of world wide data, WHO had proposed that women with height less than 145 cm and pre-conception body weight less than 38 kg may be considered to fall in the 'high risk' category, that is, likely to suffer obstetric complications and to give birth to off-spring of low birth-weight, especially in situations where antenatal care and obstetric services are below par (1, 5). According to the data gathered by the NNMB in the country, 15 to 29 per cent of adult Indian women in 10 states of India have body weight less than 38 kg, and 12 to 25 per cent have height less than 145 cm (3).

What can be done?

There is a lack of policies and programmes for improving health and nutritional status of adolescents in the country. Adolescent Health should be addressed as a part of existing maternal and child nutrition programmes. The health, nutrition, education, social welfare, food and agriculture, mass media, and the legal sector should play the major role in integrating adolescent nutrition in their activities (1).

Addressing the nutrition needs of adolescents could be an important step towards breaking the vicious cycle of intergenerational malnutrition, chronic diseases and poverty (1). The main strategies suggested for improving adolescent nutrition include: food-based strategies like dietary diversification and food fortification, for ensuring adequate nutrition at household level; addressing behavior modification to bring about dietary changes in adolescents. This can be achieved through school-based nutrition interventions, using following: i) social marketing approach, ii) behavior change through communication and mobilizing families and communities; iii) control of micronutrient deficiencies; iv) regular nutrition assessment; v) counseling of adolescents; vi) care of adolescents during pregnancy and postnatal period; vii) inter-sectoral linkages at community level and building linkages with adolescent friendly health services (1).

There is very little information about diet and nutritional status of adolescents, particularly from rural areas in India. We need to: i) develop a database regarding health and nutrition of adolescents; ii) design advocacy material; iii) formulate policy guidelines and strategies to improve adolescent nutrition; iv) develop an integrated and intersectoral approach to address nutritional problems of adolescents; v) development of adolescent-friendly health centers catering to the holistic needs of adolescents; vi) mainstreaming adolescent nutrition in the health systems and reaching the unreached out-of-school adolescents with nutrition interventions.

Need for equipping the service providers with knowledge, skills, particularly counseling and communication skills, and developing appropriate training methodologies and tools for training should also be highlighted.

The two major categories of adolescents are: i) those who are in school and ii) those who are not going to school. The focuses of efforts to improve the health and nutritional status of those who are in school have to be through the school health system; efforts should be to screen all adolescents for anemia and under-nutrition and provide appropriate management. Screening for identification of obese adolescents and initiating the appropriate remedial measures for it. Health and nutrition education to delay marriage until at least eighteen and postpone child bearing till twenty should be vigorously taken up.

The second category is the out of school adolescents. Majority of these girls marry during early teens and conceive soon after wards. In this category the focus should be to get these girls to come over to Anganwadi; the AWW in collaboration with the ANM can undertake the following activities: i.) Screening for under/over-nutrition and micronutrient deficiencies ii) Targeted interventions to tackle the nutritional problems of adolescents, especially girls iii) Introduction of community supported supplementary nutrition programmes using community provided food grain banks; the food prepared by local women's groups using locally available foodstuffs and vegetables should given on a priority basis to adolescents who are pregnant iv) Information, Education and Communication to

improve awareness v) Health and nutrition education to prevent too early pregnancies and under nutrition vi) Appropriate antenatal and intra-partum care and contraceptive care when needed (6-8).

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