PERIMENSTRUAL DISTRESS

AND

ITS EFFECTS ON PERSONALITY

M.Phil Dissertation

By

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C E R T I F I C A T E

     This is to certify that this dissertation is an outcome of the research done by Mrs. Amruta S. Oke, under my supervision. I also certify that she has made this study of "Perimenstrual Distress and Its Effects on Personality" on the basis of the relevant source material and the actual field-work that she carried out in Pune. Whatever evaluations are made and conclusions drawn in this dissertation are her own. Material obtained from other sources has been duly acknowledged in the dissertation.

Anjali Thakar

Anjali Thakar 80/7/91

(Supervisor)

DECLARATION

   I do hereby declare that I have made this study "Perimenstrual Distress and Its Effects on Personality" on the basis of the relevant source material and the field work, that I carried out in Pune. The data collected and conclusions drawn in the dissertation are my own. The results are not previously published. The books and articles referred are listed in the Bibliography and the quotations are acknowledged.

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A C K N O L E D G E M E N T S

ABSTRACT

Perimenstrual Distress and its effect on personality
Amruta S. Oke

Perimenstrual distress among 205 college going, unmarried, Hindu girls were studied. The mean age of the sample was 19.59 years. On the basis of previous theoretical and empirical research, it was hypothesized that perimenstrual distress may affect personality variables such as Locus of Control, Introversion-Extroversion, and Neuroticism.

In part one of the study factors affecting perimenstrual distress such as, menstrual and sociodemographic variables were studied. In part two of the study influence of perimenstrual distress, on personality variables, namely Locus of Control, Introversion-Extroversion, and Neuroticism were studied.

Pearson Product-moment correlations, and x^2 tests were computed for examining the relation between perimenstrual distress and other personality, menstrual and sociodemographic variables.

T-tests were employed for studying the significance of difference between low and high perimenstrual distress groups on personality and menstrual variables.

Results revealed significantly less distress during premenstrual phase than during menstrual phase. Age at menarche was found to be negatively related to perimenstrual distress. Sociodemographic variables such as family size and ordinal position were not found to be related to premenstrual and menstrual distress. Locus of Control, Introversion-Extroversion, and Neuroticism were observed to be influenced by premenstrual or menstrual distress.

Methodological limitations of the present study were delineated. Findings were discussed with regard to their implications for councelling and sex-education of college going girls.

C O N T E N T S

CERTIFICATE

DECLARATION

ACKNOWLEDGEMENTS

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1.5   SUMMARY

1.1   INTRODUCTION

As women continue to move towards a more equal status in our society, it becomes increasingly important to understand those peculiarly female problems, which may affect their functioning. Perimenstrual distress is one such problem.

Perimenstrual distress indicates the physical and psychological disturbances linked to either or both the premenstrual and menstrual phases.(Moos 1975)

Previous evidences seems to indicate that body and mind play an important role in the origin and perpetuation of menstrual symptomatology. Physical manifestations of menstruation have been certainly well understood in medical field. But only from last three decades psychologists tried to understand psychological manifestations of menstruation.

Hopson and Rosenfield (1984) found that about 70% of menstruating women experience at least one emotional, physical and behavioral change in the week or so before menstruation and during menstruation.

The perimenstural syndrome has been described as the Commonest endocrine disorder (Dalton 1964). Pennington (1957) found that 95% of one thousand high school and college girls had some perimenstrual symptomatology.

Personality factors and different manifestations of menstrual distress among normal women has been the subject of several researches, but the results are controversial. Menstruation has been related to a wide variety of psychological

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variables, among which are accident-proneness, crimes of violence, motive to avoid success, irritability, mood changes, depression and anxiety. The precise nature of these relationships is still unknown; so too are underlying causes of the observed correlations.(Awaritefe 1980)

Moos [cited in Kleinsasser (1975)] suggests that it might be hypothesized that personality factors like neuroticism or impulsiveness should be positively related to some of the premenstrual and menstrual symptoms. He also recommends that this area may benefit from further study.

Therefore in the present study the main objective is to study the influence of Perimenstrual distress on personality variables.

There are many dimensions of personality which may be influenced by perimenstrual distress. But for the present study investigator has selected only three personality dimensions namely Locus of control, Introversion-Extroversion and Neuroticism.

Since Rotter in 1966 outlined the concept of <u>Internal - External Orientation</u>, this concept has became one of the important dimensions of personality.

But there are very few studies, investigating relationship between Locus of control and perimenstrual distress, therefore to understand dimension further it is selected.

Previous researchers have tried to explore the relationship between Introversion-Extroversion and perimenstrual

distress and Neuroticism and perimenstrual distress but their results did not show any consistent trend between these factors and Perimenstrual distress. In present study investigator tried to find out the influence of perimenstural distress on these variables in Indian context with special reference to Pune City.

Age at menarche, length of the menstrual cycle and duration of menstrual flow, these are important menstrual related variables. Findings of Moos 1969, Ruble 1977, Paige 1973 indicate that these variables may correlate with menstrual distress.

The researcher of present study had tried to explore the relationships between these menstrual related variables and menstrual distress.

Some biographical and sociological variables play an important role in determining the prevalence of perimenstrual symptoms.

The author of the study had selected few of these variables like family size, and ordinal position for the purpose of the study.

How the idea was conceived

Being a college teacher, researcher is in daily contact with college going girls. She observed that some girls try to avoid practicals and tutorials by giving reasons of menstrual pain, while some girls are very regular in their performance throughout the month. Researcher discussed with these girls about their menstrual related and other emotional and family problems.

The author of the study observed that girls having menstrual problems were also have other problems. They were reserved, having few friends. Their level of achievement was not satisfactory. Thus after studying their cases in detail, researcher decided to find out, if there is any effect of perimenstrual distress on personality characteristics.

1.2 STATEMENT OF THE PROBLEM

To find the effects of perimenstrual distress on personality factors such as Locus of control, Introversion-Extroversion and Neuroticism.

1.3 CONCEPTUAL FRAMEWORK

This section clarifies the concepts related to the topic and also explains the theoretical background of the concepts under consideration. The theoretical background of the concepts may help to understand the rationale for the selection of the important variables of the study.

1.3.1 Menstruation

The term menstrual refers to the menses of females. The term menstruation comes from the Latin word mensis meaning month. It is taken to mean just the monthly flow that women have. But in fact bleeding is the culminating point of a cycle whose rhythm influences the whole being from puberty until menopause. (Lever and Brush 1982)

The cycle of menstruation is regulated by a complex series of hormonal feedbacks between the pituitary and the ovary. Estrogen and progesterone are the two most important hormones

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involved in the menstrual cycle. In order to study the significance of the hormonal changes during the menstrual cycle, it is important divide it into phases of hormonal activity. This fits neatly into seven four days phases, each having different levels of estrogen and progesterone. The following table indicates seven four day phases of menstrual cycle.

TABLE I - 1

Phases of Menstrual Cycle (Dalton, 1978)

Days	Phases	Estrogen	Progesterone
* 01-04	Menstruation	Low	Absent
05-08	Early post Menstruum	Rising	Absent
09-12	Late post Menstruum	High	Absent
13-16	Ovulation	Falling	Low
17-20	Early Lutent	Rising	Rising
21-24	Late Lutent	High	High
* 25-28	Premenstruum	Falling	Falling

* The present study, however, has taken into account only two phases from the table given above, namely menstrual phase (1st phase) and premenstrual phase (last phase).

Theories of Menstruation

Various theories interpret menstruation from biological, psychological and social points of view, to explain its etiology. Some of these theories, such as Menotoxin and Vascular spasm have been discarded.

1. Hormonal Theories - Since Frank (1931) first proposed an over abundance of female sex hormone (estrogen) as a cause of premenstrual tension, most etiological theories have given hormones an important role. [Israel (1938), Morton (1953),

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Sutherland and Stewart (1965), Janowsky (1966)]

According to all hormonal theories hormonal imbalance is an important cause of perimenstrual symptoms. But exactly why these imbalances occur has not been definitely established.

2. Psychosomatic and Somatopsychic Theories - These theories state that psyche plays an important role in the causation of premenstrual tension. The arguments used to support this view usually take one or a combination of the following forms :

(a) Emotionally disturbed women have a greater average number of gynecological problems, therefore emotional problems are causing gynecological problems (Menninger 1939)

(b) Women who complain of premenstrual tension also complain of more physical symptoms than do women who are low in premenstrual tension, indicating that they are hypochondriacal or have learned to value the sick role as a coping strategy in life (Duncan and Taylor 1952)

(c) Women who complain of premenstrual tension are more often unprepared or poorly prepared for menarche and are influenced by unfavourable attitudes towards menstruation, learn to dread the monthly flow and resulting symptoms (Levitt and Lubin 1967)

3. Multifactorial Model - Clare (1977) critically evaluated the literature relating to psychiatric ill-health and the premenstrual syndrome. He favours a multifactorial model of causation attributing psychiatric ill-health to an interaction between hormonal and hormonally related changes in the

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Premenstruum, basic personality and social dissatisfactions adverse life circumstances and interpersonal stress.

All these psychological theories lead to speculate the role of psychological factors in the experience of perimenstrual symptoms.

Menstrual cycle phase and personality change

Regular, predictable changes occur in the personality of the sexually mature women and these changes correlate with the changes in the menstrual cycle.

The personality changes occur inspite of individual personality differences and may even be extreme, they are a consequences of endocrine related physical changes. This ideas is supported by the experimental data. Most studies correlate emotional changes with the estrogen and progesterone levels of the different phases of the menstrual cycle.

In 1931, Frank labeled the emotional changes that occur after about the 22nd day 'Premenstrual tension'. Depression irritability, anxiety and feelings of low self-esteem have been reported to affect from 24 to 100% of the population studied.

Coppen and Kessel (1961) found in their pioneering study of 465 women that depression and irritability were generally more severe before menstruation than during menstruation.

Gottschalk et al and Bardwick (1968) found transient decrease in levels of anxiety and hostility during ovulation or midcycle. During the estrogen phase of ovulation, the women studied were characterized by low levels of negative affects and

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high levels of self-esteem; during the low estrogen and low progesterone premenstrual period, they were significantly anxious hostile and depressed.

Moos (1968) found that approximately 30 to 50% of responses by 839 normal young married women to a questionnaire indicated cyclic symptoms in irritability, mood swings, tension and depression.

Dalton (1964) found that a large proportion of women who commit suicide or engage in criminal acts of violence do so during the four premenstrual days and the four menstrual days of the cycle. 45% of the female industrial employees who report sick, 46% of the females who are admitted to psychiatric care, 49% of the females admitted for acute medical and surgical problems, 52% of female emergency accidents admissions and 49% of females who commit a crime are in the premenstrual or menstrual phase of the cycle. In 1966 Dalton reported another interesting finding : 54% of the children who were brought to a clinic with minor colds were brought during mother's eighth, premenstrual and menstrual days. This behavior suggests an exaggeration of the mother's normal anxiety level.

These statistics in normal young women, suggests that the premenstrual tension syndrome has more frequent and more important consequences than has been assumed.

Accordingly to Benedeck and Rubenstein (1959, cited in Bardwick 1971) when the production of estrogen gradually increases at the beginning of the menstrual cycle, emotions are

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characteristically   outward,   active,   object-directed   and
heterosexual.

This tendency which has the biological aim of copulation,
is usually accompanied by good feelings of well-being and
alertness. These sexual aims can be seen in dreams, fantasies,
conscious emotions and behavior.

For women who are not mature or who are sexually fearful
one can see an increase in characteristic defense against
sexuality at this time.

Benedeck and Rubenstein found that the active sexual
tendency   fuses   with   a   passive-receptive   tendency.   This
Psychosexual fusion represents the biological and emotional
preparation for conception. At this time the active sexual
tendency is not as intense as it had been earlier in the cycle
because   it   is   modified   by   the   receptive   and   passive
predisposition. Dreams, fantasies and behavior at ovulation
reveal a wish to receive and retain. After ovulation tension is
relieved and there is a sense of relaxation and well-being.
Estrogen levels are high, progesterone levels are rapidly
increasing and psychologically there is an intensification of the
receptive-retentive tendencies that represent a psychological
preparation for pregnancy.

When estrogen and progesterone levels swiftly decline
during   the   premenstrual   phase,   a   regression   occurs   in
psychosexual integration. There are individual variations in
symptoms, but characteristically and frequently we can see anger,

excitability, fatigue crankiness, crying spells and a fear of mutilation. Frustrations seem unbearable, gratification of needs seems imperative and all emotions are less controlled than at any other time in the cycle. This regression to more infantile ways of responding and the increased irritability of the sympathetic nervous system are seen as resulting from the low estrogen levels of the premenstrual phase.

Benedeck and Rubenstein found that the onset of menstruation is usually accompanied by a relaxation of tension and irritability of the premenstrual phase, although physical symptoms often increases.

Rubenstein gave estrogen to a women with premenstrual tension, her morale improved and she felt better able to accept herself and her environment. Thus Rubenstein showed that by administering sex hormones one could produced psychological change.

For the purpose of this study, researcher has chosen to follow the line of thinking proposed by Ivey and Bardwick (1968) who concluded that instead of finding strong individual differences in reactions during the menstrual cycle, in their subject they found the consistent and significant mood swings characteristics of particular menstrual phase. These physical changes, probably endocrine changes, so influence psychological behavior that in spite of individual personality differences, even in normal `S's psychological behavior seems predictable on the basis of menstrual cycle phase alone. Women may cope or not

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cope, become anxious, hostile, or depressive, appear healthy or neurotic, due as much to menstrual phase as to core psychological characteristics.

The statement that psychological changes during the menstrual cycle are biochemically influenced is also widely accepted among medical field. Thus psychosomatic effects of the reproductive system is becoming a more popular research area.

The relationship between psychopathology and the menstrual cycle

There is a well documented array of studies which support the view that many recurrent psychotic illnesses flare up in the premenstrual phase of affiliated women more often than would be expected by change. (Smith 1975)

Ress (1963) reported a significant association between severe premenstrual tension syndrome and neurosis. However the association was not absolute. Ress argued that a history of childhood neurosis, personality inability and clinical abnormality acted as intervening variables explaining the link between severe neurosis and premenstrual tension.

Association between deficiencies in personality growth and structure and premenstrual complaint has long been suggested.

Menninger (1939) Paulson (1961) have emphasized the rejection of the feminine role, guilt over sexual temptation and diminished comfort in the mature feminine role leads to perimenstrual tension.

According to Gough (1975) women described as apprehensive cautious conventional, stable and unemotional tended to report

little peri-menstrual symptomatology, whereas women described as shy, self-doubting, eager to seek help and tending to behave in a self defeating way tended to report more such symptomatology.

Taylor's results (1979) suggests that those who score high on Perimenstrual complaint have following characteristics : viz. emotionally unstable, suspicious, unpretentious, guilt-prone, apprehensive, self-conflicted, tense and frustrated.

The attitude a women have towards menstruation may be hypothesized to be closely related to the attitude she has about being a women and ultimately to her own self-concept.

Wittkower, Wilson (1940) have suggested that women dissatisfied with their feminine role are most likely to experience severe dysmenorrehea.

In general, it appears that women who respond negatively to menstruation experience more physiological and psychological distress and in general hold a more negative view of themselves than do women with a more accepting attitude towards menstruation.

1.3.2 Locus of control

Locus of control indicates the location of control within the individual or outside the individual. In this view, there is tendency among people to perceive the effects as either the result of their action or not a result of their action. These two beliefs, that is having control and not having control over the effects of behavior are labeled as internal control and external control respectively.

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It is not typological concept. It is not the case that people are either internally or externally controlled. (Locus of control is a continuum and people can be ordered along that continuum.)

Frame-work of locus of control was developed from social learning theory. This theory is an integration of "S-R" or reinforcement theories and the cognitive or `field' theory. The theory has attempted to understand the human behavior in complex social situations, on the basis of two principles. These are expectancy construct and an empirical law of effect.

According to this theory, psychological needs are developed by an individual on the basis of generalised expectancy of a particular occurrence and its reinforcement value.)

A person who believes that he or she is able to act so as to maximize the possibility of good outcomes and to minimize the possibility of bad outcomes is said to have internal locus of control. The opposite assumption about one's ability to control events is that individuals are helpless and at the mercy of luck, fate and other uncontrollable outside forces, is called external locus of control.

To measure generalised expectancies several different locus of control tests have been constructed for adults, and others have been developed for children. (Lefcourt 1982) The instrument Rotter (1966) developed is known as I-E scale, which is used in the present study.

Differences along this dimension have been related to behavior in a variety of social situations.

Research on this trait indicates that those with an internal orientation were raised by mother's who expected them to behave independently at an early age and who did not try to control every aspect of their offsprings behaviour.(Chance 1965) Parents of internals tend to be protective, affectionate and approving (Katkovsky, Crandall, Good 1967).

At the other extreme externals seem to experience more rejection, hostile control and criticism (Davis and Phares 1969).

As with most personality traits locus of control is relatively stable over time (Wolfle and Robertshaw 1982). Under the appropriate conditions, however change can occur. Some changes are the result of everyday life events. In childhood internality increases with age (Penk 1969) because as time passes young people are able to exert more and more control over what happens to them.

In the opposite direction, extremely disrupting life events result in a shift toward externality; for example, divorce pushes women toward externality (Doherty 1983).

Finally old age is characterized by externality (Lumpkin 1986). The combination of health problems, retirement, offspring growing up and leaving home and declining social involvement leaves the individual feeling less and less in control of life events.

On the basis of above findings author of the present study assumes that perimenstrual distress may affect locus of control. Because high perimenstrual distress is a disruptive life event which may result in a shift toward externality.

The original theory was that maladjustment should be associated with either extreme of this personality dimension, one could be maladjusted by assuming total helplessness and feeling no sense of responsibility for events. Equally maladjusted is some one who feels totally in control of life's events. (Lefcourt 1982) The researcher to date has shown however internality is a more positive asset than externality.

As Internality is viewed as the better adjusted alternative, when there is deliberate attempt to bring about personality change, it is to increase internality.

Various researches suggests that both children and adults can be taught to perceive themselves as active hopeful participants in their lives rather than as helpless pawns.

1. Internals appear to want to keep the reins in their own hands behaving in ways which facilitate independence and negate the other's influence.

   Externals on the other hand succumb to pressure from others particularly when the outside source is seen as prestigious or an expert.

2. Internals have strong achievement need they appear to work harder at intellectual and performance tasks.

3. Internals attempt to take responsibility of their lives and to

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change uncomfortable and aversive situations, they appear to support political structures that emphasize individual responsibility.

4. Externals seem to be resistant about taking risks that might lead to failure, thus giving themselves few opportunities to critically test their abilities.

5. Internals reports themselves to be more psychologically adjusted than externals and they respond to psycho therapy differentially. In relation to Physical disorders internals appear to take precautions against accidents, and disease. They are more likely to be able to control physiological functioning through bio-feedback mechanisms.

6. Externals are more likely to offer assistance because of self-confidence and greater competence.

1.3.3 Introversion - Extroversion

Jung (1923) has given this dimension of personality. Extroversion implies a turning outward of interests and energies, with highest values being placed on external or objective things.

An extrovert is a person who habitually thinks, feels and acts in relation to external objects.

Introversion implies a turning inward of interests and energies with highest values being placed on subjective, or personal factors. An introvert is an individual who habitually thinks, feels and acts in such a way as to demonstrate clearly that the self is the chief factor of motivation and that the objective world is of secondary importance.

Jung explicitly states that every individual possessed both tendencies. It is only the relative dominance of the one over other, determined by outer circumstance and inner disposition that decided whether a person will be an introvert or an extrovert.

Eysenck 1953 defined introverts and extroverts in following manner.

The Introverts are self-conscious, nervous, irritable, emotionally apathetic, moody, persistent, accurate but slow, rigid and withdrawing from social occasions. Their feelings are easily hurt. They suffer from feelings of inferiority, day-dream easily and suffer from sleeplessness. Vertical growth predominates over horizontal growth in their body built. Their intelligence is comparatively high and vocabulary is excellent. Their salivary secretion is inhibited. Their aspirations are high but they underrate their own performance. They prefer the quiet old-fashioned type of picture and produce compact designs with concrete subjects. They do not appreciate jokes very much, particularly sex jokes. The type of neurotic tendencies that they develop are anxiety, depression and obsession.

In the extroverts, horizontal growth predominates over vertical growth in their body built. They are quick but inaccurate and show extreme lack of persistence. They are not rigid in their behaviour and show great inter-personal variability. Their intelligence is comparatively low, vocabulary is poor, level of aspiration is low and interests are narrow.

They are inclined to overrate their own performance. They prefer the colourful modern type of picture and produce scattered designs with abstract subjects, they appreciate jokes very much, particularly sex jokes. The type of neurotic tendencies that they develop are hysterical conversion symptoms, and hypochondriasis. They are troubled by stammering stuttering, aches and pains. They are accident prone and frequently keep away from work through illness. They have a bad work history. Their attitude is that of a disgrunted soul.

Further comparison of the two types leads to the understanding of a few more characteristics of them. The salient characteristics of each type are compared below –

The extrovert adopt easily to the environmental conditions right from their early childhood, whereas the introvert are shy and afraid of the objects in their environment.

The approach of the extrovert is confident, whereas that of the introvert is cautions.

Extrovert welcome new situations while the introvert try to avoid them. The contacts with objects and situations are much more numerous in the extroverts than in the introverts. The extroverts are impulsive, the introverts are reflective. Though the extroverts impress upon others, as more normal, aggressive and well-adjusted persons, they also are thought of as trouble makers and nuisance at home and in school. On the other hand the shy, hesitant introvert is not easily noticed by others and is considered a well behaved person in the family as well as in school.

From the clinical point of view both the types are normal. It can be observed from the description of above characteristics, that introverts and extroverts show exactly opposite qualities therefore, author of the present study assumes that there will be no relationship between introversion-extroversion and Perimenstrual distress.

1.3.4 Neuroticism

According to Coleman (1981),Nneuroticism is the general emotional liability of a person, his emotional over-responsiveness and his liability to breakdown under stress. In order to understand, theoretical background of neuroses, we must understand process involved in forming neurotic life-style.

Neurotic individual feels basically inadequate, evaluates everyday problems as threatening and attempts to deal with the resulting anxiety by avoidance and defense - oriented reaction. The end result is a self-defeating life-style which blocks personal growth and self-fulfillment. Usually the neurotic has trouble establishing and maintaining satisfying interpersonal relationships, feels vaguely guilty for trying to avoid rather than cope with reality and is dissatisfied and unhappy with his way of life.

The neurotic clings to his established coping pattern despite the fact that it is ineffective, self-defeating and leads to dissatisfaction and unhappiness.

The basic pattern within the neuroses involves conditioned fears which render the individual particularly vulnerable to

stresses that most people can cope with effectively. This vulnerability in turn, leads to a casual chain of stress - anxiety - avoidance - reinforcement. In this way neurotic avoidance behaviour tends to be both self-defeating and self-perpetuating.

According to Eysenck (1953), people high on neuroticism tend to be emotionally liable and frequently complain of worry and anxiety as well as of bodily aches (e.g. headaches, stomach difficulties, crying spells etc.). The underlying principle is that individuals high on neuroticism respond quickly to stress and show a slower decrease in the stress response once the danger has disappeared than is true for more stable (low neuroticism) individuals.

Emotionality or neuroticism is related to the reactivity of the autonomic nervous system. Individuals with more liable autonomic nervous systems are liable to respond strongly to unpleasant or frightening experiences by increases in heart-rate, muscle tension, sweat-gland activity and so on. Individuals high on neuroticism will tend to have low thresholds of emotional arousal. This will lead to the more frequent activation of their autonomic nervous system which in turn will trigger the RAS. Thus the RAS will be more often in a state of arousal for individuals with high scores on neuroticism.

According to Coleman(1981), there are seven specific neurotic patterns.

(1) Anxiety neurosis - it involves diffuse but often severe anxiety not referable to particular situation or threat.

(2) Phobic neurosis - involves various fears the individual realizes are irrational but from which he cannot free himself.

(3) Obsessive - compulsive neurosis - involves thoughts and actions, the individual recognizes as irrational but which still persist.

(4) Hysterical neurosis - consists of two types :

(a) Conversion type - with symptoms of physical illness such as paralysis or loss of hearing without underlying physical pathology.

(b) Dissociative type - including such reactions as amensia and multiple personality.

(5) Hypochondriacal neurosis - involves preoccupation with one's bodily functioning and various presumed diseases.

(6) Neurasthenic neurosis - involves chronic fatigue, weakness and lack of enthusiasm.

(7) Depressive neurosis - involves abnormally prolonged rejection, associated with internal conflict, interpersonal loss or environmental setback.

Eysenck (1953) describe the personality of neurotic individual in following manner, these individuals suffer from excessive and wrong fear without apparent reasons. They are emotionally unstable, excessively sensitive, nervous self-

indulgent and comparatively incapable to stand hard trials of life. They suffer from inferiority feelings, harbour frustrated strong urges, find it difficult to take failures, have faulty concept of self and lack of sense of humour and confidence. They are below average in intelligence. They are also very suggestible and slow in thought and action. They lack persistence and tend to repress unpleasant facts.

From above theoretical background it can be clearly seen that characteristics of neuroticism are closely related to Perimenstrual symptoms. Hence, researcher of the present study expects that neuroticism will be positively related to perimenstrual distress.

1.4   THE PRESENT STUDY

1.4.1 Objectives :

The present study has been undertaken with four objectives in view.

1. To investigate the perimenstrual distress of college going girls on two phases of menstrual cycle namely, (a) premenstrual phase, (b) menstrual phase

2. To find of the relationship between perimenstrual distress and menstrual related variables. namely, age at menarche, Duration of menstrual flow and length of menstrual cycle.

3. To discern the relationship between perimenstrual distress and sociodemographic variables such as ordinal position and size of the family.

4. The main objective of this study is to understand the influence of perimenstrual distress on personality

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characteristics, namely (a) locus of control (b) introversion-extroversion (c) neuroticism.

1.4.2 Significance of the study

Menstruation as area of research has been studied rarely in India and the author has noticed only studies of Chattopadhyay (1980), Amal (1080), Jaiprakash Rao (1982), Anantharaman (1986). *Anujbir 1997*

1. In our society discussion about menstruation was always considered as taboo. Therefore number of research in this area are also very few.

2. In majority of the study married women were used as sample, but there has been no systematic studies solely on college going unmarried girls.

3. The findings of this research may help to understand the nature of premenstrual distress in Indian culture and may provide some basis for menstrual studies in future in our culture.

4. Results will also throw some light on personality patterns of perimenstrual distress sufferers.

5. The investigator hopes that sharing the results with parents, counsellors, doctors and others will increase understanding of the possible relationship between personality factors and type of perimenstrual distress in college going late adolescent girls.

6. This project will also shed light on the *personality patterns of* girls having menstrual distress.

7. This study will be valuable in helping girls to cope with menstruation.

8. With these findings it will be possible to find similarities and differences in the results between this study and the
   or between this study & studies
   western studies ∧ in other parts of the India.

9. Physical manifestations of menstruation has been certainly well understood in medical field. But with this type of study psychological concomitants will gain acceptance.

10. This investigation is necessary preliminary step to further continuing research that would help to shed some light on the ways in which menstruation affects functioning.

11. It is also further intended that the results of this study will help us to determine the necessity of longitudinal study investigating the changes in these areas which are noticed soon after menarche and prior to menopause.

A women's relationship with her menstrual cycle can have a profound effect on her life. Therefore menstruation has both theoretical and practical significance. The study of menstruation provides an opportunity to explore a set of complex interactions, between biological and sociocultural variables.

1.4.3 Limitations of the present study

Limitation of this study can be viewed as follows -

1.   Limitations due to sample -

The sample is drawn from the specific segment of the population. It includes college going, Hindu, unmarried girls from Pune city. All 205 girls were studying in Arts faculty of 8

different colleges in Pune. Thus it is stratified sample, but it may not be exactly representative sample. The conclusions cannot be applicable to married women, non college going girls, other than Hindu religion girls. Also the conclusions cannot be generalised to all college going girls belonging to different faculties as this sample includes only arts faculty girls.

This sample includes girls from Pune city only. Hence it is very difficult to say whether the perimenstrual symptoms would show similar patterns for all college going girls all over India.

The size of the sample (205) is small, which may have limited significance of the results.

It is very difficult to collect data from very large sample, because the present research area is tabooed in our culture Girls do not talk or answer freely in large groups. So researcher has to test the girls in group of 5 to 8 girls. Thus the procedure for testing is time consuming.

2. Limitations of Paper and Pencil measures -

Measures used for present study are all paper and pencil, therefore shortcomings of paper and pencil tests can not be avoided.

In present study Rotter's I-E scale and Palsane's personal inventory is used. Both of them are forced choice type personality inventories. According to Annastasi (1976) personality inventories may be recognized as intrinsically crude instruments. Because the question of faking and malingering is far more acute in personalities measurement than in any other

tests. The behaviour measured by personality tests is also more changeable over time. (Forced choice technique is used for controlling the social desirability. But it appears that forced-choice technique has not proved as affective as had been anticipated. At the same time this format, introduces other technical difficulties and eliminates information about absolute strength of individual characteristics.

3.   Limitations of review of literature —

Resources at the University of Pune and Armed Forces Medical College library may have limited the selection of the literature that was reviewed.) The focus assumed by the investigator may have been another limiting factor of the selected literature review.

With all these limitations the present study would be /\still useful to gain some insight into the perimenstrual distress of college going girls.

1.5 SUMMARY

In this chapter investigator tried to explain the background of the present research problem and their importance of menstruation in forming women personality has been explained.

The main purpose of this study was to investigate whether perimenstrual distress affects personality factors, such as Internal-External orientation, Introversion-Extroversion and Neuroticism.

Important concepts like Menstruation, Neuroticism, Introversion-Extroversion and Internal-External orientation are

explained in detail. The theoretical perspective of these concepts were also outlined here.

While giving outline of the present study investigator has state the four objectives of this study.

The practical importance of this study has been pointed out. For example this project will shed light on the type of girls having menstrual distress and this study will be valuable in helping girls to cope with menstruation.

The limitations of the present study in terms of sample size, measuring instruments and review of literature have been acknowledged.

CHAPTER II

REVIEW OF LITERATURE

2.1   INTRODUCTION.

2.2   REVIEW OF MENSTRUAL RESEARCH IN INDIA.

2.3   MENSTRUAL CYCLE PHASE VARIATIONS.

2.4   MENSTRUAL VARIABLES.

2.5   SOCIODEMOGRAPHIC VARIABLES.

      2.5.1   Size of the family.

      2.5.2   Ordinal Position.

2.6   PERSONALITY RELATED VARIABLES.

      2.6.1   Locus of Control.

      2.6.2   Introversion-Extroversion.

      2.6.3   Neuroticism.

2.7   SUMMARY

CHAPTER II

REVIEW OF LITERATURE

2.1   INTRODUCTION

The relevance of the menstrual cycle to the well being of women remains a controversial issue. It is debated whether cyclical subjective changes are Psychologically or hormonally determined and whether with either explanation they are manifestations of an abnormal process or rather variations of a normal pattern. (Sanders 1983)

Much of our current knowledge of menstruation, comes from the medical literature. The study of menstruation being relatively new field of endeavor, there is a lack of systematic research. There is much more confusion in the related literature, which can be attributed to a number of methodological shortcomings.

Some related studies are reviewed here, which are not directly related to the present investigation. All these studies differ in types of samples studied, in methodology and also in the type of research designs.

Studies reported here are classified according to the variables selected for investigation.

2.2   REVIEW OF MENSTRUAL RESEARCH IN INDIA

Very few studies have been conducted regarding menstruation by using Indian sample. Efforts have been made to study perimenstrual symptoms in connection with personality

characteristics among women in India (Amal, 1980, Chattopadhyay and Das 1980; Jay Prakash and Rao 1982).

Anantharaman and Swarnalatha(1986) studied the influence of personality on perception of menstrual distress.

Chopra (1985) studied the effect of relaxation therapy on premenstrual variations in personality.
Sharma (1983) constructed and developed a menopausal symptom check list.

Few studies regarding menopause have been conducted by using Indian samples (Jamuna 1987, Indira and Murthy 1980, 1982; Gupta 1987).

Ambekar (1990) studied the prevalence and intensity of perimenstrual symptoms and resulting distress in relation to some personality related variables such as sex role orientation, sex role acceptance and attitudes towards menstruation.

The findings of the above studies have been noted in related sub-sections of this chapter.

Apart from these significant studies, efforts have been made to study menstrual distress among adolescent girls and young women. For master's degree in psychology by using small samples, preliminary studies were conducted, such as menstruation and personality (Patil 1983), duration of menses as psychosomatic phenomenon (Sathe, 1984), recollection of menarche, current menstrual attitudes and perimenstrual symptoms (Karnik 1985), menstrual distress during adolescence (Puranik 1985; Wagh, 1985), adjustment and menstrual distress among adolescent girls

(Amroliwala, 1985), menstrual distress and attitude towards menstruation in mother and their daughters (Kulkarni, 1986), change in self esteem, body image, attitude towards menstruation and sexual differenciation in pre and post menarcheal girls (Peshva 1986), and menstrual distress in sports women (Thatte 1985). The findings of these studies, however, have not been mentioned as all the studies are conducted on a small sample.

2.3   MENSTRUAL CYCLE PHASE VARIATIONS

Menstrual cycle includes three distinct phases –

1. Pre-menstrual phase

2. Menstrual phase

3. Inter-menstrual phase

The question which is to be answered is how much do women's symptoms vary in different menstrual cycle phases?

Previous results indicate that many women report more symptoms in the menstrual and premenstrual than in the intermenstrual phase.

Frank (1931) was the first to call attention to the variety of disturbance preceding the onset of menstruation. He was responsible for coining the term 'premenstrual tension'.

Feelings of tension, anxiety, depression, fatigue, irritability, fluctuating mood, breast tenderness, bloated feelings and headaches commonly experienced by women in the few days prior to menstruation have been called premenstrual tension or the premenstrual syndrome.

The wide variation of symptomatology makes diagnosing premenstrual tension difficult; the best compromise may be the one proposed by Sutherland and Steward (1965). According to them any combinations of emotional and physical features occurring cyclically before menstruation which regress and disappear with menstruation may be termed as premenstrual tension.

Lahmeyer and Miller (1982) concluded that premenstrual tension may indeed exist among women without significant psychopathology and would seem to deserve more attention as a cyclic psychophysiological disturbance.

One of the first papers to deal specifically with the psychological correlated of ovarian activity was done by Benedek and Rubenstein (1939). They found that the stage of the menstrual cycle would be accurately determined by the content of the psychoanalytic material; for example, extrogen production was signified by an increase of heterosexual drive and progesterone production by passive receptive instinctual tendencies. They offer the following as characterizing the premenstrual-menstrual women : restless, irritable, over-sensitive to stimuli, fatigued fearful, emotionally withdrawn, and depressed, and feeling of regretful and inferior.

Amal (1980) studied Indian college girls and found that the correlation among distress of 3 different phases are moderate to high and are positive. 'S's who report greater distress during pre-menstrual period are likely to experience equally great

discomfort during menstruation and the post menstrual periods also. This finding suggests that more than immediate physical discomfort associated with actual menstruation, it is premenstrual tension which is more distressing and is the same which contributes to the distress throughout the other phases.

Chattopadhayay and Das (1980) in their preliminary study of personality and menstrual distress found that the 30 unmarried females experienced pain, autonomic reaction and negative affect most intensly during intermenstrual and least during post-ovulation. Feeling during premenstruum were slightly lesser than that of intermenstruum.

Chattopadhayay and Das (1982) studied 30 unmarried females and found that level of arousal was equally higher in both the menstrual and pre-menstrual phases than post-menstrual phase.

Zola and others (1978) collected data from 51 Psychotic women. Data suggest that pre-menstrual syndrome may not be major specific contributor to the reported increase in admissions during this phase of the cycle.

Jai Prakash and Rao (1982) studied 666 college girls. In this sample menstrual symptoms were much more prevalent than pre-menstrual symptoms.

Brooks-Gunn and Ruble (1982) have identified significant phase variations in symptom reports on form C of the MDQ among high school girls.

Cyclic changes have also been identified on form C of the MDQ among women in Australia (Taylor 1979) Great Britain (Rouse

1978) Egypt (Badaway et al 1983) India (Chattopadhyay and Das) and Israel (Most et al 1981)

Moos at al (1969) studied 15 married women and found that the pain, autonomic reactions, water retention and negative affect scale discriminated among cycle phases, while the control scale did not.

In their review of a set of 13 relevant studies, Ruble and Brooks-Gunn (1979) noted that most studies identified significant pre-menstrual - intermenstrual and menstrual Intermenstrual difference on the first six MDQ scales.

On the contrary neither Baisden and Gibson (1975) nor Favreau (1974) identified cyclical changes in small groups of young women.

According to Rose (1980) some women who report premenstrual depression and anxiety also reported pre-menstrual energy and sexual arousal.

Awaritefe and his colleagues (1980) studied a group of 80 Nigerian women. These women reported elevated tension, anxiety and over excitement, but they also obtained high scores on such positive mood items as pleasant, satisfied, joyful and calm.

Parlee (1982) speculated that such positive pre-menstrual mood states could be function of satisfactory life circumstances in interaction with a non-specific state of bodily arousal during the pre-menstrual phase, women who are unhappy about their life situation may learn to label non-specific premenstrual arousal as depression, while women who are content may interpret, such arousal as increased vigor.

Benedeck and Rubenstein studied the emotional responses during menstrual phases of women and found that ovulation was often accompanied by pleasant affects premenses by feelings of anxiety and depression and menses predominantly by feelings of depression and hostility.

Cross-cultural study of American, Japanese, Nigerian, Turkish and Greek women suggests that variation of behavior with the menstrual cycle is universal phenomenon. Severity and type of symptomatology, however, differ from culture to culture.(Janiger, Riffenburgh and Kersh 1972)

Ambekar (1990) found that as compared to Israeli women, distress associated with menstruation is more in the sample of Indian married women, but the prevalence of different symptoms is less as compared to previous research.

Thus, from the research work conducted throughout the world, it becomes clear that there are variations in intensity and prevalence of different menstrual symptoms, during different menstrual phases.

Most women experience some cyclic changes, but for the majority such changes are relatively minor, moreover they typically are not greater than the mood changes experienced by males (Parlee 1982). Ivey and Bardwick found (1968) that general psychological mood-states correlat with menstrual cycle phases and they found a high and normal incidence of premenstrual anxiety depression and hostility.

2.4   MENSTRUAL VARIABLES

There are three major characteristics of menstrual cycle.

They are, age at menarche, length of menstrual cycle and duration of menstrual flow.

Golub (1983) studied different factors affecting menarcheal development and concluded that menarche depends on a series of changes in hormone secretion and somatic growth. The process are in turn influential by genetic and environmental factors, such as nutrition, exercise and illness which may accelerate or retard the onset of menstruation.

Also at this time it is not known whether it is advantageous or disadvantageous to have a later menarche rather than an early one. Shainess (1961) reported menstrual problems related to traumatic or badly handled experiences of the menarche.

Researchers have speculated that women who have a longer menstrual flow and a longer or less regular cycle may experience more perimenstrual symptoms.

Moos (1969) obtained correlations between MDQ scales and these three characteristics of menstrual cycle for a sample of 700 women. There were no significant association between menstrual or pre-menstrual symptoms and length of the menstrual cycle. Moos also found that women with a longer menstrual flow or less regular cycle reported more menstrual and premenstrual symptoms, on the pain, water retention, negative affect and impaired concentration scales. The highest correlation was only ·18, which indicates that the association between these aspects of the menstrual cycle and symptom intensity are small.

According to Slade and Jenner (1980), woods, Most and Dery (1982), women who have long or irregular menstrual cycles or a heavy menstrual flow tend to report more perimenstrual symptoms.

Brooks, Ruble and Clarke (1977) stated that, length of cycle was not linked to expectations of premenstrual symptoms, but women with longer cycles showed greater increases in pain, impaired concentration and behavior change symptoms from the intermenstrual to the premenstrual phase.

Paige (1973) found no connections between the MDQ scale scores and either length or regularity of cycle or between current symptom reports and age at first menstruation. Hain, Linton, Ebers and Champman (1970) presents some evidence to suggest that women with irregular menses i.e. those in whom the difference between the longest and shortest cycle exceeds 14 days report more menstrual symptomatology than do women having regular menses. They further found that, according to an analysis of individual MMPI profiles, the irregular group was more immature and impulsive, had numerous neurotic symptoms including somatic ones and tended to experience more interpersonal difficulties. Conversely regularity of the cycles, freedom from psychological' menstrual symptoms and healthy personality defenses were all highly inter correlated.

Ambekar (1990) concluded that age at menarche and scores on premenstrual and menstrual symptoms were not found to be related. Women with early and late age at menarche did not reveal significant differences in premenstrual and menstrual symptom patterns.

Regularity of menstruation was found to be significant correlate of premenstrual and menstrual distress. Duration of menstrual flow and scores on perimenstrual symptoms did not show significant positive correlation as it was expected.

Thus, there are some relationships between the MDQ scales and other aspects of the menstrual cycle but they are typically modest and do not account for much of the variations in symptom reports.

2.5 SOCIODEMOGRAPHIC VARIABLES

2.5.1 Size of the Family

Researchers on family composition (Feinberg, Smith and Schmidt 1958, Thrope 1955, Hutt, Isaacson and Blum 1966, Eysenck and Cookson 1970) pointed out that the size of the family groups has important bearing upon the personality development of the several members of the family. The larger the family, the larger will be number of interactional systems.

According to Sampson (1965) the size of the family and the child's position within it create special psychological environment and the child's personality is affected by his efforts to cope with such environment.

Kaur and Rajendra (1968) in their study of "Emotional security, insecurity, home adjustment and family size" found that among college going individuals emotional security and better home adjustment were found in small families than in large families, which was significant at 0.01 level.

In large family one has to learn to make adjustments to all sorts of changes in status in rather on the individual.

Because of the large number of persons within a limited space, a greater degree of administration, organization and authoritarian control is needed. Reduced parent-child contact and greater degree of frustration encountered by children are the two aspects of a large family.

Kohn (1963) reported that in large families there are more parental constraints especially for middle class boys and working class girls.

A small family plays an important role in the personality make up of the adolescent.

Narchal and Shukla (1986) studied 90 adolescent girls from different family sizes. They administered Moudsly personality inventory and Bell's adjustment inventory to assess the personality (neurotic patterns) and its relationship with adjustment problems of girls. Results indicates that girls from large, medium and small families differ significantly on the various areas of adjustment and Personality, Indicating that family size has an effect on the personality and adjustment of the adolescent girls. They concluded that small family provides better adjustment for child. Small family is a quality system in which parents and children have a close relationship and the environment in the home is cordial.

2.5.2 Ordinal Position

Ordinal position indicates birth order of respondent in her family.

Birth order effects have attracted the attention of researchers in the last few decades.

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According to Sampson (1965) the size of the family and child's position within it create special psychological environment and child's personality is affected by his efforts to cope with such environment.

Therefore it is possible that due to differential status position in the family different types of responses may be there for perimenstrual distress and personality variables.

In their paper 'Socialization and menstrual distress during adolescence' Ruble and Brook Gunn (1978) did not report differences on menstrual distress due to birth order.

Patil (1983) in her M.A. disseration also failed to find significant differences in menstrual distress due to ordinal position in family.

Geogre (1967) studied the relationship between order of birth and personality and found middle children to be more extroverted and slightly better in social adjustment.

Reddy (1967) found the first borns to be more maladjusted and the second born to be least maladjusted. (cited in Shanmugum 1972)

Lindgren (1973) opined that birth-order differences may account for less than 5% of variance, but they do tend to be consistent.

2.6   PERSONALITY RELATED VARIABLES

2.6.1 Locus of Control

The concept of internal versus external locus of control is presented by Rotter (1966) as a means of measuring generalized

expectancies regarding internal versus external control of reinforcement.

It has been suggested that locus of control may be a reliable indicator of overall adjustment of an individual to his environment.

Lefcourt (1966) has concluded that an external control orientation may be most characteristic of marginally adjusted individuals in our society. It seems reasonable to conclude, therefore that individuals with more external orientation experience greater difficulty in coping with everyday pressures and frustrations than do internally oriented individuals.

Using groups of college students, Abramowitz (1969) found a significant relationship between an external orientation and self-reported depression. On the other hand Warehime and Woodson (1971) reported a positive relationship between internality and positive affect. For females an internal orientation was significantly related to general feelings of abundance and satisfaction in the life situation, calmness and freedom from anxiety and feeling cheerful and free of depression. Harding, Vail and Brown (1984) reported that women who score high on internal health locus of control report fewer premenstrual symptoms.

Author of this study has observed only one research conducted investigating the relationship between Locus of Control and the menstrual cycle. This research is conducted by Di.Nardo in 1974. She assumed that locus of control is a stable personality trait which is not affected by situational variables

such as menstruation. Di.Nardo found that there would be no significant difference between the paramenstruum group and the inter-menstrual group.

In India Rao and Murthy (1984) were investigated the relationship of locus of control to various psychological and social variables with reference to maladjustment, the three measures obtained in this investigation - anxiety, neuroticism and the psychological morbidity scores, all revealed the same findings. The higher the scores on the I-E scale, greater was the maladjustment, need for affilliation and extroversion did not yield significant results. Subjects who's mothers were gainfully employed outside the home, showed significantly lower locus of control scores. The number of siblings and birth order yield non-significant results.

The work of Storms and Macaul (1976) points out that there is a direct relationship between self attribution with control over environment and level of anxiety experienced. In other words higher the inability to control the environment, greater is the level of anxiety.

2.6.2 Introversion-Extroversion

According to Eysenck (1947) , the dimensions of extroversion - introversion measures one's sociability along a continuum from an extreme extrovert position reflecting a maximum degree of outgoing, uninhibited social proclivities of a person to an extreme introvert position reflecting a minimum of such proclivities.

In their work on personality and Menstrual distress P.K.Chattopadhayay and M.Das (1980) pointed out that, feeling of distress was much more intense in introverts. Introverted subjects experienced pain, tension etc., more intensely than did ambiverts. These findings are in line with Karen and Colin (1978) whether this intense feeling of distress in introverts is due to their more feminine and orthodox traditional attitudes towards the role of women in society or due to their more excitatory potentiality, can not be decided at this moment. Analysis of data revealed that even amongst introvert, higher the introversion score, higher was the feelings of pain.

Amal (1980) studied the relationship of personality variables like maladjustment, gregariousness and thought-fullness to menstrual symptoms. This study shows that there is positive correlation between menstrual problems and gregariousness and menstrual problems and thoughtfulness. This probably means that those who are extrovert and like social activities perceive the irritability associated with menstruation as a problem. These problems are not felt by those who stay in-doors. Whereas the intensity of the problems may be perceived to be high by those who are forced to stay out for work, as is the case of college going girls.

Those who have a personality trait of thoughtfulness are more sensitive to inner psychological pressures related to menstruation they are able to report distress more accurately.

In order to study the influence of personality on perception of menstrual distress Anantharaman and Swarnalatha interviewed 100 women college students. Menstrual distress questionnaire and Eysenck personality Inventory were administered to them. Out of these 100 respondents, 18 extroverts and 19 introverts were considered for analysis. There was no difference between extroverts and introverts in the perception of menstrual distress in the three phases of menstruation.

2.6.3 Neuroticism

According to Eysenck (1947) the dimension of Neuroticism measures one's emotional stability.

Ress (1953) noted that while a premenstrual syndrome occur more often in neurotics than in normals. There is no simple relationship between neuroticism and the syndrome. Many severally neurotic patients did not show premenstrual symptoms, whereas suffering was noted in those who showed little or no sign of neurosis.

Ress argued that a history of childhood neurosis personality instability and clinical abnormality acted as intervening variables explaining the link between severe neurosis and premenstrual tension.

According to Coppen and Kessel (1963) subjects with irregular periods also had high neuroticism.

Levy (1956) found a significant positive correlation between maternal behavior and the length of the menstrual flow.

As the length of the menstrual flow increased, the percentage of high maternal mothers also increased.

Bruce and Russell (1962) studied ten patients who reported exacerbation in neurotic symptoms or symptoms present only in the premenstruum and found that the cyclic relationship. These patients became easily upset, phobic, anxious or depressed premenstrually.

Gregony (1957) found that 32% of 52 neurotics, he studied, reported an association of their cycle, but failed to test them premenstrually.

Taylor (1979) speculated that the physiological changes associated with menstruation are associated with mild changes in behavior and mood changes which occur in the great majority of women. The physiological changes may be within normal limits but their subjective appreciation of these changes will be magnified by their sensitization. Most of them will not seek treatment for these symptoms. In Taylor's view women who report severe symptoms and do seek treatment on that account are similar to neurotic patients and can be expected to score high on tests on which neurotic patients also score high.

Mohan and Chopra (1985) studied the effect of relaxation therapy on premenstrual variations in personality. They studied personality scores of psychoticism, extroversion, neuroticism and anxiety in premenstrual tension phase. Results indicates that certain personality dimensions which can create stress in an individual during premenstrual phase can be successfully reduced

with the help of therapy. Too much of anxiety or neuroticism can be a hindrance in one's normal activities. Specially when there is a marked rise in these two personality dimensions as a part of premenstrual tension as found earlier by Mohan and Chopra. It causes an imbalance in one's routine functioning and interpersonal effectiveness.

2.7   SUMMARY

This brief review of literature reveals the fact that symptoms do vary in different menstrual phases but many women report more symptoms in menstrual and premenstrual phases than in the intermenstrual phase.

There

These are some relationships between the MDQ scales and characteristics of menstruation, but they are typically modest and do not account for much of the variations in symptom reports.

Also efforts have been made to know the role of sociodemographic variables like size of the family, ordinal position in the experience of perimenstrual symptoms.

Specifically this review emphasizes studies regarding Neuroticism, Locus of Control, and Introversion-Extroversion, as the present investigation deals with these variables. This review also emphasizes menstrual research in India.

Previous studies of factors influencing perimenstrual distress have had following significant limitations.

(1) There is less agreement among the investigators regarding influence of most of the variables on perimenstrual distress.

(2) Conclusions of different studies lack comparibility due to

diversity in methodology.

(3) Investigators have tended to focus exclusively on either physiological or sociocultural variables as determinates of menstrual distress, rather including all as relevant independent (predictor) variables.

Clearly more research is needed in this area as

(1) Available research work regarding the core variable of the present investigation is quite scanty.

(2) The conclusions of the studies related to the variable under consideration show less agreement among the investigators.

(3) "Menstruation" is new field of research as far as research in India is concerned.

CHAPTER III

DESIGN AND METHODOLOGY

3.1   INTRODUCTION

3.2   METHODS AND GENERAL ISSUES

3.3   VARIABLES, OPERATIONAL DEFINITIONS, AND HYPOTHESES

      3.3.1   Variables

      3.3.2   Operational Definitions

      3.3.3   Hypotheses

3.4   SAMPLE DESIGN

3.5   INSTRUMENTS

      3.5.1   Personal Data Form

      3.5.2   Menstrual Distress Questionnaire

      3.5.3   I-E Scale

      3.5.4   Personal Inventory

3.6   PROCEDURE

      3.6.1   Data Collection

      3.6.2   Data Analysis

3.7   STATISTICAL ANALYSIS

3.8   SUMMARY

3.1   INTRODUCTION

In previous chapters, it was pointed out that, menstruation is an important event in every woman's life. In order to study the role of menstruation in adolescent girls, the author of this study has selected specific variables. These variables were selected for the following reasons.

(1) Very few studies have been conducted in Indian setting as far as these variables are concerned.

(2) The conclusions of the studies related to these variables are inconsistant.

(3) In majority of the studies married women were used as sample, but very few studies have been conducted on college going unmarried girls.

In the present study researcher has tried to answer the following questions :

(1) Whether there is a significant difference in intensity of distress among premenstrual and menstrual phases of menstruation?

(1) To what extent perimenstrual distress is affected by menstrual variables like age at menarche, length of menstrual cycle and duration of flow.

(3) Whether sociodemographic variables like size of the family and ordinal position are related to perimenstrual distress.

(4) What is the effect of perimenstrual distress on personality variables like locus of control, Introversion-Extroversion and Neuroticism.

3.2   METHODS AND GENERAL ISSUES

Psychological studies of the premenstrual syndrome are discussed by Parlee (1973) in four methodological categories.

(a) Studies reporting a positive correlation between specific behavioral acts and phase of the menstrual cycle.

(b) Those using retrospective questionnaires concerning symptom and mood changes.

(c) Studies involving day to day self-rating of various behavior, symptoms, and moods.

(d) Thematic analysis of verbal material gathered in an unstructured situation throughout the cycle.

General issues -

Donelson and Gullahorn (1977) have pointed out following methodological weaknesses of most of the research on this subject.

(1) The women studied -

There is wide variation in what kinds of women are studied. Research samples that include subjects of a wide range of ages often report a lower incidence of symptomatology because premenstrual complaints are more frequent among older women, aged 30 to 45 (Koeske 1973). Incidence of complaints also varies with religious affiliation (Paige 1973).

How the women are selected for the research, is also important. Researchers frequently study women who are easily available and seeking medical or physiological treatment for various complaints related to reproduction. These women report

more distress related to menstruation than do healthy women. Generalizations about a high incidence of problems from such samples are inappropriate.

Subject Expectations -

According to Orne (1962) subjects' awareness of the purpose of an investigation can influence their performance. Subjects typically know that they are in a study about menstrual cycles and may knowingly or unknowingly alter their reports. Therefore it is important that investigations make even attempts to avoid biased result by disguising the purpose of their research.

(2) The symptom studied -

There is wide variation also in the particular correlates of menstrual cycles which are selected for investigation.

More attention has been focused upon negative than positive ones and inappropriate narrow focus is likely to intensify expectation of menstrual misery. For each individual woman, some variables are more sensitive to the influence of the cycle than others. Thus, the usual procedure of reporting only on the 'average symptom' of the 'average women' can be very misleading.

(3) Evaluation of personality inventories -

Anastasi (1976) stated that the question of faking and malingering is far more acute in personality measurement. The behavior measured by personality tests is also more changeable over time. This fact complicates the determination of test

reliability. Therefore, personality inventories may be recognized as intrinsically crude instruments and their application should be restricted.

(4) Evaluation of forced-choice technique -

Essentially forced-choice technique requires the respondent to choose between two descriptive terms of phrases that appear equally acceptable but differ in validity. The paired phrases may both be desirable or both undesirable.

It has been found that a force-choice test, whose items are paired on the basis of average group judgements of general social desirability, may be far from equated for individuals.

Thus forced-choice technique has not proved as effective as had been anticipated in controlling faking or social desirability response sets. The forced-choice item format introduces other technical difficulties. Author of the present study has taken into account the general issues regarding nature and selection of the sample. Efforts have been made to obtain the sample as representative as possible from the population of non-clinical group.

3.3   VARIABLES, OPERATIONAL DEFINITIONS, AND HYPOTHESES

3.3.1 Variables -

Perimenstrual distress is the major construct of this study. In order to study perimenstrual distress in detail. Present study was conducted in two parts.

PART I

A. Independent variables :

    (1) Menstrual variables

        (i) Age at menarche

        (ii) Length of the cycle

        (iii) Duration of flow

    (2) Sociodemographic variables

        (i) Family size

        (ii) Ordinal position

B. Dependent variables :

    (i) Premenstrual distress

    (ii) Menstrual distress

PART II

A. Independent variables

    (i) Premenstrual distress

    (ii) Menstrual distress

B. Dependent variables

    (i) Locus of control

    (ii) Introversion-Extroversion

    (iii) Neuroticism

In both these parts of the present study following variables were controlled.

Controlled variables

(1) Age :

This factor has been controlled by taking sample from the age range 18 to 22 years. Girls from this age group have been

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selected because they had at least 5 years experience of menstrual period and their symptoms get stabilized (Zacharias et al 1970).

(2) Marital Status :

Sample of the present study includes only unmarried girls, because after marriage parity, contraceptive pills influence menstrual symptoms.

(3) Educational level :

Girls studying in second year and third year of arts faculty were included in the sample so that educational level will be same for everyone.

(4) Religion :

The current study has also controlled the factor of religion by including only Hindu girls in the sample because incidence of complaints also varies with religious affiliation (Paige 1973).

3.3.2 Operational Definitions

The following terms are used frequently in the present study, therefore these terms are defined below :

(1) Perimenstrual distress - The term distress shall be employed to cover in a rather general manner the physical and psychological disturbances of both the premenstrual and menstrual phases.

(2) Premenstrual distress - It is the total score obtained by the respondent on 8 factors of Menstrual Distress Questionnaire for premenstrual phase (Moos 1968). These

eight MDQ factors are (1) Pain (2) Water Retention (3) Autonomic Reaction (4) Negative Affect (5) Concentration (6) Behavioral Change (7) Arousal (8) Control.

(3) Menstrual distress - It is the total score obtained by the respondent on 8 factors of menstrual distress questionnaire for menstrual phase (Moos 1968).

(4) Menstruation - Is a cyclic discharge of blood and uterine cells that occurs in fertile women.

(5) Menstrual cycle - The period of time averaging, approximately 28 days in the human female during which the endometrical lining of the uterus proliferates and sheds.

(6) Menstrual phase - Is actual days during which a woman has a flow. The span may vary from woman to woman, but usually it is 4 to 5 days.

(7) Premenstrual phase - which lasts for 2 to 4 days before the period starts.

(8) Age at menarche - The age at which a woman has her first menstruation, usually occuring between 11th and 17th year. It is a marking onset of puberty in the female.

(9) Length of menstrual cycle - it indicates, after how many days menstrual cycle repeats.

(10) Duration of menstrual flow - the number of days during which a woman has her menstrual flow. This includes days from onset of bleeding till complete termination of it with both days inclusive.

(11) Introversion - Direction of interest toward one's inner

world of experience and toward concepts rather than external events and objects. In the current study those who score above 14 on personal inventory are considered as introverts.

(12) Extroversion — Personality type, oriented toward the outward of people and things rather than concepts and intellectual thinking. In the current study those who score below 9 on personal inventory are considered as extroverts.

(13) Neuroticism — It is a emotional disturbance characterized by exaggerated use of avoidence behavior and defence mechanisms against anxiety. In the current study those who score above 14 on personal inventory are considered as neurotics.

(14) Internal locus of control — A person who believes that he or she is able to act so as to maximize the possibilty of good outcomes and to minimize the possibility of bad outcomes is said to have internal locus of control.

(15) External locus of control — A person who believes that individuals are helpless and at the mercy of luck, fate and other uncontrollable outside forces, is said to have external locus of control.

(16) Size of the family — In the present study family size was determined by number of siblings in the family.

(17) Ordinal position — It is the birth-order of the respondent. In the present study three ordinal positions were considered. First born, middle born, and last born.

3.3.3 Hypotheses

Following hypotheses were framed in the light of the

objectives of the study and review of literature.

PART I

(1) College going girls will have more distress during menstrual phase than during premenstrual phase.

(2) There will be no relationship between age at menarche and premenstrual distress.

(3) There will be no relationship between age at menarche and menstrual distress.

(4) There will be no relationship between length of the menstrual cycle and premenstrual distress.

(5) There will be no relationship between length of the menstrual cycle and menstrual distress.

(6) There will be no relationship between duration of menstrual flow and premenstrual distress.

(7) There will be no relationship between duration of menstrual flow and menstrual distress.

(8) There will be positive relationship between premenstrual distress and family size.

(9) There will be positive relationship between menstrual distress and family size.

(10) There will be no relationship between ordinal position and premenstrual distress.

(11) There will be no relationship between ordinal position and menstrual distress.

PART II

(1) Locus of control will be influenced by premenstrual

distress.

(2) Locus of control will be influenced by menstrual distress.

(3) Introversion-Extroversion will not be influenced by premenstrual distress.

(4) Introversion-Extroversion will not be influenced by menstrual distress.

(5) The higher the premenstrual distress, the higher will be the score on Neuroticism scale.

(6) The higher the menstrual distress, the higher will be the score on Neuroticism scale.

Rationale for the hypotheses

PART I

Hypothesis number one is concerned with the variations in distress among different phases of menstruation. This hypothesis was based on the hormonal theory of menstruation. According to this theory, during premenstrual phase levels of estrogen and progesterone are falling therefore the emotional symptoms of anger, excitability, crying spells, and frustration are prominent. During menstrual phase level of estrogen starts rising due to which emotional symptoms were reduced. But as progesterone is totally absent during this phase, physical symptoms like pain, fatigue, water retention become prominent. Thus intensity of physical symptoms may lead to high distress during menstrual phase.

Hypotheses numbers 2, 3, 4, 5, 6, and 7 are based on previous research findings. Majority of the studies showed that

there is no relationship between menstrual variables and perimenstrual distress. After reviewing many research findings Moos (1982) comments that there are some relationships between the MDQ scales and other aspects of the menstrual cycle but they are typically modest and do not account for much of the variations in symptom reports.

Hypotheses numbers 8, 9, 10, and 11 are concerned with family influences. According to Sampson (1965) the size of the family and child's position within it create special psychological environment. Previous research shows that, small family provides better adjustment. Girls *from small families* may get emotional support from family members during premenstrual and menstrual phases. Therefore girls from small families may perceive lesser distress. Ruble (1978) failed to find significant differences in menstrual distress due to ordinal position. Therefore researcher also hypothesized that there will be no relation between ordinal position and perimenstrual distress.

PART II

Hypotheses numbers 1 and 2 are based on assumption that, locus of control can be changed under the appropriate conditions (Wolfle, Robertshaw 1982). Disruptive life events result in a shift toward externality (Doherty 1983). High premenstrual or menstrual distress is a disruptive life event, therefore it was assumed that high perimenstrual distress may influence locus of control. *It will lead to externality.*

Hypotheses numbers 3 and 4 are based on observed inconsistancies in previous findings as regards Introversion-Extroversion and perimenstrual distress. Anantharaman and Swarnalatha (1986) found no difference between extroverts and introverts in perception of perimenstrual distress. Karen and Kolin (1978) pointed out that feeling of distress was much more intense in introverts. Because of these inconsistancies, it is not justifiable to expect any relation between Introversion-Extroversion and perimenstrual distress.

Hypotheses numbers 5 and 6 are based on theoretical background of neuroticism. From theoretical background of neuroticism, it can be clearly seen that characteristics of neurotic person such as crying spells, feeling of guilt and frustration, are closely related to characteristics of high perimenstrual distress. Therefore it was assumed that high perimenstrual distress increases neurotic tendency.

3.4   SAMPLE DESIGN

The sample for this study consisted of 205 college going Hindu girls. They were from eight different colleges in Pune. All the girls were unmarried and studying in second year or third year of arts faculty. A stratified random sampling process was used to select the respondents.

The mean age of the sample is 19.39 years with S.D. 1.31. All of them have at least 4 to 5 years' experience of menstruation. Their menstrual symptoms were stabilized.

Details about the sampling process -

(1) After getting permission from authorities of respective colleges, students were approached.

(2) The students were tested in their college premises in a group of 6 to 8 girls.

(3) The project was voluntary and the subjects were not paid for the project.

(4) Girls whose scores on intermenstrual phase of MDQ were high, which indicates either careless answering to questions or major physical illness, were excluded from the sample.

3.5   INSTRUMENTS

The following tools were used to measure the variables in the investigation :

3.5.1 Personal Data Form (Appendix A)

The items contained in the personal data form are constructed by the researcher to collect information of following biographical and menstrual related variables :

(1) Class of the subject

(2) Size of the family

(3) Ordinal position

(4) Age of the subject

(5) Age at menarche

(6) Length of the menstrual cycle

(7) Duration of menstrual flow.

Subjects were asked to tick mark the suitable alternative out of given alternatives. This helps the objective scoring.

3.5.2 MDQ Menstrual Distress Questionnaire (Appendix B)

The MDQ is a 47 item scale developed by Moos (1969b) as a means of measuring and describing menstrual cycle symptoms. Two forms of the scale have been developed. Form A, which allows women to rate their experience of these symptoms for their most recent menstrual flow, the week prior to the most recent flow, and the remainder of the most recent cycle. Form T requires rating each symptom as it is experienced on the day that the questionnaire is being filled out.

The symptoms included in the MDQ were obtained through previous research on menstrual cycle.

Additionally some items of the Blatt Menopausal Index were included as control measure.

Scale includes eight factors, namely (1) Pain (2) Water Retention (3) Autonomic Reactions (4) Negative Affect (5) Impaired Concentration (6) Behavior Change (7) Arousal (8) Control.

Each of the eight factor scales is composed of an empirically interrelated group of items. The scale labels are chosen to reflect the item content as closely as possible. It is a five point scale from 1 to 5 where, 1 represents no experience of symptom and 5 stands for severe experience of symptom.

The standardization group consisted of 839 wives of graduate students with a mean of 25.2 years. The 47 symptoms of the MDQ were intercorrelated and factor analyzed for the total sample separately for the menstrual, premenstrual and intermenstrual phase of the most recent cycle and also for the

worst cycle.

The internal consistencies of the eight MDQ scales are moderate to high. The subscale internal consistencies for the sample used by Moos vary from .89 to .53 by using Kuder-Richardson formula 20.

Reliability : The MDQ has been used in a number of different ways in different studies. Most commonly investigators utilize the 8 subscales developed by Moos. Menke (1983) modified the scale to include 8 additional items tapping positive affect. Woods et al (1982) reported different factor structure from that found by Moos. They found 16 loading on 4 factors. Voda (1976) found yet another 4 factor structure. Several studies have used the whole scale as a single measure of symptom or distress level in a given cycle phase (Markum, 1976; Stoltzman, 1983; Chernovertz et al, 1979).

Basecu (1984) obtained high reliability coefficients for the total scale for all three phases (.89 - .95). Ambekar (1990) also found high reliability .78 to .90.

Validity : Data regarding the validity of MDQ is highly controversial.

Many studies have found lower levels of cycle change and distress reported when beliefs were controlled by either disguising nature of the study or by obtaining daily reports from the subjects regarding their physical and psychological conditions (Parlee 1973, 1982; Ruble 1977).

However other findings contradict this. Schilling (1981)

found no difference between daily reports of mood and health and
retrospective reports of changes on the MDQ. Chernovert et al
(1979) found that labeling symptoms as related to menstruation
led to lower scores on the MDQ than labeling them as general
symptoms.

Other Scales measuring MDQ

Chesney and Tusto (1975) developed Menstrual Symptom
questionnaire, which consisted of 24 items (12 congestive and 12
spasmodic). It is a 5 point scale. But it is not widely used.
Therefore it was not used by researcher.

Ruble (1979) modified the original MDQ. The modified
version includes 30 symptoms which are more suitable for younger
girls. Each girl will rate the severity of 30 symptoms on a 4
point scale not at all to a lot for premenstrual, menstrual and
intermenstrual phases.

The investigator chose MDQ (modified version by Ruble
1980) because

(1) It is a self-administered scale.

(2) It takes only 5 minutes to fill the questionnaire.

(3) It has a built in control scale in order to identify women
who tend to complain of many different symptoms regardless of
whether or not they are usually cyclically associated with
the menstrual cycle.

(4) In Pune for their master's degree dissertation Patil (1983),
Karnik (1985), Wagh (1985), Puranik and Amroliwala (1985)
used MDQ (modified by Ruble 1980) scale and found it very
satisfactory. The reliability for the total scale for

menstrual phase was obtained to be .88 (Wagh 1985).

(5) It clearly measures perimenstrual symptoms in each of eight
    subgroups.   It obtains concrete data about one cycle.   It
    indicates whether or not the different sets of symptoms are
    cyclical.

(6) Effects of memory are not seen.

    All this available information about MDQ proves the fact
that it is reliable and valid tool for measuring perimenstrual
distress.

    In short this scale appeared to the investigator most
appropriate measure of menstrual symptoms available at the time
of study.

3.5.3 I-E Scale - (Rotter 1966) (Appendix C)

    The I-E Scale is a 29 item, forced-choice questionnaire
designed to measure the extent to which an individual believes
that reinforcements are contingent upon his own behavior.

    Rotter refers to several earlier I-E Scales prepared by
other investigators and describes the 29-item scale that emerged
from this research. This is a self-report inventory. Six items
are buffer items, which helps in disguising the purpose of the
scale.   Each item of this scale consists of a pair   of
alternatives lettered 'a' or 'b'. Subject has to select the one
statement of each pair. Scoring is done with the help of scoring
key. Score on this scale represents external attribution. Score
representing internal attribution = 23 — score of external
attribution.

Reliability: Split-half and Kuder-Richardson reliabilities of the 29 item scale cluster around .70. Rotter (1960) reported test-retest reliabilities ranging from .49 to .84 and other investigators have reported reliabilities as high as .84. Additionally Rotter has reported internal consistency estimates of reliability ranging from .65 to .79, with nearly all correlations greater than .70. Retest reliabilities after intervals of one to two months are at the same level but vary somewhat with the length of the interval conditions of administration and nature of the group.

Correlations with social desirability scores and intertest tests are low.

Preliminary percentile norms on several hundred male and female students from a single university are given as well as means and SDs of some dozen other samples comprising mostly college groups.

A substantial body of data on construct validity has been accumulated. Factorial analyses indicate that a single general factor accounts for most of the variance in the response. Other factor analyses of modified versions, suggest that the variable may be subdivided into several distinguishable factors, as illustrated by a belief in a difficult world, an unjust world, an unpredictable world, and politically unresponsive world (Collins 1974).

Thus from a psychometric view-point I-E Scale has been carefully constructed and evaluated.

Comparable scales have been developed for school-age and preschool children and for minority groups. (Gurin, Gurin, Lao and Beattie 1969), (Mischel Zesis and Zesis 1974), (Nowicki and Ducke 1974), (Stephens and Delys 1973), (Lefcourt 1982).

Nowicki and Duke (1974a) have developed an adult scale that might be especially suitable for noncollege samples. They have also published a scale for preschool and primary grade children.

A children's scale (IAR) developed by Crandall, Katkovsky and Crandall (1965) is widely used, the scale measures locus of control separately for success and failure situations.

Projective or unobtrusive measures of I-E have been developed by Dies (1968), Adams - Webber (1969), and Battle and Rotter (1963).

More limited and specific measures have also been offered.

For the present study researcher has selected I-E scale by Rotter for measuring the variable of locus of control because

(1) It is most extensively used scale.

(2) The norms of Rotter's test are standardized on college groups, which is more suitable for present sample.

(3) It uses forced-choice technique to avoid effect of social desirability.

(4) It is a self-report inventory, which has 6 buffer-items, in order to disguise the purpose of the scale.

(5) Di Nardo (1974) used this scale in his research psychological correlates of the menstrual cycle.

3.5.4 Personal Inventory (Palsane) (Appendix D)

This inventory was developed by Palsane (1965) to assess two personality dimensions of college students and adults. These are Introversion-Extroversion and Normal-Neuroticism. This follows the model of Eysenk. However it goes beyond that in its being a forced-choice type of inventory.

The inventory consists of 42 items providing for responses through the forced-choice technique. In this, the tastee chooses either the (a) or (b) statements in each item as applicable to him and records his choice on a separate answer sheet.

This inventory may be administered to individuals or to a group. Two hand scoring keys are provided for the two dimensions. On Introversion-Extroversion Scale score below 9 indicates Extroversion; score above 14 indicates Introversion. On Normal Neuroticism dimension score above 14 indicates emotional instability or Neuroticism.

The normative sample included 3144 individuals, most of whom were college students. The rest of this sample comprised teachers from secondary schools and universities, some administrative and clerical staff.

Reliability : The table below shows the reliability coefficients obtained by different methods :

TABLE III - 1

Reliability Coefficients for Personal Inventory

	Reliability by	N	I/E Scale	N-N Scale
(1)	Split-half method	100	.83	.74
(2)	Test-retest	120	.91	.81
(3)	K-R method	370	.60	.55

Validity : Content validity was ensured by the process of item construction and further confirmed by item selection through the technique of internal consistency.

Item validation was carried out by using independent criterion groups. Only the discrimination items were retained for the final version of the scale.

There are many other inventories measuring introversion-extroversion and neuroticism dimensions of personality, namely — (1) Maudsley Personality Inventory   (2) Bernreuter Personality Inventory   (3) Eysenck's Personality Inventory   (4) Kundu's Introversion-Extroversion Inventory.

The personal inventory (Palsane 1965) appeared to the investigator to be the most appropriate measure because this inventory is standardized on Indian sample, most of whom were college students. It is, therefore, suitable for the present study.

MDQ (Moos 1969b), I-E Scale (Rotter 1966), and Personal

Inventory (Palsane 1968) were translated in Marathi, (regional language) with forward and backward translation (keeping the sense of each statement as in the original). The translation was finally approved by psychologists and language teachers.

3.6   PROCEDURE

3.6.1 Data Collection

The students were tested in their college premises in a group of 6 to 8 girls. All the tests were administered in a single testing session. Each testing session consisted of 50 minutes. The tests were not given in randomized sequence, so that effect, generated by asking about menstruation, would be kept constant.

The questionnaires were given as follows:

(1) Personal data form

(2) I-E Scale

(3) Palsane's Personal Inventory

(4) MDQ

Before giving a questionnaire it was explained to them that there were no right or wrong answers and that it was very important that they should express their own experiences and opinions. They were convinced that the information given by them would be treated as strictly confidential.

Respondents were given enough information as regards how to fill in the questionnaire.

3.6.2 Data Analysis

(1) Complete questionnaires were filled by 220 students. Out of

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them 15 questionnaires were excluded from the sample because of incomplete information or higher score on control items.

(2) Each respondent had two scores on MDQ scale – (a) Premenstrual score (b) menstrual score. Total premenstrual and menstrual score for each respondent was computed.

(3) With the help of scoring keys, scores on I-E Scale, Introversion-Extroversion and Neuroticism were calculated for each respondent. According to norms given in manual of personal inventory, respondents were classified into introvert, extrovert, and neurotic categories.

(4) Responses obtained were also analyzed in terms of age, family size, ordinal position, age at menarche, duration of menstrual flow, and length of the menstrual cycle to find out the effects of perimenstrual distress on these variables. on perimenstrual distress

(5) Mean age and mean age at menarche were calculated.

3.7 STATISTICAL ANALYSIS.

(1) One sided T test was performed to find out whether menstrual distress · among college going girls is significantly greater than premenstrual distress.

(2) Chi-square was used to find out the relationship between perimenstrual distress and ordinal positions.

(3) Pearson product moment correlation was utilized to find out whether independent variables in the study have expected relationships with the dependent variables.

(4) 'T' tests were employed to find out the significance of

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difference ⌐on premenstrual and menstrual distress⌐ between extreme groups of personality variables.√

(5) In order to minimize the variations in premenstrual and menstrual distress quartiles were used and limits for high, medium, and low distress were obtained. On the basis of Q_1 and Q_3 values, the entire sample was divided into low, medium, and high distress groups. Then the 't' ratio was employed to test the significance of difference between two extreme groups (low and high distress) on age at menarche, length of menstrual cycle, duration of menstrual flow, I-E score, Introversion-Extroversion score, and Neuroticism score.

3.8 SUMMARY

This chapter covered information regarding the methodology of the study which included information about the variables under consideration, operational definitions, hypotheses, and also information about the sample and the instruments.

Perimenstrual distress is the major construct of the study. The author intended to find out the effect of perimenstrual distress on (1) Locus of control (2) Introversion-Extroversion, and (3) Neuroticism.

It was also decided to find out the role of family size and ordinal position in the experience of perimenstrual distress. Along with these variables efforts were made to know effects of menstrual variables (as) in the experience of perimenstrual distress.

The major tools used in the study were all standardized tools having high degree of reliability and validity.

The sample taken for the study comprised 205 unmarried college going Hindu girls.

After data collection, results were analyzed with the help of chi-square test, t-test, product-moment correlation, and quartile deviation.

CHAPTER IV

RESULTS AND DISCUSSION

4.1   INTRODUCTION.

4.2   RESULTS

PART I

4.2.1   Phases of the menstrual cycle.

4.2.2   Menstrual cycle related variables.

4.2.3   Sociodemographic variables.

PART II

4.2.4   Personality related variables.

4.3   DISCUSSION.

PART I

4.3.1   Phases of the menstrual cycle.

4.3.2   Menstrual cycle related variables.

4.3.3   Sociodemographic variables.

PART II

4.3.4   Personality related variables.

4.4   SUMMARY

4.1   INTRODUCTION

This chapter contains a detailed report of the results obtained, from the statistical analysis of the data, followed by a discussion of the results. It also clarifies the methods used in the analysis of the data.

The first section of this chapter deals with the results obtained and the second section deals with the discussion of the results.

The current study was conducted in two parts. In Part I of the study effects of menstrual and sociodemographic variables on perimenstrual distress were studied. In Part II of the study researcher tried to examine the influence of perimenstrual distress on personality variables.

4.2   RESULTS

PART I

4.2.1 Phases of the menstrual cycle

To find whether menstrual distress is significantly greater than premenstrual distress, one-sided t-test was used. Results are presented in Table IV - 1.

TABLE IV - 1

The means, SD's, and 't' values of menstrual distress on premenstrual and menstrual phases

	Premenstrual Phase	Menstrual Phase
N	205	205
M	7.07	14.29
SD $Variance$	406.23	28.41
t		4.78**	

**P < .01

Results show that distress on menstrual phase was significantly greater than distress on premenstrual phase.

4.2.2 Menstrual cycle related variables

Product-moment correlations were computed to find out the relationships between premenstrual and menstrual distress and menstrual related variables like age at menarche, length of menstrual cycle and duration of menstrual flow. The results are presented in Table IV - 2

TABLE IV - 2

Correlations Between Premenstrual and Menstrual Distress and Menstrual Related Variables and premenstrual...

N = 205

Menstrual Related Variables	Premenstrual Distress	Menstrual Distress
Age at Menarche	-0.1709**	-0.0289 NS
Length of menstrual cycle	-0.0867 NS	-0.0306 NS
Duration of menstrual flow	0.07670 NS	0.0631 NS

** P < .01   NS = Not significant

Results show that there is significant negative relationship between age at menarche and premenstrual distress, but the correlation is very low. Other correlations, namely, age at menarche and menstrual distress, length of the menstrual cycle and premenstrual and menstrual distress, duration of menstrual flow and premenstrual and menstrual distress, are not found to be significant.

As explained earlier in methodology the entire sample was classified into low PMS and High PMS, and low MS and high MS groups. Limits for low and high premenstrual and menstrual distress have been obtained by using quartiles. Table IV - 3 shows the Q1 and Q3 values of premenstrual and menstrual scores.

TABLE IV - 3

Q1 and Q3 values of premenstrual and menstrual scores, limits
for high and low PMS and MS and number of cases falling below
Q1 and above Q3 values

	:	PMS	:	MS	
Q1	:	2.67 ⎫	Low	6.97 ⎫	Low
Limit for Low Distress	:Less than 3 ⎬	PMS	:Less than 7 ⎬	MS
N	:	82 ⎭	:	67 ⎭	
Q3	:	11.22 ⎫	High	20.65 ⎫	High
Limit for High Distress	: Above 11 ⎬	PMS	: Above 21 ⎬	MS
N	:	50 ⎭	:	51 ⎭	

Hence forward terms low PMS and high PMS will be employed
to describe the respondents having premenstrual scores less than
3 and above 11 respectively. Similarly terms low MS and high MS
will be employed to describe the respondents having menstrual
scores less than 7 and above 21 respectively.

To find out whether these extreme groups differ
significantly on their mean scores of menstrual related variables
't'-tests were used. Results are presented below :

TABLE IV - 4

Means, SD's and 't' values of low PMS - high PMS and low MS - high MS groups on age at menarche

	Low PMS	High PMS	Low MS	High MS
N	82	50	67	51
M	14.27	13.76	14.31	13.90
SD	1.21	1.27	1.06	1.42
	└─ 2.28** ─┘		└─ 1.72 NS ─┘	

**P < .01   NS = Not Significant

Results show that high PMS group has lower age at menarche as compared to low PMS group. Age at menarche did not differ significantly in low MS and high MS groups.

TABLE IV - 5

Means, SD's and 't' values of low PMS - high PMS, and low MS - high MS groups on length of the menstrual cycle

	Low PMS	High PMS	Low MS	High MS
N	82	50	67	5
M	27.60	27.14	27.57	27.51
SD	2.85	2.72	2.57	2.75
	└─ .92 NS ─┘		└─ .12 NS ─┘	

NS = Not Significant

Results show that low PMS - high PMS, and low MS - high MS groups did not differ significantly on length of menstrual cycle variable.

TABLE IV - 6

Means, SD's and 't' values of low PMS - high PMS, and low MS - high MS groups on duration of menstrual flow

	Low PMS	High PMS	Low MS	High MS
N	82	50	67	51
M	4.52	4.62	4.34	4.78
SD	1.19	1.22	1.16	1.21
t	└─── .46 NS ───┘		└─── 1.99 * ───┘	

    * P < .05   NS = Not Significant

Results reveal that high MS group has significantly longer menstrual flow as compared to low MS group. But low PMS and high PMS groups did not differ significantly as regards their duration of menstrual flow.

4.2.3 Sociodemographic Variables

Attempt was made to study the impact of family size and ordinal position on premenstrual and menstrual distress.

Product moment correlations were computed to find out 'the relationships between premenstrual and menstrual distress and size of the family. Results are presented in Table IV - 7.

TABLE IV - 7

Correlations between premenstrual and menstrual distress,
and family size

N = 205

Distress   Size of the family

- -

Premenstrual Distress   0.0235 NS
Menstrual Distress   0.05461 NS

NS = Not Significant

Size of the family was not found to be related to premenstrual or menstrual distress.

Chi-square analysis was used to find out whether there is any relationship between ordinal position and premenstrual and menstrual distress. Results are presented in Table IV - 8.

TABLE IV - 8

The x^2 (chi-square) test between perimenstrual distres
and ordinal position ξ

N = 205

Distress   Ordinal Position

- -

Premenstrual   6.57 NS
Menstrual   25.074 NS

NS = Not Significant

Ordinal position was not found to be related significantly to premenstrual or menstrual distress.

4.2.4 Personality related variables

Product moment correlations between premenstrual and menstrual distress, and personality related variables such as Locus of Control, Introversion-Extroversion, and Neuroticism were calculated. Results are presented in Table IV - 9.

TABLE IV - 9

Corelations between perimenstrual distress and
personality related variables

Personality Variables	Premenstrual Distress	Menstrual Distress
Locus of Control	0.10 NS	- 0.00 NS
Introversion-Extroversion	0.09 NS	0.02 NS
Neuroticism	0.04 NS	0.02 NS

NS = Not Significant

Results reveal that there are no relationships between Locus of Control, Introversion-Extroversion, and Neuroticism, and perimenstrual distress.

As the correlations between personality related variables and perimenstrual distress are very low and insignificant, the results were further analyzed to look into the matter more deeply.

High and low extreme groups of Locus of Control, Introversion-Extroversion, and Neuroticism were found out. These groups were compared on their premenstrual and menstrual distress means by using 't'-tests.

Locus of Control

Using ±1 standard deviation around mean respondents were classified under the category of low I-E group (Internal orientation) and high I-E group (External orientation). T-tests were used to find out whether these two extreme groups differ significantly on their premenstrual and menstrual distress. Results are presented in Table IV - 10.

TABLE IV - 10

Means, SD's, and 't' values of low and high I-E groups on premenstrual and menstrual distress

	PMS		MS	
	Low I-E	High I-E	Low I-E	High I-E
N	24	20	24	20
M	5.88	8.2	16.92	15.15
SD	8.27	6.53	12.92	10.27
't'	└─ 1.03 NS ─┘		└─ .50 NS ─┘	

NS = Not Significant

Results reveal that difference between low and high I-E groups on premenstrual and menstrual scores is not significant.

Introversion-Extroversion

In order to verify whether introverts and extroverts are significantly different on premenstrual and menstrual distress 't' tests were used. Results are presented in Table IV - 11.

TABLE IV - 11

Means, SD's and t values of introverts and extroverts on premenstrual and menstrual distress

| | PMS | | MS | |
	Introvert	Extrovert	Introvert	Extrovert
N	18	101	18	101
M	5.00	5.92	13.11	12.68
SD	5.24	6.75	7.28	10.54
t	└── .65 NS ──┘		└── .21 NS ──┘	

NS = Not Significant

Note : Respondents were classified into categories of introverts and extroverts on the basis of norms given in manual of Personal Inventory.

Results show that introverts and extroverts did not differ significantly on premenstrual and menstrual distress.

Neuroticism

T-test was also used to find out whether the normals and neurotics differ significantly on premenstrual and menstrual distress. Results are presented in Table IV - 12

TABLE IV – 12

Means, SD's and t-values of normals and neurotics on premenstrual and menstrual distress.

	PMS		MS	
	Neurotic	Normal	Neurotic	Normal
N	43	162	43	162
M	8.58	6.54	15.33	13.95
SD	7.76	7.33	11.17	9.81
	⌐ 1.55 NS ⌐		⌐ .73 NS⌐	

NS = Not Significant

Note : Respondents were classified into categories of normals and neurotics on the basis of norms given in manual of Personal Inventory.

Results show that there is no significant difference between premenstrual and menstrual distress of normals and neurotics.

Tables 10, 11, and 12 show that even after classifying the respondents into two extremes of personality variables, their scores of premenstrual and menstrual distress did not differ significantly which suggests that personality variables did not affect perimenstrual distress.

Therefore another approach is taken by author of the present study in which, instead of classifying resondents on two extremes of personality variables, They were classified on the basis of two extremes of premenstrual and menstrual distress. As explained in methodology by using quartiles, limits for low

and high premenstrual and menstrual distress have been obtained. (Page 79, Table IV - 3). Scores on personality related variables were compared for low PMS - high PMS, and low MS - high MS groups with the help of 't' tests. Results are presented below :

Locus of Control

TABLE IV - 13

Means, SD's, and 't' values of Low PMS-High PMS, and Low MS-High MS groups on I-E scale

	Low PMS	High PMS	Low MS	High MS
N	82	50	67	51
M	9.11	10.34	9.61	9.65
SD	3.06	2.69	3.00	2.98
't'	└—2.41 **——┘		└— .071 NS—┘	

** P < .01   NS = Not Significant

Results reveal that I-E score of high PMS group was significantly greater than I-E score of low PMS group. But between low MS and high MS groups significant difference was not observed.

Introduction-Extroversion

TABLE IV - 14

Means, SD's and t values of low PMS - high PMS, and

low MS - High MS groups on Introversion-Extroversion scale

	Low PMS Extroverts	High PMS Extroverts	Low PMS Introverts	High PMS Introverts
N	48	21	10	04
M	7.0	7.38	14.9	14.75
SD	1.90	1.61	0.6	0.82
't'	└── 0.85 NS──┘		└── 0.33 NS ──┘	

	Low MS Extroverts	High MS Extroverts	Low MS Introverts	High MS Introverts
N	40	20	07	02
M	7.47	7.6	15.0	14.0
SD	1.58	1.24	0.75	0.0
't'	└── .34 NS ──┘		└── 12.28 **──┘	

** P < .01   NS = Not Significant

Results show that introversion score of low MS group was significantly greater than high MS group, but about extroversion significant difference was not observed between low PMS - high PMS, and low MS - high MS groups. Also low PMS - high PMS groups did not differ significantly on introversion scale.

Neuroticism

TABLE IV - 15

Means, SD's and 't' values of low PMS - high PMS, and

low MS - high MS groups on Neuroticism scale

	Low PMS	High PMS	Low MS	High MS
N	09	14	14	12
M	14.11	14.86	14.86	14.08
SD	0.33	0.63	0.83	0.75
't'	└── 3.06 **──┘		└── 2.50 ** ──┘	

** P < .01

It can be observed from these results that Neuroticism

score of high PMS group was significantly greater than low PMS

group. Neuroticism score of low MS group was significantly

greater than high MS group.

4.3   DISCUSSION

In this subsection results were discussed in the light of

previous findings and the Indian cultural context.

Part I

4.3.1 Phases of the menstrual cycle

An attempt was made to find out whether menstrual distress

is greater than premenstrual distress. One-sided 't' test was

applied.

Results from Table IV - 1 show that hypothesis number 1,

college going girls will have more distress during menstrual

phase than during premenstrual phase was accepted. This

hypothesis can be further proved with the help of Q1 and Q3

values calculated for premenstrual and menstrual distress. Table IV - 3 shows that Q1, and Q3 values for PMS are smaller than Q1 and Q3 values for MS. This indicates that menstrual distress is greater than the premenstrual distress. The present findings are consistent with studies in India and abroad.

Ruble and Brooks-Gunn (1979) in their review of a set of 13 relevant studies, noted that most studies identified significant premenstrual - menstrual - intermenstrual differences.

Jai Prakash and Rao (1982) studied 666 college girls. In this sample menstrual symptoms were much more prevalent than premenstrual symptoms.

Difference in distress levels at premenstrual and menstrual phases can be attributed to different endocrine changes, which take place at different phases of the menstrual cycle.

Benedick and Rubenstein (1971) found that during premenstrual phase, level of estrogen and progesterone is falling, (therefore emotional symptoms like anger, excitability, crying spells and frustration are prominent. With the onset of menstruation level of estrogen starts rising, but progestrone is totally absent during menstruation (see Table I - 1). Due to increase in level of estrogen emotional symptoms were reduced in menstrual phase, but as progesterone is absent during this phase physical symptoms like pain, fatigue, water retention become prominent. Thus intensity of physical symptoms may lead to high distress during menstrual phase.

4.3.2 Menstrual cycle related variables

It was hypothesized that there will be no relationship between age at menarche, length of menstrual cycle, duration of flow and perimenstrual distress. Product moment correlations from Table IV - 2 show that there are no _sig_ ₍relations₎ between length of menstrual cycle, duration of menstrual flow and perimenstrual distress. Correlation between age at menarche and premenstrual distress was found to be significant. But the correlation coefficient is low and negative. This negative correlation indicates that as the age at menarche increases premenstrual distress decreases. Results were further analyzed by using low and high PMS and low and high MS groups.

Age at Menarche : Mean age at menarche for the present sample is 14.06 with standard deviation 1.65. When low PMS high PMS and low MS - high MS groups were compared for their age at menarche, results from Table IV - 4 show that for high PMS group age at menarche was significantly smaller than low PMS group.

The previous finding found with the help of product-moment correlation, _Supports_ that there is negative correlation between age at menarche and premenstrual distress.

Hence the null hypothesis regarding age at menarche and premenstrual distress is rejected, but null hypothesis regarding menstrual distress and age at menarche is accepted.

These results are in agreement with Books, Ruble (1977) who found that there is negative relationship between age at menarche and

perimenstrual distress. Shainess (1961) also found that there is significant relationship between perimenstrual distress and age at menarche. *badly handled experience of menarche*

This finding can be interpreted as follows : Girls who have early age at menarche may not be psychologically prepared for the experience of menarche. These girls may be afraid of this unexpected experience of menarche. As their age-mates may not have such experience of menarche, they may not even discuss about menarche with their peers. Thus intensity of problem increases. They may develop negative attitudes toward menstruation. This negative attitude may lead to psychological disturbances, associated with menstruation. Premenstrual distress is supposed to be more related to psychological disturbance. Therefore it can be concluded that those girls who have lower age at menarche may have high premenstrual distress.

Length of menstrual cycle : When low PMS — high PMS and low MS — high MS groups were compared for their length of menstrual cycle, it was observed that these groups did not differ significantly. (Table IV — 5) product moment correlations between length of menstrual cycle and premenstrual, menstrual distress were also not significant. (Table IV — 2). Thus both these analysis, namely t-test and product moment correlations prove that null hypotheses concerning length of menstrual cycle and perimenstrual distress were accepted.

These findings are consistent with previous findings. Moos (1969) found no significant association between menstrual and

premenstrual symptoms and length of the menstrual cycle. Brooks, Ruble and Clarke (1977) stated that length of the cycle was not linked to expectations of premenstrual symptoms.

Findings of the present study suggest that either long or short menstrual cycles with fairly regular periods are likely to have no effect on experience of perimenstrual symptoms and either long or short menstrual cycle if occurs regularly, is often sign of normal menstrual functioning.

Duration of flow : In order to find out relation between duration of menstrual flow and perimenstrual distres 't' tests were used. Low PMS and high PMS groups did not differ significantly for their duration of menstrual flow, but low MS and high MS group differ significantly on their duration of menstrual flow. High MS group has longer menstrual flow as compared to low MS group (Table IV - 6). Hence null hypothesis concerning premenstrual distress and duration of menstrual flow was accepted, but the null hypothesis concerning menstrual distress and duration of menstrual flow was rejected.

These findings suggest that duration of flow affects menstrual distress but it did not affect premenstrual distress. This can be explained as follows : Duration of menstrual flow is directly related to menstrual phase, when duration of flow increases, girls may have more physical discomfort, which leads to high menstrual distress.

In present study, findings regarding premenstrual distress and duration of flow are in line with what Ambekar (1990) has

observed. She found women with long and short duration of flow did not differ significantly in their experience of perimenstrual distress.

Findings regarding menstrual distress and duration of flow are in agreement with Slade and Jenner (1980); Woods, Most and Dery (1982). These investigators have found that women who have long or irregular menstrual cycles or a heavy menstrual flow tend to report more perimenstrual distress.

Thus present subsection can be concluded with the help of Moos's comment (1969), that there are some relationships, between the MDQ scales and other aspects of the menstrual cycle but they are typically modest and do not account for much of the variations in symptoms reported.

4.3.3 Sociodemographic variables

An attempt was made to find out whether sociodemographic variables like size of the family and ordinal position are related to perimenstrual distress.

It was hypothesized that there will be positive relationship between family size and perimenstrual distress. But results from Table IV - 7 show that there is no significant relationship between family size and premenstrual or menstrual distress. Hence hypotheses regarding family size and perimenstrual distress were rejected.

Rationale behind framing these hypotheses was that, small family provides better adjustment for the child, Parents and children have close relationship and the environment in the home

is cordial. Therefore in small families girls may get emotional support from family members during premenstrual and menstrual phaseS. This support will help in reducing level of distress during premenstrual and menstrual phases.

But results of the present investigation were not according to expectations. This can be explained as follows : Sample of the present study was taken from Pune city, where in majority of the families both the parents are working. Girls have to stay alone at home. Instead of getting emotional support during premenstrual and menstrual phases, girls feel more distress as they are alone. In large families parent-child contacts are reduced and children from large families encountered greater degree of frustration (Kaur and Rajendra, 1986). Therefore in large families also girls may not get emotional support. Thus it can be concluded that whatever the size of the family, small or large, it does not affect perimenstrual distress.

Regarding ordinal position and perimenstrual distress null hypotheses were formulated, vis. that there is no relationship between ordinal position and perimenstrual distress. To test these hypotheses chi-square analysis was used. Results show that there is no significant relationship between ordinal position and premenstrual or menstrual distress.(Table IV - 8) Thus both the null hypotheses concerning ordinal position and perimenstrual distress were accepted.

In their study 'Socialization and menstrual distress during adolescence', Ruble, Brook-Gunn (1976) failed to find significant difference on menstrual distress due to birth-order.

Present findings can be explained in the light of changed social values. In urban India, educated parents are trying to give equal treatment to their children, irrespective of their birth-order. This may, perhaps, help to eliminate most of the personality differences which may be caused by ordinal positions. Therefore differences in perception of perimenstrual distress in respondents with different ordinal positions was not observed.

In general this subsection can be concluded as follows : Sociodemographic variables such as family size and ordinal position may not have any influence on perimenstrual distress.

Part II.

4.3.4 Personality related variables

Present study takes into account three personality related variables, namely Locus of Control, Introversion-Extroversion, and Neuroticism. Efforts were made to study the relationship between these variables and premenstrual and menstrual distress. Product moment correlations from Table IV - 9 show that personality variables and perimenstrual distress are not related.

Locus of Control

Regarding Locus of Control variable it was hypothesized that there will be positive relationship between Locus of Control and premenstrual and menstrual distress. As correlation coefficients between Locus of Control and pre.menstrual and

menstrual distress showed insignificant relationship (Table IV - 9). High and low extremes of I-E score were found out by using ±1 standard deviation around the mean and then these two extreme groups were compared for their premenstrual and menstrual distress. But Table IV - 10 shows that there is no significant difference between level of premenstrual and menstrual distress of these two groups. These findings indicate that respondents orientation may be either external or internal, it does not affect level of premenstrual or menstrual distress.

Then different approach of analysis was taken, into which, quartiles were used and respondents were classified into low and high distress groups (Table IV - 3). The scores of these groups on I-E scale were compared, it was found that low MS and high MS groups did not differ significantly on their I-E scores, but respondents in high PMS group have significantly higher score on I-E scale as compared to low PMS group (Table IV - 13). This suggests that those who have high premenstrual distress are externals.

Thus the hypothesized positive relationship between premenstrual distress and I-E score is accepted, but the hypothesized positive relationship between menstrual distress and I-E scale is refuted.

This finding is according to expectation. Previous research showed that the higher the score on I-E scale, greater was the maladjustment (Rao, Murthy 1984). Harding, Vail Brown (1984) reported that women who score low on external health Locus

of Control report fewer premenstrual symptoms. Lefcourt (1966) concluded that individuals with more external orientation experience greater difficulty in coping with everyday pressures and frustrations than do internally oriented individuals.

Studies suggest that I-E belief is related to number of aspects of emotional and physical well-being. Internals report themselves to be more psychologically adjusted than externals. In relation to physical disorders, internals appear to take precautions against accidents and disease and they also seem to be somewhat more likely to be able to control physiological functioning through biofeedback mechanisms (Blass 1972).

In the light of the above findings, the results of the present study can be interpreted as follows : As premenstrual distress is related to psychological disturbances those who have high premenstrual distress may have more psychological disturbances. They may not be able to cope with day to day problems and pressures. They may believe that individuals are helpless and at the mercy of luck, fate and other uncontrollable outside forces. This is an indication of external orientation. According to previous research externals may not be able to control physiological functioning through biofeedback mechanisms and hence they may perceive perimenstrual symptoms more intensely. Introversion - extroversion —

Refering to Table IV — 9, it was observed that pre perimenstrual and menstrual distress and scores on introversion extroversion scale show insignificant correlation, therefore results were further analysed.

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<u>Introversion-Extroversion</u>

According to the norms given in personal inventory respondents were classified into introvert and extrovert category. These two groups were compared for their premenstrual and menstrual distress but 't' values show that these two groups did not differ on their level of perimenstrual distress (Table IV 11). Results indicate that respondents' tendency towards introversion or extroversion may not affect their perimenstrual distress.

When low PMS — high PMS and low MS — high MS groups were made (Table IV -3), and compared for their Introversion and Extroversion scores (Table IV — 14). It was observed that low MS group has significantly greater score on Introversion dimension as compared to high MS group. Thus there is negative relationship between menstrual distress and introversion. As the score on menstrual distress increases score on introversion decreases.

Result of the present study shows that hypothesis that there will be no relationship between premenstrual distress and Introversion-Extroversion is accepted, but hopothesis that there will be no relationship between menstrual distress and Introversion-Extroversion is rejected.

Findings regarding premenstrual distress and Introversion-Extroversion agrees with what Anantharaman and Swarnalatha (1986) have observed. After studying 100 college going girls researcher found no difference between extroverts and introverts in the

perception of menstrual distress in the three phases of menstruation. But present findings are in contradiction with the findings of Lederman 1974, Badaway 1983, Chattopadhyay and Das 1980. Chattopadhyay and Das (1980) pointed out that feeling of distress was much more intense in introverts.

Findings regarding menstrual distress and Introversion-Extroversion agrees with what Amal (1980) observed. His sample consisted of 200 college going girls. He found positive correlations between menstrual problems and gregariousness (social extroversion). This indicates that, Amal found negative correlation between introversion and menstrual problems.

This result of present study can be explained as follows : Introverts were found to score less on menstrual distress. Being an introvert such respondents prefer to stay at home for most of the time, because of which their physical discomfort during menstrual phase may be reduced.

NEUROTICISM
Referring to Table IV – 9 it was observed that premenstrual and menstrual distress and scores on Neuroticism scale show insignificant correlations. Therefore in order to verify same results data were further analysed.

According to the norms given in Palsane's Personal Inventory, respondents were classified into normal and neurotic categories. These groups were compared for their perimenstrual distress. No significant difference between these two groups as regards premenstrual or menstrual distress was found. (Table IV – 12). This suggests that respondent may be normal or neurotic, it does not affect her perimenstrual distress.

When low PMS - high PMS and low MS - High MS groups were compared for their scores on Neuroticism scale (Table IV - 15). It was observed that there is significant positive relationship between premenstrual distress and Neuroticism, but ˙ there is significant negative relationship between menstrual distress and Neuroticism. Therefore, hypothesis concerning Neuroticism and premenstrual distress is accepted, but hypothesis regarding Neuroticism and menstrual distress is rejected.

These findings agree with what Ress (1953), Sampson and Jenner (1977), Harding et al (1984) have observed. Ress noted that while a premenstrual syndrome occurs more often in neurotics than in normals. There is no simple relationship between Neuroticism and the syndrome. Many severely neurotic patients did not show premenstrual symptoms, whereas suffering was noted in those who showed little or no sign of neuroses.

About personality related variables it can be said that personality may not affect perimenstrual distress. Because when two extreme groups of these personality variables, namely — Internals-Externals, Introverts-Extroverts and Neurotics-Normals were compared for their premenstrual and menstrual distress, it was found that these extreme groups did not differ on their premenstrual or menstrual distress significantly.

But when same sample was divided into low PMS - high PMS, and low MS - high MS groups and these extreme groups were compared for their scores on personality variables, it was found that these groups differ significantly on their scores on personality variables.

Therefore, we can conclude that personality characteristics did not affect perimenstrual distress, but perimenstrual distress affects personality characteristics. These findings agree with what Ivey and Bardwick (1968) stated. According to them, in spite of individual differences even in normal subjects psychological behavior seems predictable on the basis of menstrual cycle phase alone.

<u>General Comments</u>

In general it can be commented that, overall level of perimenstrual distress is low in the present sample. There is also wide variation in the level of distress. This may be due to changed social values. In urban India, parents give equal treatment to their children irrespective of their sex. As a result, girls may develop androgynous personality. Ambekar (1990) observed that women with androgynous personality orientation experienced less perimenstrual distress.

This low distress in the entire sample can also be explained on the basis of observation by Ruble (1980). She observed that a proportion of students in college classes discussing menstruation became extremely irritated by the idea that the menstruation cycle affects the women in important ways. This indicates denial of effects of menstruation among college going girls. Present sample consists of college going girls. Therefore, Ruble's assertion can also be applicable to this sample. In Indian context Ambekar (1990) observed denial of effect of menstruation indicated significant correlation with premenstrual distress.

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4.4 SUMMARY

This chapter contains results and discussion of the variables, studied in the present investigation in two parts. These results can be summarized as follows :

Product moment correlations between all variables - menstrual related, sociodemographic, and personality related - and perimenstrual distress were found very low and insignificant.

When respondents were classified on the basis of extreme scores of personality variables, these extreme groups did not differ significantly in their level of premenstrual or menstrual distress.

When respondents were classified on the basis of extreme scores of premenstrual and menstrual distress, these extreme groups differ significantly on some of the aspects of personality variables.

This suggests that personality characteristics did not affect perimenstrual distress, but perimenstrual distress affects personality characteristics.

Major findings of the present study are -

(1) College going girls have more menstrual distress than premenstrual distress.

(2) Girls who have early age at menarche have higher premenstrual distress.

(3) Girls who have long duration of menstrual flow have higher menstrual distress.

(4) Girls who have higher premenstrual distress show external

Locus of Control. $\times$

(5) Girls who have lower menstrual distress show tendency towards Introversion.

(6) Girls who have higher premenstrual distress show neurotic tendency.

(7) Girls who have lower menstrual distress show neurotic tendency. $\times$

Interpretations for these major finding are given in this chapter.

CHAPTER V

SUMMARY, CONCLUSIONS AND SUGGESTIONS

5.1   SUMMARY.

5.2   CONCLUSIONS.

5.3   SUGGESTIONS FOR FURTHER RESEARCH.

5.4   IMPLICATIONS OF THE FINDINGS.

5.1 SUMMARY

As women continue to move towards a more equal status in our society, it becomes increasingly important to understand the peculiarly female problems, which may affect their functioning. Perimenstrual distress is one such problem.

In the present study the main objective is to study the effects of perimenstrual distress on personality. The personality dimensions studied were Locus of Control, Introversion-Extroversion, and Neuroticism.

Moos [cited in Kleinsasser (1975)] suggests that it might be hypothesized that personality factors like Neuroticism or impulsiveness should be positively related to perimenstrual symptoms. Moos also recommends that this area may benefit from further research.

For the purpose of this study researcher has chosen to follow the line of thinking proposed by Bardwick (1968). He stated that psychological and physical changes, during menstruation, so influence psychological behavior, that in spite of individual personality differences, even in normal subjects psychological behavior seems predictable on the basis of menstrual cycle phase alone.

While taking review of related literature, investigator noticed that there is much confusion in the literature which can be attributed to a number of methodological shortcomings.

The current study was conducted in two parts. In part one of the study factors affecting perimenstrual distress, such as

menstrual and sociodemographic variables were studied and in part

two of the study factors affected—by perimenstrual distress, ~~effects of~~

namely Locus of Control, Introversion-Extroversion, and

Neuroticism were studied. Following hypotheses were framed in

the light of the objectives of the study and review of earlier

literature.

(1) College going girls will have more distress during menstrual
    phase than during premenstrual phase.

(2) There will be no relationship between age at menarche and
    premenstrual distress.

(3) There will be no relationship between age at menarche and
    menstrual distress.

(4) There will be no relationship between length of menstrual
    cycle and premenstrual distress.

(5) There will be no relationship between length of menstrual
    cycle and menstrual distress.

(6) There will be no relationship between duration of menstrual
    flow and premenstrual distress.

(7) There will be no relationship between duration of menstrual
    flow and menstrual distress.

(8) There will be positive relationship between family size and
    premenstrual distress.

(9) There will be positive relationship between family size and
    menstrual distress.

(10) There will be no relationship between ordinal position and
     premenstrual distress.

(11) There will be no relationship between ordinal position and menstrual distress.

(12) Locus of Control will be influenced by premenstrual distress.

(13) Locus of Control will be influenced by menstrual distress.

(14) Introversion-Extroversion will not be influenced by premenstrual distress.

(15) Introversion-Extroversion will not be influenced by menstrual distress.

(16) The higher the premenstrual distress the higher will be the score on Neuroticism scale.

(17) The higher the menstrual distress the higher will be the score on Neuroticism scale.

205 unmarried, college going Hindu girls were included in the sample for the study. These girls were studying in arts faculty of 8 different colleges in Pune city.

Following tools were used for data collection.

(1) Personal data sheet.

(2) Menstrual Distress Questionnaire (Ruble 1980).

(3) I-E Scale (Rotter 1966).

(4) Personal Inventory (Palsane 1965).

All the tools mentioned above are standardized tools with high reliability coefficients. Originally these tools are constructed in English. They were translated in the regional language (Marathi), keeping the sense of each statement as in the original.

For data collection respondents were contacted in small groups of 6 to 8 at a time. After establishing adequate rapport every effort was made to motivate the respondent to give true responses to the items in the questionnaire. It took about 50 minutes to fill in the questionnaire.

The collected data were subjected to different statistical analysis, namely, Pearson Product – moment correlation, t-test, chi-square (x^2), quartile deviation, mean and percentage.

5.2   CONCLUSIONS.

Results obtained in the current study led to the following conclusions:

(1) Present sample indicated that college going girls have more distress during menstrual phase than during premenstrual phase.

(2) Average age at menarche for the present sample was 14.06. Age at menarche showed negative correlation with premenstrual distress. Those who got high score on premenstrual distress have lower age at menarche as compared to low PMS group.

(3) There is no relationship between length of the menstrual cycle and premenstrual or menstrual distress.

(4) Girls who have longer menstrual flow, also have high menstrual distress.

(5) There is no relationship between family size and premenstrual or menstrual distress.

(6) There is no relationship between ordinal position and premenstrual or menstrual distress.

(7) Locus of Control is found to be influenced by premenstrual distress because those who score high on premenstrual distress also score high on I-E Scale.

(8) Subjects' tendency towards introversion is influenced by menstrual distress. Those who got high score on menstrual distress, score low on introversion.

(9) Subjects' tendency towards neuroticism is also influenced by both premenstrual and menstrual distress. But relationship between neuroticism and perimenstrual distress is not found to be simple. Those who score high on premenstrual distress also score high on neuroticism, but those who score high on menstrual distress score less on neuroticism.

5.3   SUGGESTIONS FOR FURTHER RESEARCH.

Analysis of the results revealed the fact that the phenomenon of menstruation is quite complex. Further research may be carried out in the following directions :

(1) In the present study atypical distribution of scores on premenstrual distress was found. Majority of the sample showed low distress. Therefore it can be suggested that it will be more fruitful to select respondents having high and low distress before studying their personality.

(2) In the present study age at menarche showed negative relationship with premenstrual distress, studying causes for this negative relationship would be interesting.

(3) In the present study length of the menstrual cycle and perimenstrual distress are not found to be related

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significantly. It suggests that either long or short menstrual cycle, if occurs regularly, is often a sign of normal menstrual functioning. It also suggests that either long or short menstrual cycles with fairly regular periods are likely to have no effect on experience of perimenstrual symptoms. Therefore author of the present study suggests that instead of studying length of menstrual cycle, regularity of menstruation should be studied.

(4) The current study was restricted to the urban sample, studying in arts faculty. Similar study on rural sample, or on sample of other faculties — science, commerce, engineering, etc. — will give comparative information.

(5) In order to eliminate shortcomings of self-reporting inventories other personality measuring techniques like interviews or projective tests should be used.

5.4   IMPLICATIONS OF THE FINDINGS.

Any piece of research, consciously or unconsciously, has a good chance of finding some practical applications. Some of the areas in which present findings will find conscious application are as follows :

(1) Present study reveals the fact that perimenstrual distress may affect Locus of Control, Introversion-Extroversion, and Neuroticism. Investigator hopes that sharing these results with parents, councellors and doctors will increase understanding of menstrual related problems of late adolescent girls.

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(2) Major finding of the current study is that lower the age at menarche, higher is the premenstrual distress. This may be due to lack of psychological preparation before menarche. Thus present study stresses the importance of sex education. If girls will be prepared psychologically for experiencing menarche they may not develop negative attitude towards menstruation.

(3) The current study shows that while rearing a girl-child, if parents give equal treatment to girl, apart from her ordinal position, then she may perceive perimenstrual symptoms more realistically. Similarly if girls get emotional, support from family members during their premenstrual and menstrual periods, then their perimenstrual distress may not be affected by their size of the family. These findings add to the importance of child-rearing methods.

(4) Present research is certainly a contribution to the psychology of women.

(5) Present investigation has provided basic data in the controversial field of research in a culture, where little about such matters is known. Therefore this study is also of cross-cultural significance.

(6) Results of the present study provides further validational information on the tools used in this study, namely MDQ (modified by Ruble), I-E Scale, and Personal Inventory.

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LIST OF APPENDICES

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APPENDIX A

Personal Data Form (English)

REQUEST

I am trying to collect some information, through following questionnaire, for my M.Phil, research work. The success of my research thoroughly depends on your co-operation. So it is my earnest request to you to give the answers. I assure you that this information will be used only for research purpose and for nothing else. Your responses will ultimately be reduced to numbers.

Thank you.

Yours

(Amruta Oke)

1. Class : (1) S.Y.B.A.   (2) T.Y.B.A.

2. Date of Birth :

3. Number of siblings : (1) (2) (3) (4) or more

4. Ordinal position : (1) First born (2) Middle born
    (3) Last born

5. Age at first
    menstrual period : (   ) years (   ) months

6. After how many days
    does your menstrual
    cycle repeat? : (21 to 24)   (25 to 28)   (29 to 32)

7. For how many days
    does your menstrual
    flow continue? : (3 to 4)   (5 to 6)   (7 to 8)

APPENDIX - A..

विनंती

सप्रेम नमस्कार ....

    माझ्या एम्. फिल्. च्या संशोधानासाठी तुम्ही सर्वांनी मला योग्य ते सहकार्य करावे अशी नम्र विनंती आहे. तुमच्या सहकार्यावरच माझ्या संशोधनाचे यश अवलंबून आहे. यासाठी तुम्ही काही प्रश्नावलींची प्रामाणिकपणे उत्तरे द्याल अशी अपेक्षा आहे. तुम्ही सांगितलेली सर्व माहिती गुप्त ठेवली जाईल. तसेच तुमच्याकडून मिळणा-या उत्तरांचा विचार वैयक्तिकरीत्या न करता संबोधिकरीत्या करण्यात येणार आहे. तुम्ही दिलेल्या उत्तराचे सांतर आकडेवारीत केले जाणार आहे व ते फक्त संशोधन कार्यांसाठीच वापरण्यात येणार आहे, त्यामुळे तुम्ही माझ्यावर पूर्ण विश्वास ठेवून खरी माहिती द्या.

आपली,

सौ. अमृता ओक

PERSONAL DATA FORM

१)   वर्ग   :   १) S. Y. B A   २)   T. Y. B A.

२)   जन्मतारीख   :

३)   भावंडांची संख्या   :   १,   २,   ३,   ४   व त्यापेक्षा जास्त

४)   भावंडांमधील तुमचा :   १) पहिला   २) मधला   ३) शेवटचा
      जन्मक्रम

५)   तुमची मासिक पाळी तुमच्या वयाच्या कितव्या वर्षी सुरु झाली?
     (   ) वर्षे (   ) महिने.

६)   एक पाळी संपल्यानंतर किती दिवसांनी तुमची दुसरी पाळी सुरु होते?
    (२१ ते २४)   (२५ ते २८)   (२९ ते ३२)

७)   तुमची पाळी किती दिवस चालू राहते?
    (३ ते ४ दिवस)   (५ ते ६ दिवस)   (७ ते ८ दिवस)

APPENDIX B

Menstrual Distress Questionnaire (English)

Below is a list of symptoms that girls sometimes experience. Please describe your experience of each of these symptoms during the three time periods listed below :

Column A : During the three days before your most recent menstrual flow (Premenstrual Period)

Column B : During your most recent menstrual flow (Menstrual Period)

Column C : During the remainder of your most recent menstrual cycle (Intermenstrual Period)

Mark each item using the scale below :

0 : No experience of symptom
1 : Present, Mild
2 : Present, Moderate
3 : Present, Strong

Do not leave any blank spaces.

No.	Symptoms	3 days before (A)	Most recent flow (B)	Remainder of cycle (C)
1	Fatigue			
2	Weight gain			
3	Nausea, Vomiting			
4	Crying			
5	Backache			
6	Painful or tender breasts			
7	Dizziness, faintness			
8	Anxiety			
9	Headache			
10	General aches and pains			
11	Numbness, tingling			
12	Irritability			
13	Cramps			
14	Skin blemish or disorder			
15	Confusion			
16	Mood swings			
17	Take naps, stay in bed			
18	Orderliness			
19	Difficulty in concentrating			
20	Depression			
21	Decreased efficiency			
22	Feeling of well-being			
23	Feeling of suffocation			
24	Blind-spots, fuzzy vision			
25	Avoid social activities			
26	Bursts of energy and activity			
27	Ringing in the ears			
28	Changing eating habits			
29	Not wanting to attend college			
30	Heart pounding			

APPENDIX - B... MDQ

मुलींनी काही वेळा अनुभावलेल्या लक्षणांची यादी खाली दिलेली आहे.
खाली नमूद केलेल्या तीन कालावधीतील त्या लक्षणाबाबतच्या तुमच्या अनुभवाचे
कृपया वर्णन करा -

अ) तुमच्या नुकत्याच झालेल्या पाळीपूर्वींच्या तीन
     दिवसातील अनुभव ...(पूर्वकाळ)

ब) तुमच्या नुकत्याच झालेल्या पाळीच्या काळातील अनुभव.
    (मासिक पाळीचा काळ)

क) एक पाळी संपल्यानंतर पुढची पाळी सुरु होण्याच्या २ ते ३
     दिवस आधी या उरलेल्या दिवसातील अनुभव ..(मध्यकाळ)

प्रत्येक लक्षणाबाबत तुमच्या अनुभवाचे वर्णन करतांना खालील पर्यायांचा
वापर करा -

    १) लक्षणांबाबत अनुभव नाही
    २) सौम्य अनुभव
    ३) मध्यम अनुभव
    ४) तीव्र अनुभव

१ ते ४ पैकी योग्य ते आकडे प्रत्येक लक्षणाजवळील (अ), (ब), व (क) ह्या
तीनही स्तंभात लिहा. कृपया कोणतेही लक्षण गाळू नका.

क्र.	लक्षणे	पूर्वकाळ	पाळीचा काळ	मध्यकाळ
		(अ)	(ब)	(क)
१)	थकवा वाटणे, दमल्यासारखे वाटणे.	–	–	–
२)	वजन वाढल्यासारखे वाटणे.	–	–	–
३)	मळमळणे, उलटी होणे, पोटात कसेतरी होणे.	–	–	–
४)	रडू येणे.	–	–	–
५)	पाठीत दुखणे.	–	–	–
६)	छाती हळहळी बनणे.	–	–	–
७)	चक्कर येणे.	–	–	–
८)	काळजी वाटणे, अस्वस्थ वाटणे.	–	–	–
९)	डोके दुखणे.	–	–	–
१०)	अंग दुखणे.	–	–	–
११)	हालचालीत मंदत्व येणे.	–	–	–
१२)	चिडचिडहोणे.	–	–	–
१३)	वांब येणे(वाताचे गोळे येणे)	–	–	–
१४)	पुटकुळया येणे.	–	–	–
१५)	गोंधळल्यासारखे वाटणे.	–	–	–
१६)	मन विचलित होणे.	–	–	–
१७)	डुलकी येणे, नेहमीपेक्षा जास्त वेळ झोपावेसे वाटणे.	–	–	–
१८)	चित्त एकाग्र न होणे	–	–	–
१९)	नीटनीटकेपणाने व्यवस्थित वागणे	–	–	–
२०)	दुःखी, उदास वाटणे	–	–	–

क्र.	लक्षणे	(अ)	(ब)	(क)
२१)	कामाचा दर्जा खालावणे	–	–	–
२२)	सुस्थितीत आहोत असे वाटणे	–	–	–
२३)	श्वासोच्छ्वासास त्रास होणे	–	–	–
२४)	डोळ्यासमोर अंधारी येणे	–	–	–
२५)	सामाजिक कृतीत भाग घेण्याचे टाळणे	–	–	–
२६)	अति उत्साही वाटणे	–	–	–
२७)	कानात आवाज येणे	–	–	–
२८)	राण्याच्या सवयीत बदल करावासा वाटणे	–	–	–
२९)	कॉलेजमध्ये न जावेसे वाटणे	–	–	–
३0)	छातीवर दडपण येणे	–	–	–

———

APPENDIX C

I-E Scale (English)

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives letter <u>a</u> or <u>b</u>. Please select the one statement of each pair (<u>and only one</u>) which you more strongly <u>believe</u> to be the case as far as you are concerned, and circle the letter preceding it. Be sure to select the one you actually <u>believe</u> to be more true rather than the one you would like to be true or the one you think you should choose. This is a measure of personal belief : obviously there are no right or wrong answers.

Please answer these items <u>carefully</u> but do not spend too much time on any one item. Be sure to find an answer for <u>every</u> and each choice.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the <u>one</u> you more strongly believe to be the case as far as you are concerned. Also try to respond to each item <u>independently</u> when making your choice; do not be influenced by your previous choices.

Remember <u>circle</u> the <u>letter</u> of the statement you choose.

1. a. Children get into trouble because their parents punish
      them too much.
   b. The trouble with most children nowadays is that their
      parents are too easy with them.

2. a. 'Many of the bad things in people's lives are partly due
      to bad luck'.
   b. People's misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because
      people don't take enough interest in politics.
   b. There will always be wars no matter how hard people try to
      prevent them.

4. a. In the long run, people get the respect they deserve in
      this world.
   b. Unfortunately, an individual's worth often passes
    . unrecorded no matter how hard he tries.

5. a. The idea that teachers are unfair to students is nonsense.
   b. Most students don't realize the extent to which their
      grades are influenced by accidental happenings.

6. a. Without the right breaks one cannot be an effective
      leader.
   b. Capable people who fail to become leaders have not taken
      advantage of their opportunities.

7. a. No matter how hard you try, some people just don't like
      you.
   b. People who can't get others to like them don't understand
      how to get along with others.

8. a. Heredity plays the major role in determining one's
      personality.
   b, It is one's experience in life which determine what
      they're like.

9. a. I have often found that what is going to happen will
      happen.
   b. Trusting a fate has never turned out as well for me as
      making a decision to take a definite course of action.

10. a. In the case of the well prepared student there is rarely
       if ever such a thing as an unfair test.
    b. Many times exam questions tend to be so unrelated to
       course work that studying is really useless.

11. a. Becoming a success is a matter of hard work, luck has
       little or nothing to do with it.

b. Getting a good job depends mainly on being in the right
   place at the right time.

12. a. The average citizen can have an influence in government
       decisions.
    b. This world is run by a few people in power, and there is
       not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make
       them work.
    b. It is not always wise to plan too far ahead because many
       things turn out to be a matter of good or bad fortune
       anyway.

14. a. There are certain people who are just no good.
    b. There is some good in everybody.

15. a. In my case getting what I want has little or nothing to do
       with luck.
    b. Many times we might just as well decide what to do by
       flipping a coin.

16. a. Who gets to be the boss often depends on who was lucky
       enough to be in the right place first.
    b. Getting people to do the right thing depends upon ability,
       luck has little or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are
       victims of forces we can neither understand, nor control.
    b. By taking an active part in politics and social affairs
       the people can control world events.

18. a. Most people don't realize the extent to which their lives
       are controlled by accidental happenings.
    b. There is really no such thing as "luck".

19. a. One should always be willing to admit mistakes.
    b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes
       you.
    b. How many friends you have depends on how nice a person you
       are.

21. a. In the long run the bad things that happen to us are
       balanced by the good ones.
    b. Most misfortunes are the result of lack of ability,
       ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.

b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I don't understand how teachers arrive at the grades they give.
    b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.
    b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over what happens to me.
    b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.
    b. There's not much use in trying too hard to please people, if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.
    b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.
    b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I can't understand why politicians behave the way they do.
    b. In the long run the people are responsible for bad government on a national as well as a local level.

सामाजिक प्रतिक्रिया चाचणी

काही महत्त्वाच्या घटनांचे आपल्या समाजातील वेगवेगळ्या लोकांवर कसे परिणाम होतात हे शोधणे हा या प्रश्नावलीचा उद्देश आहे. खालील प्रत्येक कलमात "अ" आणि "ब" अशी वेगवेगळी पर्यायी वाक्ये दिलेली आहेत. कृपया दोन पर्यायी वाक्यांपैकी, अशाच वाक्याची निवड करा की, जे तुम्हाला जास्त विश्वासनीय आहे असे वाटते.

तुमच्या मते जास्तीत जास्त खरे असलेल्या वाक्यांचीच निवड करायची आहे, हे लक्षात घ्या. हे वैयक्तिक मताचे मोजमाप असल्यामुळे अर्थातच यात चूक किंवा बरोबर अशी उत्तरे नाहीत.

कृपया खालील वाक्यांना काळजीपुर्वक उत्तरे द्या. परंतु कोणत्याही वाक्यावर विचार करण्यात जास्त वेळ घालवु नका. प्रत्येक कलमास उत्तर दिल्याची खात्री करुन घ्या. प्रत्येक कलमात तुमच्या मते जास्तीत जास्त खरे असलेल्या "अ" किंवा "ब" या वाक्यांसाठी तुम्हाला स्वतंत्रपणे दिलेल्या उत्तर पत्रिकेतील चाचणी क्र. १ च्या उत्तर पत्रिकेमधील "अ" किंवा "ब" पर्यायांवर (×) अशी फुली करा.

तुम्हाला काही वेळेस, दोन्हीही वाक्ये तुमच्या बाबतीत सारखीच खरी किंवा त्यातील एकही खरे नाही असे वाटेल. अशा वेळेस तुमच्याविषयी, तुमच्या मते, जास्तीत जास्त खरे असलेले वाक्य निवडावे. प्रत्येक वाक्यास स्वतंत्रपणे उत्तर द्यावे. मागील पर्यायांचा परिणाम त्यावर होणार नाही याची काळजी घ्यावी.

लक्षात ठेवा तुमच्या मते जास्तीत जास्त खरे असलेाय पर्याय निवडा..

मला फुली मारलेले विधान अधिक खरे वाटते : –

१)   – अ. पालकांनी खुप शिक्षा केल्यामुळे मुले अडचणीत येतात.
     – ब. आजकाल ब-याच मुलांच्या बाबतीत अडचण अशी आहे की, त्यांचे आईवडील त्यांना शिक्षाच करत नाहीत.

२) – अ. लोकांच्या आयुष्यातील बहुतेक दु:खी घटना काही अंशी दुर्दैवामुळे घडतात.

– ब. लोकांच्या आयुष्यात त्यांच्या स्वत:च्या चुकीमुळेच दुर्दैवी घटना घडलेल्या असतात.

३) – अ. युध्द कां होतात याचे अनेक प्रमुख कारणांपैकी एक कारण म्हणजे लोकांना राजकारणांत पुरेसा रस नाही.

– ब. लोकांनी युध्द होऊ नये यासाठी कितीही प्रयत्न केले तरी युध्द होतच राहणार.

४) – अ. जगांत, शेवटी, मान मिळण्यास पात्र असलेल्या लोकांना मान मिळतोच.

– ब. दुर्दैवाने, एकाद्या माणसाचे महत्त्व, त्याने कितीही प्रयत्न केला तरी, बरेचदा दुर्लक्षिले जाते.

५) – अ. शिक्षक विद्यार्थ्यांवर अन्याय करतात ही कल्पनाच निरर्थक आहे.

– ब. अनपेक्षितपणे घडणा–या घटनांचा किती प्रमाणांत मार्कांवर परिणाम होतो हे ब–याच विद्यार्थ्यांच्या लक्षांत येत नाही.

६) – अ. योग्य संधी शिवाय कोणीही परिणामकारक नेता होऊ शकत नाही.

– ब. नेता होऊ न शकलेल्या पण लायक अशा लोकांनी त्यांच्या संधीचा फायदा घेतलेला नसतो.

७) – अ. तुम्ही कितीही प्रयत्न केला तरीही काही लोकांना तुम्ही आवडत नाही.

– ब. जे लोक इतरांना कधीही आवडू शकले नाहीत, त्यांना इतरांशी कसे वागावे, हेच समजत नाही.

८) – अ. एखाद्याचे व्यक्तिमत्व घडविण्यात अनुवंशिकतेचा भाग प्रमुख असतो.

– ब. एकादी व्यक्ती कशी आहे हे तिच्या जीवनातील अनुभवातून घडविले जाते.

९) — अ. मी ब-याचदा असे पाहीले आहे की, जे घडायचे असेल ते घडतेच.

— ब. माझे, कृति करण्याचा निर्णय घेतल्यामुळे जेवढे भले झाले तेवढे नशिबावर विसंबून राहिल्याने झाले नाही.

१०) — अ. संपूर्णत: तयारी करणा-या विद्यार्थ्यांच्या बाबतीत, अन्यायकारक(अवघड) याचणी/परीक्षा असे क्वचितच घडते.

— ब. ब-याचदा परिक्षेतील प्रश्न अभ्यासक्रमाशी इतके असंबंधित असतात की, अभ्यास करणे खरच निरुपयोगी ठरते.

११) — अ. यशस्वी होणे हे कष्टावर अवलंबून आहे. त्यात नशिबाचा भाग थोडासा किंवा अजिबात नसतो.

— ब. चांगली नोकरी मिळणे हे मुख्यत: योग्य वेळेस योग्य ठिकाणी हजर असणे यावर अवलंबून असते.

१२) — अ. सामान्य नागरिकाचा, सरकारी निर्णयावर प्रभाव असु शकतो.

— ब. हे जग मूठभर लोकांच्या सत्तेवर चालते, आणि सामान्य माणूस त्याविषयी फार काही करु शकत नाही.

१३) — अ. जेव्हा मी योजना आखतो तेव्हा मला ती प्रत्यक्षात आणण्याची खात्री असते.

— ब. खूप लांबच्या गोष्टीविषयी अगोदरपासून विचार करणे नेहमी शहाणपणाचे असतेच असे नाही कारण नाही तरी ब-याच गोष्टी, चांगल्या किंवा वाईट नशिबामुळे घडतात.

१४) — अ. काही लोक अजिबातच चांगले नसतात.

— ब. प्रत्येकांत काही तरी चांगले असते.

१५) — अ. माझ्या बाबतीत मला काय पाहिजे ते मिळणे याचा नशिबाशी क्वचितच किंवा अजिबात संबंध नाही.

— ब. आपल्याला, ब-याच वेळेस, नाणेफेक करुन काय करायचे याविषयी निर्णय घेता येतात.

१६) — अ. कोण वरिष्ठ अधिकारी बनतो हे बरेचदा नशिबाने, तो अगोदरच योग्य ठिकाणी असण्यावर अवलंबून असते.

— ब. लोकांकडून बरोबर काम करुन घेणे हे कौशल्यावर अवलंबून असते. नशिबाचा त्यात क्वचितच किंवा अजिबात संबंध नसतो.

१७) — अ. जागतिक घटनांच्या संबंधात आपल्यातील बरेच लोक, आपण समजू न शकणा-या व आपले नियंत्रण नसलेल्या शक्तीचे बळी ठरतात.

— ब. राजकारणांत व समाजकारणांत कृतिशिल भाग घेवून लोक जागतिक घटनांवर नियंत्रण ठेवू शकतात.

१८) — अ. बरेच लोक हे समजू शकत नाहीत की, किती प्रमाणांवर त्यांचे जीवन आकस्मिक घडणा-या घटनांनी नियंत्रीत असते.

— ब. "नशिब" नावाची चीज अस्तित्वात नाही.

१९) — अ. स्वत:च्या चूका नेहमी कबूल करण्याची, प्रत्येकाची तयारी असावी.

ब. ब-याचदा स्वत:च्या चूकांवर पांघरूण घालणेच चांगले असते.

२०) — अ. तुम्ही एखाद्या व्यक्तिला आवडता किंवा नाही हे समजणे खरोखर कठीण असते.

— ब. तुम्हांला किती मित्र आहेत हे तुमचा स्वभाव किती चांगला आहे यावर अवलंबून असते.

२१) — अ. शेवटी आपल्या बाबतीत जे काही वाईट घडते त्यांच्याशी चांगल्या घटना घडून समतोल साधला जातो.

— ब. ब-याच दुर्दैवी घटना सामर्थ्यांची उणीव, अज्ञान, आळस किंवा या तिन्हीमुळे घडतात.

२२) — अ. पुरेसे प्रयत्न केल्यास आपण राजकीय भ्रष्टाचार नष्ट करू शकतो.

— ब. राजकारणी लोक कारभारात काय करतात यांवर लोकांना फारसे नियंत्रण ठेवणे अवघड असते.

२३) — अ. कधी कधी मला हे कळू शकत नाही, शिक्षक असे मार्क्स/श्रेणी देतात तरी कसे?

— ब. मी किती अभ्यास करतो आणि मला किती मार्क्स मिळतात याचा सरळ संबंध आहे.

२४) — अ. चांगल्या नेत्याची अपेक्षा असते की, "लोकांनी काय करावे" याचा निर्णय त्यांनीच घ्यावा.

— ब. चांगला नेता प्रत्येकास त्याचे काम समजावून/नेमून देतो.

२५)   – अ.   ब-याचदा मला असे वाटते की, माझ्या बाबतीत जे काही घडले
         त्यावर माझा कांडीमात्र प्रभाव नसतो.

      – ब.   माझ्या आयुष्यात दैव किंवा नशिब यांचा महत्त्वाचा भाग आहे. यांवर
         विश्वास ठेवणे मला अशक्य आहे.

२६)   – अ.   लोक एकाकी असतात कारण ते मित्रत्वाने वागण्याचा प्रयत्न करत नाहीत.

      – ब.   लोकांना खुष करण्याचा जास्त प्रयत्न करण्यात काही अर्थ नाही, जर
         तुम्ही त्यांना एकदा आवडलात की मग काहीच करायला नको.

२७)   – अ.   वैयक्तिक(ॲथ्लेटीक्स) खेळांवर शाळेतून जास्त भर दिला जातो.

      – ब.   सामूहिक खेळ हा चारित्र्य घडविण्याचा चांगला मार्ग आहे.

२८)   – अ.   माझ्या बाबतीत जे काही घडते ते माझ्याच कृत्याचे फळ असते.

      – ब.   मला कधी कधी असे वाटते की, माझ्या आयुष्यास लागणा-या
         दिशेवर/वळणांवर माझे पुरेसे नियंत्रण नाही.

२९)   – अ.   खूपदा मला हे कळू शकत नाही की, राजकारणी लोक असे का वागतात.

      – ब.   सरकार वाईट असेल तर शेवटी स्थानिक आणि राष्ट्रीय पातळीवरील
         लोकच त्याला जबाबदार असतात.

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APPENDIX D

Personal Inventory (English)

<u>Directions</u> : (Please read very carefully)

The Inventory consists of pairs of statements about peoples' day-to-day lives. For example :

a. I like to meet strangers.

b. I like to visit strange places.

Do you like to meet strangers or do you like to visit strange places. Which is more characteristic of you. You have to choose the one which describes you better.

If you think that both the statements are characteristic of you, choose the one which is more characteristic of you than the other.

If you think on the other hand, that none of the two statements describes you correctly, choose the one which is less incorrect of the two.

In any case you have to make the choice. Please do not leave any item unanswered.

You are provided with a separate answer-sheet. Please do not make any mark on the test-paper. If you choose 'a' over 'b', put a cross (X) on 'a' in the answer-sheet. If you choose 'b' over 'a' put a cross on 'b'. Make your marks against appropriate and corresponding numbers in the answer-sheet.

This is not examination. There are no right or wrong answers. You have to state honestly and frankly what is true of you, your behavior, your life. Your identify will remain secret.

Please fill in your name and other particulars carefully in the separate answer-sheet before you start answering the Inventory.

If you come across any difficult word, please consult your supervisor.

DO NOT PROCEED UNTILL YOU HAVE FOLLOWED THE ABOVE DIRECTIONS.

1. a. I find it difficult to begin talk when I meet new people.
   b. I get discouraged when others disagree with me.

2. a. I consider myself a nervous person.
   b. Usually I forget my appointments or names of the people introduced to me once.

3. a. I am generally shy in the presence of the members of the opposite sex.
   b. It is hard for me to admit when I am wrong.

4. a. I daydream a lot.
   b. I am afraid of the dark.

5. a. My friends consider me a talkative person.
   b. In school I found it very difficult to talk before a class.

6. a. I am subject to attacks of shaking or trembling.
   b. My daydreams are frequently about things that can never come true.

7. a. I have often contested elections in school, college or elsewhere.
   b. I worry about what others will say to me.

8. a. My sleep is fitful and disturbed.
   b. I feel weak all over much of the time.

9. a. I do not like to have many social engagments.
   b. I do not speak to people unless they first speak to me.

10. a. I have nightmares.
    b. I feel that other persons have more enjoyable life than I have.

11. a. In a group of people I would not be embarassed to be called upon to start a discussion or give an opinion about something.
    b. I am over-anxious about my ability to get success.

12. a. I lack self-confidence.
    b. I am not interested in being with other people.

13. a. I am not over-conscientious sort of a person.
    b. I generally take lead in the group activities.

14. a. I am troubled with feelings of inferiority.
    b. I am not very responsible and dependable.

15. a. I like to attend parties and other affairs where there is lot of loud fun.

b. I like to talk about sex.

16. a. I sometimes had a sudden sense of dread and vague danger without knowing why.
    b. Often I feel sick in the stomach.

17. a. While in trains, buses, etc. I often talk to strangers.
    b. If I can get information by reading newspapers, books, etc. I do not bother to ask anyone about it.

18. a. I sometimes awaken in the night and through worrying, have difficulty in going to sleep again.
    b. I worry about what my parents would say to me.

20. a. I forget right away what people say to me.
    b. Even when I am with people I feel lonely much of the time.

21. a. I like to limit my acquaintances to a select few.
    b. I do not take enough exercise.

22. a. I often used to get "stage-freight".
    b. I am not a steady and persistent worker.

23. a. I usually keep quiet when I am in a social group.
    b. I do not mind being made fun of.

24. a. I often feel disappointed (or dissatisfied).
    b. I am often troubled with feelings of guilt.

25. a. I can make friends as quickly as others can do.
    b. I have no fear of going into a room by myself when other people have already gathered and are talking.

26. a. I am afraid of things like lightening, high places, water, fire, etc.
    b. I get nervous at the time of examinations or when my abilities are being tested.

27. a. I am quite often absent from the gossip and talk of the group to which I belong.
    b. I generally like to work or to talk with others than to read for passing time.

28. a. I get palpitation or thumping in my heart.
    b. I worry about my lack of true friendship.

29. a. I very much like to get involved in some project that calls for rapid action.
    b. At parties I am more likely to sit by myself or with just one other person than to join with the whole gathering.

30. a. I am worried about sex matters.
    b. I am easily embarassed.
31. a. Whenever possible I avoid being in a crowd.
    b. I do not mind meeting strangers.

32. a. I worry, tremble or perspire when I have a difficult task
       ahead.
    b. People are so unreasonable that I hate them.

33. a. I wish I were not so shy.
    b. When anyone suggests an idea I realise that I, too, had
       the same and I could have suggested it earlier.

34. a. I have periods of such great restlessness that I cannot
       sit long in a chair.
    b. I get tired easily.

35. a. I am always quick and sure in my actions.
    b. I consider myself a happy-go-lucky individual.

36. a. I worry too long over humiliating experiences.
    b. My feelings are easily hurt.

37. a. Much of the time I feel as if I have done something wrong
       or evil.
    b. Bad words, often terrible words, come into my mind and I
       cannot get rid of them.

38. a. I like to be with a group who play jokes on one another.
    b. My worries seem to disappear when I get into a crowd of
       lively friends.

39. a. Once in a while I think of things too bad to talk about.
    b. It bothers to have people watch me at work even when I do
       it well.

40. a. I worry over possible misfortunes.
    b. My mind often wanders while I am trying to concentrate.

41. a. If I do not understand some point in the class, I try to
       understand from books rather than asking the lecturer
       right away.
    b. I enjoy outdoor sports and games.

42. a. I worry too much about my health.
    b. I want someone to be with me when I receive bad news.

APPENDIX - D' *Personal Inventory*

<u>व्यक्तिगत चाचणी</u>

सूचना – (कृपया अतिशय काळजीपूर्वक वाचावे)

ह्या चाचणीत काही विधानांच्या जोड्या दिलेल्या आहेत, ही विधाने लोकांच्या दैनंदिन जीवनांतील गोष्टींशी संबंधित आहेत.

उदा – (अ) मला अपरिचित व्यक्तींना भेटणे आवडते.

(ब) मला अपरिचित स्थळांना भेट देणे आवडते.

वरील दोन्ही विधानांपैकी जे विधान तुमच्या स्वभावाचे आधिक चांगले वर्णन करते ते निवडा.

जर तुम्हाला, असे वाटते की, एखाद्या जोडीतील दोन्ही विधाने तुमच्या स्वभावाचे वर्णन करणारी आहेत, तर त्यातल्या त्यात जे विधान तुम्हाला आधिक लागू पडते ते निवडा.

जर तुम्हाला असे वाटले की, एखाद्या जोडीतील दोन्ही विधाने तुमच्या स्वभावाचे वर्णन करणारी नाहीत, तरी देखील त्यातल्या त्यात जे विधान स्वभावाच्या बाबतीत कमी चुकीचे आहे ते निवडा.

कोणत्याही परिस्थितीत तुम्हाला एक विधान निवडायचेच आहे. कृपया कोणताही प्रश्न अनुत्तरित ठेवू नका.

तुम्हाला स्वतंत्र उत्तर-पत्रिका देण्यात आलेली आहे. कृपया प्रश्नपत्रिकेवर काहीही खूण करु नका. जर तुम्ही "ब" पेक्षा "अ" पर्याय पसंत केलेला असेल तर उत्तर पत्रिकेवरील "अ" वर (x) अशी फुली करा. जर "अ" पेक्षा "ब" पर्याय पसंत केलेला असेल तर उत्तरपत्रिकेवरील "ब" (x) वर अशी फुली करा. उत्तरपत्रिकेवरील योग्य त्या संबंधित आकडयापुढेच खूण करा.

ही तुमची परिक्षा नाही. विधानांची उत्तरे बरोबर अथवा चूक नाहीत. तुमची उत्तरे गुप्त राखण्यात येणार आहेत. त्यामुळे तुम्ही तुमच्या स्वतःविषयी जी काहीतरी माहिती आहे ती मोकळेपणाने व प्रामाणिकपणाने दर्शवा.

तुम्हाला जर एखादा शब्द समजला नाही तर तुमच्या पर्यवेक्षकाचा सल्ला घ्या.

वरील सर्व सूचना पूर्णपणे समजल्याशिवाय पुढे सुरुवात करु नका.

१) अ) नविन ओळख झालेल्या माणसाबरोबर संभाषण सुरु करणे मला अवघड जाते.

ब) इतर लोक माझ्याशी असहमत होतात, तेव्हा माझा धीर खचतो.

२) अ) मी स्वतःला अस्वस्थ(नर्व्हस) व्यक्ती समजते.

ब) ब-याचवेळा मी इतरांबरोबर ठरविलेल्या भेटीच्या वेळा व नविन ओळख झालेल्या व्यक्तींची नावे विसरते.

३) अ) तज्ञांच्या उपस्थितीत मी लाजाळू बनते.

ब) माझ्या हातून घडलेली चूक कबूल करणे मला अवघड जाते.

४) अ) मी ब-याच वेळा जागेपणीच स्वप्ने बघते.

ब) मला अंधाराची भिती वाटते.

५) अ) माझ्या मैत्रिणींच्यामते मी बोलकी व्यक्ति आहे.

ब) शाळेत असताना वर्गापुढे उभे राहून बोलणे मला फारच अवघड वाटे.

६) अ) मला अंग थरथरण्याचा अथवा कंप पावण्याचा त्रास होतो.

ब) माझ्या दिवास्वप्नात मी ब-याचवेळा अशक्य गोष्टी बघते.

७) अ) मी नेहमी शाळा, महाविद्यालय व इतर ठिकाणच्या निवडणुका लढविल्या आहेत.

ब) इतर लोक मला काय म्हणतील याची मला चिंता वाटते.

८) अ) माझी झोप कधी स्वस्थ व कधी अस्वस्थ असते.

ब) ब-याचवेळा मला अशक्तपणा जाणवतो.

९) अ) पुष्कळ सामाजिक संबंध ठेवणे मला आवडत नाही.

ब) दुस-या व्यक्ति कधी माझ्याशी बोलल्याशिवाय मला त्यांच्याशी बोलणे आवडत नाही.

१०) अ) मला भितीदायक स्वप्ने पडतात.

ब) इतरांचे आयुष्य माझ्यापेक्षा अधिक सुखी आहे, असे मला वाटते..

११) अ) समूहापुढे उभे राहून एखाद्या विषयावर चर्चा सुरु करताना अथवा एखाद्या बाबतीत मत देताना मला ओशाळल्यासारखे वाटणार नाही.

ब) यशस्वी होण्याच्या माझ्या क्षमतेविषयी मला अतिशय काळजी वाटते.

१२) अ) माझ्यात आत्मविश्वासाचा अभाव आहे.

ब) इतर लोकांच्या स्वभावात असण्यात मला रस नाही.

१३) अ) मी अतिसद्विवेकबुध्दीने वागणारी व्यक्ती नाही.

ब) मी नेहमी सामुहिक कृत्यांमध्ये पुढाकार घेते.

१४) अ) माझ्यात न्यूनगंडाची भावना आहे.

ब) मी फारच जबाबदारीने वागणारी, आणि अवलंबून राहण्यास योग्य व्यक्ति नाही.

१५) अ) मौज-मजा असणा-या समारंभामध्ये व इतर गोष्टींमध्ये भाग घेणे मला आवडते.

ब) मला लैंगिक विषयांवर बोलणे आवडते.

१६) अ) कधीकधी मला अचानक अशी धोक्याची आणि भितीची अकारण जाणीव होते.

ब) भितीने माझ्या पोटात गोळा येतो.

१७) अ) रेल्वेत, बसमध्ये व इतरत्र मी नेहमी अनोळखी लोकांशी बोलते.

ब) वर्तमानपत्रे, पुस्तके इ. वाचुन मिळालेल्या माहितीबद्दल इतरांना विचारण्याची गरज मला वाटत नाही.

१८) अ) काहीवेळा रात्री एकदम मला जागे येतेच आणि काळजीमुळे पुन्हा झोप येणे अवघडत जाते.

ब) कोणत्याही सबळ कारणाशिवाय ब-याच वेळा मला दुःखी वाटते.

१९) अ) सामाजिक प्रसंगामध्ये मी प्रयत्नपुर्वक स्वतःला मागे मागे ठेवते.

ब) माझे पालक मला काय म्हणतील याची मला काळजी वाटते.

२०) अ) लोक मला काय म्हणतात हे मी एकदम विसरते.

ब) इतरांबरोबर असुनही मला ब-याचवेळा एकाकी वाटते.

२१) अ) काही निवडक लोकांशी ओळखी ठेवणे मला आवडते.

ब) मी पुरेसा व्यायाम करत नाही.

२२) अ) माझ्यात समाधीटपणा नाही.

ब) मी स्थिरपणाने अथवा चिकाटीने काम करत नाही.

२३) अ) समूहात असताना मी गप्प बसते.

ब) इतरांनी माझी चेष्टा केलेली मला चालते.

२४) अ) मला नेहमी निराश अथवा असमाधानी वाटते.

ब) मला नेहमी अपराधी वाटते.

२५) आ) मी देखील इतरांइतक्याच सहजतेने मैत्री करु शकते.

ब) ज्या ठिकाणी इतर व्यक्ति अगोदरच एकत्र जमून गप्पा मारत असतील त्या खोलीमध्ये आपणहून जाण्याची मला भिती वाटत नाही.

२६) अ) विज चमकणे, उंच जागा, पाणी, आग इत्यादी गोष्टींची मला भिती वाटते.

ब) परिक्षेच्यावेळी अथवा माझ्याक्षमतांची पारख होत असताना मी अस्वस्थ होते.

२७) अ) माझ्या समूहात चालणा-या चर्चा व गप्पागोष्टी यांच्या पासून दूर जाण्याचा मी प्रयत्न करते.

ब) वाचन करण्यापेक्षा इतरांबरोबर गप्पा मारणे अथवा इतरांबरोबर काम करणे मला आवडते.

२८) अ) माझ्या छातीत धडधडते.

ब) मला जिवलग मैत्रिणी नसल्यामुळे काळजी वाटते.

२९) अ) ज्या प्रकल्पांमुळे त्वरित कृतीला चालना मिळते त्या प्रकल्पांमध्ये मनापासून सहभागी होणे मला फार आवडते.

ब) समारंभामध्ये इतरांबरोबर असण्यापेक्षा मला एकटीला बसणे आवडते अथवा दुस-या एखाद्याच व्यक्तिबरोबर रहाणे आवडते.

३०) अ) लैंगिक गोष्टींची मला काळजी वाटते.

ब) मी चटकन ओशाळते.

३१) अ) शक्यतोवर मी गर्दी टाळण्याचा प्रयत्न करते.

ब) अपरिचितांना भेटण्यांत मला गैर वाटत नाही.

३२) अ) अवघड काम करण्याची वेळ आल्यास काळजीमुळे मला कंप सुटतो व घाम येतो.

ब) लोक इतके अवाजवी असतात, की मी त्यांचा तिरस्कार करते.

३३) अ) मला असे असे वाटते की, मी इतके लाजाळू असू नये.

ब) दुस-या व्यक्तिने एखादी कल्पना सुचवल्यानंतर मला अशी जाणिव होते की मलासुद्धा हीच कल्पना सुचलेली होती आणि ती मी आधीच सुचवायला हवी होती.

३४) अ) काहीवेळा मी इतकी अस्वस्थ होते की ब-याचवेळा एका जागी बसू शकत नाही.

ब) मी लवकर थकते.

३५) अ) माझ्या कृती ह्या नेहमीच जलद व ठाम असतात.

ब) मी स्वतःला स्वच्छंदी व्यक्ति समजते.

३६) अ) उपरोधिक अनुभवांबाबात मी दिर्घकाळ चिंता करते.

ब) मी सहजगत्या दुखावली जाते.

३७) अ) ब-याचवेळा मला असे वाटते की, माझ्याकडून काहीतरी चूक अथवा दुष्कृत्य झाले आहे.

ब) ब-याचवेळा माझ्या मनात येणा-या भयानक शब्दांपासून व अपशब्दांपासून सुटका करुन घेणे मला शक्य होत नाही.

३८) अ) एकमेकांची चेष्टा मस्करी करणा-या लोकांमध्ये रहाणे मला आवडते.

ब) आनंदी उत्साही मित्रांच्या सहवासात माझ्या सर्व काळज्या नाहिश्या होतात.

३९) अ) क्वचित माझ्या मनात इतक्या वाईट गोष्टी येतात की त्याबद्दल बोलणेही योग्य होणार नाही.

ब) मी एखादे काम करत असताना, जरी ते मी चांगले करत असले तरीही इतर लोकांनी माझे निरिक्षण करणे मला आवडत नाही.

४०) अ) संभाव्य दुर्दैवी घटनांबद्दल मी काळजी करते.

ब) चित्त एकाग्र करण्याचा प्रयत्न केला तरीही माझे चित्त भरकटत राहते.

४१) अ) वर्गात शिकवलेला एखादा मुद्दा समजत नाही, तेव्हां तो मी शिक्षकांना विचारण्यापेक्षा पुस्तके वाचुन समजावुन घेते.

ब) मला मैदानी खेळ व क्रिडाप्रकार आधिक आवडतात.

४२) अ) मला माझ्या तब्येतीची अतिशय काळजी वाटते.

ब) वाईट बातमी समजते, तेव्हां माझ्याजवळ कोणीतरी असावे असे मला वाटते.

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