

CHAPTER I

INTRODUCTION

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1.1. INTRODUCTION

“Women only are the guardian angels of female health”. The development of the individual and progress of the nation depend mainly on the educational system of the country. As education is intimately related to all aspects of life, it is the responsibility of the adult members of the society to shape the development of the coming generation in accordance with its ideals of life.

The human approach in education as envisaged by Maslow and his associates (1962) has brought in the awareness that at each moment of life, any person is in the process of changing into something a little different from what he now is.

Education about menstruation is not restricted to school instruction or information provided by adults and peers; exposure to advertisements in teen media provides imagery depicting menstruation and feminine role expectations.

Menarche is an important event during adolescence causes physical and behavioral health issues and frequently needs assessment and intervention (WHO, 1995).

The knowledge and skills required to maintain a healthy life are usually learnt from families, neighbors and school. The Dakar Recommendation recognized (WSSC Global Wash Forum December 2004 held in Dakar) that “Primary School Children of today will be the adults of 2015”. Therefore, national and sectoral policies and budgets must prioritize school sanitation and hygiene education. If sanitation facilities are available, the best practices must scale up rapidly (Nahar, 2006)

Reproductive health is affected by the economic, social, cultural and educational environment, in which girls are born, grow to womanhood, marry and repeat the process in starting their own families (Sai and Naseem, 1989). It is important to look at how women experience their menarche in relation to the larger cultural, religious and social environment. In most cultures, menstruation is associated with physical discomfort, increased emotionality and restriction of social and physical activities (Brooks et al, 1982).

Adolescence is a period of human life distinguished by the maturation of the organs and the functions of reproduction extending from the onset of puberty to adulthood (Good, 1945). It is a span of human growth extending from the immaturity of childhood to the physical and physiological maturity of adulthood. This period extends from 10-19 years (WHO, 1989).

Girls begin to have a growth spurt around the age of 10-13 years. The female typically begins breast development in her 10th year, experiences considerable genital growth in her 11th year and begins to menstruate from her 12th year. This growth process continues for approximately 3 years during which all secondary sexual characteristics emerge (Peterson and Hale, 1985). Sexual development due to the influence of hormones is the major change in adolescence. Sexual development occurs in three distinct stages – pre-pubescence, pubescence and post-pubescence.

During pre pubescence, overall body growth increases, especially of the reproductive organs, the secondary sex characteristics begin to appear and as a part, menstruation begins in the girl. Menstruation is the first significant milestone in the reproductive history of a woman's life. Menstruation is a natural physical process- a harmless by-product of a biological event. Biologically menstruation is the visible manifestation of cyclic physiologic uterine bleeding out of shedding of the endometrium. The first menstruation (menarche) occurs between 11-15 years with a mean of 13 years (Dutta, 1994).

Menarche is a landmark pubertal event for most females. The average age of menarche in the United States is 12.7 years (Neinstein, 2000). It can be a significant important pubertal event in a woman's life. However, since there can be significant misinformation, the clinician can help to correct myths and misinformation. This area can be sensitive and clinicians should be sensitive to the teen's discomfort in this area (Mitan and Slap, 2000).

Girls reach menarche with conflicting attitudes, myths and illogical beliefs having heard some information about its physical and social consequences (Abraham et al, 1985). Most women reported having experienced negative

emotions only and some mentioned mixed feelings (Woods et al, 1982; Golub and Catalano, 1983).

The influence of hormones leads to certain menstrual cycle disorders like dysmenorrhoea premenstrual syndrome and amenorrhoea which are areas of increasing concern and research emphasis. The woman's health movement has created increased discussion and concern about normal and abnormal menstrual functioning and encouraged women to seek help more readily or a variety of problems (Leslie and Swider, 1986). A study on the common menstrual disorders in young women from urban population showed that in 56.3% dysmenorrhoea is the most common disorder and 40.5% had premenstrual syndrome (Skierska and Leszezyriska, 1996).

The feeling that menstruation is dirty is widespread and some versions of this view depict menstruation as a state of pollution (Walker et al, 1982). The Roman author, Pinly, in his Natural History wrote that a menstruating woman can turn wine sour, cause seeds to be sterile, wither grafts, cause garden plants to become parched and fruits to fall from a tree she sits under. A Hindu woman abstains from worship and cooking and stays away from her family as her touch is considered impure during this period. Jewish tradition regards a woman as ritually impure during menstruation and anyone or anything she touches becomes impure as well. Under Islamic law, a menstruating woman is not allowed to pray, fast or have sex. She is not allowed to touch the Koran unless it is a translation (Sherlock and Payne, 2004). Literature contains many references in this regard. The Bible says "When a woman has her monthly periods, she remains unclean for seven days. Any one touches her is unclean until evening. Any thing on which she sits or lies during her monthly periods is unclean" (Levi. 15: 19-20). Many associate the moon with menstruation. The Babylonians, Romans, Indians and Moslems based their calendar system on the lunar year (Habiger, 1998).

Another study in Bangladesh pointed out that during menstruation girls are considered to be polluted and they possess destructive powers, the fertility of seeds are spoiled and the girl is not permitted to sleep with her husband for the fear of reducing his longevity (Huq and Khan, 1991).

Menstruation is a phenomenon unique to the females, and menarche is an important land mark in the process of growth and maturation. However the women and girls are lacking in right knowledge. They need to be educated about the facts of menstruation and its physiological implications. Also they should be educated about the significance of menstruation and development of secondary sexual characteristics, selection of a sanitary menstrual absorbent its proper disposal and the problems related to menstruation. This can be achieved by school health programmes, organized at the adolescent clinics by nurses, health personnel and compulsory education through school curriculum or through educated parents, So that they do not develop psychological upset and the received education would indirectly wipe away the age old wrong notion and make her feel free to discuss menstrual matters without any inhibition (Devi and Ramaiah, 1994). The study also revealed that though most girls received advice regarding menstrual hygiene from different sources, only 15% were practicing good hygiene. The study showed that the mothers of these girls were lacking in right knowledge and the same thing was transferred to their off springs.

A woman menstruates approximately 500 times in her life time. Yet how much do most women know about their cycle? Through out history, women have been told that they are unclean during this time.

In the life time of a woman, she has to manage 3000 days of menstruation. For her basic schooling period ranging from grade IV to X, the number of such days is 450. On an average, a woman loses about four tablespoons of blood each month. To deal with the “mess” of it, women over the ages have used materials like grass, sponges, cotton wads and other absorbents to catch the blood (Bharadwaj and Patkar, 2004).

In a Chinese study, 52% of girls felt puzzled and disgusted with the onset of puberty. The tendency for questioning about puberty period via their mothers was 42% (Azizi, 1987; Walker et al, 1998). Most of the women over 30 years of age reported not having received enough information at the time of their menarche and negative experiences dominated during first menstruation (Thuren, 1994).

Health hazards due to the ignorance of physical and emotional puberty health in adolescents are many. Individual physical, mental and social problems emerge during this period. Hence quality health education must be emphasized for health promotion in developing countries (Oinas, 1999; Trent, 2000; Sieving et al, 2001).

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

In Lebanon, menstrual irregularity and bleeding problems were the most common reasons for seeking gynaecological care (Deeb et al, 2003).

Among adolescents, the prevalence of dysmenorrhea was higher with approximately 18-88% and 3-20% reported severe pain sufficient to cause them to miss school, work or daily activities (Onatra and Posso, 1994; Rojas et al, 1997; Pedron et al 1998; Schmidt and Herter, 2002).

In a study in Bangladesh, most of the girls reported that the first experience of menstruation was painful because they did not then understand what was happening (Huq and Khan, 1991).

Inadequate knowledge about menarche among adolescents is a world wide phenomenon. A survey among 600 adolescent girls found that only 8% were informed beforehand of the event of menarche. 55% had painful ones (Hegde, 1989).

A majority of the women who reported positive emotions at menarche also reported that they were well informed beforehand or that they are impatiently waiting to have their first menstruation (Amann- Gainotti, 1986).

Primary dysmenorrhea is by far the most common gynaec problem in menstruating women. In a study, dysmenorrhea accounted for 600 million lost work hours and two billion dollars in lost productivity annually (Andrews, 1999).

In another study, 4-8% of women reported having menstrual periods longer than 7-8 days and 4-9% reported to have profuse bleeding (Bang et al, 1989; Intermediate technology, 1992; Aggarwal, 1997; Bulute et al, 1997; Walraven et al, 2002).

In a Nigerian study, 12% of teenage girls had menorrhagia based on documented blood loss of above 80ml (Barr et al, 1998).

The ads depict menstruation as a “hygienic crisis” that is best managed by an effective “security system” affording protection and “peace of mind”. The failure of adequate protection places the women at risk for soiling, staining, embarrassment and odor. Menstruating women are depicted as dynamic, energetic and always functioning at their optimal level. Such imagery may encourage guilt and diminished self-esteem in the adolescent who experiences discomfort (Havens and Swenson, 1988).

Menstrual Hygiene is a major problem for many adolescent girls and women, who lack the privacy to properly wash and dry menstrual rags. In some rural areas, superstition and tradition mean rags are dried in the dark, away from male view (UNICEF, 2003).

Several community studies show the reporting of excessive vaginal discharge ranging from 13% to 57% (Bang et al, 1989; Latha et al, 1997).

Another study showed poor hygiene among the subjects. One quarter of the subjects revealed that they avoid bathing during their bleeding period. They also found that lower grade girls used less pads than those at higher grades (El-Shazly et al, 1990).

A microbiological survey of over 400 sanitary dressings showed that a large number of bacteria were present on them including species indicative of fecal contamination (Lucas and Mendes, 1980).

Factors that affect menstrual hygiene are (1) Access to resources that determine the type of protection used, (2) The kind of material used as protection, (3) Recycling practices, including methods for washing and drying and (4) Access to privacy including toilet facilities (Mukherjee, 1996).

It is found that candida infection causes white curd like discharge and symptoms occur or increase prior to menses. Good personal hygiene is essential for preventing vaginal infections (Fogel, 1995).

In menstrual product advertisement, menstruation is depicted as an unclean attribute, discrediting an ideal femininity and creating the need to conceal it. This conveys a negative self-perception, particularly in young women (Backe, 1997).

Reproductive infection preferentially affects women over men, because women are more likely to be infected, less likely to seek care, are more difficult to diagnose and suffer more severe biological and social consequences (Faundes and Hardy, 1995).

1.2. BACKGROUND OF THE STUDY

Adolescents constitute 10% of the population. Out of this, adolescent girls constitute 4.9% of India's total population. Adolescent care is then significant for the time being. Reproductive child health is getting world wide importance.

The key to child health lies in much greater emphasis on all round improvement of the competence of the mother, her physical conditions, her economic status, her health and nutrition and her education. Such attention to the mother must start not after she has become a mother, but when she herself is a child and an adolescent, because today's adolescent girl is tomorrow's mother (Ghosh, 1990).

Adolescent care or teenage care should become the major subject of care and concern in our country. In fact, teenage care is one of the mottos of Indian Academy of Paediatrics (Lokeshwar, 1998).

A study inquired into the perceptions and understanding of the biological basis of characteristics of the menstrual cycle, menstrual hygiene and menstrual related physical and psychosocial changes among adolescent girls. Although girls viewed themselves as prepared for menarche and claimed they have discussed it with their mothers, their explanation revealed incomplete knowledge and variety of misconceptions and blind beliefs (Koff, 1995).

It is possible that mothers as well as teachers at school may not be well aware of the physiology and hygiene of menstruation which will enable them to impart this type of knowledge to the adolescent girls. Thus the girls may get exposed to the wrong environment, contributing to their misconception,

unhygienic practices and fear about menstruation (James, 1997).

Physicians form an expected source of information about menstruation, but are often uncomfortable to talk about menses and sexuality in general. Croft and Asmussen (1993) perceive that nurses are having authoritative information and have talking time with patients. The nurse's background in the physical, social and behavioral sciences and her education in counseling techniques make her an ideal person to impart this knowledge.

1.3. NEED AND SIGNIFICANCE

Any programme to be effective should be based on the felt need of individuals to whom the programme is intended. The programme should be such that it would be helpful in finding out solutions to the problems experienced by the group. For organizing educational programme on menstruation for adolescence in schools, knowledge of the nature and intensity of the problem experienced by them is relevant.

Young women must have access to accurate information about their reproductive health as well as to high quality women centered care. Major changes have come out in 1997 to include all issues on women's health and adolescent girls in reproductive child health programme.

Poor menstrual hygiene is a major problem among adolescent girls (Desai et al, 1990; Devi et al, 1994). Kumar (1987) has reported that in the adolescent girls, menstrual cycle was the chief area of worry and psychological struggle to accept their new body image.

About 80% of adolescent girls practice some form of taboo during menstruation such as avoiding holy places, not touching others or not touching books (Desai et al, 1990; Mbizvo, 1997) studied the reproductive biology knowledge and behavior of teenagers in East, Central and Southern Africa. This revealed that there were misconceptions about menstruation as an illness.

Perception of the adolescent girls in the slum about themselves and their pubertal changes was studied. The study revealed that 48% of the girls were unhappy about their pubertal changes. 40% felt awkward and 15% felt shy about

the bodily changes. 94% of the girls were frightened at the onset of menstruation. 49% felt dirty about it. 28% of the girls considered menstrual days as a restricted period; 8.5% considered menstruation as a curse. The adolescent girls need reassurance that the pubertal changes are a part of normal growth and development (Joseph, 1994).

Each stage of development has a personality crisis involving a major conflict that is critical at that time. Anticipatory guidance will help to adjust with this crisis (Erikson, 1990).

Menarche is a highly emotional experience for a young pubescent. The intensity of emotions experienced by the girls depends on the degree of information obtained about menstruation (Korah, 1991).

Very few mothers are ready to share the information about menstruation which is of paramount importance to their pre menarcheal daughter. In a study it is revealed that many young girls perceive approaching menarche with anxiety, fear, hate and embarrassment. 56% of girls were unprepared for menarche and 12% perceived themselves well prepared for the event. The study emphasizes the importance of organizing educational programmes for adolescent girls so that they would have a smooth running through their adolescent tasks related to menstruation (Korah, 1991).

The frequency and severity of physical and emotional menstrual symptoms were investigated by Huerta et al (1993) with a cross sectional study of 502 women not seeking treatment for menstrual symptoms.

Parents especially the mothers do not educate their daughters about various aspects of menstruation such as age of onset, its duration and healthy practices during menstruation. The girls are not motivated to take the event lightly. So the inadequate knowledge, misconceptions and wrong ideas lead to undue fear, anxiety and undesirable attitudes in the minds of adolescent girls. The studies recommend a planned educational programme to enlighten young adolescent girls for healthy practice on attaining menarche (Mendal, 1994).

In a study on menstrual hygiene, James (1997) reported that adolescent school girls generally didn't have adequate knowledge of menstrual hygiene.

Many cultures portray a negative image of menstruating women and in most cultures menstruation is associated with physical discomfort, increased emotionality and restriction of social and physical activities and menstruation is considered to be illness that needs to be cured. It is a problem for girls and their parents that need to be solved (Whisnant and Zegans, 1975; Kissling, 2002).

A study revealed that in all the four areas of menstrual hygiene, female reproductive system, menstrual cycle, menstrual practice and management of pain during menstruation the respondents scored less than 35%. This shows that the knowledge level of all subjects were inadequate in all areas of menstrual hygiene (George, 2003).

Menstruation is associated with physical and emotional problems of its own. Physical problems such as spasmodic pain of abdomen, thighs and low back, nausea and vomiting, wet feeling due to excess blood flow worry the beginners a lot. Yet, she may feel shy to discuss these issues with her mother or teacher. Pre menstrual syndrome resulting from hormonal changes is an additional burden to her in addition to the restrictions due to certain menstrual myths. These create problems in moving around freely to attend social functions, in touching certain plants, restriction in taking bath for fear of developing cold, etc. Moreover an important false belief is that menstruation is controlled by moon, so the girl is not allowed to go out the house during menstruation and it is also believed that she holds some evil spirit and transfers this to other girls.

In recent times, reproductive tract infections have been increasingly recognized as a major health problem affecting women world wide. Past few years have witnessed a growing concern for the social, cultural and the psychological forces that act upon reproductive health of women in developing countries.

Several studies done in the last decade have documented high prevalence of gynaecological problems among rural women in India (Bang et al, 1989; Bhatia and Cleland, 1995; Bhatia and Cleland, 1997; Koeing et al, 1998; Garg et al, 2000).

In rural India, Reproductive Tract Infections occur due to poor menstrual hygiene and neglect of asepsis in gynaecological and obstetric interventions (Apte and Agarwal, 1999).

Ideally, the education for menarche should be done at the onset of puberty, prior to starting menstruation. Agarwal (1992) found that the average age at menarche for Indian girls is 12.6 years. Therefore the information should be given to the girls prior to this age.

In India, not many studies are available, exploring this silent domain. The available literature is limited to few areas such as knowledge and attitude related to menstruation (Chaturvedi and Chandra, 1991).

Kerala is one of the smaller states in India, supporting around 3% of its population (Kannan, 1991). Compared with other states, Kerala has got distinguishing health status (Thankappan and Valiathan, 1998). In a state like Kerala, with its outstanding literacy rate, culture taboos and restrictions related to menstruation are still persisting (Thomas, 1998).

A hospital based study in Kerala confirmed the importance of genital hygiene in the fight against infections that have a role in the development of cervical cancer (Cherian et al, 1999).

Even though in Kerala women literacy is high, very few mothers are ready to share the information about menstruation to their girl children which leads them to be more anxious, irritable and other emotional upset and feel shy in clearing doubts.

A study conducted at Calicut showed that 40% have very little knowledge and 20% have moderate knowledge (Kumar, 1998).

The knowledge and life skills required to maintain a healthy life are usually learnt from families, neighbors and school in childhood. The Dakar Recommendation recognized that "Primary school children of today will be the adults of 2015. Therefore, national and sectoral policies and budgets must prioritize School Sanitation Hygiene education in terms of the need of hardware and software. If all schools are to have safe water, sanitation, and hygiene education by 2015, current best practices must scale up rapidly, applying

principles of sustainability, decentralization, participation, partnership and policies (Nahar, 2006).

Yet another study conducted at Trivandrum by Thomas (1998) showed that the knowledge regarding menstrual hygiene is very poor among adolescents. The investigator's personal experience with adolescent girls showed that they are less informed about menstruation.

In developing countries, priority setting in the health sector traditionally focuses on the principal causes of morbidity. More recently, Global Burden of Disease approach incorporates assessment of morbidity and quality of life in identifying priorities. Yet, although investigations in various developing countries reveal that women are concerned by menstrual disorders, WHO and its member states are implementing various programmes on reproductive and child health with much emphasis on adolescent health, little attention is paid to understanding or ameliorating women's menstrual problems and menstrual hygiene practices (Harlow and Campbell, 2004).

Available data from developing countries on the frequency of menstrual disorders and their impact on women's health status, quality of life and social integration suggest that evaluation and treatment of menstrual complaints should be given a higher priority in primary care programmes. The above literature shows that even though wide publicity is given through TV, radio and news papers about sanitary napkins, girls are attaining menarche with very little knowledge. So the problems related to menstruation are high.

During school health services, the investigator identified that the girls are absent for the 1st one to two days of menstruation. The teachers and students emphasized the importance of imparting knowledge regarding menstruation. Here it is evident that the problems due to menstruation can be prevented by proper education on menstruation and menstrual hygiene. The education to a pre menarcheal generally comes from her mother, peers, teachers and health personnel which helps her in accepting menstruation as a normal physiological change which guides a girl to the next transition as a woman.

However, there is no published literature available that explores menstrual hygiene practices, menstrual problems, barriers associated with hygiene maintenance and its implication for reproductive health. Hence the investigator decided to select this problem among the girls studying from 7th -10th standard.

1.4. THEORETICAL FRAME WORK

This study is based on Neuman's System Model (Fig. 1.1). Neuman (1982) describes adjustment as the process by which the organism satisfies its needs. Because many needs exist and each may upset client balance or stability, the adjustment process is dynamic and continuous. All life is characterized by this ongoing interplay of balance and imbalance with the organism.

The concept of this mode is holistic. The model considers all five variables simultaneously affecting the client system physiological, psychological sociological cultural and spiritual sectors. This refers to the whole person.

This is mainly an open system that is when its elements are exchanging information energy with in its complex organization. Stress and reaction to stress are basic components of an open system.

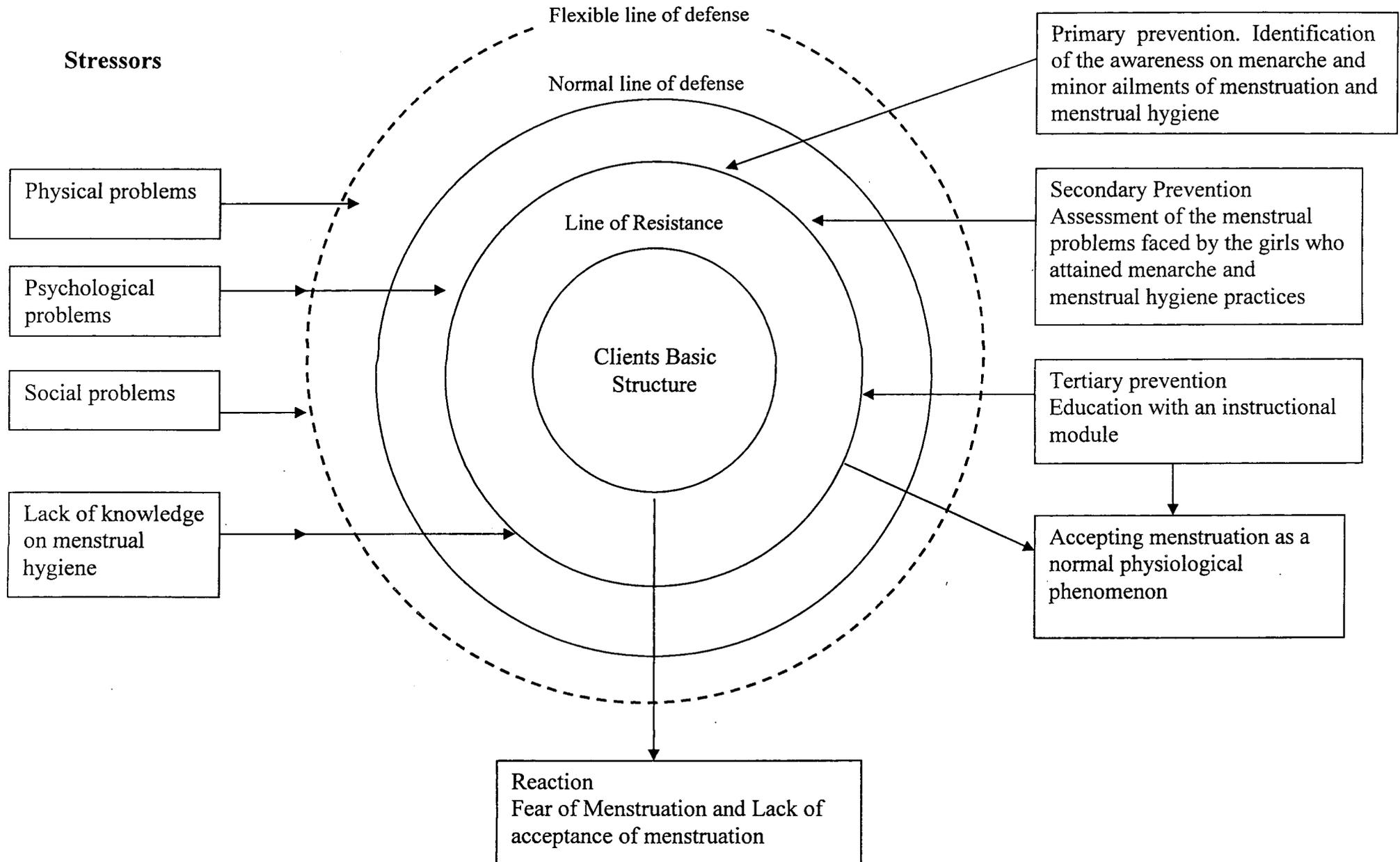
The stressors comprise the environment. The stressors can be internal and external or it can be interpersonal, intrapersonal or extra personal.

The hormonal changes (intrapersonal), physical and emotional changes and lack of knowledge about the process of menstruation and menstrual hygiene prevent the girls from accepting menarche and menstruation as a normal physiological change related to secondary sexual characteristics. These changes are the major stressors for a pre adolescent girl. According to Betty Neuman (1980, 1982) these are the normal lines of defense, flexible lines of defense and lines of resistance.

1.4.1. Normal Lines of Defense

It is vital in protecting the core structure and the integrity of the system. It represents a state of equilibrium of the individual or the state of adaptation the individual has maintained over time that is considered normal of him.

Fig No: 1.1. CONCEPTUAL FRAME WORK BASED ON BETTY NEUMAN'S SYSTEM MODEL



1.4.2. Flexible line of Defense

It is considered to be a protective buffer for preventing stressors from breaking through the solid line of defense. All environmental stressors first attempt to attack the flexible line of defense. The relationship of variables can affect the degree to which an individual is able to use his flexible line of defense against possible reaction to a stressor. Eg: Knowledge about menstrual hygiene and related physical and psychosocial problems is important to strengthen the flexible lines of defense.

1.4.3. Lines of Resistance

These represent the internal factors that help the client defend against a stressor.

1.4.4. Prevention as Intervention

“Prevention is better than cure”. Interventions are purposeful actions to help the client retain and or maintain system stability. They can occur before or after resistance lines are penetrated in both reaction and reconstitution phases. Interventions are based on possible or actual degree of reaction, resources, goals and the anticipated outcome. Neuman (1980) identifies three levels of intervention primary, secondary and tertiary.

1.4.4.1. Reconstitution: It is the state of adaptation to stressors in the internal and external environment. Reconstitution can begin at any degree or level of reaction and may progress beyond or stabilize somewhat below the client’s previous normal line of defense. In reconstitution, interpersonal, intrapersonal, extrapersonal and environmental factors are interrelated with physiological, psychological, sociocultural, developmental and spiritual variables.

1.4.4.2. Primary prevention: This carried out when a stressor is suspected or identified before it occurs. Eg: In this study, the pre menarcheal group was informed about menstruation, the minor ailments which can face by the girl during menstruation and education was given regarding menstrual hygiene.

1.4.4.3. Secondary prevention: This involves early diagnosis and intervention or treatment initiated after symptoms have occurred. Eg: Here the knowledge regarding problems of menstruation and menstrual hygiene was identified and

education was imparted to the pupil who attained menarche. This knowledge helped them to identify minor ailments and adopt hygienic practices during menstruation.

1.4.4.4. Tertiary Prevention: This relates to the adaptive process and moves on back towards primary prevention. Eg: By imparting knowledge, the girls accept menarche as a normal phenomenon and consider minor ailments as normal and are able to check infections by proper menstrual hygiene practices.

1.5. STATEMENT OF THE PROBLEM

Development of an instructional module on the knowledge on menstrual hygiene and physical and psychosocial problems related to menstruation among adolescent girls in Thiruvananthapuram.

1.6. RESEARCH QUESTION

1. Is there any change in knowledge level regarding menstruation and menstrual related problems and menstrual hygiene?
2. Will improvement in the knowledge about menstruation and menstrual hygiene reduce the problems associated with menstruation and improvement in menstrual hygiene practices?

1.7. OPERATIONAL DEFINITIONS

The following are the terms that are used in the text detailing the study.

1.7.1. Instructional module

In this study the term instructional module means a teaching material on adolescence, menstruation, menstrual problems and menstrual hygiene.

1.7.2. Menstrual hygiene

The present study means menstrual hygiene as the cleanliness during menstruation.

1.7.3. Physical problems

Bodily symptoms faced by the girl during menstruation. Abdominal pain back pain, muscle cramps in the lower abdomen and thigh, head ache, vomiting

are the minor ailments related to menstruation.

1.7.4. Psychological problems

Psychological upset based on menstruation due to hormonal changes like tension, anxiety, loneliness, irritability and fear.

1.7.5. Social Problems

They included restriction to participate in social activities and some superstitions like keeping away the girl from plants, not allowing her to move around, not allowing her to draw water from well etc during menstruation.

1.8. HYPOTHESIS

1. The knowledge on menstruation and menstrual hygiene will increase by using an instructional module.
2. The physical and psychosocial problems will be considered as normal during menstruation by increasing the knowledge.

1.8.1. Alternate Hypothesis

Improvement in the knowledge about the anatomy and physiology of menstruation will reduce the psychosocial stresses associated with menstruation.

1.8.2. Null Hypothesis

Improvement in the knowledge about menstruation and menstrual hygiene will not reduce the psychosocial stresses associated with menstruation.

1.9. OBJECTIVES

The following objectives were to be achieved while completing the study.

1.9.1. General objectives of the study

1. To assess the knowledge about menstrual hygiene and physical and psychosocial problems of menstruation.
2. To assess the tolerance of menstrual problems faced by adolescents related to menstruation.
3. To assess the menstrual hygiene practices adopted by the girls during menstruation.

4. To develop an instructional module on menstrual hygiene and physical and psychosocial problems of menstruation.

1.9.2. Specific Objectives

1. To find out the effect of the instructional module.
2. To find out the difference in knowledge between the students of urban school and rural school.
3. To find out the differences in knowledge based on age, education, income, religion and domicile of girls.
4. To identify the tolerance level of menstrual problems after educating the girls.
5. To identify the changes in menstrual hygiene practices of girls after educating.

1.10. RESEARCH METHODOLOGY

This study was a one group pretest post test design. Data were collected from 1000 students from 7th to 10th standard, 500 students from a rural school and 500 from an urban school.

1.10.1. Population

Adolescent girls of Thiruvananthapuram

1.10.2. Sample size

Considering the alpha error as 5% and beta error as 10%, and the significance of difference in knowledge in pre test and post test as 5%, the sample size was calculated as 1000 adolescent girls studying in 7th to 10th standard of rural and urban schools.

1.10.3. Inclusion Criteria

1. Girls studying in 7th to 10th standard.
2. Girls who were able to read Malayalam.

1.10.4. Limitations of the study

1. Sample selection was limited to two schools.
2. Majority of girls selected had attained menarche.

1.11. FORMAT OF THE REPORT

The report is divided into VI chapters

Chapter I **Introduction** - contains a presentation on the background of the problem, need and significance, theoretical framework, statement of the problem, hypothesis, objectives and research methodology.

Chapter II **Review of Literature** – contains a description of related literature

Chapter III Describes the **Materials and Methods** of the study

Chapter IV Concerns with the **Observations** of the study

Chapter V Deals with the **Discussion** of the observations

Chapter VI **Conclusions**

1.12. EPILOGUE

Basic knowledge about one's own body is worthwhile for understanding the 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. Menarche is one of the most important biologic signals in the life of a girl who is enmeshed in fears and doubts. This is the right time that the girls should be educated about the significance of menstruation and development of secondary sexual characteristics and menstrual hygiene practices. This chapter deals with the introduction, background, need and significance, theoretical frame work and statement of the problem. A brief review of literature is given in the next chapter.