INTRODUCTION

“The adolescent girl still remains a young plant that neither gets light nor water. She remains the flower that could have blossomed but didn’t....”  

Bhasin

The term adolescence which means “to emerge”, or to “achieve identity” is a relatively new concept, especially in development thinking. The origin of the term is the Latin word; ‘adolescere’ meaning ‘to grow, to mature’ indicates the defining features of adolescence (UNFPA, 2000). The Oxford Dictionary defines adolescence as the period between childhood and adulthood.

Adolescence begins around the age of 11 and lasts up to 18 or 19 years of age [NCERT, 2008]. WHO defines adolescence as the period between 10 and 19 years of age which broadly corresponds to the onset of puberty and the legal age for adulthood. It is a developmental period during which a person is no longer a child, but not yet an adult. This is the phase of life when important changes occur in different dimensions of life, such as physical, biological and emotional growth and maturity. A time of rapid growth, adolescent is an extremely sensitive period, as it is the stage when an adolescent becomes inquisitive, attempts to explore his/her individuality and independence, and thinks critically about himself/herself and the world around. These years are also a time of exploration and widening horizons and a time to ensure healthy all round development.

During this time, transformation of body contours, the onset of puberty, unusual mood swings, and emotional and hormonal changes occur. The young individual undergoes rapid behavioral variations - anxiousness, apprehension, curiosity, and defiance. Cognitive development, involving the maturation of the mind, perceiving abstract phenomenon and articulating an argument logically and maturely also takes shape (UNICEF, 2002).
Adolescents account for one fifth of the World’s population. India’s population of young people is approximately 327 million, which comprises 30 per cent of the population of the country, with the number of adolescents projected to continue growing over the coming years (National Commission on Population, 2007). Males outnumber females in every age group (Bakshi, 2005). Of the total population, 12.1 per cent and 10.5 per cent girls fall in the age groups of 10-14 and 15-19 years respectively. Population of India and the quality of health of this group is of considerable importance in the context of national development (CSO, 2001).

In India, millions of girl children are compelled to marry and consequent childbearing and rearing before they have had a chance to complete their physical growth. An average adolescent girl usually has little, if any, input into the decision of her own marriage, sexual initiation and child bearing. Indian adolescent girls have high rates of fertility, with 19 per cent of total fertility rates accounted for by women in the 15-19 years age group. Early marriage and subsequent pregnancies can have adverse effects on both mother and child (WHO, 2007). There is a considerable high incidence of low birth weight newborns to adolescent mothers and high rates of neonatal under five and infant mortality (UPS, 2000). According to the Indian Council of Medical Research (ICMR) maternal mortality rates among 15-19 year olds were 645 per one lakh live births, compared to 342 per one lakh among adult women aged 20-34 years. Any deprivation during adolescence is believed to adversely affect the outcome of pregnancy resulting in high maternal mortality, low birth weight and poor nutritional status of the infants (Kusuma, 2001).

Imbalances in mortality rate, low level of gainful employment, adverse sex ratio and early marriage are not the only challenges faced by adolescent girls in India. Low nutritional status is also a major hindrance for their growth, with anemia and vitamin A deficiency being prevalent. UNICEF [2002] reported 55 per cent of adolescent girls in India were anemic. According to the National Family Health Survey (NFHS - 3) for the 2005-2006 period, there was
a high prevalence of anemia, 56 per cent amongst ever married women aged 15 years and above, which represented an overall increase of 5 per cent from the 1998-1999 period.

According to UNFPA (1998), actions taken during adolescence can affect a person’s life opportunities, behavioral patterns and health. For physical, socio-cultural, economic and psychological reasons, young people are typically poorly informed about how to protect themselves sexually and are thus particularly susceptible to unwanted pregnancies and STI including HIV/AIDS.

A number of studies support the fact that adolescents desire and seek authentic knowledge on reproductive health-related matters. But sex being a taboo in our society, there has been an absence of any authentic source of accurate knowledge on it. This creates anxiety and confusion among adolescents who fall prey to prevailing myths and misconceptions that are carried over to their adulthood, subsequently creating problems with serious implications for family and marital relationship (CBSE, 1999).

There is an increasing recognition that reproductive health needs of the adolescents have to be attributed in terms of information and services, so that they can make informed choices leading to improvement in the health status (UNFPA, 2000). WHO states that Reproductive Health is a crucial component of general health. It has developmental and intergenerational components. It reflects health in adolescence and sets the stage for health beyond the reproductive years for both boys and girls.

Again nutrition is a significant indicator of the health and overall status of adolescents. The phenomenal growth that occurs in adolescents creates increased demands for energy and nutrients. Total nutrient needs are higher during adolescence than any other time in the lifecycle. Nutrition and physical growth are integrally related; optimal nutrition is a requisite for achieving full
growth potential. Failure to consume an adequate diet at this time can result in delayed sexual maturation and can arrest or slow linear growth (Stang and Story, 2005). Adolescents can and should take responsibility for their nutrition and the long term repercussion on health (Kuh et al., 1997).

Swaminathan (2006) reports that majority of school going adolescents consume inadequate diet and are malnourished. One of the major contributing causes is lack of knowledge on nutrition. Begum [2002] views that since the period of adolescence is accompanied by considerable stress due to physiological and psychological changes, attitude towards diet is often very unhealthy. Adolescent girls are at risk of inadequate intakes of nutrients due to various reasons - dieting, snacking, (usually energy-dense but otherwise nutrient - poor items), meal skipping, irregular eating patterns and a wide use of fast food for meals and snacks (WHO, 2005).

Schools can be one of the most credible and important source of information and education on reproductive health and nutrition where the formal instruction will play a role in providing accurate information tailored to the educational needs of the young, based on the cultural and religious environments of their communities. Further, schools can reach many adolescents and provide opportunity to practice healthy eating habits at low cost (UNESCO, 1998).

It is important that any educational programme at schools should involve teachers who may provide helping hand and support for the success of the programme. Teachers will often have their concern and degree of apprehension regarding such programme and through training of teachers in the development stage; one can enable them to view the programmes as relevant. Teachers dealing with adolescents on a daily basis are in strong position to provide valuable insight into the needs and strategies relevant to educational intervention programme development (UNESCO, 1998).
Need and scope of the study

Adolescence in girls has been recognized as a special period in their life cycle that requires specific and special attention. Joshi (2001) reports that, it is necessary to take more care of girls than boys who may be vulnerable to malnourishment. Health and nutritional needs of female adolescents are mostly ignored in our society. The attention given to the health problems of adolescent girls is still meager, even though adolescence is a period when looking after health and nutrition can help to build a buffer against the heavy physical demands of the reproductive years.

During the adolescence stage, secondary sexual characteristics and reproductive maturation occurs. Many physiological and psychological changes take place due to hormonal changes in the body of adolescents. Puberty attainment is considered as a landmark in female adolescent life. Many adolescent girls get shocked at the onset of menarche and take it as a fearful event. A lot of myths and misconception about menstruation prevails among adolescent girls. Most of them lack knowledge regarding management of menstruation, genital hygiene etc. Due to lack of genital hygiene girls get trapped into reproductive tract infection which may lead to further complication.

Elizabeth [2004] reports that malnutrition is common among adolescents due to various reasons. Many of the school going adolescent consume less food due to lack of time as they are engaged in a period of stressful studies for the school exams. Many of them refuse to carry tiffin boxes and resort to taking “fast foods” and soft drinks. These food items do not supply enough calories, vitamins and minerals. Some of adolescent girls have psychological problems like anorexia nervosa and bulimia nervosa. Many adolescent girls eat less food due to ignorance of their nutritional requirements. Malnutrition in turn affects their physical growth and development during the growth period and leads to generalized functional impairment, diminished productivity, poor resistance to infection etc.
Thus just because of ignorance many adolescent girls are trapped in the vicious cycle of poor health. It can be viewed that poor health is not only because of lack of resources but many times due to lack of knowledge. Parents, teachers, peer group, media etc. are not able to provide adequate information to adolescents regarding their reproductive and nutritional health. More specifically, this indicates that adolescents should be properly informed regarding reproductive and nutritional health and prepared effectively in achieving sound general health free from reproductive diseases and nutritional deficiencies.

School based educational intervention programme on adolescent reproductive and nutritional health can be effective and an important way of enhancing adolescent girls’ knowledge attitude and practice on their reproductive and nutritional health. Arora et al. [2008] have reported that the National Council for Educational Research and Training (NCERT) had recognized the need for reproductive health and nutrition education in elementary and secondary education years back in 1988 itself. It had then recommended that this would help the adolescents to develop a healthy attitude and also help to prevent the rise of diseases. Thus it is important not to delay providing information to young adolescent girls but to begin when they are young, as the basic information provides the foundation on which more complex knowledge is built up over time.

Different setting provides different contexts and opportunities to gather information on reproductive and nutritional health. But in school the interaction between the teacher and young students takes a different form and is often provided in organized blocks of lessons. So school based educational intervention can be an important and effective way of enhancing adolescent girls’ knowledge, attitude and behavior on their reproductive and nutritional health.
The most important determinant of success of an educational programme for adolescents is the teacher. Since adolescents spend a considerable amount of time in school, teachers can play a critical role in building the total school environment which is congenial for imparting adolescent education (Voluntary Health Association of India, 2002).

School teachers, the most appropriate persons who can deliver knowledge to the students in a scientific approach, can play an important role in providing information and advice to the adolescents. Teachers establish a warm, friendly, open minded atmosphere where students feel free to discuss problems which concern them. Spectrum of information can range from routine education to health advice. Many queries of students get easily resolved merely by having discussions with teachers which may be difficult to get resolved at home or through the guidance of outside experts. They can discuss certain matters in a direct, unemotional an unembarrassed manner. It is the quality of the personal interaction between students and teachers that can bring success to a programme.

In order to increase the comfort zone on the topics of adolescent reproductive and nutritional health, training has to be provided to the teachers involved in the educational programme. The school teachers are not equipped to perform their role as they were not properly trained to do so in the period of their professional training and they are dictated by the rigidly defined curriculum. Trained teachers will help to build fine attitudes and values which will enable students to make wise choices and to draw their own conclusion. Their understanding helps to satisfy curiosity by providing opportunities for skills development and attitude clarification in more formal ways. The findings of the present study may be useful for the educators to formulate similar models of teaching - learning packages for the dissemination of authentic information to adolescents.
The Experimentation with new programme like this in schools will help one to analyze the impact of the programme and facilitate implement the programme in future. The developed module for this programme with needed information, illustrations followed by related exercise will help one to assess the effectiveness and utility of the module which can be replicated for wider use. Training will equip the teachers with appropriate teaching methodology as far as teaching of the adolescent girls on reproductive and nutritional health is concerned. Imparting knowledge on reproductive and nutritional health will allow adolescent girls to take care of their own health.

Objectives

The general objective of this research study was to improve knowledge, develop positive attitude and promote healthy practice regarding Reproductive and Nutritional Health among School Going Adolescent Girls through Educational Intervention.

Specific objectives were to:

- identify the needs of the adolescent girls related to their Reproductive and Nutritional Health,
- frame a module suitable to meet the identified needs of the respondents related to their Reproductive and Nutritional Health,
- train the selected teachers to develop skill in their methodology to impart knowledge to the respondents on Adolescent Reproductive Health and Adolescent Nutritional Health (ARH and ANH),
- understand the background characteristics of the respondents - age, ordinal position, mother’s education, family type, residence, religion and family income,
- assess the baseline Knowledge, Attitude and Practice (KAP) of the respondents on ARH and ANH for both experimental and control groups,
> assess the influence of background characteristics of the respondents on their baseline KAP on ARH and ANH,
> evaluate the effectiveness of the educational intervention on ARH and ANH given to the respondents,
> compare the impact of educational intervention on ARH and ANH among the respondents by the government and by the private schools,
> analyze the relationship among and the Knowledge, Attitude and Practice of the respondents on ARH and ANH and
> analyze the impact of the educational intervention given to the respondents by the type of the facilitator to their respective groups.
Based upon the objectives, a conceptual frame work has been framed and is given below;

Conceptual Frame Work

C - Control Ei - Experimental Group 1 E2 - Experimental Group 2
Hypotheses

Based upon on the objectives and conceptual frame work of the present study the following null hypotheses were formulated.

1. Respondents background characteristics like age, mother’s education, family type, religion, locale of their residence and family income do not have any impact on baseline KAP of the respondents on ARH and ANH.

2. There is no significant change in the KAP of the respondents on ARH and ANH before and after the intervention.

3. There is no significant difference in the KAP on ARH and ANH among the respondents of government school and private school in the pretest and the posttest.

4. There is no significant relationship among Knowledge, Attitude and Practice on ARH and ANH in the pretest and the posttest.

5. There is no significant difference in the KAP on ARH and ANH among the respondents of Experimental group 1 and Experimental group 2.

Presentation of the research report

The report of the study is presented in five chapters. The first chapter deals with introduction where need and scope of the study, objectives and hypotheses are discussed. Second chapter covers review of literature related to the study. Third chapter deals with design of the research followed by results and discussion in the fourth chapter. Fifth chapter is the summary and conclusions followed by bibliography and appendices.