CHAPTER II

REVIEW OF LITERATURE
## CHAPTER II

### REVIEW OF LITERATURE

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2.1. INTRODUCTION

In this era of scientific and technological advancements where changes have become a way of life, the female adolescent, enmeshed in fears and doubts, trying to assume physical and emotional maturity, invites more than a casual interest. Menstruation is the most dramatic manifestation of puberty. Being a phase of tremendous hormonal fluctuations, adolescent’s menstrual patterns invite more than a cursory attention.

Adolescence is that period of life during which maturity is attained. Adolescence is viewed as a time of rebellion, a time to fight for dreams. This is a period of transition from childhood to adulthood. During this period (12-16 years), girls attain puberty. With puberty come profound internal changes involving novel and more sensitized social reactions. This is also the stage which raises the status of the girl to that of a woman.

The attainment of puberty brings with it many problems, both physical and psychosocial. Not surprisingly, adolescence is often referred to as the period of “storm and stress”.

A brief review of study related to the different aspects of menstruation, menstrual problems and menstrual hygiene is attempted here with. The review of literature is arranged in the following sections

* Adolescent growth and development
* Menstruation
* Problems of menstruation
  - Physical problems
  - Psychological problems
  - Social problems
* Menstrual hygiene
* Health Education

2.2. ADOLESCENT GROWTH AND DEVELOPMENT

Before entering in the period of adolescence, the girl has to complete the pre adolescence. Since puberty signals the beginning of development of secondary
sex characteristics, pre pubescence, the two year period that precedes puberty, typically occurs during pre adolescence (Wong, 1993).

Adolescence is a period of transition during which sudden changes take place in the body. “From the long legged flat chested awkward school girl, the transformation to the shapely young woman is almost like the metamorphosis from the caterpillar to the butterfly and quite as breath taking (Joseph, 1994).

Adolescence is the time period between 10-19 years (WHO, 1989). Adolescence is classified into pre adolescence, which begins at age of 9 years and ends by 13th year. Then start the middle adolescence that ends by 17th year and late adolescence that ends by 19th year.

Adolescence, growth and development encompass two closely related maturation phenomena, puberty and adolescence. Puberty is the process of physical growth and development. Adolescence is the process of cognitive and psychological development. Puberty begins in the stormy years of adolescence that brings an awakening of sexual feelings and desires (Smithson, 1992).

2.2.1. Secondary Sexual Development

Growth and development during childhood and adolescence appear to manifest three distinct cycles. The first extends from fertilization to 2 years, second extends from 2 years to 7 years. The third cycle begins gradually at about 7 or 8 years of age. Rapid growth occurs during nine to fifteen years of age in almost every bodily dimensions giving rise to adolescent growth spurt.

2.2.1.1. Physical Development:

The height and weight increase followed by the growth in several skeletal and muscular dimensions. Most skeletal and muscular structures follow the general pattern of the adolescent growth spurt (Tanner, 1962).

Reproductive growth spurt begins when pubic and axillary hair appears. The period when the reproductive system develops is often called puberty. Both external and internal organs of reproductive system grow spectacularly in adolescence.
Girl attains the ability to ovulate and is able to become pregnant. The physical changes of puberty are primarily the result of hormonal activity. Sex hormones are secreted by the ovaries (Wong, 1993).

The girl’s body appearances include, increase in the transverse diameter of the pelvis, development of the breasts, changes in the vaginal secretions and growth of pubic and axillary hair. Menstruation begins (menarche) during this period at an age of 12.5 to 12.8. The girl’s hip begins to broaden from about the age of 12 years (Marlow, 1998).

The normal age range for menarche is considered to be 10-15 years. Estrogen, the feminizing hormone, found in low quantities in childhood slowly increases and becomes cyclic. Ovulation usually occurs 12 to 24 months after menarche (Wong, 1993).

Menarche may reflect a level of estrogen sufficient to induce endometrial bleeding and it is associated with a progressive increase in oestradiol secretion (Taylor, 1989).

### 2.2.1.2. Psychosocial or Emotional Development

Children during pubescence show changes in personality development as well as physical growth. They become increasingly more adaptable, approaching their peer groups and problem situations at home and school with greater confidence.

Adolescents are able to assume an increasing responsibility in what to them is reality. Pubescent may be able to handle important emotional problems (Marlow, 1998).

The theory of Erikson concerning emotional development shows sense of identity in early adolescence and sense of intimacy in later adolescence (Kids and Cults, 1984).

### 2.2.1.3. Cognitive / Intellectual Development

Progression in the realism of cognitive thinking culminates with the capacity for abstract thinking (Piaget’s 4th and last stage).
Adolescents are able to think about themselves and about others (Wong, 1993). They wonder what opinions others have of them and they are increasingly able to imagine thoughts.

2.2.1.4. Sexual Development

TANNER'S CLASSIFICATION OF SEXUAL MATURITY STAGES IN GIRLS

<table>
<thead>
<tr>
<th>SMR</th>
<th>Pubic hair</th>
<th>Breast</th>
<th>Menarche</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No pubic hair</td>
<td>Dormant breast tissue: veered nipple</td>
<td>No menses, all primary oocytes dormant, locked in the first meiotic division.</td>
</tr>
<tr>
<td>2</td>
<td>Sparse and fine, along the medial border of labia</td>
<td>Breast bud stage increase in areolar size; small breast mound elevation.</td>
<td>First menses occurs; usually scanty and anovulatory; may be spotting</td>
</tr>
<tr>
<td>3</td>
<td>Becoming darker, coarser, curlier and more abundant</td>
<td>Continued enlargement of breast and areola</td>
<td>Succeeding menses irregular in amount and interval; may involve dysmenorrhoea and other physical symptoms.</td>
</tr>
<tr>
<td>4</td>
<td>Coarse, curly abundant but amount less than in adult</td>
<td>Projection of areola and nipple beyond the contour of breast mound'</td>
<td>Menses become increasingly regular in amount and interval; all internal genitals show cyclic changes.</td>
</tr>
<tr>
<td>5</td>
<td>Normal adult female pattern spread to medial aspects of thighs.</td>
<td>Adult contour; only nipple project</td>
<td>Adult cyclic ovulatory pattern established with consequent fertility.</td>
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SMR: Sexual Maturity Ratio

2.3. MENSTRUATION

Menstruation is the monthly flow which is regulated by two hormones, estrogen and progesterone. The uterus is prepared for pregnancy every month. When pregnancy is absent, both estrogen and progesterone levels decline gradually bringing about menstruation (Padubidri and Daftary, 2004).

Menstruation is a monthly phenomenon which leads to certain responses that are physical, psychological and social.

In a study of 224 sixth grade girls, about their preparation for and expectation for menarche, girls viewed themselves as prepared for menarche.
However their expectations of menstruation reflected incomplete knowledge and a variety of misconceptions or ignorance (Koff, 1995).

Because of lack of adequate information, girls may have ambivalent feelings about menstruation. They may resent the fact that they cannot completely control all their bodily functions and may therefore consider menstruation a burden.

Many parents do not adequately explain to girls the various changes in body contour that indicate puberty. Before puberty and adolescence, children should be well oriented to the anatomic and functional differences between the sexes and certainly should have been told about menstruation.

2.4. PROBLEMS OF MENSTRUATION

“Disease free condition is the best source of virtue, wealth, gratification and emancipation while diseases are destroyers of these sources, welfare and life itself”. Of all kinds of happiness, the best is to have a good health ie, freedom from diseases in the mind and body.

The attainment of puberty brings with it many problems, both physical and psychological. Not surprisingly, adolescence is often referred to as the period of “storm and stress”. In addition to coping with every day stress, girls also start to face the problems of menstruation.

Ignorance about the physiological and phenomenological reality of menstruation might be expected to be significant feature of cultures which menstruation is surrounded by secrecy and euphemism (Walker et al, 1982).

Of 3000 Turkish teens, 26.7% had irregular periods, and 11.3% had visited a gynaecologist for irregular bleeding. 38.7% had dysmenorrhea, for which 41% used pain medication half obtained from family members and half over the counter. 46.6% had PMS (Demir et al, 2000).

Normal menstrual cycles during adolescence are 21-40 days in length with 2-8 days of bleeding and 20-80 ml blood loss per cycle. Up to 80% of menstrual cycles are anovulatory in the first year after menarche It is also pointed out that over 50% of adolescent females experience some menstrual dysfunction, including
dysfunctional uterine bleeding, amenorrhea, dysmenorrhea and PMS in which most of them are minor (Neistein, 2002).

In recent years, there has been a significant increase in researchers on physical and psychosocial problems of menstruation. Studies come out with conclusion that women face severe problems during menstrual cycles, mainly due to lack of knowledge.

Menstrual disorders such as amenorrhea, excessive uterine bleeding, dysmenorrhea and premenstrual syndrome are common reasons for visits to health care providers by adolescent girls (Mc Evoy et al, 2004).

Menstrual disorders were found to be the commonest gynecological problem among 58.06% (Sebanti et al, 2005).

In a study the girls reported excessive vaginal discharge, itching of genitals and urinary complaints. Few girls reported minor problems like acne, height and weight concerns, skin and general health problems. However the help seeking behavior is very poor for these problems (Joshi et al, 2006).

The most common menstrual disorders found among adolescent girls are dysmenorrhea, dysfunctional uterine bleeding, irregular menstruation, premenstrual syndrome and social problems.

2.4.1. Physical Problems

Physical problems are the somatic representations of symptoms associated with menstruation. This is mainly due to hormonal changes usually that doesn’t need any treatment.

2.4.1.1. Dysmenorrhea: It is the painful menstruation or menstrual cramps. A study revealed that 17% of the girls had dysmenorrhea (Hegde et al, 1989). Another study conducted showed that 77% of girls have mild to moderate pain during menstruation, 80% of them continued to have the pain in the present cycle (Vaidya and Kapadia, 1979).

Klein and Litt’s (1981) showed that 72% of young adult women complained of menstrual pain. Demir et al (2000) in a study reported that the mean age of menstruation was 15.8 and the incidence of dysmenorrheal was 38.7%.
Dysmenorrhea is one of the most common gynaecologic problems of women. Yet, considerable confusion exists as to what exactly by it is (Brown and Woods, 1984; ACOG, 1995).

Menstrual pain during adolescence is almost always primary in type. ie, it is caused by a functional disturbance, not an organic pelvic disease (Huffman et al, 1981).

Between 25% and 58% of women participating in the WHO multicountry study reported having menstrual pain (Omran and Standly, 1976, Omran and Standly, 1981).

In a study it was found that 20% of girls experience some menstrual pain (Kantero and Widholm, 1971).

More than 75% of college women and late adolescents in New Jersey experienced dysmenorrhea. The secondary dysmenorrhea associated with organic disorders, does occur during adolescence but is unusual during the first years after menarche (Gunn and Ruble, 1980).

The observations of Flushmann (1956) and many others who have noted that there is a relationship between the onset of primary dysmenorrhoea and the duration of the adolescent sterility period were documented by (Montagu, 1978).

Almost all women have some indication or awareness that their period is about to start. It is also said that symptoms of dysmenorrhea generally begin with menstruation although some women will experience symptoms for several hours before the onset of flow. The pain is located in the supra pubic or lower abdomen and is described either as sharp gripping and cramping or as a steady dull ache. It may be accompanied by feelings of pelvis fullness and radiate to the lower back or upper thighs (Fogel et al, 1995).

A study revealed that 55% of girls have painful menstruation (Hegde et al, 1989).

Vaidya and Kapadia (1979) identified that 52% of girls had dysmenorrhea. Severe pain was present in 5.3%. Treatment for dysmenorrhea was taken by 26 girls.
In another study, Wentz (1988) observed that the symptoms seen in women with dysmenorrhea were tiredness (85%) nausea and vomiting (89%) low back pain (60%) nervousness (67%) dizziness (60%) diarrhea (60%) and headache (45%).

Prime candidates to develop dysmenorrhea were young women with a history of an unstable personality who had conflict in acceptance of their sexual role or who experienced psychic trauma associated with the initial menstrual periods, perhaps because of lack of knowledge of the significance and normality of the menstrual function (Berry and Guire, 1972).

A study on severe premenstrual symptoms prevalence and effects on absenteeism and health care seeking in a non-clinical sample found that severe menstrual symptoms, particularly dysmenorrhoea had more of an effect on absenteeism and health care seeking than severe pre menstrual symptoms (Burch and Costa, 1988).

Seigel et al (1979) conducted a study on 244 female students who had to complete a life experience survey, designed to assess desirable and undesirable changes in their lives during the past year using a menstruation questionnaire. Both positive and negative life changes were significantly correlated with the number of symptoms reported. They found that negative life changes were a significant predictor of menstrual pain.

The onset of menstruation is without any pain or discomfort. Sometimes it is accompanied by severe painful cramps. The painful nature and prevalence of this problem serve to suggest that the economical, social and most important, the psychological costs of dysmenorrhoea are considerable (Chensy, 1977).

There are two opposite types of dysmenorrhoea known as spasmodic and congestive. He also says that spasmodic type causes acute pain beginning on the first day of menstruation. This pain is so severe to cause vomiting and fainting. The pain is limited strictly to uterine and ovarian nerves that are back, inner aspects of thigh and lower abdomen (Dalton, 1969).
The experiences of menarche on 639 public school girls were studied. They reported the following physical discomfort and limitations. Pain and cramps during their first period (40%), moodiness or fatigue before or during their periods (22%) had other ailments as head ache, vomiting etc (Rubel and Jeanne, 1982).

In a cross sectional survey of school girls aged 10-18 years proved that 72% had dysmenorrheal (Odujinrin and Ekunwe, 1991).

Dysmenorrhea presents as painful periods that starts two to three years after menarche. The usually begins when the bleeding starts and lasts for 48-32 hours. The cause of primary dysmenorrheal is related to prostaglandin production (Deligeoroglou, 2000).

Of 706 Hispanic teens in grades 9-12, 85% reported dysmenorrhea, with 38% having missed school. Although dysmenorrheal was also significantly associated with decreased academic performance (59%) and socialization (46%), only 14% had seen a physician (Banikarim et al, 2000).

Studies around the world, it has been reported that dysmenorrheal is the leading cause of absenteeism of women from work, school and other occupations and between 10% to 18% of young girls believed that it hampers functions of daily life (Fishbein, 1975; Klein and Litt, 1981; Jarret et al, 1995; Rayan, 1995).

In a study it is revealed that most of the females experience painful periods, which is accompanied by other symptoms such as nausea, vomiting, diarrhea, head ache, weakness or fainting (Westhoff and Davis, 2001).

2.4.1.2. Dysfunctional Uterine Bleeding (DUB)

"Less bleeding is O.K., more bleeding is not." Dysfunctional uterine bleeding (DUB) can best be defined as abnormal bleeding of the uterus not associated with any organic disease of the genital system (Boyed, 1986; Van Eijkeren, 1989).

DUB affects about 50% of the menstruating women worldwide. The majority of DUB cases occur in the 5 to 10 years premenopause or postmenarche, when the ovaries are in an unstable responsive state (Wren, 1998).
Bleeding not associated with any organic diseases of the genital system. The condition is often encountered during the early periods of menarche (Aksel, 1994; Kadayifcy et al, 1997).

DUB is a gynaecologic problem that happens frequently during adolescence and is the most frequent cause of urgent admission to hospital (Altchek, 1977; Deligeoroglou, 1997).

Dysfunctional uterine bleeding (DUB) is a common menstrual problem during adolescence and can be life threatening if severe (Sshwayder, 2000).

2.4.1.3. Amenorrhea

Amenorrhea literally means absence of menstruation. It is a symptom and not a disease (Dutta, 1994).

Among women of reproductive age, the prevalence of amenorrhea ranged from approximately 5% to 13% (Nunez et al, 1991; Filippi et al, 1997; Hernandez et al, 1999).

2.4.2. Psychological Problems

Mild to severe forms of emotional disturbances are not uncommon with adolescents who are predisposed to the inner imbalance caused by physiological and corresponding psychological changes.

Congestive is a variation of pre menstrual syndrome (PMS). This constitutes a wide variety of psychological symptoms which most commonly occur in a few days before the occurrence of menstruation.

Usually women experience mood changes in the later part of the luteal phase, with physical symptoms like headache, swelling of the ankles and sometimes hands, abdominal distension and breast enlargement, usually with discomfort (Copper and Kessel, 1963).

The performance of young women in sitting examination is reduced during menstruation and in the premenstrual period. A handicap of about 5% in marks appears to be the usual effect of this stage of the cycle and obvious in those women with long cycle (Dalton, 1959).

A study conducted in a sample of 400 nurses in Nairobi by means of a structured interview schedule to determine the prevalence and some other aspects
of pre menstrual tension. About 95.5% of study group had premenstrual tension and 75% followed abdominal bloating (Rupani and Hema, 1993).

Prime candidates to develop dysmenorrhoea were young women with a history of an unstable personality who had conflict in acceptance of their sexual role or who experienced psychic trauma associated with the initial menstrual periods, because of lack of knowledge of significance and normality of menstrual function (Berry and Mc Guire, 1972).

There is significant association between impaired concentration and stressful events in the pre menstrual phase in 22 women whom they studied (Wilcoxon et al, 1976).

Women who had stressful lives and who were generally distressed had severe perimenstrual negative affect (Taylor et al, 1989).

In a group of Philadelphia teens, PMS symptoms were significantly related to life’s emotional distress levels, but menstrual cramps were not (Freeman, 1993).

There is possible stress associated with the bleeding, experiences more pain and more anxiety. Both men and women believe that women do not function well when menstruating (Golub, 1992).

A study on 377 young women showed that mild PMS is seen in 31.8%, moderate to severe PMS is seen in 8.2% (Elsevier, 2006).

2.4.3. Social Problems

Menarche is a socio-cultural event that is shaped and constructed by cultural institutions such as religion, science and media (Chandra and Chaturvedi, 1992).

In the Marshiq customs, women during menstruation were considered very dangerous. They were not only regarded as impure and unclean, but also, if not actually possessed by a spirit, likely to be transmitters of the actions of evil spirit (Encyclopedia Britanica, 1976).

Adolescent girls often view menstruation with attitudes of fear and hate; often their attitudes are influenced by the age old customs and myths. The functions of human body were for the most part, universally considered pollutions. The list of polluting organic processes include menstruation, sexual intercourse,
birth, illness and all bodily excretions and women in general (because they menstruate) are considered polluting (Encyclopedia Britisha, 1976).

Girls arrive at menarche with conflicting attitudes, myths and illogical beliefs having heard some information about its physical and social consequences (Abraham et al, 1985; Rierdan et al, 1986).

80% of adolescent girls practice some form of taboo during menstruation such as avoiding holy places, not touching others and any other objects (Desai, 1990).

Certain beliefs which keep the women socially isolated include menstruating women can make flowers wilt, should she walk through a farmer’s fields would hinder growth of crops and if she tried to bake bread, the dough would not rise (Boback et al, 1993).

Studies among 100 school girls attending standard 7, 8 and 9 revealed that 32% of the girls perceived menarche with anxiety and fear, 56% felt unprepared, 36% expressed hate and 22% felt embarrassed about it. Only 12% thought they were well prepared for menarche. This brought to light many taboos and beliefs such as menstrual blood is bad, during menstruation a girl is unclear, bath and hair wash should be avoided during menstruation, a woman should not cook during menstruation and should remain segregated from other family members during menstrual days (Korah, 1991).

In a study, pointed out that majority of girls were totally or partially isolated in the house and were given separate diet during menstruation, which was devoid of any type of protein and fat. Even though 67% of the urban and 62% of the rural girls had pre-onset knowledge of menarche, such practice resulted in negative attitude towards menstruation among them (Basanayaka, 1987).

South Asian women may underreport menorrhagia, and ethnographic research suggests this lack of care-seeking is because these women value heavy periods, which are believed to cleanse the body (Chapple and Ling, 1998).

Various cultural and religious believes associated with menstruation, that is menstruating women are excluded from religious activities and ceremonies in
certain sets of Judaism, Christianity and Islam and are considered dirty sick, unbalanced and ritually impure (Shuttle and Redgrove, 1980).

The experience of menarche is influenced by the girl’s preparedness for this biological event and its timing and adolescents reported that mothers and schools were the primary source of information (Razor, 2000).

2.5. MENSTRUAL HYGIENE

“Cleanliness is next to Godliness” During adolescence the girls have many questions and uncertainties regarding the physical maturation. The onset of menarche introduces a new dimension of life to cope with, competent advice is essential in these habit forming years to correct misconceptions and lead to proper health care (Hagspiel, 1976).

In a study on knowledge and practice of adolescent school girls of Punjab regarding menstrual hygiene, the findings showed that 56% has self imposed restrictions such as playing, talking, daily bath and 20% donot wash hair during subsequent menstrual period (James, 1997).

A study to identify the knowledge and practices of menstrual hygiene among rural adolescent girls in Andhra Pradesh recommended that the girls should be educated about the significance of menstruation and reproductive health (Devi and Ramaiah et al, 1994).

The menstruation problem of Nigerian students was studied and it revealed outstanding low personal hygiene among the students and they admitted that they were ignorant of changing regularly the materials they used for protection. The study suggested that sex education and management of menstruation should be made an integral part of the school curriculum at all levels of the educational system (Oscijith, 1986).

In a study it is revealed that there is restriction in reaching sufficient information regarding menstruation and menstrual hygiene through man media and schools. This has prevented the flow of accurate and sufficient information regarding pubertal hygiene and has often led to superstitious perception and believes about dysmenorrhea and menstrual hygiene in the rural areas. 98.5%
indicated that young girls should receive more information about menstrual period and related hygienic practice. (Mohammad and Ashtiani, 2004).

Clean cloth, sanitary napkins and any cloth during menstrual period were used by 61.54%, 28.21% and 4.49% respectively. In the lower age groups (L) 21.25% use sanitary napkins where as 35.5% in higher age group use this, clean cloth users are more (65%) in; lower age group than those in higher age groups (57.85%). About 8.75% of lower age group did not know the use of these materials as they are yet to attain menarche (Haldar et al, 2004).

77.3% girls tend to use house hold clothes for menstrual flow. Only 22.6% used sanitary napkin. The major reason for not using sanitary napkin was their high cost (Desai, 1990).

Poor hygiene is prevalent in some cultures. They have traditional practices such as avoiding bathing during menstruation. These women are often reported to have genital infections (El-Shagly et al, 1990). White discharge or patches with erythema of tissues is a common finding in vaginal candidacies (Deborah et al, 2000).

It is revealed that girls had an inadequate knowledge of menstrual hygiene. Adolescent girls were not confident of their self-care with regard to protection against staining clothes during menstruation. During menstruation more than half of the girls were using unsterilised cotton as pads or old cloth pieces after washing. Most of the girls changed pads at fixed times of the day that are twice or thrice, morning, evening and night. They were dissatisfied with information they have been receiving on menstrual hygiene (James, 1997).

In a study it is found that 98.5% of girls indicated that young girls should receive more information about menstrual period and related hygienic practice (Mohammad and Ashtiani, 2004).

The lack of appropriated and sufficient information about menstrual hygiene can be attributed to cultural and religious beliefs.

In a study it is interpreted that 95% dealt with menstruation unhygienically. A statistically significant association was seen between menstrual hygiene maintenance and education (Anuradha, 2001).
2.6. HEALTH TEACHING

Preparing pre-menarcheal girls for menstruation is very important. The knowledge on the secondary sexual development in physical, psychological and social dimensions helps the girls accepting the minor ailment during menstruation as a normal physiological phenomenon.

Feminine hygiene is a concern not only in the reproductive years, but should be observed throughout life. Childhood is the formative period for behavior and every day routine, thus proper education and guidance of little girls are essential (Esser, 1979).

A study to determine the knowledge, attitude and practices with regard to menstruation, showed that a high proportion (80%) of them considered menstruation to be inconvenient and embarrassing. Many had misconceptions and myths regarding menstruation. 24% thought that menstruation rids the body waste, 37% of all young women said “avoid cold,” 28% said avoid swimming (Abraham, 1985).

The knowledge and beliefs about body interior during early adolescence and the care of menstruation was studied. The results showed consistent lack of correct information regarding menstrual event, in a high percentage of subjects (Gainotti, 1989).

Another study on menstrual mythology and sources of information about menstruation reported that the knowledge regarding reproductive physiology was inadequate. Superstitions, biological believes and misinterpretations are more common than accurate understanding (Kurean, 1991).

Basic knowledge about ones own body is worthwhile for the understanding of advisable attitudes in personal hygiene. Teaching of hygienic means for the controlling of bodily functions should go hand in hand with the education in human biology. The care giver who offers care will always be confronted with certain typical questions about discharge and menstruation (Mittag JE, 1994).

A study on teaching adolescent school girls about menstrual hygiene by using a specially prepared information package regarding menstruation and menstrual hygiene, a significant change in knowledge regarding menstrual hygiene
was observed in the experimental group who had attended the teaching programme (Mendal, 1994).

Parents especially the mothers do not educate their daughters about various aspects of menstruation such as age of its onset its duration and healthy practices during menstruation. The girls are not motivated to take the event lightly. So the inadequate knowledge, misconception and wrong ideas lead to undue fear, anxiety and undesirable attitudes in the minds of adolescent girls (Mendal, 1994).

In a survey, the recommendations from adolescent girls in preparing premenarcheal girls for menstruation showed that 157 girls rated their own experience of menarche and emphasized the need for emotional support and assurance that menstruation was normal and healthy not bad frightening or embarrassing (Rierdan et al, 1986; Koff, 1995).

The knowledge of Indian adolescent girls was poor about menstruation and re-productive health in a study. The study emphasize on educating both school girls and parents about adolescent health (Singh et al, 1999).

The results of a study suggest that it might be possible for health care providers to teach women safe economical health care practices, such as douching and hand washing before and after use of menses management product to prevent infection (Czerwinski, 1996).

Another study revealed that vast majority of students (98.5%) indicated that young girls should receive more information about menstrual period and related hygienic practice, and 61% identified their mothers as the best information source in this regard (Mohammad and Ashtiani, 2004). The results of recent studies showed the effectiveness of educating female students about the health topics at schools, as many young girls also identified their peers as a common source of information. Moreover students spent most of their daily time at school, thus providing the opportunity for teaching programmes. Therefore, teachers should also receive specific skills during their on going education to spread the information to their young students (Dagwood, 1995; Shayani and Uenkafa, 1995; Nafstad et al, 1995; Westhoff, 2001).
2.7. EPILOGUE

This chapter has reviewed literature on the various aspects related to adolescence, menarche, menstrual problems, menstrual hygiene and inadequacies in the existing knowledge regarding menstruation and menstrual hygiene and lack of educational programmes for adolescent girls. So the girls are facing different problems of menstruation. The next chapter deals with the research methodology under different heading viz introduction, research approach, research design, setting for the study, population, sample, description of sample, tool and technique, pilot study, data collection process, preparation of the instructional module and data analysis.