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Adolescence



A Pivotal Stage

in the Life Cycle

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ADOLESCENT NUTRITION

LESSONS LEARNT AND CHALLENGES AHEAD

EDITORIAL

Venkatraman Chandra-Mouli, Department of Child & Adolescent Health & Development
WHO

Rukhsana Haider, Regional Office for South East Asia, WHO

Andrea D Moreira, UN System Standing Committee on Nutrition

Introduction

The focus of this issue of *SCN News* is on the nutritional challenges facing adolescents today, and how they are being addressed. Adolescence, the second decade of life (10-19 years), is a period in which an individual undergoes major physical and psychological changes. Alongside this, there are enormous changes in the person's social interactions and relationships. Adolescence is more of a phase rather than a fixed time period; a phase in which an individual is no longer a child, but is not yet an adult.¹

Over half a century ago, WHO defined health as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity.² Good nutrition is an essential precondition for health and well-being, and for the realization of a person's full potential. This applies to adolescents, just as it does for infants and children.

In every country and community, there are many adolescents who make the transition into adulthood in good health. Unfortunately, there are also many other adolescents who do not do so. Like in other age groups, poor nutrition in adolescents is the result of dietary inadequacies that result from a complex mesh of socio-economic factors (eg, poor access to food) and psycho-social factors (eg, cultural norms which influence eating habits). Key nutrition problems in developing countries include micronutrient deficiencies—iron deficiency anaemia in particular, undernutrition, eating disturbances and disorders, diet-related chronic diseases associated with conditions such as obesity and diabetes, and HIV-related illnesses. (Obesity, in fact, is a fast growing problem in many developing countries, while eating disturbances and disorders are still relatively uncommon).³

Exacerbating the challenges to nutrition in young girls is the practice of too early pregnancy. Women who have not yet finished growing and/or are undernourished run a higher risk of problems during pregnancy and childbirth, and of delivering low birth-weight babies.⁴ Globally, an estimated 25% of women have their first child in their adolescent years. In some regions such as South-East Asia, the problem is much worse. In countries in this region, between 24-60% of women below the age of 20 are married, and are 'at risk' both because there is enormous pressure on them to have babies and because they are undernourished, with short stature (<145 cm) and low weight (<38 kg).⁵ The Millennium Development Goals (MDGs) specifically mention improving child survival (MDG 4) and maternal health (MDG 5) as essential to human development. Improving the nutrition of adolescent girls and preventing too early pregnancy and child birth need to be key elements to achieving these goals.

Lessons being learnt from intervention studies and programmes

An overall strategy to ensure good nutrition in adolescents should aim at promoting good nutrition on the one hand, and preventing and responding to health and nutrition problems on the other hand. In places where too early pregnancy is an important cause of morbidity and mortality in adolescent girls and infants, actions to postpone child bearing should play an important role.⁴ The papers presented as part of this *SCN News* describe programmes and intervention studies that strive to do this.

Dwivedi and Schultink describe pilot programmes in 13 Indian States aimed at reducing anaemia prevalence in girls in- and out-of-school. The primary component of the programmes was weekly administration of iron and folic acid supplements by trained teachers in the school setting, and by trained community health workers in community centres. In several, but not all the states, this was combined with abendazole administration. The other components of the programme were the provision of health education to adolescents, linked in some cases to life-skills education programmes, and parent education. Twelve to fourteen months after the programmes were initiated, the decrease in anaemia prevalence ranged from 5% in one state to 50% in another.⁶

Soekarjo, de Pee, Kusin and Bloem describe three intervention studies in Indonesia, which aimed to test the effectiveness of micronutrient supplementation programmes in reducing the prevalence of



anaemia, as well as that of iron and Vitamin A deficiency in school-going adolescent girls and boys in Indonesia. The primary intervention component in these studies was weekly supplementation of tablets of iron-folic acid and Vitamin A. In the first study, plain tablets were used, whereas in the second study, sugar coated ones were included. The third study aimed to evaluate the effects of education and supervision on compliance. All three studies assessed anaemia prevalence and compliance. The studies showed only a limited effect on reducing anaemia prevalence, and point to lack of compliance as a key factor contributing to this.⁷

Cordeiro, Lamstein, Mahmud and Levison describe the activities of the Bangladesh Integrated Nutrition Project that aimed to improve the health and nutrition of the population. As part of this multi-faceted project, adolescent girl forums (AGF) were piloted to assess their effectiveness in promoting healthy eating practices, consumption of iron and folate supplements, and in delaying marriage and first pregnancy. The primary intervention component was counseling sessions conducted by community nutrition workers and adolescents. Other components included numeracy training and the administration of a midday snack. An evaluation that was carried out in six upazilas (administrative units) six years after the initiation of project, showed that the mean age of marriage and of pregnancy was significantly higher in the project areas, and especially in those women who had been involved in the AGF. Further, pregnant women in project areas who had been involved with the AGF were taking care of themselves better (eg, eating more and resting more) than women in control areas.⁸

Kurz, Barua, Khale and Prasad describe an intervention study conducted by the Indian Institute of Health Management whose aim was to test the effectiveness of a package of interventions in delaying the age of marriage among girls aged 11-17 in a rural community in Maharashtra State of India. The primary intervention component was a life-skills course of 225 sessions spanning one year. Five evening meetings were conducted every week by teachers who had been recruited, trained and placed in their home villages. The other intervention components were monthly group meetings with parents, and the involvement of girls in projects in their villages. At the end of one year, the median age of marriage of girls in the intervention villages had risen from 16 to 17, and the proportion of girls who were married below the age of 18 in the intervention group, was significantly lower than in the control group.⁹

The initiatives described in these papers are important ones. Firstly, they underline the feasibility of programmatic actions to improve the nutritional status of pre-pregnant adolescent girls in developing countries. Secondly, they underline the potential benefits of such actions. Thirdly, they highlight the challenges in implementing them. For example, Dwivedi et al, point to logistic challenges such as maintaining an uninterrupted supply of micronutrients; Soekarjo et al, point to the need to engage families and communities in addition to reaching out to adolescents, in order to influence behavioural outcomes; and Kurz et al, point to the need to work with communities to develop interventions that are acceptable to them.

Opportunities and risks

Adolescence has been described as a time of opportunity, but also of risk. It presents a window of opportunity because actions could be taken to address problems originating earlier in life, as well as to set the stage for reducing the likelihood of problems in adulthood. The initiatives from Bangladesh, India and Indonesia point to how this window of opportunity could be used to reduce anaemia and Vitamin A deficiency. The initiatives from Bangladesh and India also point to how supplementation programmes could be linked to programmes aiming to knowledge and practice on good eating.

At the same time, adolescence is a period of risk; a period when health problems with potentially serious consequences occur, and problem behaviours which have potentially serious adverse effects on future health, are initiated. In their paper, Kurz et al, describe the nutritional and health risks resulting from social and cultural pressure for too early marriage and child bearing. They also highlight the enormous obstacles that young married and pregnant adolescents face in obtaining the health services they need. These themes are developed further in the paper by Sethuraman, Barua, Naved and Khale which presents selected findings of their qualitative studies in India and Bangladesh.¹⁰ These findings—which will contribute to strengthening and expanding the scope of intervention studies and programmes—suggest that families are well aware of the special needs of their daughters as they evolve from girls into young women, and want to do the best they can to ensure their health and well-being (including nutrition). However, prevailing social and cultural norms and economic constraints hinder their ability to do this. The authors stress that gender discrimination is still widely prevalent and continues to define what female adolescents can be 'permitted to do' and how they should be 'cared for'.



Another major risk for this age group is HIV/AIDS. In their paper, Cordeiro et al outline the findings of an assessment of the nutritional status of adolescents in a rural district of Tanzania, one of many countries in East and Southern Africa which is coping with a huge HIV/AIDS burden. In his paper, Gillespie cites data from Malawi, Tanzania and Uganda to highlight the nutritional vulnerability of children and adolescents orphaned by AIDS in Africa.¹¹ These findings point to the pressing need to address the pandemic of undernutrition that is unfolding in many Sub-Saharan African countries in the wake of the AIDS pandemic. Gillespie's paper contains both a message of hope—that communities, and particularly households, have a tremendous coping capacity, and a warning—that this runs the risk of being overwhelmed by the steadily increasing number of orphans. Gillespie calls for research to understand how communities and households cope in different socio-economic contexts and what could be done to strengthen them, all the while using a vulnerable child's perspective.

To conclude, there are many nutritional problems facing adolescents. Problems that are caused by a web of interrelated factors; problems that need to be addressed by concerted and coordinated multi-sectoral action. The papers in this issue of *SCN News* point to some of the key problems and to ways and means of overcoming them. Moreover, approaches have been proposed in which nutritionists can play a valuable role in doing this. Valuable lessons have been learnt; lessons that need to be applied widely, and integrated into ongoing national HIV/AIDS, reproductive health, child survival and adolescent health programmes.

References

1. WHO. *The health of young people. A challenge and a promise*. Geneva:WHO, 1993.
2. WHO. *Constitution of the World Health Organization*. Geneva:WHO, 1948.
3. Delisle H. *Nutrition in adolescence: Issues and challenges for the health sector*. Geneva:WHO 2005 ISBN 92 4 159366 0. www.who.int/child-adolescent-health/publications/ADH/Discussion_papers.htm
4. Delisle H, Chandra-Mouli V, de Benoist B. *Should adolescents be specifically targeted for nutrition in developing countries? To address which problems and how?* Geneva:WHO. www.who.int/child-adolescent-health/publications/NUTRITION/Adol_nutrition.htm
5. WHO. *Adolescent nutrition: A review of the situation in selected South-East Asian countries*. New Delhi, India, 2005
6. Dwivedi A and Schultink W. Reducing anaemia among Indian adolescent girls through once-weekly supplementation with iron and folic-acid. *SCN News* 31:Late-2005 Early 2006.
7. Soekarjo DD, de Pee S, Kusin J, and Bloem MW. School-based supplementation: Lesson learned in Indonesia. *SCN News* 31:Late-2005 Early 2006.
8. Cordeiro LS, Lamstein S, Mahmud Zeba, and Levinson FJ. Adolescent Malnutrition in Developing Countries: A close look at the problem and at two national experiences. *SCN News* 31:Late-2005 Early 2006.
9. Kurz KM, Barua A, Khale M, and Prasad J. Delaying the age of marriage and meeting reproductive health needs of married adolescent women: Finding from India. *SCN News* 31:Late-2005 Early 2006.
10. Sethuraman K, Barua A, Naved R, and Khale M. Nutrition and care of unmarried adolescent girls: Qualitative findings from South Asia. *SCN News* 31:Late-2005 Early 2006.
11. Gillespie S. Lost Youth: Children and AIDS in Africa. *SCN News* 31:Late-2005 Early 2006.

Contact: V Chandra-Mouli, chandramouli@who.int, and Rukhsana Haider, HaiderR@searo.who.int