CHAPTER-I
INTRODUCTION

Introduction

Adolescence is very important period in human life. After infancy it is a period of rapid growth and development. As it is true of every important period during the human life span, adolescence has certain characteristics that distinguish it from the periods that preceded it and the periods that will follow it (Hurlock, 1981). Some developmental stages are important for their physical effects and some for their psychological effects - adolescence is important for both.

The term adolescence comes from the Latin word *adolescere*, which means “to grow” or “to grow to maturity” (Hurlock, 1981). Adolescence period begins generally at age of 12 or 13 on onset of puberty and end in the late teens or early twenties (Papilla and Olds, 1997). Today the term adolescence has a broader meaning. It includes mental, emotional, social and physical maturity. It is a period of transition, a passage from one stage of development to another i. e. from childhood to adulthood. Adolescence is characterized by dramatic biological, cognitive and social changes (Susman and Rogel, 2004) including changes in physical stature and appearance, improvements in cognition and executive function, increase in emotional activity and self-reflexion and changes in self-concept and identity (Erikson, 1967).

The early period of adolescence is Puberty. Puberty is the period in the developmental span when child changes from an asexual to a sexual being. The word Puberty is derived from the Latin word “*Pubertas*” which means “age of manhood”. Puberty is an overlapping period because it encompasses the closing years of childhood and the beginning years of adolescence (Hurlock, 1981). It is a relatively short period. Girls as a group, tend to mature more rapidly than boys, as a group. At this stage, many physical and physiological changes take place. One and the most important physiological change taken place in the female body is onset of menarche i. e. menstrual cycle. Menarche is a normal biological milestone in the females’ life (Iyengar, 2008). It indicates girls has undergone puberty and enter into adolescent years, they became mature.
Menstruation prepares female body for reproduction. Menstruation is a natural periodic change occurring in a female in which discharge of blood and cells sheds from the lining of the uterus takes place from the cavity of the womb (Iyengar, 2008). In general girls begin to menstruate during age of 10 to 14 years. The mean age of menarch is typically between 12 and 13 years (Hurman-Giddens, et al., 1997; Flug, Largo and Prader, 1984). Menstrual bleeding lasts 2-7 days in 80-90% of adolescent girls (Flug, Largo and Prader, 1984; Widholm and Kantero, 1971). Menstruation period of women continue until the age of 45 to 55, i.e. up to the beginning of menopause. During this period of maturation the female body undergoes several visible changes i.e. rapid increase in height and weight, the hips become widened and fat is deposited in this region. The vagina becomes fully developed, along with the breasts, the heart and the lungs attain a fuller size the muscle in the body become harder, the oil glands under the skin secrete more oil often resulting in acne or pimples among teenagers (Hurlock, 1981; Iyengar, 2008; Papilla and Olds, 1997). The liberal generation of sex hormones also causes excessive secretion of fatty substances under the skin (Papilla and Olds, 1997).

Menstruation though a normal physiological process many a times is associated with disturbances before and during menstruation (Deo and Ghattargi, 2007). The physiological and psychological changes cause discomfort and affect the daily routine, physical as well as academic performance. These problems include headache, abdominal pain, acne (Deo and Ghattargi, 2007) backache, leg pain, calf pain, (Banerjee and Mukharjee, 1961) nausea, feeling of vomiting, (Padubidri and Daftar, 1997) dizziness, confusion stress, pain in breast, pimples, skin problems (Papilla and Olds, 1997) and excess bleeding. Among these dysmenorrhoea i.e. painful menstrual is the most common problem reported in adolescents (Chan, et al., 2009; Deo and Ghattargi, 2007) and a frequent cause of absenteeism from school or restriction of daily activity (Cakir, et al., 2007; Lee, 2006; Banikarim et al., 2000; Demir, et al., 2000; Vicdon, 1996). Most of the girl students avoid their participation in any physical activity and sports during their menstrual period. The degree of discomfort experienced during menstruation varies from girls to girls. Some girls are facing it comfortably while some are badly affected by unpleasant symptoms.

The physical hazards of puberty are minor as compared with psychological hazards (Hurlock, 1981 Papilla and Olds, 1997). Most common psychological problems are the tendency to develop unfavourable self-concepts, to become underachievers, unwillingness to accept changes in bodies or socially approved sex
roles and deviant sexual maturing (Hurlock, 1981). The age of puberty has important implications for the way adolescents feel about themselves and how others treat them (Feldman, 2004). The rate at which their physical changes occur can affect the way adolescents are viewed by others and how they view themselves (Morgan, et al, 1993). Due to physical changes and changing bodies some adolescents may face problem of self-acceptance, they become anxious due to dissatisfaction with their appearance. Especially girls realize the role of appearance in their social acceptance more important and tend to worry more and be conscious about their looks than boys. There is a tendency to have weaker self-concept among girls as compared to boys, may be due to their different experiences during early adolescence when they undergo the demands of stereotypes gender roles (Papilla and Olds, 1997).

Self-concept is a way people think about themselves (Sarswat, 1981). It is the map which each person consults in order to understand himself during the moments of crisis or choice. It develops as a result of the interaction of the individual and environment of his surrounding, hence it is conceived. Self-concept and self-esteem which are interchangeably used and interdependent terms are getting shapes in adolescence years. Due to changes occurred in body, physical appearance, psychological and social adjustments, self-concept of adolescents get affected to a greater extent, it may be positively or negatively. Besides the physical and psychological changes, there is cognitive, intellectual and moral development also takes place during this important period of life. The level of development, social acceptance, academic achievement, changes in social behaviour of adolescents may develop unfavourable self-concept (Hurlock, 1981). Lowered or unfavourable self-concept may cause increase in anxiety level of adolescents. There are evidences of inverse relationship between self-concept and anxiety. According to Feldman (2004), anxieties are very common in adolescents. They have concerns about their physique, attractiveness, academic and physical activity performance, acceptance by peers as well as society and about their futures. Generally adolescent girls concerns about physical discomforts they suffer during their menstrual period. Some girls feel menstrual period is a curse and may experience anxiety and depression.

Hence, it becomes very crucial to enhance self-concept and to reduce anxiety level as well as to get rid from physical problems occurring during and before menstruation.
**Surya Namaskar and Yoga Nidra for Adolescent girls:**

Yoga has been an excellent solution for various health ailments. Yoga is an ancient Indian art and science that dates back more than 5000 years ago. It is being practiced since the beginning of civilization. Kindersley, (2003), describes; “Yoga is a form of exercise based on the belief that the body and breath are intimately connected with the mind. By controlling the breath and holding the body in steady poses or asanas yoga creates hormone.”

**Surya Namaskar:**

The *Surya Namaskar* is one of the best exercises that people can perform. The benefits occurring from these exercises are unique and excellent. *Surya Namaskar* is a method of worshiping Surya as sun is the prime source of light and energy (Nandar and Urs, 2014). It has been practiced in India for thousands of years from Vedic era by Rishimunis (Khardekar, 2007). *Surya Namaskar* is a sequence of yogic postures along with chants that together comprise a complete yoga (Unkule, 2014; Mandalik, 2015). In *Surya Namaskar* besides asanas equal importance is given to breath control or breathing in i.e. pranayam and recitation of different mantras (Unkule, 2014; Mandalik, 2015). Somewhat the practice of pranayam is also included in it. Though *Surya Namaskar* is a link of few asanas from yogasana, still in the ancient books of yoga the importance of *Surya Namaskar* is mentioned separately. Due to some of its specialities it has gained a separate position in yogasana (Mandalik, 2015).

By performing the *Surya Namaskar* daily our body becomes flexible. The series of exercise in *Surya Namaskar* activates the endocrine glands and the chakras. It accords overall strength and flexibility to the body. It tones up digestive system, massages the viscera; it oxygenates the blood and detoxifies the body; regulates nervous system, promotes good sleep, improves memory, allays worry and calms anxiety, increases the immunity to disease. It has beneficial effects on chronic skin problems; it relieves stress and tension (Naik, 2013). *Surya Namaskara* also improves attention and concentration. Energy is circulated throughout the body by *Surya Namaskar* through suryanadi due to which psychological balance is achieved and development of pranshakti can be achieved (Dalvi, 2012). *Surya Namaskar* helps a woman to fulfil her tasks and maintain her complexion, luster and feminist (Iyengar, 2008).
**Yoga Nidra:**

*Yoga Nidra* (Sanskrit for Yogic Sleep) derived from Tantra *Yoga* tradition is a powerful technique (Bali, 2012). Although Tantric in origin can be classified as a part of the Raja Yoga system’s eight limbs of yoga, the well-known codification system of the Yogic practices by Patanjali (an Indian sage who lived around 200 B.C.) (Swami Satyanand Saraswati, 1998). *Yoga Nidra* is the yogic tranquillizer, the natural method to establish harmony and well-being throughout the entire system (Amita, et. al, 2009). It is a systemic method of inducing complete mental, physical and emotional relaxation (Bali, 2012; Kumar, 2010). For absolute relaxation, one must undergo *Yoga Nidra*, the state of dynamic sleep. Now-a-days *Yoga Nidra* is probably best known technique to induce complete physical, mental and emotional relaxation (Kumar and Pandya, 2012). *Yoga Nidra* apart from an important tool in stress management also showed significant results in various psychosomatic diseases and opens up a new avenue for the holistic management of the ailments (Bali, 2012). Research has been proved that, yogic relaxation training should be prescribed more frequently as an adjunct or alternative to conventional drug therapy for menstruation pain and disorder (Ferguson, 1981).

According to Iyengar (2008), yogic practice in puberty stage gives courage to approach womanhood without any mental disturbances by controlling and checking impulses and emotions. *Surya Namaskar* and *Yoga Nidra* offer great help at puberty. Hence, in the present study, researcher wanted to intervene *Surya Namaskar* and *Yoga Nidra* programme as a remedial solution for physical and psychological (anxiety and self-concept) problems during menstruation in adolescent girls.

**1.1 Statement of the problem:**

Adolescents face a period of rapid physical and social change that affects them for the rest of their lives (Feldman, 2004). Morgan, et al. (1998) reveals, just as important as physical changes psychological and social changes that unfold during adolescence have equal importance. For many girls, menstruation is a serious concern, in other words it is a curse. This is because they suffer physical discomforts such as cramps, weight gain, headaches, backaches, swollen ankles and breast tenderness and experience emotional and psychological changes. Changed body size, gain in weight, changed appearance and the physical discomfort can lead to lower their self-concept in this period (Hurlock, 1981; Papilla and Olds, 1997). Adolescents
are anxious about friends, parents, appearance, independence and their futures. Of the various psychological problems researcher found lowered self-concept and anxiousness are very common and of most concerned issues in adolescent girls. Yoga is a mind-body practice that combines physical postures, breathing exercises and meditative practices. *Surya Namaskar* and *Yoga Nidra* has been part of Yoga since ancient time. Both have proven their therapeutic effects on several menstrual disorders of women as well as psychological variables. In the present study entitled, “*Effect of Surya Namaskar and Yoga Nidra on Menstruation Problems of Adolescent Girls*” researcher wanted to study the effects of *Surya Namaskar* and *Yoga Nidra* on physical and psychological problems (self-concept and anxiety) generally faced by adolescent girls during their menstruation. Researcher also wanted to compare the results of both the programmes and find out which of the yogic practice is more effective and beneficial for reducing the physical and psychological problems of adolescent girls.

1.2 Significance of the Study:

Nature has endowed women with the responsibilities of perpetuating mankind (Iyengar, 2008). The wealth of nation and health of the future generation depend upon physical and mental well being of women. In the modern days of competition women had to work with men. But during menstrual period women face various physical and psychological problems. During this period girls avoid participation in physical activity and sports, as well as due to absenteeism their academic performance is also decreased. Due to the physiological changes in their body they are under stress condition. Most of the girls prefer to stay at home so their number of absentees increases in school. Researcher has recently studied (Gawali, 2011) the effects of Rhythmic *Yoga* and *Pranayama* program on problems during menstrual cycle of 13-14 year old girls of Makhamalabad, District Nashik of Maharashtra. It has been found that there is intense need of a complete exercise program which can be easily administered, adopted and practiced, which require no props or equipment and the physical education teachers can conduct through their Physical Education syllabus. *Surya Namaskar* is one of the best solutions. It is the exercise program which girls can continue in their future life too and which can be easy for administering and adopting at school level for girls from their age of puberty. Similarly *Yoga Nidra* is a therapeutic remedy and form of yogic practice including deep relaxation, meditation,
pranayama. Yoga Nidra if once learnt by girls in student life they can be benefited throughout their life.

Researcher herself is a teacher of physical education and yoga. She observed and studied the positive effect of Surya Namaskar and Yoga Nidra. Hence in the present study researcher wanted to use Surya Namaskar and Yoga Nidra practice as a remedial solution on the problems of adolescent girls in their menstrual period.

1.3 Objectives of the study:
1.3.1 To understand and measure the physical and psychological problems (self-concept and anxiety) of the adolescent girls during menstrual period.
1.3.2 To find out the effects of Surya Namaskar on physical and psychological problems of adolescent girls during menstrual period.
1.3.3 To find out the effects of Yoga Nidra on physical and psychological problems of adolescent girls during menstrual period.
1.3.4 To compare the effectiveness of Surya Namaskar and Yoga Nidra programme.

1.4 Hypotheses:
H₁: Surya Namaskar will have significantly positive effect on physical problems during menstruation of adolescent girls.
H₂: Surya Namaskar will significantly have positive effect on psychological problems faced by adolescent girls during menstruation i.e. it will reduce the anxiety level and help to improve self-concept of adolescent girls.
H₃: Yoga Nidra will have significantly positive effect on physical problems during menstruation of adolescent girls.
H₄: Yoga Nidra will have significantly positive effect on psychological problems faced by adolescent girls during menstruation i.e. it will reduce the anxiety level and help to improve self-concept of adolescent girls.
H₅: Surya Namaskar group and Yoga Nidra group will show similar results on physical and psychological problems of adolescent girls during menstruation.

1.5 Assumptions:
It was assumed that,
• 12-15 year old girls of Maratha Highschool, Nashik, suffer from several physical and psychological problems during menstrual cycle.
• The School authority will co-operate for conducting the training programme.
• Girls will co-operate and actively participate in training programme.
• The teacher made questionnaire will accurately measure physical problems of adolescent girls during menstrual cycle.

1.6 Delimitations and Limitations:

1.6.1 Delimitations:

The study was delimited to,

• 180 girls in early adolescence years i.e. age group between 12 to 15 Years from Maratha High School, Nashik.
• 24 weeks Surya Namaskar and Yoga Nidra programme for 6 days per week and 60 minute per session.
• Selected physical menstrual problems during and before menstrual period.
• Psychological variables viz., self-concept and anxiety.

1.6.2 Limitations:

• Daily routine, diet, health habits, physiological and hormonal changes of the girl participants could not be controlled by the researcher.
• The information given by the girls was the only source of measuring the problems during menstruation with the help of which training programmes are evaluated. Hence researcher considered it as a limitation of the study.
• It was assumed that the suggestions given by researcher during Yoga Nidra session were accurately and strictly followed by the participants of Yoga Nidra group. Researcher could not be cross check whether participants were gone in deep yogic sleep and following the suggestions. Hence it is also considered as limitation of the study.

1.7 Operational Definitions:

• Adolescent girls:
Girls of age group between 12 to 15 years who have started their menstruation and suffer from certain menstrual problems are called as adolescent girls.

• Menstruation:
Menstruation is a periodic change occurring in a mature girls in which blood is expelled out from uterus through vagina once in a month for 3 to 5 days is known as menstruation.
• **Surya Namaskar:**
  A sequence of 10 yogic postures referred by Balasaheb Pant Pratinidhi, Aundh along with chants of 'Omkara' with the appropriate 'Bija Mantra' along with the name of the Sun (which corresponds to the chakra in the body in ascending order) together comprise a complete yoga called *Surya Namaskar.*
  *Surya Namaskar* included following asanas;
  Utthitasana, Hasta padasana, Ardha bhujangasana, Tarafasana, Ashtangasana, Bhujangasana and Parvatsana.

• **Surya Namaskar Programme:**
  It is a 24 weeks programme of *Surya Namaskar* designed by researcher which includes pre-yogasana movements, omkara, *Surya Namaskar,* pranayam, deep breathing and shavasana.

• **Yoga Nidra:**
  *Yoga Nidra* means yogic sleep. *Yoga Nidra* is a state in which participant adolescent girls are supposed to be in deep relaxation with inner awareness, concentrating on the specific body parts of their body and following the instructions given by researcher.

• **Yoga Nidra Programme:**
  It is a 24 weeks programme of *Yoga Nidra* designed by researcher which includes pre-yogasana movements, omkara, *Yoga Nidra,* pranayam, deep breathing and shavasana.

• **Physical Problems during menstruation:**
  The signs of physiological changes seen in adolescent girls before and during menstruation which cause discomforts and affect the daily routine, poor physical condition as well as poor academic performance are referred as physical problems during menstruation. Feeling pain during menstruation, pain before menstruation, abdominal pain, leg, calf pain, thigh pain, feeling of vomiting and improper eating, backache, headache, Skin problems, acne, pimples on face, excessive bleeding, are the physical problems during menstruation.

• **Psychological Problems of adolescent girls:**
  Self-concept and anxiety of adolescent girls are referred as psychological problems of adolescent girls.
• **Self- concept:**
The score obtained from the 48 items of the self-concept scale constructed by Saraswat (1981) is called as self-concept.

• **Physical dimension of self-concept:**
Individual view of adolescent girls about their body health, physical appearance and stress is physical dimension of self concept.
It is total score of item no. 2, 3, 9, 20, 22, 27, 29 and 31 from 48 items of the self-concept scale constructed by Saraswat (1981).

• **Social dimension of self-concept:**
Individual sense of work of adolescent girls in social interactions is called as social dimension of self concept.
It is total score of item no. 1, 8, 21, 37, 40, 43, 46 and 48 from 48 items of the self-concept scale.

• **Temperamental dimension of self-concept:**
Individual view of adolescent girls’ prevailing emotional state of predominance of the particular kind of emotional reaction is temperamental dimension of self concept.
It is total score of item no. 4, 10, 14, 16, 19, 23, 24 and 28 from 48 items of the self-concept scale.

• **Educational dimension of self-concept:**
Individual view of adolescent girls in relation to their school, teachers and extra-curricular activities is educational dimension of self concept.
It is total score of item no. 5, 13, 15, 17, 25, 26, 30 and 32 from 48 items of the self-concept scale.

• **Moral dimension of self-concept:**
Individual estimation of adolescent girls’ moral work-right and wrong activities is moral dimension of self concept.
It is total score of item no. 6, 34, 35, 41, 42, 44, 45 and 47 from 48 items of the self-concept scale.

• **Intellectual dimension of self-concept:**
Individual awareness of intelligence and capacity of problem solving and judgement is intellectual dimension of self concept.
It is total score of item no. 7, 11, 12, 18, 33, 36, 38 and 39 from 48 items of the self-concept scale.

- **Anxiety:**
  
  Total score of 90 items Comprehensive anxiety test constructed by Sinha and Sinha (1973) is called anxiety of adolescent girls.
References


