Introduction

An Adolescent!!!
To the endocrinologist … it is a period of hormonal adjustment
To the teachers/educators… it is a period of “all work, and no play”.
To the parents—it is a period of immense stress and strain.

To the society—he/she is most troublesome one, always full of energy but wasting it for the unwanted things.

But for himself/herself, he/she is an individual with lots of physical, emotional and social needs. “No longer children, not
yet adults”. It is a fascinating period of life that marks the transition from being a dependent child to become an independently functioning adult.

Making one’s way through adolescence is like maneuvering a “minefield”, while multiple paths of minefield leads to safety and normal development, other passages may lead the adolescent off the track, resulting in many kind of ill health (Adolescent Care, 2001).

One in every five people in the world is an adolescent, defined by WHO as a person between 10–19 years of age. Out of 1.2 billion adolescent worldwide, more than 90% live in the industrialized world (WHO, 1998).

In India, adolescents represents over one fifth of the population. In our country, as a result of poor nutritional status of the average Indian adolescent girl, menarche occurs later than in other regions of the world while marriage and consequently the onset of sexual activity and fertility occur far earlier leading to their poor reproductive health and also result in high infant mortality. Further, adolescent girls are especially disadvantaged in terms of food intake, access to health care and growth patterns and educational opportunities (Jejeebhoy, 1996).

Adolescence proves to be the most vulnerable phase in the path of human life cycle after infancy, characterized by rapid growth and development with a transition from childhood to adulthood (NIPCCD, 2012).

Reproductive health services under the public sector are more oriented towards adult married women, while unmarried adolescents hesitate to seek health services due to the fear that these services are not confidential, inability to pay, requirement of parents' approval and negative or insensitive attitude of health providers. Keeping this in mind, Government of India has recognized Adolescent Reproductive and Sexual Health (ARSH) strategy as a key strategy under RCH-II. The components of ARSH are Adolescent Friendly Health Services and Adolescent health counseling services (Annual Administrative Report 2009-10, 2011).

Health and Family Welfare department in Gujarat has also initiated Adolescent Friendly Health Services (AFHS) Clinics at 55 centres in Gujarat under RCH-II. Out of this, 10 AFHS clinics were started in ten Urban Health Centres in Ahmedabad Municipal Corporation during 2010. These clinics operate on fixed days – two days a week (Monday 2 to 5 pm for adolescent girls and Tuesday 2 to 5 pm for boys). During initial months, it operated once a week on Thursday 2 to 5 pm only for adolescent girls (Adolescent Reproductive Sexual Health Strategy for State and District Programme Managers, 2006).

The significant features of an Adolescent Friendly Health Clinic encompass provision of: reproductive health services, nutritional counseling, sex education, and life skills education. It is a kind of ‘one-stop’ shopping approach which means that the different needs of adolescents can be met under one roof, by a team of professionals who understand their needs and are trained to address them effectively. Apart from the routine general health services, additionally the following is provided: monitoring of growth and development, management of behavioral problems, offer information and counseling on developmental changes, personal care and ways of seeking help, reproductive health including contraceptives, STI treatment, pregnancy care and post abortion management,
voluntary counseling and testing for HIV, management of sexual violence, mental health services including management of substance abuse. Adolescence is the last chance to correct the growth lag and malnutrition. The adolescent poses a distinct array of reproductive and sexual health challenges.

So, it was decided to evaluate the awareness of adolescent girls residing in AMC area regarding availability of AFHS services, their access to AFHS clinics, to assess their knowledge, attitude and practices regarding iron deficiency anemia and to analyzing factors influencing and impeding utilization of services.

**Methodology:** The present study was carried out at ten Adolescent Friendly Health Services (AFHS) clinics in Ahmedabad Municipal Corporation area during August, 2011 to September, 2012. AMC has 64 Urban Health Centres (UHC) across 6 zones. Out of these 64 UHCs, AFHS clinics are functional in ten UHCs. Study population comprised of adolescent girls (10-19 years of age). Those who didn’t give consent were excluded. A total of 467 adolescent girls were interviewed who were present on the day of the visit to AFHS clinic.

**Study type:** Cross-sectional study

**Study tool:** A pre-tested semi-structured questionnaire was used for the study which included information such as socio-demographic information, height, weight, etc.

**Ethical Considerations**

After obtaining permission from Medical Officer of Health, Family Welfare Officer, AMC, Institutional Review Board of Smt. NHL Municipal Medical College and Medical Officers of all 10 UHCs where AFHS clinics are operational, the study were started. Informed written consent was taken from all the adolescent girls.

**Results**

A total of 467 adolescent girls in the age group of 10 to 19 years were interviewed and examined from ten AFHS clinics in AMC. Maximum (42%) girls belonged to the age group 13–15 years (mid adolescence). 23.4% girls were in early adolescence (10–12 years) and 34.6% girls were in late adolescence (16–19 years). Around 2% girls were illiterate, 78% girls were currently studying while 19% girls were school dropouts.

Of the total 467 girls, 5% were gainfully employed, out of which 2% were studying as well. As the educational level increases number of girls studying were decreasing. Only 4 girls were married. There were 90% Hindus and the rest were Muslims.

**General Health Status**

Proportion of girls with under-nutrition was 32.1%, 8.6% were overweight and 0.4% were obese. Systolic Blood Pressure of 3% girls and Diastolic Blood Pressure of 6% girls were in Stage -1 category of High BP according to JNC-7 classification. Refractive errors were seen in 28% girls, but only 26% were corrected, the rest were undetected.

Vitamin – A deficiency was observed in 9% girls, Acne vulgaris were observed in 26% girls, while 22% girls complained of white discharge/leucorrhea, 7% girls had intestinal worm infestation and 3% girls complained of Dysuria. Only 45% girls had received at least a single dose of Tetanus Toxoid which reflects low vaccine coverage.
Reproductive Health

About 63% girls had attained Menarche. Mean age at Menarche was 13.31±1.31 years. Dysmenorrhea was present in 60% girls. Menstrual Hygiene was poor and majority of girls disposed sanitary pads in open.

Nutritional status

All girls were Vegetarians and over 77% of girls were consuming GLVs either daily or frequently. However, regular fruit consumption was observed in 57% of girls. Almost all (98.5%) girls were taking some or other junk foods with varying frequency. It is observed that overall dietary intake of essential minor nutrient, especially Iron is grossly deficient. Overall mean calorie intake was 929.3±340.8 Kcals, deficient by 54% of RDA. Mean iron intake was 15±6.8 gms, deficient by 41% of RDA. The prevalence of anemia amongst girls was 86%. Mild anemia was observed in 59.1% girls, moderate anemia was observed in 26% while severe anemia was seen in 1% girls. Therefore, there is high prevalence of under-nutrition (chronic energy deficit) and iron deficiency anemia. Habit of tobacco chewing was seen in 2 % girls.

Knowledge related to Iron Deficiency Anemia

The knowledge of the micronutrient Iron, its sources and other related questions about IDA was poor (7% to 45%). When asked from where they received iron folic acid tablets, 54% replied that they received tablets from Anganwadi while 29% didn’t know from where to obtain Iron folic acid tablets.

Discussion

Illiteracy among adolescent girls was low but drop-out rate was high, especially majority had dropped out after primary schooling. In Sarva Shiksha Abhiyan emphasis is on free primary education, success of which is evident but along with this now higher education should also be promoted so as to empower women both in terms of ability for decision making and financial stability.

Nearly one-third girls were undernourished. This observation is alarming as government is already supplying free supplementary nutrition to girls under Integrated Child Development Scheme. So, to overcome this, IEC regarding availability of supplementary foods and quality assurance should be provided. One way to do this is branding supplementary foods along with social marketing. This will increase confidence among beneficiaries and their parents regarding the products.

Growth monitoring of school girls at regular interval of every six months in the schools should be made compulsory to detect early nutritional deficiency. For out of school girls, their growth monitoring can be done regularly at Anganwadis or AFHS clinics. Few girls have their blood pressure in pre-hypertensive stage or in stage-I. This is very dangerous if not corrected promptly as blood pressure in younger age groups tends to increase in adulthood. Health promotion measures like arranging Marathon, arranging fairs showing different nutritious recipes from traditional diet, etc. should be arranged and continue on a regular basis to create healthy adolescents. Even, schools can be asked to arrange such activities along with some appreciation for the winners to motivate adolescent regarding healthy lifestyle and behaviour.

Ten years & sixteen years Tetanus Toxoid (TT) coverage was very low, even for single dose indicating low level of awareness
among beneficiaries regarding availability and its importance.

In school health services, screening for refractive errors is done once a year which is a very important tool for its early detection, along with this regular monitoring by teachers for refractive errors should be supervised so as to strengthen early detection and prompt correction. Intestinal worm infestation rate was 7% along with practice of open air defecation (3%). To overcome this, albendazole and health education regarding hazards of open air defecation should be repeatedly instilled in the minds of adolescent, this can be done in schools or when adolescent girls come to AFHS clinics.

Adolescent girls are very receptive regarding menstruation as they have very little information about it. So, opportunity should be grabbed to give them information regarding the normal physiology of menstruation and menstrual hygiene at AFHS clinics. Special interactive sessions of lady doctors or gynaecologists and girls should be arranged at AFHS clinics from time to time.

Mean calorie intake and iron intake was low according to their age. Along with provision of supplementary nutrition, dietary diversification and food fortification can also be tried out.

Prevalence of Iron deficiency anemia is very high and mean haemoglobin concentration is falling with advancing age. So, regular monitoring of haemoglobin of girls should be done every 3 months at AFHS clinics and it should be ensured that iron folic acid tablets are available on a regular basis at the clinics free of cost.

Special nutrition weeks should be celebrated in the AFHS clinic to emphasize

1) the importance of regular and adequate amount of iron rich foods or foods fortified with iron in the household diet, 2) Use of traditional practices of cooking in iron vessels, 3) Emphasis on regular consumption of vitamin C rich foods along with meals and 4) harmful effects of post meal consumption of tea.

Many girls were not knowing that Iron folic acid is available free of cost at the clinics. Nor they were aware regarding anemia, its symptoms and how to prevent it. It is taken as granted that health education is provided regarding adolescent problems like anemia to the girls. In reality, hardly 10 % were aware about it. So, if this gap is to be closed, regular supervision by AHO or DyHO should be ensured. Even community medicine department can be asked to provide regular health education as well as supervision.

It was observed that many adolescent were not aware about AFHS clinics, about what activities are done at such clinics, about availability of services at these clinics, etc. So, first and most important step is to make each and everyone aware regarding existence of such clinics and their services. Those who were aware of such clinics were not willing to avail the services. Hence, there is some problem in accountability of the services. One way to achieve accountability is public private partnership. NGOs can be asked to run AFHS clinics initially and later on it can be merged with existing facilities.

**Recommendation**

It was seen that confidentiality, privacy and waiting rooms were not appropriate as it should be to make services friendly. If confidentiality and privacy are not ensured then girls will hesitate to avail the services.
One of the main criteria for effective functioning of AFHS clinics is to segregate it from general health services. This was not seen at any of the centre. This should be immediately rectified otherwise attendance at the clinics will be low.

It was seen that many times AFHS clinics were cancelled due to other work activities at the centre. This is harmful as inability to provide consistent services will lead to loss of faith in the services.

References


