PSYCHOLOGICAL ASPECTS OF THE PREMENSTRUAL SYNDROME

by

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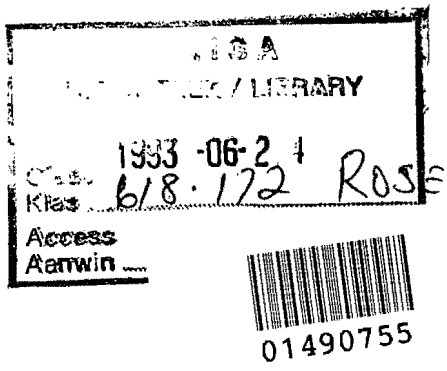
The aim of the study was to assess specific psychological aspects of the premenstrual syndrome, such as stress, attitudes towards menstruation, and past history of psychosomatic illnesses. Thirteen PMS subjects, were compared with 8 control subjects, who reported only minimal or no premenstrual symptoms. In comparison to controls, PMS subjects regarded menstruation as significantly more debilitating. No significant differences were found between the groups in levels of stress. However, the PMS group evidenced a significantly greater tendency to react to emotional stress, with over-control, i.e. the need to control and suppress emotions. In addition, the PMS group evidenced a significantly greater history of psychosomatic illnesses, than controls. Finally, there was a significant group reduction in symptom severity, within the PMS group, over the two month period of daily monitoring of symptoms. The results of this study suggest that certain psychological factors may be implicated in premenstrual symptom severity.



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I declare that **PSYCHOLOGICAL ASPECTS OF THE PREMENSTRUAL SYNDROME** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete reference.

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Finally, to my friends and family, who helped in so very many different ways.

Some of my most creative hours have been in this period, because it is the time when the temptation to doubt is strongest, with the rational mind submerged, the unharnessed emotions racing like a swollen river of purpose. And then it starts again, the bleeding starts, like a deep autumnal signal to let go of the leaves, the limbs of the trees that create the jungle of my psyche are bare again, and the life force begins to quicken around yet another seed, and I feel glad to be female.

Elizabeth Campbell, 1984

CHAPTER 1

GENERAL INTRODUCTION

This introductory chapter presents the aims of the current study, as well as a brief introduction to the premenstrual syndrome. The motivation for the current study, together with an outline of the empirical study is also provided. In conclusion, a summary of the format of the dissertation is presented.

1.1. THE AIM OF THE STUDY

The aim of the study was to assess specific psychological aspects of the premenstrual syndrome. Factors identified as relevant in past research and theory, were explored, by comparing women with severe premenstrual symptoms to women reporting mild or no symptoms. The specific aims, as well as the theoretical framework of the study, are discussed in more detail at the end of this chapter, in the section outlining the empirical study.

1.2. THE PREMENSTRUAL SYNDROME

1.2.1. Historical background

Across the centuries, the volatile nature of certain women has been attributed to female hormones. It was, however, only in this century that the term premenstrual tension was coined when Frank (1931) described a group of women, who *"complain of a feeling of indescribable tension from ten to seven days preceding menstruation which, in most instances continues until the time that menstrual flow occurs. These patients complain of unrest, irritability, 'like jumping out of their skin' and a desire to find relief by foolish and ill-considered actions."*

The fact that premenstrual tension was only recognised by the medical profession in this century, may partially be accounted for by historical factors. Prior to this century, women had fewer menstrual periods in a lifetime. Menarche usually only occurred at about 14 or 15 years of age, and menopause at 35 to 40 years of age. Many of the intervening years were spent either pregnant or lactating (Mascarenas, 1990). Currently, improved nutrition has brought the age of menarche forward. Menopause also occurs later than in previous centuries. In addition, advances in the knowledge of the

female reproductive cycle, have facilitated the development of contraceptive methods. These factors have contributed to the fact that contemporary women experience more menstrual periods in a lifetime, than was the case for our predecessors.

Within the past two decades, premenstrual tension has received increasing attention from both the public and the medical profession. A great deal of research has been conducted in an attempt to elucidate the aetiology of premenstrual syndrome (PMS) and provide treatment for those who suffer from this syndrome. Despite the large amount of recent research, the exact cause of PMS still remains unknown. Our limited current day knowledge and understanding of the complex interactions of the psychoneuroendocrinological system, may partially explain the fact that the aetiological pathways of PMS, are still not clear.

Aetiological explanations implicating biological, psychological and cultural factors have been advanced. Controversy exists regarding the aetiology and treatment of the syndrome, as well as the name of the syndrome, and whether the syndrome in actuality exists (Siegel, 1987; Walker, 1992).

1.2.2. Diagnosis of PMS

In 1986, the DSM-III(R) included this syndrome in the appendix of the revised edition, under the diagnostic category of Late Luteal Phase Dysphoric Disorder/LLPDD (see appendix 1 for the diagnostic criteria). A call was issued for more research regarding the prevalence, aetiology and nature of the syndrome. The provisional diagnosis is currently under review by a DSM-IV diagnostic work group (Gallant, Popiel, Hoffman, Chakraborty & Hamilton, 1992).

The listing of LLPDD in the appendix of the DSM-III(R) as a provisional diagnosis, reflects the controversy surrounding the diagnosis (Gallant & Hamilton, 1988). Critics have argued against the classification of hormonal changes as pathological, and warn against the wider implications which such a diagnosis will have for women as a group (Mills, 1988).

1.2.3. Definition of PMS

Premenstrual symptoms are differentiated from the premenstrual syndrome, on the basis of symptom severity and interference with daily living. PMS can be defined as a specific cluster of symptoms occurring in the second half of the menstrual cycle, with symptoms increasing in severity, as the cycle progresses. Symptoms are time-limited in that they

subside with the onset of menses and a symptom-free week occurs in the follicular phase of the menstrual cycle.

In order for a diagnosis of PMS to be made, symptoms must have been present for at least three preceding menstrual cycles. In addition, symptoms must be of sufficient severity to interfere with daily living (Ablanalp, 1985; Brooks-Gunn, 1986). According to the NIMH (National Institute of Mental Health) guidelines, symptom severity is defined as a minimum increase of 30% in symptoms, during the week prior to menses, compared to the week after menses (Rubinow, Hoban, Roy-Byrne, Grover & Post, 1985).

Symptom increase and severity must furthermore be confirmed by prospective daily monitoring over a period of at least two menstrual cycles. This diagnostic requirement derives from observations that retrospective ratings are unreliable, in that symptoms are often misattributed to the premenstrual phase and symptom recall may exaggerate or minimise symptoms (Futterman, Jones, Miccio-Fonseca & Quigley, 1988; Logue & Moos, 1987). A further requirement of a PMS diagnosis is that symptoms should not be a mere exacerbation of underlying psychiatric or physical disorder.

1.2.4. Symptom classification

Symptoms fall into two main categories: (1) psychological; and (2) physical. Psychological symptoms include emotional, behavioural and cognitive symptoms (see appendix 1). Physical symptoms appear to affect all organs in the body (Sonnendecker, 1986). The six most common premenstrual symptoms are: (1) bloating or water retention; (2) headaches; (3) breast tenderness and swelling; (4) depression; (5) anxiety; and (6) irritability (Demarest, 1985).

Over 100 premenstrual symptoms have been reported (Greenblatt, Teran, Barfield & Bohler, 1987; Langley, 1988). However, the emphasis in PMS is on the timing of symptoms and clustering of symptom groups, in relation to the menstrual cycle, as opposed to the presence of a particular symptom (Haskett & Steiner, 1986). Many women show 28 day peaks in physical symptoms but not all women experience peaks in emotional symptoms (Coleman, Hart & Russel, 1988). Some women with PMS, also report distressing menstrual symptoms (Youdale & Freeman, 1987).

1.2.5. Incidence

The exact incidence of PMS is unknown and estimates vary depending on the definition of PMS. The incidence of severe premenstrual symptoms (PMS), which motivates some women

to seek treatment, appears to be in the region of 3-5%, with estimates of up to 10% (Demarest, 1985; Friedman, 1984; Sherry, Notman, Nadelson, Kanter & Salt, 1988). Approximately 30-40% of women experience moderately incapacitating symptoms (Friedman, 1984). It has been estimated that 70-90% of the female population experience mild premenstrual symptoms (Kinch & Robinson, 1985; Osofsky, 1985).

In actuality, only a small percentage of women seek treatment for their symptoms (Demarest, 1985).

1.3. MOTIVATION FOR STUDY

1.3.1. Psychological aspects of PMS

The crucial question to be addressed in PMS research, arises from the fact that all women experience monthly hormonal fluctuations and many women experience mild premenstrual symptoms. Nevertheless, most women cope well with these hormonal changes and the accompanying physical and psychological changes. The question thus arises as to what distinguishes women with severe PMS from women who report only mild or minimal premenstrual symptoms.

Recent research suggests that PMS is a multi-dimensional syndrome, with multiple aetiological influences, arising from the interaction of biological, psychological and socio-cultural factors. Undoubtedly, the biological influences are important. However, contemporary views on PMS, suggest that psychological factors are also important determinants of the premenstrual experience.

Psychological factors identified as pertinent in past theory and research, include stress (Gannon, 1988; Janowsky & Rausch, 1985; Taylor & Bledsoe, 1986), coping with stress (Heilbrun & Renert, 1988), attitudes towards menstruation (Woods 1985), psychodynamic conflicts (Deutsch, 1944; Horney, 1967) and a predisposition to anxiety and depression (Dejong, Rubinow, Roy-Byrne, Hoban, Grover & Post, 1985; Harrison, Rabkin & Endicott, 1985; Siegel, Meyers & Dineen, 1986; Stout, Steege, Blazer & George, 1986).

The research findings regarding the role of specific psychological factors are, however, contradictory. Furthermore, some of the psychodynamic theories regarding premenstrual symptoms, have not been evaluated in recent research. These factors

motivated the decision to investigate further, the role of psychological influences in the premenstrual syndrome.

1.3.2. Intervention

PMS reportedly responds to just about any type of intervention. The PMS placebo response is very high (Rubinow et al, 1985), however, it has been noted that the physical symptoms respond less to placebo than the psychological symptoms (Dennerstein, Morse, Gotts, Brown, Smith & Burrows, 1986; Metcalf & Hudson, 1985). It has also been reported that the daily rating of symptoms, as part of the research process, in itself, may lead to a reduction in symptom severity (McDaniel, 1988). This reduction in symptom severity, could possibly be due to spontaneous remission, changing attributions, or changing life circumstances, such as stress, which may initially have contributed to PMS. In addition, reductions in distress, could also occur in response to the acknowledgement by others, of the existence of symptoms (Gerdes, personal communication, 1992).

Differences in symptom severity which occur over a short period of time, have implications for our understanding of PMS. In addition, if daily records contribute to a lessening of symptoms, daily ratings could be used as a first step in treatment regimens, or alternatively, utilised to cancel out potential placebo responders prior to treatment trials. It thus appears important to research changes in symptom severity over time, in response to the daily monitoring of symptoms.

1.3.3. Environmental influences

Menstruation has, across cultures and across time, been invested with all sorts of fears, myths and taboos. Socio-cultural influences, such as myths, taboos and attitudes are frequently internalised by individuals and are believed to influence individual attitudes towards menstruation, as well as experiences of menstruation (Bernsted, Luggin & Petersson, 1984). Adherence to cultural sex-role stereotypes is also believed to play a role in symptom distress. Environmental influences thus appear to be closely connected with the psychological factors, which are considered important in the development of PMS. For this reason, the influence of such factors were investigated.

1.4. THE EMPIRICAL STUDY

1.4.1. Theoretical framework

The epistemological assumptions underlying the current study were that biological, psychological and cultural factors interact synergistically in the development of PMS. The Newtonian linear cause-effect model of understanding was thus viewed as inadequate for understanding a syndrome as complex as PMS. The systems or interactional framework was considered to provide a more appropriate and useful model of understanding. Within this framework, the aim of the study was to explore psychological aspects of the premenstrual syndrome, without postulating a direct linear cause-effect role, for any of these factors.

1.4.2. Research aims

1. To compare women with PMS and women without PMS on measures of:
   - stress
   - coping mechanisms
   - past psychosomatic illnesses
   - attitudes to menstruation

2. To investigate socio-cultural influences such as myths and taboos regarding menstruation.

3. To explore the role of influences, such as menarche and the feminine role, on the development of PMS.

4. To examine changed ratings of PMS severity over a period of at least two menstrual cycles, as assessed at the beginning and the end of the study.

1.5. OUTLINE OF DISSERTATION

The following three chapters (chapters 2-4) provide a review of the theoretical and empirical literature, in relation to the biological, psychological and environmental aetiological factors, of relevance to PMS. Chapter 5 presents the research method and design of the study, as well as a brief discussion of the methodological problems inherent in PMS research. The data analysis is presented in chapter 6, and the final chapter of the dissertation (chapter 7), provides a discussion of the research findings, together with the implications thereof, for future research.

CHAPTER 2

BIOLOGICAL FACTORS

The monthly activities of the ovaries which marks the advent of puberty in women, has a notable effect upon the mind and body wherefore it may become an important cause of mental and physical derangement.

Henry Maudsley, 1873 (cited in Greenblatt et al, 1987, p.193).

2.1. INTRODUCTION

In reviewing a syndrome such as PMS, it is necessary to take into account the role of physiological, psychological and environmental factors, and the way in which these systems interact with regard to causation and symptom presentation. Attempts to understand PMS from a linear cause-effect model appear fragmented. Efforts should therefore, be made to understand PMS, on the basis of the interactions between the biological, psychological and environmental systems. These systems should be viewed not as separate categories, but rather as different aspects of the whole.

In addition to this, any attempt to understand PMS needs to take into account the wide individual variation in PMS, both within individuals and between individuals. This variation entails not only symptom presentation but also treatment response. In evaluating the research findings regarding PMS, it is necessary to bear this individual variation in mind. At the same time, it is important to remember that the one factor common to women with PMS, is the link between symptoms and the premenstrual phase.

In the following three chapters, an attempt is made to review the relevant research findings and theories regarding PMS, from the different biological, psychological and environmental perspectives. Theories are also presented which provide a conceptual basis for understanding the interactions of the different systems relevant to PMS.

This chapter focuses primarily on the physiological factors, although, it needs to be stressed that these should not be seen in isolation from the psychological and environmental influences.

2.2. PHYSIOLOGICAL FACTORS

As far back as the 11th century, Trotula postulated that *"If the womb is too moist, the brain is filled with water and the moisture running over to the eyes compels them involuntarily to shed tears"* (cited in Steiner, 1987, p. 118). While this ancient explanation may seem rudimentary, it is of interest to note that the links between the female reproductive system and the brain, are currently considered to be important in understanding PMS. In addition, nutrition also forms an important link in the interaction of the neuroendocrine system. This chapter addresses the role of the aforementioned factors, in the aetiology of PMS.

2.3. THE HORMONAL SYSTEM

The hormones of significance to the female hormonal (menstrual) cycle, are secreted by the hypothalamic-pituitary-ovarian system. The hypothalamus, which is situated in the brain, is linked to the pituitary, the actions of which, are in turn linked to the ovaries, the thyroid and the adrenal glands. The hypothalamus regulates the secretion of certain hormones to the pituitary, where these hormones in turn, regulate the secretion of other hormones, important in the female cycle (Droba & Whybrow, 1989, p.1209). The interactions of this system are very complex and the role of the pituitary in this process, has been likened to that of the conductor of an orchestra (Gerdes, personal communication, 1992). The process of the menstrual cycle is discussed in more detail below.

2.3.1. The menstrual cycle

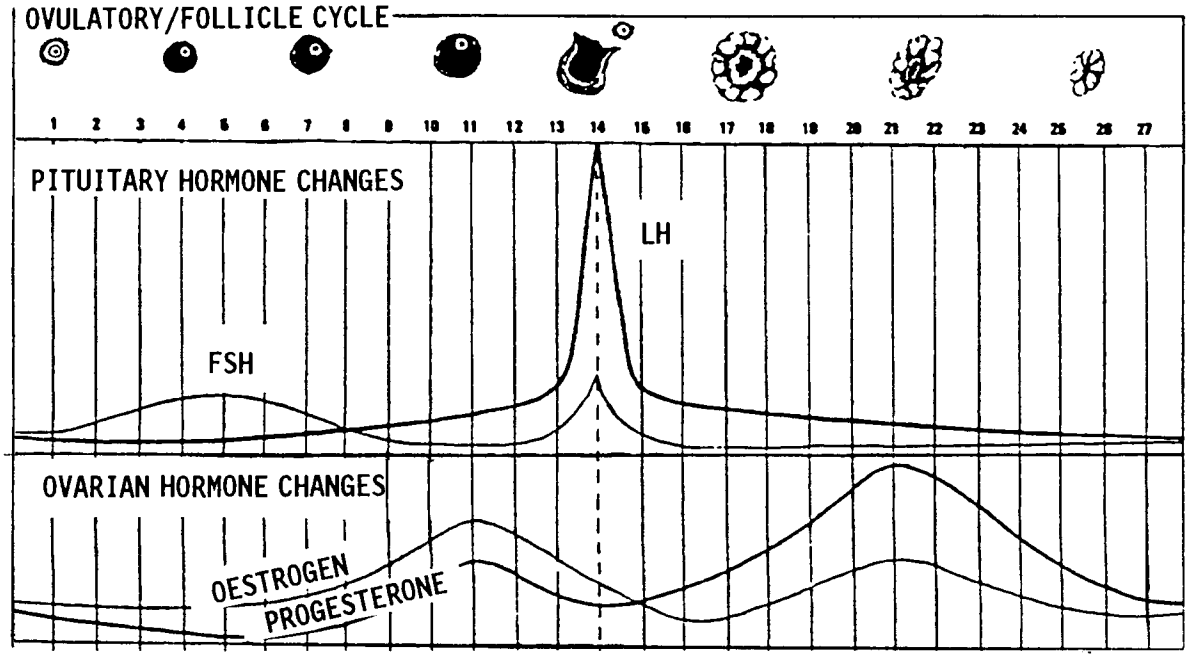
The reproductive years of the female are marked by monthly changes in hormones across the menstrual cycle, which on average, is approximately 28 days in length (Guyton, 1986). The length of menstrual cycles, however, varies between different individuals. Both shorter and longer cycles occur without necessarily being indicative of any underlying pathology.

The menstrual cycle is marked by the cyclic interaction of hypothalamic gonadotropin releasing hormone (GnRH), follicle-stimulating hormone (FSH), luteinizing hormone (LH) and ovarian sex steroid hormones, such as oestrogen and progesterone (Bates, Garza & Garza, 1990). These hormones are produced by the hypothalamus, pituitary gland and ovaries, in a dynamic system of feedback loops which serve to stimulate ovulation and

menstruation (Bates et al, 1990). If any of these hormones are tonically elevated or suppressed, ovulation will not occur (Bates et al, 1990).

Tanner and Taylor (cited in Gerdes, 1979, p.102) describe the process of the menstrual cycle as follows: *"It is controlled by one of the body's most intricate feedback systems, in which four hormones enter and exit, advance and retreat, like performers in a classical ballet. Each hormone presides over one step in the process and in addition triggers the next step."* This process is illustrated graphically in Diagram 1 below.

DIAGRAM 1. THE MENSTRUAL CYCLE



(Adapted from Menning, 1988, p.15)

As can be seen from Diagram 1, at the beginning of each cycle, follicle stimulating hormones (FSH) from the anterior pituitary glands, lead to the growth of follicles in the ovaries, within which an ovum begins to develop (Guyton, 1986). The follicles then produce oestrogen, which stimulates the growth of tissues related to reproduction. Oestrogen inhibits FSH, while stimulating the secretion of luteinizing hormone (LH).

Shortly before mid-cycle, oestrogen peaks. At mid-cycle, LH reaches its highest levels and ovulation occurs due to LH stimulation, which causes one of the follicles to rupture, thereby releasing the ovum (Guyton, 1986). This phase is referred to as the follicular phase.

After ovulation, the follicle forms a corpus luteum which secretes progesterone, the function of which is to prepare the uterus for possible pregnancy (Guyton, 1986). As progesterone increases, oestrogen starts to decline rapidly and if the ovum is not fertilized, the corpus luteum starts degenerating, approximately two weeks after ovulation. Both oestrogen and progesterone reach their lowest levels and menstruation follows.

The latter half of the menstrual cycle is referred to as the luteal phase and it is within the latter part of this phase, that premenstrual symptoms are commonly reported.

2.4. HORMONAL THEORIES OF PMS

2.4.1. Progesterone

Progesterone secretion (albeit minimal), commences shortly before mid-cycle and reaches its highest levels during the mid-luteal phase. Thereafter, it starts to decrease rapidly (Bates et al, 1990). Progesterone is the dominant hormone in the luteal phase of the menstrual cycle and has consequently been targeted as a possible cause of PMS.

One factor which is proposed to lend support to the progesterone theory, is that PMS is reported to be absent in anovulatory cycles, in which there is no luteal phase increase in progesterone (Bates et al, 1990; Dennerstein, Spencer-Gardner & Burrows, 1984; Halbreich, Alt & Paul, 1988; Janowsky & Rausch, 1985; Steege & Nemeroff, 1987).

Progesterone withdrawal theory suggests that PMS is due to the fact that progesterone increases shortly after ovulation and then drops sharply before menstruation (Halbreich et al, 1988). The possible role of progesterone deficiencies in women with PMS, has also received attention (Robinson & Garfinkel, 1990). Progesterone is considered to have a sedative effect on the central nervous system (Lurie & Borenstein, 1990). Progesterone withdrawal or deficiencies would thus theoretically account for the reported irritability, anxieties and aggressions in the premenstrual phase (Lurie & Borenstein, 1990). Furthermore, progesterone promotes the excretion of sodium, which

is implicated in water retention. Progesterone deficiencies or withdrawal, would thus also theoretically explain premenstrual water retention (Lurie & Borenstein, 1990).

Certain studies (Metcalf, Livesey, Hudson & Wells, 1988) have found no differences in progesterone levels, between PMS subjects and controls. However, the findings of other studies suggest that there may be differences. Facchinetti, Borella, Fioroni, Pironti and Genazzani (1990) in a study investigating magnesium levels in PMS patients, observed that PMS patients had significantly lower progesterone levels in the luteal period than did controls.

Dalton (1984), an avid proponent of the progesterone hypothesis, has advocated the treatment of PMS with natural progesterone supplements. There are reports of progesterone being helpful to some women in alleviating PMS, however, much of the research appears to indicate that progesterone is not more effective than placebo in double-blind placebo-controlled treatment trials of PMS (Andersch & Hahn, 1985; Casper, 1989; Corney, Stanton, Newell & Clare, 1990; Dennerstein, Spencer-Gardner & Burrows, 1984; Dennerstein, Morse, Gotts, Brown, Smith, Oats & Burrows, 1986; Halbreich, Endicott, Goldstein & Nee, 1986; Janowsky & Rausch, 1985).

The evidence regarding the efficacy of progesterone as a treatment for PMS is contradictory, nevertheless, it needs to be remembered that individual differences are important in PMS and the effectiveness of a particular treatment cannot be evaluated on the basis of statistical averages. Progesterone deficiencies may indeed be a major factor in the causation of PMS in certain individuals and consequently, progesterone may be an effective treatment for those particular individuals.

Dennerstein, Spencer-Gardner and Burrows (1984) state that one factor which complicates the interpretation of studies on the role of progesterone in PMS, is that many studies only take one or two measurements of progesterone blood levels in a cycle. According to these authors, this is insufficient and may explain the failure to find any differences in progesterone blood levels between women with severe PMS and controls.

2.4.2. Oestrogen

Oestrogen is produced at increasing levels in the follicular phase, until sufficient oestrogen has been secreted to stimulate LH and ovulation. Thereafter, oestrogen starts to decline rapidly (Bates et al, 1990). High levels of oestrogen are thought to

have anti-depressant effects (Janowsky & Rausch, 1985) and it has been speculated that PMS is due to the rapid decline of oestrogen in the luteal phase, following ovulation (Clare, 1985a).

Theories regarding oestrogen withdrawal as being responsible for PMS have, however, been challenged by reports of PMS in hysterectomized and post-menopausal women, in whom oestrogen is low and fluctuates very little (Janowsky & Rausch, 1985; Keye, 1985; Metcalf, Livesey & Hudson, 1988). It has also been hypothesised that PMS may be due to an oestrogen excess in PMS patients. Certain authors have, however, rejected this theory on the grounds that oestrogen levels peak during the second half of the follicular phase, which is an asymptomatic phase for most PMS patients (Janowsky & Rausch, 1985). This argument in turn, has been refuted by numerous reports of PMS symptoms in certain individuals at the time of ovulation, which correlates with high levels of oestrogen (Ablanalp, 1985).

2.4.3. Hormonal imbalances

Imbalances in the ratios of progesterone and oestrogen, have also been considered as a possible cause of PMS. Dennerstein, Spencer-Gardner, Brown, Smith and Burrows, (1984), investigated hormonal profiles, in 30 PMS patients and 86 controls, matched for age and parity, over two cycles and found that PMS patients evidenced:-

(1) a lower than normal pre-ovulatory peak of oestrogen;
(2) either very low or very high oestrogen in the luteal phase;
(3) lower pregnanediol values in both the follicular and luteal phases.

Significant ovarian abnormality was also noted in a few of the PMS patients, as evidenced by two anovulatory cycles and four cycles with short luteal phases.

Halbreich et al (1986) investigated daily changes in plasma levels of progesterone and estradiol, and their temporal relationship to changes in mood and behaviour. A positive correlation was found between premenstrual depression, anxiety, irritability and loss of libido, and (a) peak levels of progesterone in the luteal phase, (b) its rate of decrease over time, and (c) the ratio between the rates of decrease over time in progesterone and estradiol levels.

2.4.4. Oral contraceptives

Investigations involving the use of oral contraceptives, which artificially regulate

the hormonal cycle and suppress ovulation, have been conducted, in order to investigate further, the relationship between ovulation, ovarian hormones and PMS.

Graham and Sherwin (1987) in a retrospective study, found that women using oral contraceptives did not evidence less PMS than non-users, however, users had less severe scores on the sub-scales of premenstrual water retention, anxiety, fatigue and low mood. Van den Boogard and Bijleveld (1988) also found that women using oral contraceptives reported less water retention but more abdominal pain, than non-users.

Walker and Bancroft (1990) studied daily ratings of mood, irritability, energy, tension, breast tenderness and libido for three cycles, in three groups of women (the majority of whom were not severe PMS sufferers):-

(1) women on a low dose combined pill (monophasic);
(2) women on a low dose escalating progestagen pill (triphasic);
(3) non-pill controls.

The only variables to show clear differences between the groups were that the monophasic group reported less breast tenderness than the other two groups and showed a tendency to menstrual as opposed to premenstrual symptoms.

PMS is reported to increase at times of <u>hormonal upheaval</u> such as initiating or terminating the usage of oral contraceptives. It has also been noted that some PMS patients (Dennerstein, Spencer-Gardner & Burrows, 1984; Dennerstein, Morse & Varnavides, 1988; Graham & Sherwin, 1987; Keye, 1985; Walker & Bancroft, 1990):-

(1) experience more side effects (including negative mood) on oral contraceptives;
(2) discontinue the usage of oral contraceptives due to unpleasant side effects;
(3) experience worse PMS while taking oral contraceptives.

Degree of loss of libido and depression in some women taking oral contraceptives has also been positively correlated with progestin in contraceptives (Janowsky & Rausch, 1985). Robinson and Garfinkel (1990) state that other side effects of synthetic progestins include masculinization, luteolysis and estrogenization.

A factor which makes it difficult to examine the role of hormones on behaviour and physiology, using artificial hormones such as oral contraceptives (O.C's) is the fact

that exogenous artificial hormones may not have the same physiological or behavioural effects as natural endogenous hormones (Walker, 1992).

2.4.5. ANDROGENS

Excess levels of the male sex hormone, androgen, has been linked with both aggression (McGuire & Troisi, 1989) and acne (Bates et al, 1990). Androgens have been considered to play a role in PMS, due to reports of increased libido, acne and aggression, in some women, premenstrually (Clare, 1985a; Halbreich et al, 1988). The exact role of androgens in the female reproductive cycle is unclear, however, it has been speculated that cyclic changes in androgens occur, as reflected in reports of increased libido just prior to and during ovulation (Bates et al, 1990), as well as premenstrually.

Summary: Hormonal theories of PMS

Progesterone: It has been suggested that PMS is due to progesterone withdrawal or deficiencies, however, the research findings are contradictory. Treatment trials of progesterone have not been found to be more effective than placebo, although, progesterone appears to be effective for certain individuals.

Oestrogen: Theories regarding both oestrogen withdrawal, and oestrogen excess, have been advanced. Reports of symptoms at ovulation, as well as in hysterectomised women, however, raise questions regarding these theories.

Hormonal imbalances: Research suggests that hormonal imbalances and changes in the ratios of hormones across time, may partially account for premenstrual symptoms.

Oral contraceptives (O.C.'s): Users of O.C.'s appear to experience less water retention premenstrually, however, O.C.'s may exacerbate PMS in some women.

No consistent hormonal abnormalities or imbalances have been found to date, in PMS women, as a group. However, the use of retrospective ratings of PMS, insufficient measurements of blood and hormone levels and the lack of double-blind placebo-controlled studies, renders it difficult to interpret many of the research findings regarding ovarian hormones and PMS. Walker (1992) states that the available evidence does not indicate that ovarian hormones are, independently, responsible for the severity of premenstrual changes. According to Walker (1992), the question regarding the reported severity of premenstrual changes in some women, may be related to a hormonal or

biochemical factor as yet undiscovered, an over-sensitivity to 'normal' hormone levels, or alternatively, psychosocial factors.

2.5. HYPOTHYROIDISM AND HYPOGLYCAEMIA

2.5.1. Hypothyroidism

Hypothyroidism is a clinical syndrome resulting from the deficiency of thyroid hormones. Symptoms include weakness, fatigue, temperature dysregulation, cognitive deficits, mood disturbances and menstrual irregularities (Droba & Whybrow, 1989).

It has been proposed that similarities exist between PMS symptoms and hypothyroidism symptoms of weight gain, lethargy, irritability, moodiness, anxiety and temperature dysregulation (Brayshaw & Brayshaw, 1986). Sub-clinical hypothyroidism has been linked to both PMS and depression (Halbreich et al, 1988).

Brayshaw and Brayshaw (1986) found that 51 of 54 PMS patients displayed evidence of thyroid dysfunction. The remaining three subjects were diagnosed as evidencing an affective disorder. Of the 51, 16 had severe hypothyroidism and 35 had sub-clinical hypothyroidism. Thyroid treatment (synthroid) was administered and PMS symptoms declined and remitted completely once an adequate dosage of synthroid was established (Brayshaw & Brayshaw, 1987). It was concluded that a virtually 100% correlation between PMS and thyroid dysfunction existed (Brayshaw & Brayshaw, 1987).

This study is unique in PMS research to date, as no other studies have attained such a high correlation or remission of symptoms upon treatment. The findings of the above study raised intense debate and controversy. Critics argued that:-

1. The diagnosis of PMS was based on retrospective ratings (Dalton, 1987; Leon, 1987; Logue & Moos, 1987; Steege & Nemeroff, 1987).

2. Subjects did not evidence a symptom free week in their cycles (Dalton, 1987).

3. Questions exist about both the inclusion and exclusion criteria of subjects, as well as the definition of PMS (Hamilton, 1987).

4. The authors were treating hypothyroidism and not PMS (Logue & Moos, 1987; Rubinow & Schmidt, 1987; Steege & Nemeroff, 1987).

5. PMS is not simply hypothyroidism although there may be a sub-group of PMS patients who respond to thyroid treatment (Steege & Nemeroff, 1987; Logue & Moos, 1987).

6. 100% resolution is divergent from the clinical findings on PMS, regardless of how it is treated (Steege & Nemeroff, 1987).

Although methodological problems were evident in this study, many other studies contain the same methodological problems and have failed to report such significant findings. Hypothyroidism as a sub-group of PMS requires further investigation.

2.5.2. Hypoglycaemia

Hypoglycaemia is a pathophysiological state related to decreased blood glucose levels (Droba & Whybrow, 1989). Common symptoms include irritability, carbohydrate cravings, trembling and palpitations (Denicoff, Hoban, Grover & Rubinow, 1990). It has been suggested that changes in insulin and glucose tolerance may provoke certain PMS symptoms (Clare, 1985a; Halbreich et al, 1988). It has also been proposed that women with PMS may be hypoglycaemic, since many of the PMS symptoms, such as cravings for carbohydrates and sweets, are common to both PMS and hypoglycaemia.

Denicoff et al (1990) administered glucose tolerance tests to 11 women with PMS, in the luteal and follicular phases, in order to examine abnormalities of glucose tolerance in PMS patients. It was found that many of the patients experienced symptoms of hypoglycaemia, however, these symptoms were not specific to the luteal phase. Furthermore, the hypoglycaemic symptoms did not resemble the PMS symptoms, although, there was some overlap. The authors concluded that the fact that the observed hypoglycaemia was not specific to the luteal phase, together with the fact that PMS symptoms differed qualitatively from hypoglycaemic symptoms, warrants abandoning the hypothesis that PMS is hypoglycaemia.

2.6. PROSTAGLANDINS

Prostaglandins are found in many bodily tissues and fluids, including those of the reproductive organs and the brain. They are implicated in the physiologic regulation of the reproductive organs and appear to be important in ovarian function (Guyton, 1986). Prostaglandins affect thermoregulation and imbalances may cause headaches, irritability and impaired concentration (Halbreich et al, 1988). The production and release of prostaglandins in the uterus, are known to be causative in dysmenorrhoea

(Wilson & Keye, 1989). Both deficiencies and excesses of prostaglandins have been speculated to be causative in PMS.

Callender, McGregor, Kirk and Thomas (1988) conducted a double-blind trial of evening of primrose oil (a source of prostaglandin) and found it to be no more effective than placebo, in reducing scores on scales of premenstrual depression and anxiety. Furthermore, 80% of the subjects experienced skin reactions of transient burning for half an hour after administration of the treatment, which was thought to be due to the niacin (a vitamin B derivative) in evening of primrose oil.

Gunston (1986b) conducted a double-blind placebo-controlled trial of mefenamic acid (a prostaglandin inhibitor), administered on days 11-26 of the cycle. These authors found that with the exception of gastro-intestinal symptoms, no other symptoms improved significantly for individuals. The overall group improvement on mefenamic acid was, however, greater than that of placebo.

2.7. PROLACTIN

Prolactin is an anterior pituitary hormone which is important for breast development and milk secretion in lactating females. The secretion of prolactin is under direct inhibitory regulation by dopamine neurons, located in the hypothalamus (Reus, 1989). Prolactin also inhibits its own secretion by means of a feedback loop to the hypothalamus (Reus, 1989). It appears that prolactin may mediate some of the effects of oestrogen on the brain (Reus, 1989). High levels of prolactin are reportedly associated with symptoms of depression, decreased libido, stress intolerance, anxiety and irritability (Reus, 1989).

Prolactin levels are reported to increase premenstrually and under stress, and can lead to water, sodium and potassium retention (Dennerstein, Spencer-Gardner & Burrows, 1984). Prolactin is not changed by hysterectomy or menopause and may account for the continuation of cyclic 'premenstrual symptoms' in some women after these events (Dennerstein, Spencer-Gardner & Burrows, 1984).

Janowsky and Rausch (1985) state that conflicting results have been reported in studies investigating prolactin differences between PMS subjects and controls. Bromocriptine, a prolactin inhibitor, has been used in treatment trials of PMS and is

reported to relieve breast symptoms, swelling, weight gain and mood disturbance (Clare, 1985a; Halbreich et al, 1988; Keye, 1985).

Halbreich et al (1988) state that although bromocriptine appears to be effective in relieving irritability and breast pain, bromocriptine is a dopamine agonist and high prolactin levels may represent decreased dopamine activity. It is thus not clear which factor is causative, if we take into account that neither prolactin nor dopamine (a monoamine neurotransmitter) act in isolation (Halbreich et al, 1988). The interaction between dopamine and prolactin is discussed in more detail in the section regarding the interaction of neuroendocrinological factors.

2.8. NEUROTRANSMITTERS

Neurotransmitters function as a vehicle of communication between neurons in the brain (Reber, 1985). Every message to and from the brain needs neurotransmitters. Many of the neurotransmitters identified to date, are comprised of amino acids and are thus directly diet-dependent (Erdmann & Jones, 1987).

Gonadal steroid hormones interact with the neurotransmitter systems in the brain (Rojansky, Halbreich, Zander, Barkai & Goldstein, 1991). These complex interactions vary across the menstrual cycle. EEG frequency changes (which reflect neurotransmitter activity) have been reported between the follicular and luteal phases of the menstrual cycle (Halbreich et al, 1988; Harrison, Rabkin & Endicott, 1985). There have also been reports of lower platelet monoamine oxidase activity in PMS patients (Hallman, Oreland, Edman & Schalling, 1987).

2.8.1. Serotonin

Serotonin is a neurotransmitter whose actions are implicated in sleep, pain and the psychobiology of various affective disorders, specifically, depression and bipolar affective disorder (Reber, 1985). Serotonin is an important central modulator of mood and behaviour and the serotonergic system is proposed to play a role in PMS (Rojansky et al, 1991). Serotonin neurotransmission is believed to be influenced by changes in blood concentrations of oestradiol and progesterone (Eriksson, Lisjo, Sundblad, Andersson, Andersch & Modigh, 1990).

Decreased levels of serotonin have been reported premenstrually, as well as in endogenous depression (Alberts & Alberts, 1990; Taylor, Mathew, Ho & Weinman, 1984).

An association has also been found between serotonin levels and carbohydrate cravings (Wurtman, 1988).

2.9. CENTRAL OPIOIDS

Several opioids such as beta-endorphins are found in the central nervous system (Chihal, 1990). Endorphins, which are produced in the brain, are the body's natural morphine-like substances and are associated with analgesia and euphoria (Hsia & Long, 1990; Reber, 1985). Endorphins are believed to vary in relation to steroid hormone concentrations, to be stress responsive and to play an important role in appetite, as well as in the control of pain, anxiety, tension and fear (Hamilton & Gallant, 1988; Reber, 1985). Prostaglandins appear to exert some influence on the production of beta-endorphins (Chihal, 1990).

Oestrogens are associated with increased endorphin levels and it has been suggested that PMS might reflect an opiate withdrawal syndrome, in that irritability and depression in women with PMS, may be due to a "mini-addiction" to their own endorphins, which decrease across the menstrual cycle (Chihal, 1990). Regular exercise is considered to increase blood levels of beta-endorphins and has subsequently been widely recommended for PMS symptoms (Hsia & Long, 1990).

Various studies have investigated changes in endorphin levels across the menstrual cycle in women with PMS. Hamilton and Gallant (1988) found changes in endorphins at mid-cycle but no changes concurrent with PMS. Giannini, Price and Loiselle (1984) reported a significant decrease in endorphin levels premenstrually (day 24 of the cycle) compared to levels measured at day 7 of the cycle. An inverse relationship was also noted between endorphin decline and PMS severity (Giannini et al, 1984).

In a later study, Giannini, Price, Loiselle and Giannini (1985b) found that women with severe PMS reported a higher caloric intake prior to menses, which according to these authors suggested endorphin withdrawal. Chihal (1990) states that the current data strongly supports a role for beta-endorphins in the aetiology of PMS.

2.10. NUTRITIONAL FACTORS

Various dietary recommendations and vitamin supplements have been recommended for women with PMS. These suggestions are largely based on speculation regarding

nutritional inadequacies in women with PMS.

A widely suggested treatment for PMS, is vitamin B6 (pyridoxine), which is known to be a co-factor in dopamine, serotonin and prostaglandin synthesis (Lurie & Borenstein, 1990). Treatment trials of PMS with pyridoxine have been found to be effective in certain studies but not others and await further placebo-controlled double-blind studies (Gonzales, 1984; Keye, 1985; Lipman, 1988). Concern has been expressed regarding the treatment of PMS with vitamin B6 (see Alberts & Alberts, 1990; Chihal, 1990; Robinson & Garfinkel, 1990), since available data (see Chihal, 1990) indicates that certain doses of B6 can be toxic and result in sensory neuropathy.

Vitamin A has also been suggested as a treatment for PMS, since it is assumed to oppose thyroid hyperfunction and have a diuretic effect. However, according to Chuong, Dawson and Smith (1990a), none of these theories have been substantiated. Chuong et al (1990a) examined vitamin A levels in PMS patients and controls, and found no significant changes in vitamin A levels between the luteal and follicular phases of the menstrual cycle. In addition, no vitamin A deficiency was found in PMS patients.

Vitamin E is a co-factor proposed to be important in modulating the production of prostaglandins. It has subsequently also received attention as a possible treatment for PMS. Chuong, Dawson and Smith (1990b) examined changes in peripheral vitamin E levels in 10 premenstrual subjects and 10 controls across three menstrual cycles, as measured at 2 or 3 day intervals. They found no significant changes in vitamin E levels, between the luteal and follicular phases, in the control and experimental group. Furthermore, no deficiencies of vitamin E were found, in women with PMS.

The role of caffeine containing substances, such as chocolate, has also received interest and attention in PMS research. This interest has largely been based on reports of cravings for caffeine containing substances, specifically chocolates, in women with PMS. Caffeine is widely available and is according to Jaffe (1989) the most commonly used psychoactive substance. It is frequently recommended that women with PMS reduce their intake of caffeine containing substances due to the fact that excess ingestion of caffeine may increase irritability and anxiety (Chihal, 1990).

Magnesium has been suggested as a treatment for PMS, due to its sedative effect on neuromuscular excitability, as well as its involvement as a co-factor in other enzyme reactions (Facchinetti, Borella, Fioroni, Pironti & Genazzani, 1990). Magnesium

depletion often occurs together with other deficiencies of vitamins and minerals (Masdeu & Solomon, 1989). It has been hypothesised that magnesium deficits may interfere with neurotransmitter activity, renal function and hormone metabolism (Facchinetti et al, 1990).

2.11. GENETIC FACTORS

Various studies (Taghavi, 1990; Wilson, Turner & Keye, 1991) and reports (Lurie & Borenstein, 1990) suggest that genetic factors may be implicated in menstruation and menstrual distress. Clare (1985b) and Shapiro (1988) state that research findings suggest a significant relationship between mothers and daughters, as well as between identical twins reared apart, in terms of age of menarche, duration of cycles, menstrual flow, dysmenorrhoea and premenstrual symptoms (Clare, 1985b; Shapiro, 1988).

2.12. INTERACTION OF BIOLOGICAL FACTORS

It is difficult to isolate any one specific hormonal or other factor as being responsible for PMS, due to the fact that the entire neuroendocrinological system is marked by synergy. The complexity of the neuroendocrine system becomes apparent when the interactions between ovarian hormones and neurotransmitters are examined. In addition to the relationships between these factors, nutritional factors also form part of the interaction, since certain vitamins and proteins derived from food, are essential for the production of certain neurotransmitters. The interactions between various of the neurotransmitters, hormones and nutritional factors are outlined below, in an attempt to illustrate the complexity of the interactions between many of the factors proposed to be causative in PMS.

It was previously mentioned that prolactin excesses may be implicated in PMS. However, the secretion of prolactin is regulated by dopamine neurons. It is subsequently difficult to identify which factor is more influential in PMS. Prolactin in turn, is linked to oestrogen and appears to mediate the effects of oestrogen on the brain (Reus, 1989). High oestrogen levels may result in a deficiency of vitamin B6, which in turn, may lead to reduced levels of serotonin, dopamine and magnesium, together with increased levels of prolactin (Robinson & Garfinkel, 1990).

Serotonin is linked to progesterone, which plays a role in conserving magnesium, deficiencies of which are also thought to affect PMS (Clare, 1985b; Dennerstein,

Spencer-Gardner & Burrows, 1984; Halbreich et al, 1988; Lipman, 1988; Wurtman, 1988). Nutritional deficiencies of magnesium, zinc, niacin, ascorbic acid and pyridoxine can, furthermore, result in the reduced formation of prostaglandins, which are also considered to be an aetiological factor in PMS (Keye, 1985; Halbreich et al, 1988).

In addition to the highly developed interactions between the abovementioned factors, environmental and inter- or intra-personal stressors (whether they be physical, such as illness, or psychological, such as fear or anxiety), influence the secretion of hypothalamic releasing factors such as ACTH (adrenocorticotropic hormone), which is in turn, linked to various hormonal and neuronal actions (Droba & Whybrow, 1989). Deficiencies of ACTH, LH and FSH are often associated with hypothyroidism (Droba & Whybrow, 1989), which has also been suggested as a cause of PMS. The gonadotrophins which control the ovaries, are themselves secreted from the hypothalamus. This complex neuronal interaction thus enables external factors, such as nutritional status and stress, to influence ovarian function (Walker, 1992).

What emerges clearly from the preceding discussion is that many of the hormones, neurotransmitters and vitamins which are considered to be causative in PMS, are interacting components in the neuroendocrine system. Each plays an important role in maintaining homeostasis through feedback loops, which serve to regulate secretions, in a well synchronised, dynamic flow of biochemical movement. If, however, homeostasis becomes disturbed, biochemical changes reverberate throughout the entire neuroendocrinological system and if this balance is not restored, disorders such as PMS may occur. The above discussion can be summarised as follows:

1. The functioning of the neuroendocrine system is affected by the interactions between multiple hormonal, neuronal and nutritional factors.

2. There is a reciprocal interaction between the neuroendocrine system and the environment (e.g. food intake, external stressors).

3. There are reciprocal interactions between the neuroendocrine, environmental and psychological systems (e.g. internal stressors, processing of information from the environment).

The psychological and environmental systems, are also comprised of multifaceted interacting components, each of which will be discussed in more detail, in the following chapters.

2.13. CONCLUSIONS

Biological theories ranging from hormonal, to neurological, to nutritional factors, have been advanced. This is not surprising, given the close interconnections and interactions between many of these factors. It appears that there is a link between the neuroendocrine system and PMS. However, given the fact that much remains to be discovered regarding the interactions thereof, as well as other factors not yet discovered, it is consequently also not surprising, that at this point in time, we do not fully understand PMS. No consistent abnormalities in any single factor have been found across groups of PMS patients, and a wide variation exists in treatment response.

No reliable and reproducible biochemical marker has been found to differentiate sufferers from asymptomatic controls (Magos, 1990) and it has been stated that "no existing hypothesis is even close to being proved at this time" (Janowsky & Rausch, 1985). Nevertheless, as Haskett (1987) argues, there is undoubtedly a link between PMS and the hypothalamo-pituitary gonadal axis.

Factors which continue to confound the research on the role of biological factors include the following:

1. The remarkable sensitivity of PMS to placebo.
2. The strong reliance on correlative techniques which do not necessarily imply causation.
3. The assumption that ovarian-linked hormones are the primary cause of PMS.
4. The wide individual variations in treatment response.

Undoubtedly, there is a biological component to PMS, however, it is also necessary to consider how the individual's psychodynamic system interacts with the biological system, to influence the pattern and severity of symptoms, as well as the meaning and wider significance which symptoms take on in relation to the individual's self-perception and interpersonal relationships.

CHAPTER 3

PSYCHOLOGICAL FACTORS

A better approach would be to develop theories that reflect the more complex relationships among the women, her body and her psychological and cultural milieu.

McFarlane & Macbeth Williams, 1990

3.1. INTRODUCTION

It has been suggested by various authors (see for e.g. Hsia & Long, 1990; Walker, 1992) that the missing link, with regard to why some women suffer from severe PMS, may in fact lie in the psychological and environmental influences, specific to each individual. The psychological factors which are purported to be influential in the development of PMS, are discussed in this chapter. These influences include psychodynamic conflicts, stress, cognitive factors and interpersonal relationships. The role of psychiatric disorders in PMS, is also discussed in this chapter. The chapter begins with a discussion of the individual variations in PMS. However, it needs to be pointed out that there is a great deal of overlap between the biological and psychological influences, in relation to individual variations in PMS, as well as the role of psychiatric illness in PMS.

3.2. INDIVIDUAL VARIATIONS IN PMS

In the preceding chapter, it was mentioned that individual variations between women, in the incidence of PMS symptom sub-type and treatment response, appear to exist and have perplexed researchers who have sought to identify a single universal cause or treatment for PMS. Gerstein, Reznikoff, Severino and Hurt (1989) argue that the variability among women with PMS, is due to the lumping together of many different somatic, emotional and behavioural symptoms, which may obscure relationships with other variables. It is not clear whether biological or psychological factors are primarily implicated in the variations. Nevertheless, it is difficult to separate the influence of biological and psychological factors, with regard to individual variations in PMS.

3.2.1. Variations within individuals

The reports of variations in PMS relate to differences between individuals, as well as variations across cycles in the same individual. PMS appears to be transient and present in some cycles but not in all. Furthermore, PMS may fluctuate across an individual's lifespan and may be more problematic at certain times than at others. Various factors, such as age, length of cycle, parity, marital status and stress (Lurie & Borenstein, 1990), are thought to account for these variations.

It is a frequent belief that premenstrual symptoms do not occur in adolescents, however, recent studies appear to indicate that this is a fallacy (Fisher, Trieller & Napolitano, 1989; Wilson & Keye, 1989; Futterman et al, 1988). Some studies report that age (Futterman et al, 1988) and length of menstrual cycle (Friedman & Jaffe, 1985) may influence the type of premenstrual symptom reported (i.e. physical or psychological). However, other studies have found no correlation between PMS and age, parity, marital status or length of the menstrual cycle (Ainscough, 1990; Friedman & Jaffe, 1985; Gunston, 1986a).

The findings regarding demographic factors, which may account for variations in PMS, appear to be contradictory. These contradictions may partially be due to methodological problems, such as the confusion between premenstrual symptoms and premenstrual syndrome, or, due to overly simplistic aetiological theories of PMS. Future research based on prospective longitudinal studies could contribute to identifying which life experiences are concurrent with PMS. For example, times of hormonal upheaval, life stress, or critical psychological developmental transitions in the lives of women, such as the transition to motherhood.

3.2.2. Sub-groups of PMS

Ablanalp (1985) states that research on PMS suggests that a number of premenstrual syndrome sub-groups exist and effective treatment for one group or individual may not necessarily be effective for another group or individual. Abraham (cited in Demarest, 1985) has identified the following four sub-groups based on patterns of symptoms and types of symptoms:

PMT-A: The main symptoms are anxiety, irritability and tension. About 80% of PMS patients experience these symptoms.

PMT-B: Hyperhydration, with symptoms of abdominal bloating, breast tenderness; a sensation of weight gain, and oedema of the face and extremities. These symptoms are common in approximately 60% of PMS patients.

PMT-C: Increase in appetite, craving for sweets (especially chocolate) and palpitations, fainting spells, headaches or tremors within three to four hours after eating sweets. These symptoms occur in about 40% of PMS patients and mimic those of hypoglycaemia.

PMT-D: Depression, forgetfulness, insomnia and weeping. About 20% of PMS patients experience symptoms similar to PMT-A but are, in addition, depressed for two days preceding menstruation. There thus appears to be some overlap between these two categories.

Various sub-groups have also been identified, on the Premenstrual Assessment Form (PAF) (Goldstein, Halbreich, Endicott & Hill, 1986; Halbreich, Endicott & Lesser, 1985). One of which is the group of women who report feelings of positive well-being. This group has received very little attention in PMS research, to date. It has been argued that research needs to take cognisance of the fact that certain women report experiences of positive premenstrual changes, such as increased levels of productivity, creativity and energy (Rosen, Moghadam & Endicott, 1988). Chaturvedi and Chandra (1990b) found that a high percentage of women in their study, reported positive premenstrual changes such as increased feelings of affection, happiness, excitement and increased work performance. Although the findings of the latter study need to be interpreted with caution (as cultural factors may be implicated), the results lend weight to the increasing call for the recognition of positive premenstrual experiences, together with the recognition, that not all women experience premenstrual symptoms as distressing.

3.2.3. Symptom patterns

Reid-Yen (in Ablanalp, 1985) described four patterns of symptoms, in relation to the timing of symptoms, as follows:

1. Symptoms develop late in the luteal phase, increase in severity and are significantly relieved shortly after the onset of menses.
2. Same as (1) except that symptoms begin to develop in the immediate post-ovulatory phase.
3. Symptoms develop around ovulation, remit and then build up again in the mid to late luteal phase, and are relieved shortly after the onset of menses.

4. Symptoms develop at mid-cycle, increase in severity as the cycle progresses and remit only at the end of menstruation.

3.2.4. Symptom clusters

Schechter, Bachmann, Vaitukaitis, Phillips and Saperstein (1989) correlated specific symptom clusters with specific points in the menstrual cycle. These authors identified five symptom clusters which fluctuate in relation to the phase of the menstrual cycle, as follows:

1. Changes in mood and cognition (depression, anxiety, self-perceived judgement).
2. Changes in physical condition (breast tenderness/pain, abdominal discomfort, water retention).
3. Changes in energy levels (fatigue, hypersomnia).
4. Changes in sociability (desire to be alone, avoidance of social activities).
5. Changes in appetite (food cravings, increased appetite).

The pattern of symptoms was as follows:

1. Negative symptoms increased in intensity in the luteal phase (from the day after LH peak until the onset of menses).
2. Symptoms of negative mood, fatigue, food cravings and social withdrawal decreased with the onset of menses.
3. Symptoms of physical discomfort, headache and loss of libido decreased significantly only in the mid-follicular phase.

The preceding discussion suggests that sub-groups of PMS do exist. Taking into account the wide individual variations in the PMS experience, it seems unlikely that there is one all encompassing syndrome of PMS. More research is needed to elucidate better the nature of these groups in relation to the timing, pattern and type of symptom, as well as aetiology and treatment. Aside from the physical factors and causes in the different sub-groups, attention also needs to be paid to psychological factors, such as changing stress levels, which may contribute to variations across cycles within individuals.

Another predominant sub-group which needs consideration, is the group of women who experience exacerbation of underlying or chronic disorders premenstrually. A wide variety of disorders are reported to worsen premenstrually. These include both psychiatric disorders and chronic physical disorders such as asthma, bronchitis,

allergies, migraine (Dalton, 1987), acne, and herpes (Friedman & Jaffe, 1985). Although symptoms may be present in the follicular phase, a change from baseline, in symptom severity, is reported to occur in the premenstrual phase (Chuong, Colligan, Coulam & Bergstralh, 1988; Morse & Dennerstein, 1988).

3.3. PSYCHIATRIC FACTORS

Much speculation exists about the relationship between PMS and psychiatric disorder. Osofsky (1985) states that questions regarding this relationship include the following:

1. Whether early psychiatric symptoms first appear premenstrually with subsequent spreading of symptoms.
2. Whether PMS symptoms mimic those of certain psychiatric disorders.
3. Whether premenstrual exacerbation of underlying psychiatric disorder occurs.

Many women who seek treatment for PMS, or report severe premenstrual changes, have been found to display a concurrent psychiatric disorder, particularly, affective disorder (Ascher-Svanum & Miller, 1990; DeJong et al, 1985; Harrison, Rabkin & Endicott, 1985; Siegel et al, 1986; Stout et al, 1986). However, it must be stressed that not all women with PMS evidence psychiatric problems (Osofsky, Keppel & Kuczmierczyk, 1988). Research findings suggesting a link between PMS and affective illness include the following:

1. PMS patients who experience depressive symptoms premenstrually, are more likely than controls to have had a history of major depressive disorder (Blumenthal & Nadelson, 1988; Halbreich & Endicott, 1985b; Hallman, 1986; Harrison, Rabkin & Endicott, 1985; Kinch & Robinson, 1985; Osofsky, 1985; Pearlstein, Frank, Rivera-Tovar, Thoft, Jacobs & Mieczkowski, 1990).

2. Women with PMS affective symptoms have a higher incidence of family psychiatric disorder (Dennerstein et al, 1988; Harrison, Rabkin & Endicott, 1985).

3. More psychiatric hospitalization takes place in the premenstrual phase than would be expected (Bernsted et al, 1984; Blumenthal & Nadelson, 1988; Dennerstein, Spencer-Gardner & Burrows, 1984; Harrison, Sharpe & Endicott, 1985).

4. Suicide attempts are reported to occur more frequently in the luteal phase (Friedman, 1984; Harrison, Sharpe & Endicott, 1985; Keye, Hammond & Strong, 1986). The evidence regarding the link between PMS and suicide attempts is, however, contradictory. Tricoridis (1985) found that no phase of the menstrual cycle was statistically related to suicide attempts.

It appears that the menstrual cycle may influence psychiatric symptoms as follows:

1. By exacerbating underlying psychiatric problems premenstrually (Blumenthal & Nadelson, 1988; Osofsky, 1985).
2. Through the cyclic clustering of psychiatric symptoms premenstrually (Blumenthal & Nadelson, 1988).
3. The gradual development of an affective illness may be facilitated in vulnerable individuals, as a result of repetitive experiences of premenstrual dysphoria (Blumenthal & Nadelson, 1988; Osofsky, 1985).

Graze, Nee and Endicott (1990) conducted a follow-up study of women who had volunteered for menstrual cycle studies. These authors found that premenstrual depression (as assessed by retrospective PAF reports) was significantly correlated with the occurrence of major depressive disorder (MDD), in the follow-up period. Moreover, premenstrual depression had predictive value for the occurrence of MDD, over and above two known risk factors for MDD, namely, a family history of depression and prior personal history of depression. However, these authors point out that PMS in itself, may result in the deterioration of interpersonal relationships, thereby possibly leading to either job loss or divorce, both of which are factors that may precipitate depression.

The relationship between PMS and psychiatric disorder is a point of contention. Harrison, Sharpe and Endicott (1985) state that it is rare to find women with severe dysphoric PMS, who do not evidence concurrent psychiatric disorder. Dalton (1987) has emphasized that in order for a diagnosis of PMS to be made, at least one symptom-free week must occur in the cycle and that this is not the case with underlying psychiatric disorder. Dalton (1987) states that women who experience an exacerbation of underlying chronic disorders premenstrually, represent a menstrual distress group and not PMS. Recent research appears to indicate that there is a group of women with 'pure' PMS (i.e. symptoms only occur in the premenstrual phase), but that a group of women also exists who experience a premenstrual exacerbation of sub-clinical depression (Chisholm, Jung, Cumming, Fox & Cumming, 1990). Siegel (1987) argues that although many PMS patients are

not completely symptom free at other phases of the cycle, the severe anxiety and depression which occurs premenstrually, deem this group of women most in need of assistance.

Greenblatt et al (1987) argue that the very fact that PMS symptoms are cyclical, indicates that PMS is not a psychiatric disorder. According to Hart, Coleman and Russel (1987), irrespective of the 'purity' of PMS, it is to be expected that non-premenstrual factors will produce some anxiety, irritability and depression, during the follicular phase. It is thus to be expected that women with PMS will not be completely 'symptom-free' throughout the menstrual cycle.

3.3.1. Depression

Women who experience premenstrual depression also report more physical symptoms than controls (Christensen, Oei & Callan, 1989). Studies comparing PMS subjects and controls, report higher rates of depression in PMS subjects, together with dramatic increases in depression during the luteal phase (Van der Ploeg, 1987). Other studies, however, report that PMS patients have significantly higher levels of depression only in the luteal phase, when compared to controls (Mortola, Girton & Yen, 1989; Trunnel, Turner & Keye, 1988).

McMillan and Pihl (1987) conducted a study to determine whether retrospective ratings of premenstrual depression would be confirmed prospectively. They reported that only 39% of women attributing their depression to PMS were found to have premenstrual depression, whereas 36% of the study group experienced intermittent depression.

Siegel et al (1986) compared the symptoms of depressed PMS patients to the symptoms of non-depressed PMS patients. They found that the underlying premenstrual dysfunction was the same for both groups, irrespective of the presence of premenstrual depression.

Recent studies indicate that psychoactive medications used in the treatment of depression, appear to be more effective than placebo in decreasing premenstrual depression and intakes of carbohydrates, calories and fats (Brzezinski, Wurtman, Wurtman, Gleason, Greenfield & Nader, 1990). Other studies (non-placebo, non-controlled trials) also report decreases in premenstrual irritability and depression, in response to anti-depressant medication (Eriksson et al, 1990; Taghavi, 1990). Benzodiazepines used in the treatment of anxiety, have also been found (in double-blind

placebo controlled trials) to be superior to placebo in treating premenstrual emotional symptoms (Harrison, Endicott & Nee, 1990).

It appears that the depression experienced premenstrually is not of the endogenous depression sub-type (Halbreich & Endicott, 1985b; Harrison, Rabkin & Endicott, 1985; Haskett, Steiner & Carrol, 1984; Haskett & Steiner, 1986; Mortola et al, 1989). Endocrine changes which have been found to occur in endogenous depression, have not been found in women with PMS (Haskett et al, 1984; Mortola et al, 1989). Some studies (Parry & Wher, 1987; Parry, Berga, Kripke, Klauber, Laughlin, Yen & Gillin, 1990), however, report evidence of circadian abnormalities (which are considered to be contributory in major depression), in women with PMS. The general consensus, however, appears to be that episodic premenstrual dysphoria is representative of other sub-types of depression and not of endogenous depression.

Many PMS symptoms parallel those of atypical depression, such as, hypersomnia, increased appetite and rapid mood changes (Blumenthal & Nadelson, 1988; Halbreich & Endicott, 1985b). In comparison to controls, PMS subjects are reported to experience greater sleep disturbance premenstrually (Mauri, Reid & Maclean, 1988), as well as greater premenstrual increases in appetite (Both-Orthman, Rubinow, Hoban, Malley & Grover, 1988). A relationship has been found between increased appetite and depression in women with PMS (Both-Orthman et al, 1988; Chaturvedi & Chandra, 1989). Variations have, however, been found between PMS subjects, with reports of increases, decreases and no changes in appetite (Chaturvedi & Chandra, 1989).

Premenstrual depressive symptoms have also been described as follows (Halbreich & Endicott, 1985b; Halbreich, Endicott & Lesser, 1985):

1. Anxious-agitated depressive symptoms (anxious, jittery and restless).
2. Hostile depressive symptoms (irritability, anger and impatience).
3. Withdrawn depressive symptoms (desire for loneliness, decreased activities and decreased energy).

PMS has been said to mimic other cyclic mood disorders such as bipolar affective disorder. Rubinow, Roy-Byrne, Hoban, Grover, Stambler and Post (1986) studied symptom profiles in PMS patients and found that the week following menses was the time of maximal well being. These authors state that the post-menstrual elevated mood mimics bipolar disorder, in that mood disturbances are frequently followed by apparently

compensatory swings in opposite mood. Some studies report that the prevalence of PMS, in patients with cyclic mood disorder, is not significantly different from that of controls (Roy-Byrne, Rubinow, Hoban, Parry, Rosenthal, Nurnberger & Byrnes, 1986). However, other studies (Price & Dimarzio, 1986) have found that 60% of rapid-cycling bipolar disorder patients experienced severe PMS, in comparison to 20% of controls. Rubinow et al (1986) state that what makes the cyclic nature of PMS of interest to researchers, is the fact that PMS patients can predict the point of mood transition.

PMS has also been compared to seasonal affective disorder (SAD) since some PMS patients report that they experience PMS only in autumn and winter (Parry, Rosenthal, Tamarkin & Wehr, 1987; Hallman, 1986). The symptoms of PMS and SAD are also reported to be similar in terms of symptoms such as depression, overeating and over-sleeping.

3.3.2. Anxiety

A frequent complaint by PMS patients, is that of increased premenstrual anxiety (Endicott, Nee, Cohen & Halbreich, 1986; Stein, Schmidt, Rubinow & Uhde, 1989). It has also been noted that patients with panic disorder, or agoraphobia, retrospectively report a premenstrual worsening of anxiety complaints (Cook, Noyes, Garvey, Beach, Sobotka & Chaudry, 1990; Harrison, Sharpe & Endicott, 1985; Van Der Molen, Merckelbach & Van Den Hout, 1988). Prospective studies (Cook et al, 1990; Stein et al, 1989) have, however, found no premenstrual increases in the symptoms of panic disorder patients, when compared to controls, on prospective ratings.

Van der Molen et al (1988) found that the acquisition of a classically conditioned skin conductance fear response was more easily facilitated in premenstrual women, than in controls, in other phases of the menstrual cycle. These authors suggest that physiological processes may account for the premenstrual susceptibility to fear acquisition. Giannini, Price, Loiselle and Giannini (1985b) found that levels of pseudocholinesterase (a marker in trait-anxiety) were elevated in 43% of severe PMS subjects, in 14% of moderate PMS subjects, and in none of the mild PMS subjects.

3.3.3. Psychosis

The premenstrual worsening of symptoms has been noted in various psychotic disorders including schizophreniform psychosis, puerperal psychosis, bipolar disorder with psychotic features and periodic psychosis of puberty (Brockington, Kelly, Hall & Deakin, 1988; Conrad & Hamilton, 1986; Dennerstein, Spencer-Gardner & Burrows, 1984; Friedman, 1984; Gerada & Reveley, 1988; Harrison, Rabkin & Endicott, 1985; Kaminer,

Feinstein, Barrett, Tylenda & Hole, 1988; Labbate, Shearer & Waldrep, 1991). Various authors report that (a) the suppression of ovulation with Danazol; (b) increased premenstrual medication levels; and (c) the use of progesterone, has been successful in treating psychosis recurring in association with menses (Brockington et al, 1988; Dennerstein, Spencer-Gardner & Burrows, 1984; Harrison, Rabkin & Endicott, 1985). It has been speculated (Osofsky et al, 1988) that symptoms may worsen premenstrually in patients who are otherwise successfully medicated, possibly due to the interactions of hormones with the uptake of medication (see Yonkers, Kando, O.Cole & Blumenthal, 1992, for a recent review on gender-related differences in the pharmacodynamics of psychotropic medications).

Summary: Psychiatric illness and PMS

The fact that underlying psychiatric illness is often concurrent with PMS, raises many interesting questions regarding the nature of this relationship. The exact nature of the relationship between psychiatric illness and PMS, in terms of causation and direction, is not clear. However, there does appear to be a relationship between PMS and psychiatric disorder as evidenced by the premenstrual exacerbation and cyclicity of psychiatric disorders, in some women. In addition, many of the common premenstrual symptoms, such as depression and anxiety, are classic psychiatric symptoms.

The interaction between psychological and biochemical factors, which contribute to psychiatric disorder, together with changing hormone levels, requires further investigation. On the other hand, it has been suggested that a PMS diagnosis may be more socially acceptable than a psychiatric label and that this may account for the fact that many women who seek treatment for PMS evidence underlying psychiatric disorder.

3.4. PSYCHODYNAMIC THEORIES OF PMS

Various proponents of the psychoanalytic school have suggested that menarche and menstruation may mobilise conscious and unconscious conflicts regarding pre-genital control of bodily function, male-female differences, and pregnancy or childbearing (Bernsted et al, 1984; Chapman, 1967; Deutsch, 1944; Horney, 1967). PMS is viewed as the manifestation of intense inner conflict regarding female sexuality and the feminine role.

Chapman (1967, pp 86-94) proposes that women with menstrual disturbances, such as severe premenstrual tension, have an unconscious awareness of the impending menstrual period and the associated unconscious anxieties. Since these conflicts are repressed and consciously unrecognised, they cannot be expressed in thoughts or words. Consequently, tension mounts, thereby influencing not only the mind but also the body. These tensions are expressed through the hypothalamus, pituitary and the ovary, thus symbolically representing that part of the anatomy with which the anxieties and conflicts were originally associated.

3.4.1. Menarche

An understanding of the experiences of the first menstrual period is important for the understanding of subsequent experiences of menstruation. The initial reaction to menarche, is proposed to be re-enacted with subsequent menstruations, albeit in a weaker form. Deutsch (1944, p.149) states that the first menstrual period *"mobilises psychic reactions so numerous and varied that we are justified in speaking of the 'psychology of menstruation' as a specific problem."*

Deutsch (1944, p.149) states that the first menstrual period may potentially, be experienced as a trauma, particularly, for girls who start menstruating at an early age. However, various factors are proposed to mediate in determining the actual experience and impact of menarche (Deutsch, 1944). Amongst others, these factors include the girl's age, the mother-daughter relationship, individual psychological development, previous history of bedwetting and incontinence, as well as personality characteristics such as obsessionality and cleanliness (Chapman, 1967; Deutsch, 1944).

3.4.1.1. Pre-genital conflicts

For the young girl who starts menstruating at an early age, menarche may stir up old anal conflicts and may be experienced as a new uncontrollable eliminatory function (Chapman, 1967; Deutsch, 1944). Ritvo (1977, p.128) states that girls who start menstruating early have not had a latency period long enough, to establish stable ego structures, in order to maintain a reliable defence against the pregenital strivings.

According to the cloaca theory, in fantasy, little girls view the vagina, urethra and anus as one organ, namely the cloaca, which has a single excretory function (Deutsch, 1944). Everything deriving from the lower parts of the body (the cloaca) is viewed as dirty and associated with elimination, and subsequent feelings of shame. Menstruation thus too becomes associated with elimination. Feelings of shame may be transferred to

the entire body and the young girl may feel dirty and devalued as a whole (Deutsch, 1944).

In a study of adolescents, Whisnant and Zegans (1981, p.139) found that many of the adolescents felt ashamed of menstruation and viewed it as a new eliminatory function. Pre-menarcheal girls thought menstruation would be "like going to the bathroom except not, because you couldn't stop it". Elizabeth Campbell (1984) writes that her initial experience of using sanitary towels evoked clear associations of wearing a diaper. The use of sanitary towels, together with societal and maternal prescriptions to be clean and hygienic during menstruation, may precipitate regression to an anal experience of menstruation (Shapiro, 1988, p.79). Thus menstruation may become an anal or hygienic crisis and awaken old conflicts regarding dirtiness and the need to control bodily functions (Shapiro, 1988, p.79).

Fantasies regarding loss of eliminative control may also evoke the associated earlier conflicts, regarding infantile dependency/independency on the mother, centred around issues of autonomy and control (Whisnant & Zegans, 1981). The young girl's perception of being out of control of her bodily/eliminative functions, may also lead to intense anxieties of a phobic nature, regarding bodily function (Deutsch, 1944). Simone de Beauvoir (1952) states that the young girl comes to regard her body as a source of shame and embarrassment, and quite frequently becomes prone to fits of blushing, as well as phobias centred around bodily function and control.

Benedek and Rubenstein (1939b) found that the late premenstrual phase (as determined by vaginal smears and basal body temperature) corresponded to psychoanalytic material (based on dreams and free association) which centred around eliminative tendencies on a pre-genital (anal and urethral) level. Rome (1986) states that one of the most distressing and most frequently reported PMS complaints, is the feeling of 'being out of control'. It has been found that the cessation of menses (amenorrhea) in patients with eating disorders is initially and temporarily associated with increased feelings of personal control (Swain, Shisslak & Crago, 1991).

3.4.1.2. Male-female genital differences

Menstruation together with increased sexual tensions at puberty, is proposed to redirect attention to the genitals and the awareness of male-female anatomical differences. Infantile anxieties regarding the female as "only having an opening that is difficult to control" are re-activated and the young girl devalues her body on the

grounds of inferiority and inadequacy (Deutsch, 1944, p.159). According to Deutsch (1944) the young girl upon discovery that she does not have a penis, feels that she has been deprived and lacks an adequate organ for the expression of inner tensions. Menarche evokes earlier fantasies regarding the inferiority and inadequacy of the female body, as well as castration fantasies and feelings of envy, due to the lack of a penis (Deutsch, 1944). It has been found that compared to controls, women with PMS are less accepting of their physical selves, as reflected in more negative attitudes towards their bodies, genitals, sex and masturbation (Watts, Dennerstein & De L. Horne, 1980).

Freud (cited in Shapiro, 1988) postulated that menarche symbolised the castration complex, in which earlier fantasies of the little girl, regarding her castration by the mother were mobilised. From the Freudian point of view, the little girl upon discovery that she does not have a penis, believes that the mother has deprived her of her penis (Shapiro, 1988). The girl experiences a sense of injury, loss, penis envy and aggression, usually directed toward the mother. Consequently, the little girl turns to the father in the hope that he will provide her with a penis or baby. This phase ushers in the oedipus complex and is proposed to be the turning point in the development of feminine identity. Benedek and Rubenstein (1939b) found that the late premenstrual phase corresponded with psychoanalytic material on the genital level, which revolved around fears regarding castration, destruction of the body and premenstrual depressive feelings of inferiority. However, Shapiro (1988) states that many of Freud's views regarding feminine development, are not supported today. Feminine development is believed to develop at approximately 18 months of age and precedes any awareness of the lack of a penis (Shapiro, 1988).

It has also been suggested that the sight of menstrual blood, may further evoke anxieties and fantasies of internal damage, tearing or mutilation (Horney, 1967, p.159). Klein (in Deutsch, 1944), in contrast to some psychoanalytic theorists who deny the awareness of the vagina in little girls, proposes that little girls have an innate awareness of the vagina. Genital sensations occur with subsequent fantasies and desires to fulfil these sensations by incorporating the father's penis. However, any such fantasies also produce fears of destruction of part of the little girl's body, due to the disparity in size between the genitals of the father and the vagina of the little girl.

In fantasy, the genital/menstrual bleeding may be related to sexual fantasies and the anticipated punishment for forbidden sexual thoughts, desires and actions, since blood is associated with a wound, which in turn is often related to punishment (Chapman, 1967; Deutsch, 1944; Horney, 1967). A survey of adolescent attitudes to menstruation found that menstruation was viewed by the adolescents as being like 'a wound', "like you cut yourself somewhere" (Whisnant & Zegans 1981, p.319).

3.4.1.3. Mother-daughter relationship

The mother-daughter relationship and preparation for menarche, is an important factor in attitudes to and experiences of menarche, as well as subsequent menstrual experiences. Simone de Beauvoir (1952, p. 310) states that a frequent finding in the past, was that "her mother had neglected to inform her". Deutsch (1944) reports that mothers, when asked about the lack of preparation of their daughters for menarche, frequently responded that the girl was unwilling to know, and reluctant to discuss the topic. Nevertheless, terror is often evident in young girls who are unprepared, and menarche may be experienced as a frightening event, associated with impending death.

Deutsch (1944, p.149) postulates that the reasons for the young girl's apparent lack of knowledge about menstruation, relate to both the mother and the daughter's feelings about menstruation, and are independent of actual intellectual knowledge regarding menstruation. According to Deutsch (1944, p.149), mothers generally feel ill at ease discussing menstruation with their daughters and often take great care in concealing their own menstruation from their daughters. Concealment of menstruation by the mother does not, however, imply that the daughter will remain ignorant of menstruation, since knowledge can often be obtained from peers or siblings. Deutsch (1944, p.149) states that most girls have some sort of awareness of menstruation, and absolute ignorance of the event, is due either to gross negligence on the part of the significant adults, or alternatively, a result of repression by the young girl, due to the associated conflicts, anxieties and emotions mobilised by menstruation. Horney (1967) argues that intellectual enlightenment at puberty is not enough to dispel fears, since the infantile and early fears are so strong, as are the forces of repression, which operate to contain the anxieties.

Various findings regarding the ignorance of menstruation in young girls today, indicate that most girls are intellectually prepared for menarche and menstruation. However, this knowledge does not extend to an understanding of the causes of the

physiological and emotional changes accompanying menstruation (Ferreira & Viljoen, 1985; Whisnant & Zegans, 1981; Wilson & Keye, 1989).

Whisnant and Zegans (1981) found that most of the adolescents in their study were well educated by their mothers, sisters, friends and school educational programmes, with regard to the biological event of menstruation. However, the adolescents experienced menarche as an emotionally charged event relating to their emerging identity as a woman. It was in this regard that they wanted information from their mothers, but many of the girls perceived their mothers to be unwilling, unavailable or unable to discuss the wider implications of menstruation.

Wilson and Keye (1989) in a survey of adolescents, noted that menstrual difficulties (dysmenorrhoea and premenstrual tension) were experienced by many of the girls. However, many of the girls were uninformed about the causes and treatments of these symptoms. Furthermore, a survey of the parents revealed that some parents were not even aware that their daughters had reached menarche and only 30% were aware of their daughter's menstrual discomfort.

Hallman (1986) states that adolescents often do not connect their changing emotional or physical states with their menstrual cycle, largely as a result of inadequate knowledge of their bodies. This ignorance may explain why it is believed, that PMS does not occur in adolescents (Hallman, 1986). The findings of other studies (Koff, Rierdan & Stubbs, 1990) indicate that it is not only adolescents who are uninformed about the menstrual cycle. Koff et al (1990, p. 119) found that the knowledge of well educated women as regards the physical, emotional and cognitive changes of the menstrual cycle was "at times incorrect, generally incomplete, and negatively biased".

Knowledge of menstruation and preparation for menarche as well as the mother's reaction to the daughter's menstruation may have implications for later experiences and misconceptions of menstruation. Zelling (1986) treated 17 women for severe PMS by age-regressing them through hypnosis, back to menarche and dealing with the fears and misconceptions, which were present at menarche regarding female physiology. Out of the 17 subjects, 14 of the women were relieved completely of their PMS and two showed an improvement in their PMS symptomatology. One subject showed no improvement but insisted that her PMS was due to physiological causes. It has been pointed out that irrespective of the psychology of menstruation, it needs to be remembered that

menstruation is primarily a biologic event. Consequently, potential physiological causes for menstrual distress need to be evaluated (Deutsch, 1944).

3.4.1.4. Reactions to menarche

Reactions to menarche, may vary from absolute denial of any effect of menstruation, to various emotional reactions, such as hostility, aggression, anxiety and depression. In addition, menstruation may be regarded as an illness and many of the conflicts, anxieties and sexual connotations thus averted, since illness is usually regarded as a state for which one is not responsible, and which entitles one to loving care and nurturance (Deutsch, 1944). Reactions to menarche are influenced by early conflicts, anxieties and fantasies, as experienced by each individual, as well as the reaction of the mother to her daughter's first period.

Attitudes of denial or focusing on symptoms, as well as the perception of menstruation as an illness, are considered to be learned from the mother (Deutsch, 1944 ; Shapiro, 1988). However, some studies suggest that this may not always be the case. Stoltzman (1986) found that most of the adolescents in their study, experienced more pain and water retention than their mothers. In addition, the adolescents viewed menstruation as more debilitating and unsanitary than their mothers. The findings of this latter study indicate that the girl's attitudes to and experiences of menstruation are not influenced only by the mother, however, the mother is nevertheless a central figure in the young girl's development, as is menarche in female development.

The experience of menarche and menstruation is influenced to a large extent, by how the mother and the daughter feel about this phase of sexual development, as well as the wider implications thereof (Shapiro, 1988). It has been noted that parental conflict is more frequent shortly after menarche, particularly in the mother-daughter dyad (Holmbeck & Hill, 1991). It has been suggested that some of the factors accounting for this conflict, may be the parental need to curb the daughter's sexual activities, as well as the daughter's need to separate from the parents and form close relationships outside the family (Holmbeck & Hill, 1991). Menarche and the accompanying physiological changes, such as the development of breasts, represents the dawning of adult sexuality and the potential for pregnancy and motherhood. Acceptance of these changes, by the adolescent, presents the opportunity to move beyond the early libidinal conflicts, towards the fulfilment of inner tensions and needs, through adult sexual relationships, pregnancy and motherhood (Deutsch, 1944).

3.4.2. The breast

Menarche accompanies the development of other sexual characteristics, such as the breasts. The development of the breasts may potentially mobilise early conflicts regarding the daughters infantile attachment to the mother's breast, as well as her experiences of the mother's breast. The psychoanalytic theories which could be traced, regarding menarche and menstruation, appear to focus very much on the 'genital trauma' and the actual menstrual bleeding, as the potential source of many anxieties. No theories could be traced which explored the possible connections between premenstrual symptoms and earlier infantile conflicts, in relation to the mother's breast.

Given the fact that one of the six most common premenstrual symptoms (in women with mild, moderate and severe PMS) is painful breasts, breast tenderness, and swelling of the breasts, it appears surprising that attention has not been paid to the symbolic role of the breast in premenstrual tension. In addition, some women lactate premenstrually, albeit minimally. In women with severe PMS, painful breasts may be present for a longer period of time than the actual menstrual bleeding. The fact that breast pain is experienced by women with severe PMS, as well as the so-called 'normal' group of women who do not complain of PMS, makes it interesting, to tentatively explore the possible associations between premenstrual breast pain and the earlier infantile attachments or conflicts, in relation to the breast.

The following assumptions form the basis of this discussion:

1. It is assumed that the breasts form a central aspect of the premenstrual experience and that the breasts become a focus of attention (whether conscious or unconscious) due to the swelling and tenderness. It is speculated that this attention may mobilise earlier infantile conflicts, in relation to the maternal breast, as well as symbolic conflicts or anxieties, regarding the woman's own breasts (e.g. breast-feeding, pregnancy and childbearing).

2. It is assumed that there may be an association between painful premenstrual breasts and the experience of menarche, since the initial development of breasts, during puberty, is accompanied by breast tenderness and pain. It is speculated that painful premenstrual breasts may potentially re-evoke memories of menarche and the associated psychodynamic conflicts.

It seems important to examine what painful breasts might symbolically mean to a woman, in the light of early infantile experiences and object relations. According to certain proponents of the psychoanalytic school (e.g. Klein), the breast is the first object with which the infant forms a relationship. The mother's breast is the source of nourishment, and the mother becomes recognised as the provider of pleasure and fulfilment, but also, as the source of frustration (Wong, 1989, p.363). The experiences of the oral phase, are thus proposed to provide the first identifications with the mother, as well as the first experiences of frustration and fulfilment. According to Erikson (in Logfren, 1989, p.405) the experiences of the oral phase form the foundations for later feelings of trust vs mistrust, in that the infant must experience that he/she has arrived in a world, which he/she can trust and in which love, care and help are available.

Klein (1960) suggests that the infant incorporates the experiences of the breast as internal objects. These experiences may include experiences of both the good and the bad breast, and the infant may thus experience ambivalent feelings towards the mother's breast. On the one hand he/she has feelings of love for the good breast, which nurtures him/her, but on the other hand, he/she has feelings of oral aggression and sadism towards the breast which withholds fulfilment and frustrates him/her (Klein, 1960).

Klein (1960) states that frustration, pain and discomfort are experienced whenever the infant is hungry or feels neglected. These feelings are experienced as persecutory in that the infant imagines that the milk from the breast is deliberately withheld from him/her. These fantasies lead to feelings of resentment and envy for the all powerful object, on which the infant's life depends, with subsequent feelings of aggression and destructive impulses.

Feelings of aggression towards the mother, however, produce anxiety due to the fact that the infant depends on the mother for his/her survival and well-being. In addition, the infant fears that there will be retaliation for his/her aggressive impulses. Klein (1960) argues that the infant cannot distinguish between fantasies of wanting to do harm and the reality of whether s/he has in fact done harm. Feelings of infantile depression are speculated to arise from the fear of losing the loved objects, as a consequence of his/her aggressive impulses. Klein (1960) states that at approximately six months of age, the baby begins to fear the harm that his/her destructive impulses may bring about. This fear leads to feelings of guilt and the need for reparation, together with anxieties of a depressive nature.

Klein (in Barglow & Schaeffer, 1977, p.421) argues that the frustration at the breast (and the loss at weaning) turns the infant from the mother to the father, with an oral incorporation wish for the penis of the father. This precipitates awareness of the oedipal situation which for the infant, entails relinquishing fantasies of sole possession of the mother. This may lead to a profound sense of loss, as well as rivalry towards the father, who draws the mother's attention away from the infant.

These theories are much more detailed and due to space limitations, cannot be explicated here. In summary, the experiences of the breast, are considered to influence later interpersonal relationships and are regarded as important determinants of the individual's emotional and sexual life. The loss of the breast at weaning is also the first real experience of loss and mourning for the infant.

It was suggested at the outset of this discussion that tender and painful premenstrual breasts may possibly re-evoke unconscious anxieties or conflicts regarding the mother's breast and early object relations. It was stated that one of the most common premenstrual symptoms is breast pain, tenderness and swelling. It is interesting, in the light of the preceding discussion, to note that three of the other six most common premenstrual symptoms are: feelings of aggression/irritability; depression; and anxiety.

It could be speculated that painful breasts evoke unconscious infantile feelings of irritation, anxiety, depression and frustration, in relation to the mother's breast. These feelings may then be transferred to current interpersonal relationships (which are assumed to be founded on the early object relations). The following questions thus arise, regarding the phenomenology of premenstrual breast symptoms.

(1) Do premenstrual food cravings and bingings reflect regressive tendencies to the oral phase, as well as needs for nurturance?

(2) Are premenstrual feelings of irritability associated with infantile experiences of frustration/irritation in relation to the breast?

(3) Is there a connection between premenstrual feelings of anxiety and unconscious memories of the infantile anxieties and fears of damaging, destroying and losing the breast, as well as fears of retaliation and persecution, for damaging the breast?

(4) Does premenstrual depression evoke early memories of the infant's first object loss of the breast at weaning?

The above questions are all based on theoretical speculation and may be interesting questions for future research on the psychological aspects of the premenstrual syndrome. Various findings regarding the premenstrual syndrome, as outlined below, suggest that object relations may be implicated in PMS.

Benedek and Rubenstein (1939a, p.259, 263, 266; 1939b, p.484) analyzed the dreams of several women throughout the menstrual cycle, on a daily basis, for several months. These authors found that the psychoanalytic material in the early premenstrual phase (i.e. immediately after ovulation as reflected by high progesterone levels) revealed oral regressive dependency tendencies, identifications with infancy (wanting to be loved, nurtured and cared for) and identification with the mother (wanting to be impregnated, become a mother and nurse the infant, e.g. a patient reports a dream in which "I saw my breasts, I wanted to be recognised as a woman..."). However, the authors state that oral regressive tendencies, were present, only as long as progesterone dominated (i.e. immediately post-ovulation). As the cycle progressed (and progesterone diminished), the premenstrual psychoanalytic material reflected pre-genital (anal-urethral) and genital (castration) conflicts. The findings of this study suggest that part of the premenstrual phase (albeit the early premenstrual phase), is associated with oral regressive tendencies.

Research appears to indicate that women with PMS report higher levels of relationship dissatisfaction (Coughlin, 1986; Siegel, 1986; Siegel, 1987; Stout & Steege, 1985; Winter, Ashton & Moore, 1991). Although it needs to be pointed out that relationship dissatisfaction may precede PMS (or vice versa), and that dissatisfaction with relationships may be related to perception in the premenstrual phase, it could be speculated that relationship dissatisfaction may occur in the premenstrual phase, at a time when repressed infantile object-relations (which may have been frustrating), are unconsciously evoked and transferred to current interpersonal relationships. It is commonly reported that women with PMS only become 'aware' of relationship dissatisfactions in the premenstrual phase. Once menstruation occurs, the perception of dissatisfaction changes and the world (and the people in it) becomes a happier place. The research regarding relationships in women with PMS and changes in perception in the premenstrual phase, will be discussed in more detail later.

Research suggests that premenstrual physical symptoms precede psychological symptoms. For example, it has been found that peaks in physical premenstrual symptoms precede peaks in depression by approximately two days (Coleman et al, 1988). One interpretation of these findings would be that psychological symptoms are linked to the appearance of physical symptoms, or arise in response to physical symptoms.

The symbolic role of the breast appears to have been neglected in the psychoanalytic work regarding menstruation and premenstrual symptoms. The focus appears to have been much more on the pre-genital and genital anxieties evoked by menstrual bleeding. Breasts are an essential aspect of female sexuality and body-image. The importance of the breasts in the lives of women, is often reflected in dissatisfactions with the breasts. This is revealed in the demand for cosmetic breast surgery, particularly, in Western cultures. This demand is not only in relation to dissatisfaction with the size of the breasts, but also in response to age-related changes in the shape of the breasts.

It appears that even in the lives of little girls, breasts are important, as reflected in play when the little girl creates her own 'breasts', by filling her shirt or dress, with fabric. Also, in a recent interaction with a little two year old African girl (who was'mothering' her doll) and her mother, the mother reported that the little girl frequently 'breastfeeds' her doll.

Given cultural differences in breast feeding patterns, it would be interesting to examine the experience of breast pain across different cultures, and the rating of this symptom as more severe or distressing, in comparison to other symptoms. For example, observations lead one to assume that many African babies are not as frustrated at the breast. Many African women feed their babies freely and on demand. If the mother does not provide the breast immediately, the baby frequently will make active physical attempts to obtain the mother's breast, and in addition, will express his/her frustrations physically (which appears to be tolerated and accepted by the mother). Furthermore, African babies are frequently only weaned at two or three years of age and it has been observed that older infants are offered the breast as a consolation for other frustrations, even if the mother is no longer lactating.

Pretorius (1992) investigated the 'shadow of the breast' (moriti we letswele), within a group of African patients. The 'shadow of the breast' is a psychosomatic disorder, with no organic pathology. It is well known in the African culture and is more common in women, than men, and manifests in pain in the chest area below the left breast, as

well as in the area surrounding the left breast. Associated symptoms include depression, loss of appetite, and anxiety. Pretorius (1992) found that psychological factors associated with this disorder included, amongst others, disturbed interpersonal relationships (e.g. marital, parent-child); tension in the mother-daughter relationship; pent-up feelings of anger, as well as an inability to express, or deal with aggression.

The symbolic role of the breast in PMS may be an interesting area of exploration for future research, since it could be speculated that oral-regressive unconscious associations and memories, are evoked by breast pain. It is also, however, important to examine the symbolic role of the breast in adult women, and the associated implications, namely, pregnancy, childbearing, nurturance and lactation, as well as body-image.

3.4.3. Pregnancy and motherhood

Fantasies, wishes and conflicts relating to childbirth and pregnancy may arise in response to menstruation and premenstrual symptoms, such as, abdominal bloating. Menstrual pains, may further, be associated in fantasy, with birth and labour pains (Deutsch, 1944). It has been suggested that the psychological depression which occurs in conjunction with menstruation, frequently, reflects the biological meaning of menstruation, namely, the disappointment in the expectation of a child (Deutsch, 1944).

According to certain proponents of the psychoanalytic school, the wish for a child and the desire for motherhood, may replace the earlier feelings of deprivation and inadequacy in relation to the wish for a penis (Horney, 1967, p.106). Horney (1967) states that impediments to the fulfilment of the wish for a baby and motherhood may, however, arise as a result of both external and internal factors. External factors, include unfavourable life circumstances, which are not conducive to the fulfilment of the traditional feminine role. Internal factors, would include the repression and denial of this need, as a result of neurotic conflicts (Horney, 1967). Ultimately, the frustration of this need results in increased tensions in the premenstrual phase, as evidenced in states of tension, anxiety, aggression and depression (Horney, 1967).

Horney (1967, p.104) asserts that premenstrual tension occurs in women, in whom there is a very strong desire for a child, which cannot be fulfilled, because of the strong defenses against it. For these women, the wish for a child is tied up with feelings of

anxiety and guilt (because of old destructive impulses). The wish is thus repressed and denied. At the time when the body is preparing to conceive, this repressed wish together with all the associated anxieties, is aroused, which leads to a disturbance of the psychic equilibrium (Horney, 1967). The anxieties regarding the wish for a child, may be related to anxieties regarding sex, or infant care, or fears of dying in childbirth (Horney, 1967). Other conflicts which may be generated by pregnancy and childbearing, may include conflicts in relation to breastfeeding, dependency and the neediness of the infant. According to Horney (1967), a major factor in the development of premenstrual tension, is thus the denial of the wish for a child, as well as the rejection of the traditional feminine role.

Research findings are contradictory regarding the hypothesis that PMS is due to the rejection of the feminine role and childbearing. Much of the research has found that women with PMS, do not reject the traditional feminine role or childbearing, and that PMS is in fact associated with adherence to traditional sex-role stereotypes or attitudes of passivity and wanting to stay at home (Friedman & Jaffe, 1984; Paige, 1973; Rosen et al, 1988; Stout & Steege, 1985). Woods (1985) found that traditional women regarded menstruation as more debilitating, than women with non-traditional attitudes to feminine roles. However, Berry and McGuire (1972) found that subjects with a lesser acceptance of the female sexual role reported a significantly higher number of symptoms of menstrual distress.

In a prospective study, Schnurr (1988) found that the probability of experiencing PMS, was positively correlated to working outside the home. Schnurr (1988) states that this group of women may represent a group who experience role conflicts in dealing with the stress of maintaining both traditional roles and a career. Coughlin (1986; 1990) found that women with careers outside the home (but not by choice), experienced more symptoms than homemakers. The group of women with the least symptoms were those who were homemakers by choice (Coughlin, 1990).

As is evident from the above discussion, the findings regarding the role of traditional feminine roles in PMS are inconsistent. Heilbrun, Friedberg, Wydra and Worobrow (1990) state that the interaction of sex role behaviour (i.e. masculinity or femininity) and woman's role attitudes (i.e. contemporary or traditional) may explain some of the inconsistency in the research findings. These authors found that masculine women preferring a contemporary role, and feminine women committed to traditional roles,

reported more menstrual and premenstrual distress. In contrast, feminine contemporary women and masculine traditional women revealed less distress.

Factors such as the stress of maintaining both traditional unpaid work and non-traditional roles, need to be taken into account in interpreting the research findings, as do the life circumstances and choices of women who stay at home or work (e.g. working as a result of financial necessity). Although work outside the home, may increase the demands on those who are homemakers, working may in fact enhance coping, since colleagues may provide social support. Working may also satisfy other needs (e.g. intellectual stimulation, achievement needs, financial independence) and thereby enhance the individual's sense of personal worth.

Lifestyle also needs to be considered in evaluating reports of premenstrual symptoms. Symptoms experienced in the context of homemaking may be more easily adapted to than those experienced in the workplace. Symptoms may subsequently appear less debilitating and distressing. For example, symptoms such as menstrual pain, fatigue, and the inability to concentrate, may be less disruptive and have fewer consequences in the home environment, than in the workplace.

Summary: Psychodynamic theories of PMS

The psychodynamic theories regarding premenstrual symptoms have largely focused on potential areas of unresolved conflict, in relation to female sexuality, as the precipitants of premenstrual and menstrual problems. These conflicts may potentially be evoked by menstruation and the implications thereof, namely, pregnancy and motherhood.

Gitlin and Pasnau (1989, p.1419) point out that "sexuality and reproductive capacity are deeply identified with the sense of self." Gynaecologic symptoms and changes may thus become a focus for individual psychological vulnerabilities and thereby, affect an individual's feelings of personal worth and self-esteem (Gitlin & Pasnau, 1989). However, according to Gitlin and Pasnau (1989), although the psychodynamic formulations may occasionally 'fit', they tend to rely on unproven clinical assumptions, as well as older definitions of depression. Gerdes (1979, p.119) states that the theories of Deutsch and Horney were based on women in psychoanalysis and a "theory of menstruation in normal women is yet to emerge." It has also been argued (Reiser &

Reiser, 1985) that explanations of PMS being due to the rejection of the feminine role, have been used to deny the existence of PMS.

Various criticisms have been launched against the Freudian concept of penis envy in women. It has been argued that Freud was inaccurate, with regard to female sexuality and the development thereof. In addition, it has been suggested (Horney, 1967, p.59) that the male orientated emphasis on penis envy, masks and detracts from the underlying male envy of the female's biological capacity to conceive, create and sustain a new life.

Shapiro (1988) has pointed out that the psychoanalytic theories were developed at a point in time when women lacked the ease of control over their reproductive abilities, which is available to contemporary women. Furthermore, many women still died in childbirth, and pregnancy was thus associated with much that was painful (Shapiro, 1988). It has been suggested (Gitlin & Pasnau, 1989) that the psychoanalytic theories be researched, using reliable measures of conflicts about sexuality and mothering, in order to determine the influence of these factors on syndromes such as PMS.

The value of the psychoanalytic theories with regard to PMS, may lie in the fact that they clarify early conflicts and anxieties which may potentially be repeated, if not resolved. Theoretically, it could be speculated that psychodynamic conflicts may affect PMS, in that physiological premenstrual changes might be interpreted and given meaning, in light of the earlier conflicts, through the following process:

1. The physical event comes into focus as a result of changes across the menstrual cycle (e.g. premenstrual symptoms, such as changes in the breasts, or menstrual changes such as bleeding or pain).

2. The individual scans her knowledge base, in order to interpret the meaning of these changes (this process may be conscious or unconscious). This knowledge base may be comprised of past life experiences, early memories and associated conflicts (both conscious and unconscious). Symptoms or changes may then be appraised, interpreted and given meaning in the light of this knowledge base (this may be conscious or unconscious).

3. The interpretation of the event and the emotions elicited, will determine the reaction to the event both internally and behaviourally.

4. If the interpretation and meaning given to the event evokes anxiety and unresolved conflicts, it may in turn be experienced as a stressor. The individual's reaction to the stressor may create further interpersonal stress. These stressors in turn may alter the biochemical state, thus contributing to biochemical imbalances and disturbances.

3.4.4. Libido

Increased libido is a frequently reported premenstrual change. The frustration of increased sexual needs in this phase of the cycle has also been considered to contribute to premenstrual tension. Horney (1967, p.101) says that the frustration of the fulfilment of sexual needs, may be due to internal neurotic conflicts, or external factors which are not conducive to the fulfilment of sexual needs. Spaulding (in Frank, 1931) proposed that premenstrual tension was related to hysteria and the inability to cope emotionally, with sexuality. Married women were to find an adult outlet for their emotions, but for those who were unmarried, the sex drive was to be lessened.

3.5. PERSONALITY PROFILES

Personality traits which have been reported in women with PMS, include apprehension, introversion, hostility, trait anxiety, self-conflict, dissatisfaction, low self-assertiveness, and an inability to cope with stress (Dennerstein, Spencer-Gardner & Burrows, 1984; Keye et al, 1986; Hallman et al, 1987; Watts et al, 1980).

Various studies (Bisson & Whissel, 1989; Palmer, Lambert & Richards, 1991) indicate that personality ratings may change across the cycle. It is thus important to note the point of the menstrual cycle, during which personality is measured, since ratings may change between the follicular and luteal phase (Freeman, Sondheimer & Rickels, 1987; Stout & Steege, 1985).

Chuong et al (1988) found that PMS patients evidenced significant changes in ratings on anxiety and interpersonal oversensitivity, between the follicular and luteal phase. However, women without PMS evidenced no clinically significant changes. Layton (1988) found a decrease in extroversion two days after the cessation of menses, compared to measurements two days prior to menses, as measured on the Eysenck Personality Inventory. Mohan and Chopra (1986) found that scores on neuroticism and anxiety, as measured by the Eysenck Personality Inventory, were significantly higher two days prior to menses, compared to two days after the onset of menses.

The above findings indicate the importance of considering the phase of menstrual cycle, in which personality is assessed. In assessing the personality of PMS patients, it is also important to remember, as Dennerstein, Spencer-Gardner and Burrows (1984) point out, that the question remains whether such personality traits are the cause or consequence of PMS.

Dispute regarding the relationship between PMS and neurosis, is of long standing. Some studies suggest that women reporting distressing premenstrual symptoms display high scores on measures of neuroticism (Dennerstein et al, 1988; Hallman et al, 1987; Watts et al, 1980). However, the findings of other studies suggest that the relationship between PMS and neurosis has not been confirmed (Mira, Vizzard & Abraham, 1985). An early study by Rees (cited in Siegel, 1987) found that psychotherapy with neurotic women who experienced PMS, led to an improvement of the neurosis, but not of PMS. Greenblatt et al (1987) argue that what distinguishes PMS from neurosis, is the fact that neurotic behaviour in women with PMS, usually disappears with the onset of menses. It has been found that relaxation therapy is helpful in reducing premenstrual anxiety and neuroticism (Mohan & Chopra, 1985).

Borderline personality disorders are said to become more evident during the premenstrual phase (Ablanalp, 1985; Harrison, Rabkin & Endicott, 1985, Shapiro, 1988). Ablanalp (1985) states that women with severe PMS often appear to be borderline premenstrually, and may thus appear borderline for half their reproductive lives. Shapiro (1988) argues that the higher rates of diagnosed borderline personality disorder in women, raises questions regarding misdiagnosed PMS.

As is evident from the preceding discussion, many different personality traits have been attributed to women with PMS. However, caution is required in drawing conclusions from studies regarding personality traits in women with PMS, as ratings may change across the cycle. Interesting questions also arise regarding the relationship between certain PMS behavioural changes and the diagnosis of personality disorders in women.

3.6. COGNITIVE FACTORS

3.6.1. Attitudes, expectancy and attribution

Menstruation is frequently viewed as a negative and debilitating event, despite the fact, that regular menstruation is in reality an indication of good health and the ability to conceive a new life. It has been found that women who report distressing

premenstrual changes, appear to have more negative attitudes towards menstruation, than controls (Dennerstein, Spencer-Gardner & Burrows, 1984; Chaturvedi & Chandra, 1991). Evidence to the contrary has, however, also been reported (Watts et al, 1980). Nevertheless, the question once again arises whether negative attitudes to menstruation are the precipitator or consequence of PMS. Woods (1985) found that menstrual attitudes were influenced by negative emotional symptoms, related disability and traditional socialization.

Expectancy of negative premenstrual changes has been found (Fradkin & Firestone, 1986) to enhance symptoms. Fradkin and Firestone (1986) manipulated expectancy in three groups of women as follows:

1. The first group was told that symptoms had a psychological cause arising from negative societal myths.
2. The second group was told that the cause of PMS was biological.
3. The third group was not given any explanation.

The findings of the above study indicated that the first group lowered their symptom expectations and reported fewer symptoms, as well as a less negative mood premenstrually. In contrast, the other two groups reported no change in symptoms, as well as a more negative premenstrual mood, than did the 'psychological causes group'.

A frequently cited study in the PMS literature, is the study by Ruble (in Dennerstein, Spencer-Gardner & Burrows, 1984) of two groups of women in identical phases of their menstrual cycle. Ruble found that the group of women who were led to believe that their menses were due in a day or two, reported significantly more distressing symptoms than the group who believed they were intermenstrual.

Slade (1989) states that expectancy of symptoms may lead to increased vigilance of both somatic and emotional states. Subsequent associations between negative symptoms and menstruation may lead to attribution of symptoms to biology.

Research (Bains & Slade, 1988) appears to indicate that premenstrual negative moods are attributed to health factors, whereas positive moods are explained as being due to situational factors. Bains and Slade (1988) state that the attribution of moods or symptoms to hormones, may lead to passivity and feelings of helplessness, which may exacerbate negative symptoms and inhibit actions which could counter symptoms.

Feelings of helplessness and of events being beyond one's personal control, can contribute to depression (O'Boyle, Severino & Hurt, 1988).

O'Boyle et al (1988) found that locus of control scores became more external premenstrually in PMS subjects, whereas controls did not show significant variations in locus of control scores across the cycle. O'Boyle et al (1988) state that their results support the hypothesis that cycle-related changes in self-perception occur in PMS patients.

3.6.2. Perception

Changes in self-perception and the perception of life events, have been found to occur across the menstrual cycle. Research indicates that the same negative daily life events experienced by PMS patients, in both the follicular and luteal phases, are perceived to be more unpleasant or distressing in the premenstrual phase, than in the follicular phase (Rubinow & Schmidt, 1989; Schmidt, Grover, Hoban & Rubinow, 1990). Matteo (1987) found that self-reports of daily stressors were greater in the late luteal and early phases of the menstrual cycle than in other phases of the cycle. Changes in perception of body image are also reported to occur premenstrually (Rubinow & Schmidt, 1989).

A common PMS complaint is that of cognitive dysfunction. Dispute exists in relation to whether objective changes in cognitive function actually occur premenstrually. It has been speculated that reports of cognitive dysfunction, may reflect altered self-perception, as opposed to actual cognitive deficits (Rubinow & Schmidt, 1989). Clare (1985b) states that many women will remember the occasions when poor performance coincided with the premenstrual phase, but forget those which coincided with ovulation. Asso (1985) found that women taking final degree examinations were not at more of a disadvantage in the premenstrual phase of their cycle. However, Mohan and Jogi (1989) found that cognitive performance declined significantly in the premenstrual phase, in association with increased anxiety levels, which in itself influences cognitive performance. Giannini, Sorger, Martin and Bates (1988) found that PMS subjects experienced impairment in their ability to perceive non-verbal facial cues premenstrually, compared to their intermenstrual abilities, as well as the abilities of controls. Ussher and Wilding (1991) in a study of women, found no decrement in cognitive performance in the menstrual or premenstrual phase. Asso (1986) found that cortical alertness decreased premenstrually and autonomic reactivity/lability increased, however, the perception of change was a strong indicator of negative mood.

Studies investigating pain ratings in PMS patients, have found that compared to controls, PMS patients perceive pain to be more aversive and intense, regardless of cycle phase (Kuczmierczyk & Adams, 1986; Kuczmierczyk, Adams, Calhoun, Naor, Giombetti, Cattalani & McCann, 1986). Pain ratings may be influenced by perceived control over pain (Kuczmierczyk & Adams, 1986). Siegel et al (1986) report that women who are depressed premenstrually perceive their symptoms to be more acute, aversive and disabling than do non-depressed controls.

Summary: Cognitive factors and PMS

Perception, attitudes and expectancy of symptoms appear to play a role in determining the actual experience of PMS. Changes in the perception of life events, cognitive abilities, coping abilities and locus of control, appear to occur premenstrually in women with PMS.

Rubinow and Schmidt (1989) suggest that changes in perception occur within the context of experiential states, which in turn, are influenced by beliefs, emotions, memories, relationships and rules for interpreting the environment. These factors then interact together with neurobiological factors, premenstrually, to produce PMS.

3.7. STRESS

3.7.1. Symptom severity under stress

Stress can cause disruption and irregularity of the menstrual cycle and life stressors are often implicated in missed periods, late periods and the early arrival of a period (Guyton, 1986). Changes in thyroid and growth hormones, as well as in sex steroid hormones and neuroendocrine activity, have been associated with stress (Pasnau & Fawzy, 1989, p.1236). Selye (1976, p.176) postulated that premenstrual tension is indicative of severe stress. Under stress, adrenocorticotropic hormone (ACTH) is hypothesised to be increased, at the expense of gonadotropin secretion, i.e. levels of LH and FSH hormones decrease, thereby influencing the menstrual cycle (Selye, cited in Coughlin, 1986). Janowsky and Rausch (1985) state that many biochemical changes occur under stress and if we are able to understand the interactions of these changes, under conditions of high and low stress, we may better understand the aetiology of PMS. It has been suggested (Taylor & Bledsoe, 1986) that the stress of recurrent PMS together with everyday life stressors, may increase imbalances and perpetuate PMS.

It has been observed that the symptoms of PMS appear to increase in proportion to psychosocial life stressors, which appear to be predictive of PMS intensity (Coughlin, 1986; Gannon, 1988; Janowsky & Rausch, 1985; Taylor & Bledsoe, 1986; Warner & Bancroft, 1990). Stress has been found to correlate with certain symptoms, such as negative affect, performance impairment and pain symptoms, but not with symptoms of water retention (Woods, Most & Longenecker, 1985). It has also been reported (Woods et al, 1985) that daily ongoing stressors exert a greater influence on PMS than a single life stressor occurring in the premenstrual phase. However, Beck, Gevirtz and Mortola (1990) found no association between high levels of cumulative daily stress and increases in symptom severity, although, the amount of self-reported stress increased premenstrually. According to these authors, increased reports of stress, may have been due to the stress of symptom severity. Reports of increased stress in the premenstrual phase, may also be related to changes in perception.

According to Woods et al (1985) individuals exposed to a stressful environment or stressful life events are more likely to seek help for their symptoms, than those whose social milieu is less stressful. The reporting of PMS may thus be influenced by stress.

The sensitivity of the menstrual cycle to stress has created methodological problems in studies which have sought to establish a relationship between the premenstrual phase and life stressors, such as accidents, suicide attempts and examination performance. These events may in themselves induce menstruation, thereby creating the impression that they took place in the premenstrual phase. A further methodological problem related to the research on stress, is that stress is often loosely defined without clear specifications of the particular stressor, or the temporal nature of the stressor (i.e. a single life event stressor, chronic ongoing stressors, daily hassles).

3.7.2. Psychophysiological studies of stress

Various studies investigating changes in physiological indices of stress across the menstrual cycle, have been conducted. Van Den Akker and Steptoe (1987) found that significant changes in autonomic activity as measured by heart rate, muscle tension and skin conductance, were not associated with premenstrual and menstrual symptoms. A later study (Van Den Akker & Steptoe, 1989) found that women with severe PMS evidenced higher heart reactions to a cognitively demanding task, in the premenstrual phase, than did controls. Meyer and Morrel (1988) found that premenstrual changes in heart rates, occurred irrespective of the presence of PMS, and that women with PMS reacted dif-

ferently to stress, than did controls with regard to psychophysiological responses. Dickson-Parnell and Zeichner (1988) found that PMS patients with severe low back pain, experienced greater premenstrual changes in muscle activity, in response to personally relevant stressors, in comparison to their intermenstrual responses.

3.7.3. Specific stressors

3.7.3.1. Occupational stress

Hamilton and Gallant (1988) found that job and achievement stressors were reported more frequently in the premenstrual phase, than post-menstrually. Self-perceived decrements in premenstrual performance together with the need for increased effort in maintaining usual performance levels, were thought to contribute to increased occupational stress (Hamilton & Gallant, 1988). Various studies have found that PMS and menstrual distress are a major cause of work absenteeism. Estimates of the actual incidence of absenteeism due to PMS, vary (Andersch, Wendestam, Hahn & Ohman, 1986; Hallman & Georgiev, 1987; Langley, 1988). However, it has been estimated that approximately half of all female work absenteeism takes place within the premenstrual phase. The annual cost to industry is estimated to run into billions (Langley, 1988; Shapiro, 1988).

3.7.3.2. Marital stress

Several studies suggest that a relationship exists between PMS and marital distress (Coughlin, 1986; Siegel, 1986; Siegel, 1987; Stout & Steege, 1985). Coughlin (1986) found an inverse relationship between marital satisfaction and intensity of PMS symptoms. It has also been reported that women with PMS experience difficulties with dyadic intimacy and interpersonal relationships (Greenblatt et al, 1987; Siegel, 1986). Severity of PMS has been found to be statistically related to degree of dyadic dysfunction (Siegel, 1986). Clare (1985b) has suggested that marital problems which often involve sex-role conflicts, sexual anxieties and problems of self-esteem, may increase sensitivity to aspects of sexuality and lead to increased vigilance of premenstrual changes, which would otherwise be tolerated.

It has also been reported (Stout & Steege, 1985) that women with PMS often repress, deny and control their anger intermenstrually, but are unable to do so premenstrually. They then present for treatment of their angry outbursts, despite the fact that the issues involved in premenstrual arguments, are often valid and legitimate concerns which have remained unresolved (Stout & Steege, 1985). Hicks et al (1986) found that

the PMS women in their study, made long-suffering sacrifices for their families, were perfectionistic, self-critical and self-denying. Specific complaints which arise consistently every month, in the premenstrual phase, may serve as a sensitive barometer of issues which require attention and change in the individual's life.

It is important to bear in mind that PMS may contribute to relationship problems just as relationship problems may contribute to PMS. Winter et al (1991) state that a great deal of recent research appears to support the idea that relationships, nurturance and emotional intimacy are essential components of a woman's self-esteem and sense of self. An unhappy marriage or relationship could thus be expected to increase stress, thereby contributing to PMS. On the other hand, Linkow (1991) has pointed out that PMS in itself, may impair interpersonal relationships and family functioning. According to Linkow (1991), interventions should thus be geared to the whole family. In America, men who are married to or living with women who have PMS, have started support groups, in order to attenuate the stress associated with PMS (Rapport, October, 1991). Women's lack of appreciation (albeit in the eyes of the beholder), for the support displayed by men in the premenstrual phase, specifically in relation to the provision of chocolates, has been pointed out.

3.7.3.3. Mother-child relationships

Stressors related to children have been found to correlate only with menstrual symptoms, whereas other life stressors appear to correlate with symptoms across the cycle (Woods et al, 1985). Friedman (1984) reports that a study by Tuch found that women were more likely to bring their children to a paediatric outpatient department in the premenstrual phase, although the children actually had fewer illnesses and different illnesses, to those experienced when the mothers were in other phases of their cycles. Fradkin and Firestone (1985) observed mother-child interaction, at mid-cycle and premenstrually, and found more positive interactions in the premenstrual phase. However, these authors point out that the interactions of subjects, may have been influenced by the knowledge that they were been observed.

3.7.4. Coping with stress

Research on stress suggests that the impact of a specific stressor, cannot be evaluated independently of the individual's appraisal of the stressor, as well as the individual's coping style (Pasnau & Fawzy, 1989, p.1232). The importance of effective

coping skills in relation to PMS (and stress), has been emphasised by various authors (Heilbrun & Renert, 1988). The possibility of ineffective coping styles in women with PMS, has been considered.

Coping refers to any attempts made by the individual to master and manage the demands of a specific stressor (Folkman, 1984). Two main categories of coping have been identified: (1) problem focused coping which entails direct confrontation of the stressor, by engaging in activities aimed at resolving the problem, and (2) emotion focused coping which involves attempts to modulate anxiety, and reduce the degree of emotional arousal or subjective distress (Yager, 1989, p.554). Emotion focused coping may include defense mechanisms, such as denial, avoidance, rationalisation, and intellectualisation (Yager, 1989, p. 553). The two strategies are not viewed as mutually exclusive (Heilbrun & Renert, 1988) and it has been pointed out (Yager, 1989, p.554) that no specific strategy or style is inherently good or bad. The situation or context needs to be taken into account in evaluating the appropriateness of a specific coping response.

Other factors which may influence how the individual copes with a specific stressor, include the actual event, together with the individual's perception of whether something can be done about the situation. Factors such as locus of control, personality patterns, cognitive patterns and previous experiences, also influence coping (Carver, Scheier & Weintraub, 1989; Folkman, Lazarus, Dunkel-Schetter, Delongis & Gruen, 1986; Thompson, 1981). Oken (1989, p.1166) states that repeated exposure to a specific stressor is associated with a reduction in the stress response. With time, people learn how to cope adaptively and situations which may initially have been highly stressful are adapted to.

The premenstrual phase is a time of vulnerability for women with PMS and this in itself may lead to a decreased ability to cope with stress (Slade, 1989). Various coping strategies such as exercise, support groups, behavioural therapy (e.g. anger or anxiety control strategies), and cognitive therapy have been suggested for women with PMS (Gannon, 1988; Kuczmierczyk, 1989; Levitt, Freeman, Sondheimer & Rickels, 1986; Mohan & Chopra, 1985; Neimeyer & Kosch, 1988; Phillips, 1991; Slade, 1989). Recent research (Goodale, Domar & Benson, 1990; Jonker, 1992) suggests that daily stress reduction exercises, aimed at eliciting relaxation, are effective in reducing severe PMS.

Heilbrun and Renert (1988) investigated the role of psychological defenses, in coping with and tolerating premenstrual changes. It was found that repression elevated stress whilst rationalisation was related to decreased distress. The adaptive role of rationalisation and the subsequent modification of meaning, was thought to be due to coping by confrontation as opposed to evasion, in tolerating premenstrual changes (Heilbrun & Renert, 1988). Futterman et al (1988) state that one method of coping with PMS, is reliance on cognitive attributions. These authors found that less educated women reported more cognitive and physical symptoms, which according to these authors, may be due to the fact that less educated women may have less self-knowledge of their bodies, and thus rely less on rationalisation in tolerating premenstrual symptoms.

3.7.5. Social support

Social support has been identified as an important mediating factor in attenuating the impact of stress and in helping the individual to cope with the demands of stress. Clare (1985b) states that there appears to be a relationship between social support and the development of illness, as well as the ability to tolerate stress. Feeling valued, cared for and belonging to a community network are considered to be important factors in mediating stress (Cobb, 1976; Coughlin, 1986; Dennerstein et al, 1988; Taylor & Bledsoe, 1986). Cobb (1976) states that the important element in social support networks, is the knowledge that the individual is cared for, esteemed and part of a community network of mutual obligation, as opposed to the goods or services that the community provides.

Morse, Dennerstein, Varvavides and Burrows (1988) compared a (community) group of non-depressed, low distressed, high self-esteem women (without PMS), to a group of women with PMS, who evidenced low self-esteem and premenstrual depression. The results suggest that the absence of depression, together with high self-esteem and the availability of social support, may serve as protection factors against the development of PMS (Morse et al, 1988). Social and family support may be an important factor in helping PMS women cope, not only with PMS, but also with other psychosocial stressors which may be contributing to PMS. Chaturvedi and Chandra (1990b) state that the stress-protective functions of reduced work loads (domestic and other) may account for the reports of positive premenstrual and menstrual experiences in Indian women, who are relieved from many of their household duties, such as cooking, when menstruating.

In evaluating the role of social support in relation to PMS, it needs to be taken into account that the social environmental context in which menstruation occurs, is one in

which menstruation is generally not disclosed or discussed. This environment may thus not be conducive to eliciting support from others, with regard to distressing premenstrual and menstrual symptoms. Research (Christensen & Oei, 1990) indicates that both men and women, are aware that menstruation may be accompanied by distressing emotional and physical symptoms. Nevertheless, the cultural taboos regarding the discussion of menstruation, may make it difficult for those affected by distressing premenstrual symptoms, to reveal the source of their distress and elicit support.

3.8. CONCLUSIONS: PSYCHOLOGICAL FACTORS

It has been suggested that psychodynamic conflicts regarding femininity and sexuality, may influence experiences of menstruation. Early psychological development, the mother-daughter relationship and the experience of menarche, are also considered to influence PMS. These theories are largely based on Freud's theories of the psychology of women, most of which are currently considered to be questionable. Theories regarding the denial and rejection of the feminine role, have also been advanced, but the evidence regarding this hypothesis is inconsistent. The role of psychodynamic factors in the development of PMS, awaits further research.

Personality ratings have been found to vary across the cycle and premenstrual changes in neurotic and borderline personality behaviours have been reported. It is, however, difficult to attribute any specific personality traits to women with PMS, since changes in personality ratings across the cycle, have been reported.

Cognitive factors such as negative attitudes towards menstruation, as well as expectations of negative symptoms, appear to influence PMS. Changes in perception also appear to occur premenstrually and it has been speculated that subjective reports of cognitive dysfunction in the premenstrual phase, may be related to changes in perception.

Stress appears to play a role in PMS, and the combination of ongoing life stressors, together with stress-induced biochemical imbalances, may affect the severity of PMS. Changing stress levels and life circumstances may explain the fact that individuals vary within themselves, in their experience of PMS. Coping styles and social support may, however, mediate the stress response.

In conclusion, various psychological factors appear to influence the development of PMS. It appears that no single psychological factor is independently responsible for PMS. Some of the factors, such as stress, are related to both biological and environmental factors. Others, such as psychiatric disorder, are more closely linked to biological factors. Yet others, for example attitudes towards menstruation, appear to be inter-connected with environmental factors. The pathways of these interactions are, however, not clear. Nevertheless, there does appear to be an inter-connection.

CHAPTER 4

ENVIRONMENTAL FACTORS

Perhaps she would be obliged to smear bright dye over her face or wear a mask or special garments and call out 'Unclean, unclean.'

Chapman, 1967

4.1. MYTHS AND TABOOS

Throughout the ages, menstruation has been associated with myths and taboos regarding the actual menstrual flow and the effects thereof. In 1889 when debate was waging regarding the desirability of higher education for women, menstruation was cited as a major reason why women were unfit and unsuitable for higher education (King, 1989).

Ford (cited in Atcheson, 1977) has argued that menstruation has acquired a significance for human beings far beyond it's reality as a biological function. Historically, the powers attributed to menstruation were numerous and included death, disease and destruction (Atcheson, 1977). Menstrual rites in societies have ranged from restriction of activities, to the isolation of menstruating females in menstrual huts (Wilson, 1964). The cyclic nature of menstruation, resulted in primitive people relating it to the sinister effects of the moon on the female reproductive cycle (Chapman, 1967).

Donelson and Gullahorn (cited in Gerdes, 1979, p. 104-105) categorised myths into three groups:

1. "Protect her" which identifies the women as vulnerable.
2. "Protect us from her" which identifies the menstruating female as threatening and contaminating.
3. "There's power in the blood."

According to Atcheson (1977, p.25) myths regarding the powers of menstrual blood can be traced back to magical-religious beliefs. Most primitive beliefs associate the menstrual flow with impurity, destruction and disease (Atcheson, 1977). Many religions

view the menstrual flow as unclean, contaminated and as a potential threat to religious purity (Atcheson, 1977).

It has been suggested (Atcheson, 1977) that myths regarding the danger of the menstruating women originated from the association between menstruation and death related phenomena. Menstrual blood has been associated with (i) blood from injuries, wounds or death and (ii) abortion and the death of a potential human being. Lederer (1968) states that the fact that women could bleed without dying, was historically viewed with fear and wonder by men, and may also have contributed to rites of restriction.

Atcheson (1977) states that according to psychoanalytic theory, in females, menstruation evokes unconscious castration anxieties, as well as penis envy and the associated aggressions, which may be directed towards the male. However, menstruation may also evoke the unconscious castration anxieties of the male (Atcheson, 1977). Male fears of the menstruating female have been speculated to be partly due to the fact that the blood of menstruation may symbolise the blood of castration (Shapiro, 1988). Men's fears of the menstruating female are thus associated with the original mother-son relationship (Atcheson, 1977). Confinement of the menstruating female, in the past, may thus have protected men from their own unconscious anxieties, as well as the envy and wrath of menstruating women!

Female sexuality has also been suggested as a reason for the historic confinement of women, as well as men's avoidance of menstruating women. Increased sexual arousal prior to and during menstruation, is frequently reported. It has been argued (Atcheson, 1977) that if the female is more sexually aroused, she is more likely to be the sexual aggressor, which is regarded as untraditional feminine behaviour. Benedek (in Atcheson, 1977) suggested that premenstrual sexual arousal reflected pre-genital sexuality, the nature of which was impatient, urgent, aggressive and more traditionally 'masculine'.

Primitive rites involving the protection of the female during menstruation enabled women to withdraw from their daily labours. Advantages to the female of these myths are still evident today, in the avoidance of activities (such as school, work or sport), due to menstruation (Atcheson, 1977). It has been speculated that women may have instituted these rites and that men may have extended and imposed them (Atcheson, 1977).

Although many of the menstrual rites have largely disappeared from contemporary society, the myths surrounding menstruation have not been as easily discarded, as is evident from the hygienic crisis and cultural secretiveness with which menstruation is viewed today (Whisnant & Zegans, 1981). The remnants of primitive myths also appear to have been carried over to contemporary cultural myths about menstruation. Some insight into present day cultural attitudes to menstruation, is revealed in the following excerpts from advertisements for 'sanitary products' in women's magazines (Fair Lady & Cosmopolitan, May & June 1990):

1. "How do I keep my period a secret from my friends?"
2. "That first period is one no women ever forgets. But it should be the only one you remember...prevent tell-tale odour...Forget your periods."
3. "There is no danger of embarrassing accidents."
4. "So even when you're having your period you can still do anything you want..."
5. "Outtasight"
6. "Comfortable and hygienic...you'll feel confident enough to look and feel happy and relaxed...without having to hide your face..."

Primitive rites regarding the restriction of activities, may have led to the internalisation of menstruation as restricting, hence, the emphasis today on freedom of movement during menses. Cultural denial is evident in the need for secretiveness, which in itself, prevents detection and the consequences thereof, such as restriction, shame and embarrassment. The shame of staining and subsequent exposure as a menstruating female, may relate to primitive myths of the menstruant as unclean, dangerous and evil. The shame of staining may also relate to internal anxieties about being out of control of one's bodily functions. "Tell-tale" odours which would lead to exposure are supposedly avoided through the use of feminine"hygiene" products. Cultural prescriptions regarding the temperament of women as 'happy and relaxed' also appear in the advertisements, and reflect taboos against the expression of anger and aggression by women. The acknowledgement of menarche as a significant event in female development, is reflected in the advertisements, but is accompanied with suggestions that all subsequent periods be forgotten or denied. Primitive myths regarding menstruation, thus appear to be evident in our contemporary society, albeit more subtly so.

Various theories have been advanced regarding the origin of menstrual taboos. It appears that menstrual taboos may have originated from both female and male primitive beliefs about menstruation. It needs to be remembered that many of the primitive

beliefs and myths, were based on ignorance regarding the functioning of the reproductive system and the role of menstruation in the reproductive process. Lederer (1968, p.33) states that men's primitive fear pertained "...to the other-ness of woman, the particular mystery by which she managed to bleed, and to transform blood into babies, and food into milk, and to be apparently so self-sufficient and unapproachable in all of it". It has also been suggested that men's envy of the female reproductive capabilities, may have contributed to taboos, as may the beliefs about the actual harmful effects of the menstrual cycle, such as violent behaviour and accident proneness (Dalton cited in Sayers, 1982).

It appears also that men are influenced by the menstrual cycle of the women with whom they live (Mansfield et al, 1989; Shuttle & Redgrave, 1978). Taking into account the significance which menstruation has held for both men and women, it is important that PMS be evaluated within the wider environmental context in which it occurs.

4.2. CULTURAL DIAGNOSIS OF PMS AS PATHOLOGICAL

Johnson (1987) has argued that even though premenstrual symptoms have always existed, the impetus for the recognition of PMS as a disorder, followed close on the heels of major societal changes in the status and role of women, as a consequence of the women's liberation movement. Johnson (1987) states that PMS as a disorder, is recognised only in those societies, in which these changes took place, and subsequently presented women with conflicting societal expectations that they be both productive and reproductive. Through the recognition of PMS as a disorder, women are at the same time recognised as neither reproductive nor productive, since in menstruating, the female is potentially fertile but obviously not pregnant or reproducing, and through the experience of symptoms, the female is exempted from normal work activities and production (Johnson, 1987).

Ablanalp (1985) states that in 1982 (after years of doctors telling women that their problems were in their heads), PMS was recognised as a legitimate disorder, by the medical profession. Reasons that may have contributed to this recognition, included the use of PMS as a legal defence, as well as the recent medical legitimisation of dysmenorrhoea, which had also previously been considered to be 'in the head'. However, Johnson (1987) claims that the major impetus for the recognition of PMS as a disorder, came from women and not the medical profession. It has been argued (Johnson, 1987) that the classification of PMS as a disorder renders it treatable, which facilitates the

removal of potential sex related differences in performance and provides freedom from the constraints of symptoms which would otherwise interfere with women's careers. Furthermore, making PMS 'treatable' enables women to be in control of characteristics, such as anger and aggression, which are deemed socially undesirable (Johnson, 1987). Negative premenstrual behaviours, such as anger and hostility, are in conflict with cultural stereotypes of female behaviour (Bains & Slade, 1988). 'Premenstrual tension' thus allows women to express anger which would otherwise be deemed unacceptable (Bains & Slade, 1988).

According to Spitzer, Severino, Williams and Parry (1989) the rationale for the inclusion of PMS in the DSM-III(R) was:

1. The hope that diagnostic criteria would reduce the misdiagnosis, over-diagnosis and underdiagnosis of the syndrome.
2. The use of many past studies had been hampered by the lack of an accepted definition of PMS.
3. Criteria were needed to educate the public, psychiatry and the medical profession about PMS.

With the recognition of PMS as a disorder, both the public and the medical profession, appeared to display a tendency towards the overattribution of problems to hormones. This is illustrated in the following excerpt of a play (cited in Mills, 1988, p.101).

> You're sure Doctor?
> Premenstrual syndrome?...
> I'm getting divorced...
> I have a lot of job pressure...
> I'm raising twin boys...
> I lost a very dear friend...
> my husband is...in love with this women...younger than I
> And you think its *my period* and not my life?

In a survey of women's experiences of help-seeking for PMS, it was found (Brown & Zimmer, 1986) that the majority of women felt that they were not taken seriously, by health professionals. Nurses were, however, rated most positively in terms of assistance, whereas physicians were rated most negatively (Brown & Zimmer, 1986).

Despite the fact that no agreed upon treatment exists for PMS, one study (Alexander, Taylor & Fordyce, 1986) found that 81% of G.P.'s believed that they had been successful in treating PMS, in their general practices. Atkinson and Kozitza (1988) found that most psychotherapists could accurately diagnose PMS on the basis of the cyclicity of symptoms, however, the number who misdiagnosed was according to the authors, alarming.

4.3. CULTURAL IMPLICATIONS OF A PMS DIAGNOSIS

The cultural implications of a PMS diagnosis are immense and have provoked much reaction, and objection to the DSM- III(R) inclusion of PMS. Hart, Russel and Coleman (1987) state that the inclusion of PMS raises questions regarding the social control of culturally determined desirable behaviours and emotions in women. The major objections to inclusion are (McDaniel, 1988; Spitzer et al, 1989):

1. It confirms myths and taboos.
2. Stigmatisation and discrimination may occur in the work place.
3. It may be used against women in child custody and divorce proceedings.
4. Most women experience some premenstrual changes and symptoms, so why is a naturally occurring female cyclic phenomenon (experienced by half the world's population), considered a psychiatric disorder?

This final point is of great importance. The potential risk of a PMS label, to women in general, lies not so much in the recognition and treatment of severe PMS, but rather, in inaccurate estimates of the actual incidence of PMS, as well as the confusion between premenstrual symptoms and premenstrual syndrome. The severity criterion is imperative in the diagnosis. Hallman (1986) states that not all symptoms require treatment and mild symptoms of tension and irritability, are not comparable to the severe and debilitating symptoms experienced by a small percentage of women. Halbreich (1989) states that it must be remembered, that women with severe PMS, represent a very small group of women, who are at the extreme end of the continuum of those who do not have any premenstrual changes and those who report severe changes.

Critics of the diagnosis argue that in view of the ethical considerations of race and/or gender specific diagnostic categories and the subsequent potential for stigmatisation, alternatives such as a sub-coding of premenstrual exacerbation should be considered (Gallant & Hamilton, 1988). It has furthermore been argued (McFarlane, Martin & Macbeth Williams, 1988) that once established, stereotypes are difficult to change. In

addition, stereotypes may be internalised and lead to self-fulfilling prophecies. Concern has been voiced over the effect which the label will have for black women, in particular, who are frequently subjected to both racial and sexual inequalities (Williams, 1987).

It has also been argued (Rome, 1986) that the medicalisation of PMS, is a further step in the medicalisation of normal female life events, which are treated as illnesses, such as menstruation, pregnancy and the menopause.

4.4. LEGAL IMPLICATIONS OF A PMS DIAGNOSIS

According to Vanezis (1991) the courts have, in the past, often taken the menstrual cycle into account when dealing with female offenders. Many court cases have been reported in which the premenstrual phase was cited as a mitigating factor (see Vanezis, 1991). Sommer (1984) states that Victorian society considered women to be prone to stress at times of hormonal change, such as menstruation, pregnancy and following childbirth. These events were considered to render women irresponsible and probably accounts for the fact that few women who murdered their children, were held responsible and punished (Sommer, 1984). The legal case of Mary Harris in 1865, who murdered her lover and was found not guilty, on the grounds of temporary insanity, 'caused' by menstrual problems, is often cited in the PMS literature (Spiegel, 1988).

More recently in 1980 and 1981, the British courts set free two women charged with murder, on the condition that they comply with progesterone treatment and eat sensibly (Sommer, 1984). Dalton had testified that PMS had transformed these women into uncontrollable and 'raging animals' every month (Sommer, 1984). Even more recently (Star, 21st September 1990) another court case was reported in which a British woman escaped a jail sentence, for stabbing the father of her baby. The judge ruled that PMS, together with the aggravating factor of post-natal depression, rendered the woman irresponsible for her actions.

PMS has not been used successfully to date in the U.S.A. courts and it has been argued that the lack of an agreed upon definition of PMS, as well as dispute regarding the existence of the syndrome, makes it unlikely that it will ever be used successfully in the U.S.A. courts (Benedek, 1988; Sayers, 1988; Sommer, 1984). According to Benedek (1988) the current definition of PMS does not comply with any of the legal grounds for an insanity plea. Sommer (1984) argues that the courts take into account, the fact that

at certain times, people are less in control of their behaviour, than at other times. However, according to Sommer (1984), no evidence exists to date, which indicates that the ability to behave rationally is influenced by the menstrual cycle.

Indiscriminate usage of the PMS label may allow women to get away with behaviour, such as murder, which would be unacceptable in men. It has furthermore been argued (Laws, Hey & Eagan, cited in Oakley, 1986), that the legal sanction of the usage of PMS as a defence, has implications for all women. Subsequently, any theory which supports the view that women are not in control, at least once a month, deserves scrutiny. Critics argue that interest in PMS as a medical phenomena is one thing, but to argue that premenstrual symptoms drive women to criminal actions is unacceptable (Sommer, 1984). Chrisler and Levy (1990) state that it needs to be remembered, that while a very small percentage of women may go into uncontrollable rages, become violent and attribute this to their hormones, women actually commit very few violent crimes, when compared to men. In fact, women are responsible for less than 5% of all violent crimes (Chrisler & Levy, 1990).

The ethical considerations in the recognition of PMS as a disorder, require careful consideration, in that disadvantages to women are implicit in gender related diagnoses, which propagate the view that women are at the mercy of their 'raging' hormones. Furthermore, many pertinent questions remain to be answered, as to why the expression and appearance of 'symptoms' such as anger and irritability, in women, are considered a psychiatric disorder. On the other hand, it has also been pointed out (Shuttle & Redgrave, 1978) that the denial of PMS, as well as the avoidance of research (regarding the aetiology and treatment), may also reflect negative sociocultural attitudes to the health of women. Haskett and Steiner (1986) point out that attempts to understand and treat, should be differentiated from unwarranted generalisations about the emotional stability of women as a group.

4.4.1. Feminist objections to the PMS diagnosis

The major objections to the DSM-III(R) inclusion of PMS can best be understood in terms of the liberal and radical feminist arguments. Liberal feminists argue that there is no scientific basis or evidence which indicates that menstruation is harmful. Consequently, there is no validity in the argument for discrimination on the basis of menstruation (Sayers, 1982; Travis, 1988). Liberal feminists deny any physiologically determined sex differences and argue that any sex differences between men and women, stem from socialisation processes (Travis, 1988). Radical feminists, on the other

hand, emphasise sex differences, and maximise unique features of maleness and femaleness (Travis, 1988). Sayers (1982) states that radical feminists argue that we need to reverse the prevalent negative views of menstruation, and create a positive social view and evaluation of menstruation, through the celebration of menstruation and the flouting of menstrual taboos. Central to the radical feminist views of menstruation are the concepts of unique female styles such as creativity, trust and co-operation, as opposed to traditional male styles, such as competitiveness, exploitation and destruction (Travis, 1988). The stress is on a universal femininity, which is essentially positive, and relates to concepts of mother nature and the earthmother (Travis, 1988).

Sayers (1982, P. 120) argues that the romantic symbolisation of a universal feminine community, does not take into account the fact that women from different classes and cultures have different and conflicting needs, that "cannot simply be wished away by glorifying and wallowing in our shared biology." Furthermore, the above schools of thought deny the fact that for some women, menstruation does in reality have negative effects, and is extremely distressing (Sayers, 1982). According to Sayers (1982), this denial is to the disadvantage of certain groups of women, such as those working in industry or performing physical labour, who would benefit from time off from work during the menstrual phase. The denial is, however, to the advantage of industry in terms of the potential cost of work absenteeism (Sayers, 1982).

4.5. CROSS-CULTURAL INCIDENCE OF PMS

Premenstrual symptoms appear to be a universal phenomenon. Findings from cross-cultural studies suggest that subtle differences do, however, exist with regard to the most commonly reported premenstrual symptoms (Adenaike & Abidoye, 1987; Chaturvedi & Chandra, 1990a; Hasin, Dennerstein & Gotts, 1988; Janiger, Riffenburgh & Kersh, 1972).

Chaturvedi and Chandra (1989) examined symptoms in women from India, and found that more of the women had somatic changes (e.g. fatigue, backache, bloating), than cognitive and affective changes. Only six percent of the women met the DSM-III(R) criteria for PMS. According to these authors, the low incidence of severe PMS, may be due to the fact that oriental women are known to somatise and report fewer emotional symptoms. In addition, during the menstrual and perimenstrual phase, Indian women are relieved from all household duties, such as cooking (Chaturvedi & Chandra, 1989). The

demands of the family are also decreased, all of which may, according to these authors, decrease feelings of distress.

PMS community clinics in the U.S.A. are reported to be utilised by mainly white women, despite the fact that some of these community clinics, are located in predominantly black community areas (Stout, Grady, Steege, Blazer, George & Melville, 1986). Stout et al (1986) investigated the factors, which may account for the difference in the utilisation of health care services for PMS. They concluded that the differences in PMS clinic attendance, was not due to differences in severity of symptoms, such as negative emotions, but may rather have been due to factors, such as differences in patterns of help-seeking, between black and white American women (Stout et al, 1986).

Cultural factors which may influence decisions to seek medical treatment for PMS, need to be considered, as do cultural interpretations of menstrual and premenstrual symptoms, as distressing and worthy of professional medical treatment.

4.6. CONCLUSIONS: CULTURAL FACTORS

PMS occurs mostly, within an environmental context, which attaches great significance to menstruation, as well as the categorisation of sex roles and stereotypes of female behaviour. Different cultures may accommodate symptoms differently and factors, such as social support and help seeking, need consideration. Cross-cultural variations in PMS, may provide helpful clues to understanding the aetiology of PMS. The cultural diagnosis of PMS as a psychiatric disorder, raises many ethical considerations, the implications of which are immense and deserve attention. Arguments both in favour of and against the diagnosis have been advanced.

4.7. INTERACTION OF BIOLOGICAL, PSYCHOLOGICAL AND ENVIRONMENTAL FACTORS

Due to the fact that so many competing theories and different factors have been implicated in PMS, various theoretical frameworks are presented below, which can be utilised to understand the diverse and at times inconsistent, research findings.

Halbreich et al (1988) have outlined a theory of PMS causation, which attempts to integrate and explain the possible interactions underlying PMS, as well as the aetiological mechanisms thereof. Among the factors, which Halbreich et al (1988) identify as potential contributors to the development of PMS, are the following:

hormonal fluctuations; single and multiple biochemical imbalances; impaired homeostasis; stressors and lowered tolerance; individual vulnerability; genetic inheritance; early psychological development; and environmental factors. Other factors which could be added to this list include beliefs, emotions, memories, experiential states, and rules for interpreting the environment (Rubinow & Schmidt, 1989).

Halbreich et al (1988) postulate that multiple cyclic neuroendocrine changes occur, at different magnitudes and paces, across the cycle. If homeostatic balance becomes impaired, susceptibility and vulnerability to both internal and external stressors is increased, and symptoms may appear. Specific symptom clusters are then determined by the following factors: (1) individual tendency to specific symptoms (e.g. panic attacks); (2) changed activity of a single neuroendocrine component (e.g. decreased serotonergic activity); and (3) imbalances between two or more components. Repeated hormonal fluctuations, imbalanced homeostasis, and negative symptoms, may increase vulnerability, which in turn may lower tolerance and increase impairment (Halbreich et al, 1988). This self-amplified cycle, is controlled through feedback loops, which interact dynamically to produce PMS, and are influenced by psychological and environmental factors.

An important factor identified in Halbreich et al's (1988) theoretical framework, is the individual's tendency to specific symptoms. Gerdes (personal communication, 1992) has also emphasised the importance of considering the individual's tendency to specific symptoms, in psychosomatic illness. In a study of climacteric women, Gerdes (1980) found that in comparison to asymptomatic women, symptomatic climacteric women had a significantly higher tendency to psychosomatic illness, together with more gynaecological symptoms, in relation to menstruation, pregnancy and the menopause. These results suggest that certain women may react gynaecologically, under stress, by developing symptoms related to gynaecological functioning. While genetic inheritance may partially account for this tendency, other psychological and environmental factors may also play an important role in determining vulnerability to gynaecological disturbances.

Gerdes (1980) identified specific characteristics, in climacteric women, which appear to play a role in determining resilience against the development of symptoms. These characteristics included, amongst others, positive or neutral attitudes to the menopause, informed knowledge about the menopause, positive self-image, an adequate

means of coping with stress, higher satisfaction on marital indices, the presence of family support, and low ratings of depression and anxiety. The inverse of these characteristics, were identified as increasing vulnerability. It is of importance and interest to note, that the inverse of these characteristics, have also been associated with PMS women.

What emerges clearly from the preceding discussion, is that it is not only important to consider the women, as a whole, in terms of the reciprocal interactions between the biological, psychological and environmental systems (and sub-systems), but also, that it is important to take into account, characteristics which may foster resilience, or alternatively, increase vulnerability. In addition, individual response specificity and proneness to gynaecological symptoms or disturbance under stress, need to be taken into account in the assessment and treatment of women with PMS. The implications for treatment are that each individual needs to be considered as unique. While the common denominator may be PMS, different factors may be more important in different women and subsequently, individualised treatment may be implicated.

While it is difficult to understand and know the exact causal mechanisms underlying PMS, it is clear that certain factors interact reciprocally to influence the development of PMS. The difficulty with regard to understanding the causal mechanisms underlying PMS, may also partially be accounted for, by the dominant views of mind and body as separate, as opposed to interacting parts of the whole. In addition, simplistic causal models based on linear thinking, may also be hampering attempts to understand and treat. At a time when there is a call for integration and a move away from "mechanistic thinking which may obscure our understanding" (Capra, 1982; Freedman, 1992) attempts to understand the role of the many diverse factors, implicated in PMS, present an exciting and challenging area for research.

4.8. CONCLUSIONS: LITERATURE REVIEW

As is evident from the literature reviewed in the preceding chapters, a substantial amount of research has been conducted in an attempt to identify the causal factor/s implicated in the development of PMS. It appears that PMS is a complex syndrome, which cannot be understood in simplistic either/or theories, regarding the biological, psychological and environmental factors. It is likely that multiple factors contribute to the development of the syndrome. Table 1 lists the main aetiological factors, which are considered to be implicated in PMS.

TABLE 1. FACTORS IMPLICATED IN THE AETIOLOGY OF PMS

BIOLOGICAL FACTORS	PSYCHOLOGICAL FACTORS	ENVIRONMENTAL FACTORS
1. **Hormonal**	1. **Personality traits**	1. **Culture**
Oestrogen		Myths and taboos
Progesterone	2. **Cognitive factors**	Sex roles
Prolactin	Attitudes	Social support
Prostaglandins	Attribution	Cultural variations
Hormonal imbalances	Expectancy	
2. **Neurotransmitters**		
Serotonin	3. **Psychodynamic**	
Dopamine	Early development	
3. **Nutrition**	Menarche	
Vitamin B6, A, E	Sex role	
Magnesium		
4. **Hypothyroidism**	4. **Psychiatric disorder**	
5. **Hypoglycaemia**	Depression	
6. **Genetic inheritance**	Anxiety	

With regard to the mechanisms of aetiology in PMS, it appears that this is a syndrome comprised of a wide array of potential biological, psychological and environmental influences, which interact dynamically, through feedback loops, thereby influencing the development and perpetuation of PMS. It thus appears difficult to identify and isolate any one single factor which is independently responsible for causation.

CHAPTER 5

RESEARCH METHOD AND DESIGN

The field of premenstrual syndrome research, is a methodological minefield - very few studies avoid criticism from one viewpoint or another.

Walker, 1992

5.1. METHODOLOGICAL ISSUES

Despite the ongoing research world-wide, regarding the aetiology and treatment of PMS, numerous methodological difficulties have hindered the interpretation and generalisation of past research findings. Rubinow et al (1985) argue that the current mystery and controversy, surrounding PMS, is largely a result of errors in research design. Problems in PMS research include the following (Brooks-Gunn, 1986; Halbreich & Endicott, 1985a; Hart, Coleman & Russell, 1987):

1. The use of small samples, as well as samples, which are not representative of PMS patients as a group.
2. The lack of double-blind placebo-controlled studies.
3. The sensitivity of PMS to placebo.
4. The lack of control groups in PMS studies.
5. Inappropriate statistical techniques.
6. Dispute regarding the definition of PMS.
7. Difficulties in determining the change from baseline, in symptom levels.
8. The use of retrospective ratings of PMS.
9. Failure to differentiate between symptoms and syndromes.

The above considerations, were taken into account, in the planning of the current study. Table 2 presents the main criticisms of past research, issues which future research must address, and how some of the central methodological problems were addressed in the current study.

TABLE 2. METHODOLOGICAL PROBLEMS IN PMS RESEARCH

CRITICISM OF PAST RESEARCH	ISSUES WHICH FUTURE RESEARCH MUST ADDRESS	CURRENT RESEARCH STUDY
1. Lack of a clear definition of PMS, which distinguishes between symptoms and syndrome.	Use a clear and accepted definition of PMS.	Used DSM-III(R) criteria for Late Luteal Phase Dysphoric Disorder.
2. PMS diagnosis based on retrospective and subjective ratings.	Prospective reports to be used. Self-reports to be confirmed, with more objective ratings.	Used prospective ratings. Subjects observed in premenstrual phase.
3. Failure to include control groups.	Use of appropriate comparison groups.	Inclusion of control group.
4. Small samples.	Representative sample.	Small sample.
5. Over-generalisation from specific samples, to the general population.	Selection of well-defined groups.	Sample defined.
6. Use of research designs which do not reflect individual variations.	Selection of designs which reflect individual variations.	Use of instruments which take into account individual variations.
7. Failure to test specific hypotheses.	Formulate specific hypotheses.	Specific hypotheses formulated.

A methodological shortcoming not addressed in the current study, was that a small sample was used. The main reason for this, was that it was decided, to focus in depth on a smaller sample and assess thoroughly, various psychological aspects of the premenstrual syndrome, as opposed to focusing on a larger sample, in less detail. Nevertheless, based on the small sample size, caution needs to be applied in interpreting and generalizing the findings of the current study.

5.2. THE RESEARCH DESIGN

The theoretical assumption underlying the current research study, was that the development of PMS, is influenced by the reciprocal interaction, of multiple psychological, biological and environmental factors. The central aim of the study, was to explore and delineate some of the psychological aspects of PMS, without assuming that any of these factors exerted a direct and simple linear cause-effect role, in the development of PMS. Women with PMS (experimental group), were compared to women reporting only mild or minimal premenstrual changes (control group), on various psychological measures. The specific factors researched, were based on those identified in past research and theory, as being influential in the development of PMS.

5.2.1. Hypotheses

1. Women with PMS have higher scores on measures of stress, when compared to women with mild/minimal premenstrual changes.
2. Women with PMS have more negative attitudes to menstruation, than do women without PMS.
3. Women with PMS utilise different coping mechanisms, in response to emotional stress, when compared to women with mild/minimal premenstrual changes.
4. Women with PMS have a history of more psychosomatic illness, than do women without PMS.
5. The daily monitoring of symptoms in women with PMS, over a period of two menstrual cycles, will result in diminished symptom severity.

5.2.2. Exploratory questions

1. What are the most commonly reported premenstrual symptoms, within the experimental (PMS) group?
2. What daily stressors are reported by women with severe PMS?
3. Which socio-cultural myths and taboos were adhered to, by the PMS and control subjects, regarding the restriction of activities during menstruation?
4. What was the experience of menarche within the study sample?
5. What do research participants perceive to be the most positive and negative aspects, of being a woman?

5.3. DEFINITION OF CONCEPTS

5.3.1. PMS

The DSM-III(R) criteria, for Late Luteal Phase Dysphoric Disorder (see appendix 1), were used to define PMS. The premenstrual phase was defined as the 5 days preceding menstruation. The first day of menstrual bleeding was defined as day 1 of the cycle, and the intermenstrual phase (follicular phase) was defined as days 5-10 of the cycle.

5.3.2. Stressor

Stressor was defined as any event, which produced psychological tension and required adaptive coping. Recent life events, as well as current stressors, were assessed.

5.3.3. Coping

Coping refers to the individual's endeavours to manage stress, either through problem focused (action orientated) coping, or through emotion focused coping (using defenses such as denial, or avoidance, to reduce the degree of emotional arousal).

5.3.4. Psychosomatic

Psychosomatic illness refers to any physical disorder, in which the aetiology is assumed to have a psychological component (Reber, 1985, p.597). A psychosomatic reactor, is an individual, in whom there is a tendency to react physiologically, as opposed to behaviourally, under stress (Gerdes, 1979, p.48).

5.4. SUBJECTS

5.4.1. Recruitment of subjects

Various factors need to be considered, when recruiting subjects for PMS research. The selection of subjects, as well as the phrasing of recruitment notices, is linked to the characteristics and symptoms, reported by research participants (Halbreich & Endicott, 1985a). Notices which do not emphasise symptom severity, tend to attract subjects, who report only mild premenstrual changes (Halbreich & Endicott, 1985a).

One factor which may influence the final number of subjects recruited, is that the potential sample population, is estimated to be only 5-10% of the female population. In addition, the stringency of the inclusion criteria, will further affect the final number of subjects recruited.

A potential difficulty with regard to the recruitment of subjects for prospective PMS research, is that subjects may withdraw from the study, due to dwindling interest, or, changing life circumstances. However, the literature indicates that the drop out rate in studies of severe PMS, is very low (Hart, Coleman & Russell, 1987). It has been reported that most PMS subjects, remain in the study for the required period of two months (Hart, Coleman & Russell, 1987).

Many of the research studies which have been conducted overseas, have recruited subjects from women seeking treatment, at PMS clinics. On the whole, such clinics are unusual in South Africa. One such clinic is in existence, at a local Johannesburg hospital (Sonnendecker, personal communication, 1991) however, various factors excluded this clinic as a possible source for the recruitment of subjects. PMS support groups, also provide a potential source for the recruitment of subjects. One such group was initiated in Johannesburg, however, it has subsequently been discontinued, due to lack of support. Subjects for the current study, were thus recruited from the general population.

5.4.1.1. PMS group

PMS subjects (experimental group), were recruited, by posting recruitment notices to women on the mailing list of a women's organisation, as well as through word of mouth. Notices were also placed on notice-boards at various female residences. Notices were further distributed at various places of work. In addition, an advertisement was placed in a local newspaper.

Recruitment notices for the PMS group, stated that subjects were required for a study on severe premenstrual symptoms (PMS). Interested volunteers were requested to contact the researcher, at the stated contact telephone numbers. Despite the fact that notices emphasised symptom severity, some participants stated that they were uncertain with regard to the distinction of severity of symptoms. It might have been informative to add to the recruitment notice, that subjects who experienced severe premenstrual symptoms, which *interfered with work, or interpersonal relationships and other activities*, were required for a research study.

Participation in the study was voluntary. Subjects were informed that the research formed part of a Master's degree, and would be published in the form of a dissertation. Research participants were assured of confidentiality and anonymity. No remuneration

was offered for participation. However, a workshop on the management of PMS, was presented at the end of the study, by Professor L.C. Gerdes and the researcher.

5.4.1.2. Control group

Colleagues and associates of the researcher, assisted in the recruitment of subjects for the control group, from places of work and university classes. Potential participants were informed through word of mouth, that women who experienced only mild or minimal premenstrual changes (or no premenstrual changes), were required for a research study. Women interested in participating in the study, gave their names and contact numbers, to the persons assisting in recruitment and the researcher then contacted them.

5.4.2 Inclusion criteria

The measuring instruments used in the study, were of the pen and pencil variety. A general requirement with regard to participation in the study was thus literacy and a minimum education of 10 years of schooling (Standard eight). Based on practical considerations regarding the translation of the measuring instruments, the ability to understand written English, was a further requirement for participation. The researcher was, however, present during the assessments, in order to re-phrase or explain the meanings of any words which were not clear. In addition to the general inclusion criteria, specific criteria were formulated for the two groups of subjects.

5.4.2.1. PMS group

Various factors necessitated the use of stringent inclusion criteria, in the selection of subjects for the PMS group. These factors were primarily related to methodological considerations in PMS research, such as the criteria for the diagnosis of PMS. Other considerations, were that subjects should be free of any other gynaecological or hormonal disorders and that menstrual cycles should be regular. For ethical reasons, subjects at risk, such as those with current psychiatric or medical diagnoses, for which treatment was being received, were not included in the study. Since the focus of the study was on psychological and not biological aspects of PMS, subjects using oral contraception, were not excluded from the study. However, this factor should, ideally, have been controlled for. Nevertheless, only one subject in the PMS group, was currently using oral contraception. The following inclusion criteria were finally adopted for the selection of PMS subjects:

1. Age 20-40.
2. Regular menstrual cycles.
3. Symptom severity for at least three months.
4. Meets DSM-III(R) criteria for Late Luteal Phase Dysphoric Disorder.
5. No current diagnosis of a medical or psychiatric disorder, for which treatment is being received.
6. Not on any psychotropic or hormonal medication (excluding the pill).
7. Willing and able to remain in the study for a period of two months.

Most of the persons who contacted the researcher, met the inclusion criteria. Reasons for the exclusion of persons who volunteered for participation, included symptoms of dysmenorrhoea and not PMS. One respondent was excluded since she was currently receiving medical treatment for PMS. Another respondent was excluded from participation, due to the fact that she was moving to another town shortly, and would be unable to keep records for the required time.

5.4.2.2. Control group

Inclusion criteria for the control group were that premenstrual changes should be only mild or minimal. In addition, the general requirements pertaining to literacy, education and age were also applicable to the control group.

5.4.3. Selection of final sample

5.4.3.1. PMS group

The inclusion of subjects in the final data analysis, was dependent on the completion of daily ratings, for at least two menstrual cycles. All subjects complied with daily ratings and none of the subjects included in the study dropped out. One or two subjects mentioned that they had forgotten to fill in the forms on a particular day, but had subsequently, completed the ratings on the following day. Some of the women in the study reported that husbands/partners and family members, took an active role in reminding them to complete daily ratings. All subjects completed the prospective ratings for a minimum of two menstrual cycles. Many of the subjects kept ratings for three cycles. The length of participation in the study, was determined by the acquisition of daily records for at least two complete menstrual cycles. One subject remained in the study for five cycles, due to the fact that the daily ratings for the first two cycles, were destroyed in a taxi accident. It was thus necessary to obtain new ratings.

Subjects who completed the study were only included in the final data analysis, if the retrospective PMS diagnosis was confirmed by prospective ratings. In accordance with research guidelines, a minimum increase of 33% in mean symptom intensity, measured intermenstrually (days 5-10 of the cycle), as compared to that of the premenstrual phase (5 days preceding menstruation), was required. The increase in symptom severity had to be evidenced with regard to at least three symptoms, listed in the DSM-III(R) diagnostic criteria. In addition, these symptoms had to occur at the severe or extreme level, in the premenstrual phase. Three out of sixteen subjects who completed the study, were excluded from the data analysis, based on the daily rating requirements.

It is important to point out, that although fairly stringent inclusion criteria were compiled for the current study, it was necessary to exercise some degree of flexibility with regard to these criteria. For example, although one subject was 19 years of age, she was included due to the fact that she was shortly turning 20. Some doubt also existed with regard to the reported presence of endometriosis in one subject, however, this could not be confirmed with certainty, despite her visit to her gynaecologist. In another subject, tranquilisers were prescribed by her doctor, within the latter part of the study. However, she was nevertheless included in the final data analysis, since the medication was taken for a short period only, which coincided with the last few days of her daily ratings.

While it was a requirement that cycles should be regular and although subjects confirmed that their cycles were regular, prospective records indicated that this was frequently not the case. Variations across cycles, albeit minimal (a few days), were common.

The preceding discussion indicates some of the difficulties with regard to the selection of subjects for PMS research. It is not always possible to have a 'pure' PMS sample, since many other factors may contaminate ratings or be superimposed upon PMS. All these factors make it necessary to exercise some degree of flexibility with regard to the original inclusion criteria. In addition, changing life circumstances may necessitate the exclusion of subjects, who were initially included, from the data analysis.

5.4.3.2. Control group

Out of sixteen subjects who were assessed for the control group, only eight were included in the final data analysis. Five were excluded because premenstrual symptoms

were moderate. A further three subjects, were excluded due to the fact that their ratings suggested that they were false negatives, i.e. even though they responded to the recruitment notices for subjects with only mild or minimal premenstrual changes, symptoms were rated as moderate or even severe on measuring instruments.

5.4.4. Number of subjects

Out of 32 subjects who completed the study, a final sample of 21 subjects were included in the data analysis. The experimental group (severe PMS) comprised 13 subjects and the control group consisted of 8 subjects.

5.4.5. Description of subjects

The following table (Table 3) provides descriptive data of subjects, in both the experimental (n = 13) and control groups (n = 8).

TABLE 3. DESCRIPTION OF SUBJECTS

DESCRIPTION	PMS GROUP (n = 13)	CONTROL GROUP (n = 8)
Age		
Range	19-40	19-28
Mean	29	23
Education		
10 years schooling	1	-
12 years (matric)	-	-
Diploma	9	-
Degree	1	5
Post-graduate degree	2	3
Occupation		
Full time student	-	2
Clerical/Secretarial	5	-
Professional	8	6

...Table 3 cont/d

TABLE 3. DESCRIPTION OF SUBJECTS (continued)

DESCRIPTION	PMS GROUP	CONTROL GROUP
Marital status		
Single	4	5
Divorced	1	1
Married/Living together	7	2
Widowed	1	-
Language group		
English	3	2
Afrikaans	7	6
Sotho	2	-
Zulu	1	-
Number of children		
None	7	8
One	1	-
Two	4	-
Three	1	-

A few factors relating to the above table require further elaboration. The mean age difference between the PMS group and the control group, was six years. Although this may seem large, the mean for both groups is within the age range of 20 to 30 years. The literature does not indicate any differences in the incidence for PMS, within this age range, and it is thus not expected that this difference will influence the results.

Subjects were more or less matched on both language and education. With regard to education, the majority of subjects (PMS group = 92%; control group = 100%) had some form of tertiary education. Socio-economic status and income is frequently related to educational attainment, and it can thus be assumed that the inclusion criteria, with regard to education, resulted in the fact that women from very poor socioeconomic groups, were excluded from the study.

All subjects were either working or studying full-time, i.e. none of the subjects were full-time homemakers. This factor controlled for any differences which may have arisen, between homemakers and career women, on PMS symptom severity. Students who

were in their final year of professional training (e.g. final year medical students), and who were working as part of this training, were classified as professionals.

Fifty four percent of subjects in the PMS group were married (engaged to be married, or living with a partner) as opposed to 25% in the control group. However, this difference should not affect the results, since, marriage per se is not associated, independently, with PMS.

None of the controls had children as opposed to 54% of the PMS group, who did not have children. The literature regarding the association between parity and PMS symptoms, is inconsistent. It is thus not clear whether this factor will influence the results. In addition, given the fact that approximately half of the PMS group had children, as opposed to the remainder of the group (54%) who did not have children, it appears that parity per se, is not, independently, associated with PMS.

5.5. MEASURING INSTRUMENTS

5.5.1. Structured interview

A structured interview was used to obtain general information, regarding menstruation, such as length of cycles and cycle regularity. Questions were also devised to elicit information about the following aspects of PMS: the main distressing symptom; onset, duration and history of PMS; events temporally associated with PMS; past treatment for PMS; personality changes in the premenstrual phase, and changes in feelings about important people. Subjects were also asked what they thought caused PMS, i.e. to what they attributed PMS.

5.5.2. Premenstrual Assessment Form (PAF)

Various measures are available for the assessment of premenstrual symptoms. The Premenstrual Assessment Form (devised by Halbreich, Endicott, Schacht & Nee, 1982) was selected for various reasons relating to the actual instrument itself, as outlined below. A further reason for the selection of the PAF, was that it is one of the most frequently used instruments in PMS research. This factor, facilitates the comparison between the findings of this study, with that of other research studies.

The PAF is a comprehensive questionnaire comprised of 95 items, which include various physical, emotional and behavioural changes. It is a retrospective self rating instrument, which reflects the wide diversity of premenstrual changes. Items are rated

on a six point scale, ranging from no change, to extreme change. Each subject is instructed to rate the degree of premenstrual change, experienced in her last three menstrual cycles. Additional instructions are provided, to assist in the distinction of premenstrual changes from chronic symptoms. For example, " A feature is considered to be part of the premenstrual phase if: (1) it appears or changes during the premenstrual period, (2) it does not exist in the same form or severity immediately prior to the premenstrual period, and (3) it disappears or returns to its usual state, or level of severity, during the full flow of menses" (Halbreich et al, 1982).

The initial selection of items for the PAF was based on a survey of the PMS literature, as well as a survey of other premenstrual assessment questionnaires. The initial item pool was reviewed by female research assistants, and additional items were added to the initial item pool. The original item pool contained 200 items, however, this was eventually reduced to 150 items. The scale was then administered to two groups of women, namely, female employees and student nurses. An analysis of the responses of 154 subjects was then conducted. Item frequencies and intercorrelations were carried out, in order to determine which items could be combined, with a view to reducing the initial item pool. Subsequently, 95 items were retained for the final scale. Alpha coefficients of internal consistency, as well as intercorrelations of items, were also conducted (see Halbreich et al, 1982).

The PAF can be scored in three different ways. The first method, is along seven dimensional measures of bipolar continua, which indicate the direction and magnitude of change on each dimension (for example, depressed mood - increased well-being). The second method of scoring, is based on the Unipolar Summary Scales, which represent dimensions of change and provide a quantitative score, derived by summing the changes in all items of the particular scale. The final method of scoring, is according to typological categories, compiled according to certain criteria (for example, agitated depressive sub-type; hostile depressive sub-type). The latter type of scoring is most useful in clinical practice, when making treatment decisions (see Halbreich et al, 1982 and Halbreich, Endicott & Lesser, 1985, for more information with regard to scoring).

Other features of the PAF, which render it attractive as a research instrument, are that: (a) it enables each subject to give a qualitative account of her premenstrual changes, and (b) it is complemented by a Daily Rating Form. The Daily Rating Form (DRF) contains 21 items which emphasise dysphoric changes, as well as common premenstrual physical changes. The DRF can be further modified, to include individual symptoms, not

listed on the DRF. In addition, it also provides space, for the description of the occurrence of any event, on a particular day, which may have affected the way the subject was feeling. The DRF provides prospective ratings, of cycle symptomatology and change, thereby providing confirmation of the retrospective PMS diagnosis.

5.5.3. Menstrual Attitude Questionnaire

The Menstrual Attitude Questionnaire (devised by Brooks-Gunn & Ruble, 1980) was selected in order to assess attitudes towards menstruation. Factors affecting the choice of this instrument were (a) it is frequently used by other researchers (thereby facilitating the comparison of findings), and (b) various factors relating to the actual instrument itself, deemed it the most suitable for the current study.

The MAQ was devised for use as a clinical research instrument. The questionnaire assesses five dimensions of attitudes (as opposed to other scales which assess only one dimension, i.e. positive-negative attitudes to menstruation). The five dimensions assessed by the MAQ, are as follows: (1) menstruation as a debilitating event; (2) menstruation as a natural event; (3) menstruation as a bothersome event; (4) menstruation as an event, in which the onset can be anticipated and predicted; and (5) denial of any effect of menstruation.

The MAQ contains 33 items, which are rated on a seven point Likert type scale, ranging from: strongly agree = 1, to strongly disagree = 7. Scores are obtained for each dimension, by summing the total for each item, which pertains to the particular dimension. Items are counterbalanced, in that some are negatively phrased and others positively phrased (Brooks-Gunn & Ruble, 1980). The statistical analysis of the scale indicated internal consistency and high item homogeneity (Brooks-Gunn & Ruble, 1980).

Brooks-Gunn and Ruble (1980) compiled the 33 item scale from an original 46 item scale. A factor analysis of the responses obtained from a first sample of 191 university students (on the original 46 item scale), facilitated the identification of five factors, as opposed to the initial seven, which were identified during the construction of the scale. The shortened scale of 33 items was then re-administered to a second sample of subjects. A statistical analysis of the latter responses was conducted and the scale was retained in the shortened form (see Brooks-Gunn & Ruble, 1980, for more information regarding the construction of the scale).

5.5.4. Schedule of Recent Events (SRE)

The Schedule of Recent Events (devised by Holmes & Rahe, 1967) is frequently used in research, for the assessment of recent life events stress. The theory underlying the development of this scale, was that life events, which induce stress and require adaptation, generate physiological demands on the individual. These demands are hypothesised to increase the individual's vulnerability to the development of a psychosomatic illness. The rationale for the choice of this instrument was: (a) that it gives an indication of recent stressful life events, and (b) an accumulation of stressful life events in the preceding year (as evidenced in a score of more than 200 on the scale) has been associated with the development of a psychosomatic illness (see Holmes & Rahe, 1967; Kaplan & Sadock, 1989, p.1157 for more information on this scale).

The scale lists 43 life events (both positive and negative), which may cause varying degrees of disruption, and require varying degrees of adaptation (e.g. marriage, divorce). Subjects indicate which of these events, they have experienced within the past year. The original scale, was modified for the current study, due to the fact that certain items were irrelevant or inappropriate (for example, items pertaining to school, christmas, and pregnancy). Five items were consequently omitted from the scale, which resulted in a 38 item scale being used in the current study. A further modification was that subjects were instructed, to list events which had occurred, only in the past six months.

The SRE was constructed by questioning hundreds of men and women, from different educational, socioeconomic, age, religious and cultural groups, as to the relative degree of adjustment, required by each life event. A high degree of consensus was found, across the various groups, with regard to the ranking of the adaptation required by each life event. Each item was then ranked or given a score, based on the rankings obtained from the sample, for example, divorce = 73 units (see Holmes & Rahe, 1967, for more detailed information about the construction of this scale).

5.5.5. Mini Biography Questionnaire (MBQ)

The Mini-Biography Questionnaire (devised by Gerdes, 1979) provides comprehensive information pertaining to the individual as a bio-developmental-social unit. It was compiled based on a review of the relevant theory and research, regarding the biopsychosocial antecedents of illness. The motivation underlying the selection of this instrument was that it provides comprehensive information about the individual, which was relevant to the hypotheses in the current study. In addition, certain

qualities of the questionnaire, deemed it suitable for the purposes of the current study. For example, the MBQ is unique, in that no other similar questionnaires appear to exist, which assess the various biopsychosocial aspects, associated with psychosomatic (and in particular gynaecological) disorders.

The MBQ is designed to elicit information pertaining to the individual's developmental life history (Gerdes, 1979). Questions on the MBQ elicit information, regarding major developmental and life experiences. Through the completion of the MBQ, the individual writes her autobiography, or life story, in a structured form. The MBQ contains 287 items, which are grouped into several sections. These sections include the following: general information; health; emotions and interpersonal responses; important life events; family of origin; marriage; gynaecological history; parenthood role; occupational role; and home-making role. The questionnaire contains both structured and open-ended items (see Gerdes, 1979, for more details regarding the structure of the questionnaire). The questionnaire is scored both quantitatively and qualitatively, according to several major scoring categories (for example, psychosomatic tendency; stressors; psychological reactions to stress).

A shortened version of the MBQ was used in the current study. The reason for this was that the MBQ is lengthy, and requires a few hours for completion. Consequently, only items relevant to the hypotheses of the current study, were retained. In addition to these items, a few items were added to the scale, in order to elicit information specific to the current study (for example, menstrual myths and taboos).

5.6. PROCEDURE

Prior to the main research study, a pilot study was carried out. Five subjects completed the original battery of instruments. The main object of the pilot study, was to determine the length of time needed for the completion of the psychometric instruments, as well as to determine the suitability of instruments for obtaining information, specific to the hypotheses. Based on the outcome of the pilot study, one of the instruments was shortened, as subjects reported that it was very lengthy and time consuming. In addition, a questionnaire which had been compiled to elicit information, regarding socio-cultural myths and taboos, was also modified due to its length and the fact that the information obtained, duplicated that of other instruments used. Aside from these modifications, no other modifications appeared necessary.

5.6.1. PMS Group

The first contact with subjects in this group, was by telephone. During this conversation, information pertaining to the inclusion criteria was obtained. Prospective subjects were also informed of the daily rating requirement and were asked whether they were willing and able to comply with daily ratings, for at least two months. Subjects were, however, assured that they were free to withdraw from participation at any stage, if they so desired. During the telephone conversation, an interview was set up with each individual subject. Interviews and assessments, were conducted either at home or at the office (either the subject's or the researcher's), depending on which was more convenient for the subject.

The main object of the interview, was to establish rapport with subjects in order to facilitate the research process, as well as to further screen subjects, according to the inclusion criteria. A structured interview was used to obtain information about each subject's premenstrual symptoms. During the interview, the Premenstrual Assessment Form was administered. Subjects were also provided with the Daily Rating Form, which was to be completed over the study period.

In order to facilitate compliance with daily ratings, each subject was seen individually, by the researcher, every two to three weeks. Subjects were requested to bring their daily ratings to the meetings, so that the researcher could review these and ensure that the forms were being completed correctly. In order to allow for objective confirmation of reported symptoms and severity, arrangements were made so that at least one of these meetings, would coincide with each subject's premenstrual phase.

The administration of the remaining psychometric instruments, was spread over each of these meetings (which lasted approximately one hour). Instructions were given for the completion of each instrument, and subjects completed these in the researcher's presence. After data had been obtained for two complete menstrual cycles, the Premenstrual Assessment Form was again administered, in order to determine whether daily ratings and the research process, had resulted in a reduction of symptom severity. Subjects were instructed to rate their most recent premenstrual phase.

5.6.2. Control group

Arrangements were made to assess control subjects in groups of four or five, as opposed to individually. All psychometric instruments were administered in one session, which lasted approximately one and a half hours. Instructions were given for each of the instruments and subjects completed these in the researcher's presence. Due to practical considerations, one or two subjects in the control group were seen individually, and were given the instruments to complete in their own time. All subjects were instructed to give their own responses and not to discuss their responses with anyone else, prior to completing the questionnaires.

CHAPTER 6

RESULTS

During my premenstrual phase I feel bloated, uncomfortable and miserable. I feel weepy and unable to cope as well as usual, wanting to isolate myself from others (letting them get on with the world while I wait for this phase to pass).

Description by a research participant

The aim of this chapter is to present the data and to test the hypotheses, in order to determine whether any statistically significant differences exist between the PMS group and the control group. In addition, descriptive and qualitative data are presented, with a view to addressing the exploratory research questions.

The chapter begins with the story of menarche and the experience of menstruation, followed by that of being a woman. Thereafter, the focus turns to woman with PMS, specifically in relation to the actual premenstrual syndrome itself. The PMS group and the control group are then compared statistically. An analysis of pre- and post research PMS scores is provided, together with a description of daily events reported by the PMS group, during the study period. In conclusion, a summary is provided which outlines the significant differences between the two groups.

6.1. DATA ANALYSIS PROCEDURES

Both quantitative and qualitative methods of data analysis were utilised in the current study, since quantitative procedures were most appropriate for testing the hypotheses, whereas qualitative procedures were more appropriate for addressing the exploratory questions. While both methods have their advantages, when used in isolation, disadvantages are also inherent in both.

A specific disadvantage of quantitative analysis is that information (and research participants) are reduced to mere numbers, thereby detracting from the depth of the information obtained. For example, it would have been a pity to omit the many rich and informative tales, of menstruation and the premenstrual experience, as told by the women in the study. These stories provide a colourful and meaningful context for the interpretation of the statistical results. On the other hand, qualitative data

analysis procedures also have certain disadvantages. For example, the nature of the data makes it impossible to conduct statistical tests, which would reveal significant differences or relationships between variables. Nevertheless, qualitative data can be useful in delineating areas for future research.

6.2. QUALITATIVE DATA ANALYSIS

Many of the psychoanalytic theoretical explanations regarding the role of psychological factors in premenstrual tension, are based on dated clinical observations regarding menarche and the female role. In order to explore the relevance of such factors, in relation to the premenstrual syndrome, various exploratory questions were formulated.

6.3. MENARCHE

The experience of menarche is considered to be a turning point in female development. In addition, the experience of menarche is believed to influence later experiences of menstruation. In order to determine whether any differences (in the experience of menarche) existed between the two groups, various aspects of menarche were investigated. Data is presented in this section in an attempt to answer the following research question:

"What was the experience of menarche in the study sample?"

TABLE 4. AGE OF MENARCHE

AGE	PMS GROUP	CONTROLS
Mean Range	13 11-19	12 11-14

The data in Table 4 indicates that the control group reached menarche, on average, one year younger than the PMS group. In addition, the age range of menarche was greater for the PMS group, than for that of controls.

6.3.1. Preparation for menarche

Preparation for menarche is of paramount importance, given the fact that any physical bleeding is likely to arouse anxiety. For girls who are uninformed, the occurrence of menarche, can be experienced as a huge shock. The majority of the subjects in both

groups were prepared for menarche, however, there was a small percentage in both the PMS group (23%) and the control group (12%) who were not informed about menstruation, prior to menarche. Table 5 provides data describing the source of information regarding menarche, for those who were prepared in the PMS group (77%) and the control group (88%).

TABLE 5. SOURCE OF INFORMATION ABOUT MENARCHE

SOURCE	PMS GROUP	CONTROLS
Mother	50%	72%
Sister	10%	-
Friend	10%	14%
Books	20%	14%
Nurse	10%	-

As can be seen from Table 5, more of the controls than the PMS group, were prepared for menarche by their mothers. This suggests a closer mother-daughter relationship, within the control group, at least with regard to female development and sexuality.

6.3.2. Emotional reactions to menarche

According to psychoanalytic theory, menarche may evoke earlier libidinal conflicts, which in turn, may be reflected in emotional reactions to menarche (Deutsch, 1944). These reactions, may potentially, be re-enacted with subsequent menstrual periods.

The reactions to menarche, within the study group, varied for both groups. These reactions are presented in Table 6.

TABLE 6. EMOTIONAL REACTIONS TO MENARCHE

REACTION	PMS GROUP	CONTROLS
Pride/Satisfaction	31%	37,5%
Shame/Humiliation	23%	12,5%
Shock/Fear	15%	12,5%
Irritation	8%	12,5%
Matter of fact acceptance	15%	-
Felt out of control of bodily functions	8%	25%

MIXED REACTIONS: In addition to the reactions listed in Table 6, four of the PMS subjects reported experiencing more than one predominant emotional reaction to menarche. This suggests that the abovementioned reactions are not mutually exclusive. For example, one subject felt proud, yet she cried; another felt both shocked and out of control of her bodily functions.

Table 6 illustrates that positive emotional reactions to menarche, of pride and satisfaction, were reported by 31% of the PMS group and 37,5% of the control group. The latter findings suggest that menarche is not necessarily experienced as a developmental trauma, by all young girls. However, menarche may have evoked earlier anal conflicts for some subjects, within the PMS group, as well as the control group, as evidenced by their reactions of shame/humiliation (PMS = 23%; controls = 12,5%), and feeling out of control of their bodily functions (PMS = 8%; controls = 25%). The fact that some subjects reacted to menarche with feelings of shock or fear (PMS = 15%; controls = 12,5%), may reflect nothing more than the lack of preparation for menarche, and the subsequent shock upon discovery of the genital bleeding.

6.3.3. Reactions to menarche by mothers

The mother's reaction to her daughter's menarche may reveal how she feels about her daughter's sexual development. In addition, the mother's response may also be internalised by the daughter and influence her experiences of menstruation. Menarche may also be accompanied by curtailment of the young girl's activities, for example, one subject reported that her grandmother's response had been "you must be careful, you can't move around with boys now!" The reactions of mothers to their daughters menarche varied. Table 7 illustrates these reactions, which can broadly be viewed as positive, negative or neutral.

TABLE 7. REACTION TO MENARCHE BY MOTHERS

REACTION	PMS GROUP	CONTROL GROUP
Mother absent	15%	-
Positive (pride)	31%	12,5%
Negative (embarrassed)	23%	-
Neutral:		
-matter of fact acceptance	23%	75%
-surprise at early age	8%	12,5%

The data in Table 7 indicates that the reactions of mothers of the control subjects, to their daughter's menarche, were less varied and more often neutral, than those of the PMS group. This implies, that menarche may have been regarded as more natural, by the mothers of the control group.

None of the control subjects perceived their mother to be embarrassed, when told of their daughter's menarche. In contrast, 23% of the PMS group reported that their mother had been embarrassed. One of the subjects who perceived her mother to be embarrassed, added that to this day, her mother had never spoken to her about menstruation (despite the fact that she was now an adult woman, who had been pregnant etc). Within her family of origin, the topic of menstruation, like that of sex, or death, was something never spoken about.

Summary of Menarche

(a) Controls reached menarche, on average, one year younger than the PMS group. In addition, the age range was much larger for the PMS group, than for that of the controls.

(b) Reactions to menarche varied for both groups and included feelings of pride, acceptance, irritation, humiliation, and feelings of being out of control of bodily functions.

(c) Some subjects within both the PMS group (23%) and the control group (12%), were not informed about menarche prior to its occurrence.

(d) Considerably more mothers of controls (75%), than of those in the PMS group (23%), were matter of fact about their daughter's menarche. None of the controls perceived their mothers to be embarrassed about menarche, whereas 23% of the PMS group reported that their mothers had been embarrassed.

6.4. MENSTRUATION

In order to obtain information regarding current attitudes to menstruation, subjects were asked to complete the following open-ended question:

"To me menstruation is..."

Responses to this question are tabulated in the following table (Table 8).

TABLE 8. ATTITUDES TO MENSTRUATION

RESPONSE	PMS GROUP	CONTROLS
Positive		
- Natural or part of being a woman	31%	75%
- A sign of good health	15%	-
Negative		
- Nuisance or a curse	23%	-
- Unpleasant or "Nie lekker nie"	15%	-
Neutral		
- Lets you know that you are not pregnant	8%	-
- Something I have to live with	-	12,5%
Myths		
- Cleansing process	8%	12,5%

The data presented above, suggests that more of the control subjects (75%) were aware of the positive aspects of menstruation. One of the control subjects, added, that "I like the increased awareness of myself during my period". In contrast, more of the PMS group, appeared to be aware of the negative aspects of menstruation.

Myths regarding menstruation, as a physical cleansing process, still appear to exist, as reflected in the above responses to the open-ended question regarding menstruation.

In order to determine which aspects of menstruation were regarded as bothersome, or negative, subjects were asked to respond to the following structured question:

"The one thing I would like to change most about menstruation is:...".

Various aspects of menstruation were listed as optional responses. In addition, a category for "other" responses, was included. The responses to this question are listed below in Table 9.

TABLE 9. BOTHERSOME ASPECTS OF MENSTRUATION

BOTHERSOME ASPECT	PMS GROUP	CONTROL GROUP
Emotional symptoms	92%	-
Cramps	8%	50%
Sanitary products	-	25%
Menstrual flow	-	12,5%
Other's perceptions of menstruation	-	12,5%

The data in Table 9, indicates that the emotional changes preceding and accompanying menstruation, were the most distressing aspect of menstruation, for the PMS group. In contrast, none of the controls, identified the emotional symptoms as bothersome. It thus appears, that control subjects either do not experience such emotional symptoms, or alternatively, that they do not find such symptoms distressing.

Summary of reactions to menstruation

(a) Considerably more controls (75%) than PMS subjects (31%), regarded menstruation as being a natural fact of life and/or part of being a woman. These findings suggest a more positive attitude to menstruation, within the control group.

(b) The myth that menstruation is a physical detoxification process, is still adhered to by a small number of subjects, within both groups.

(c) The majority (92%) of the PMS group, compared to none of the control group, reported that the most bothersome aspect of menstruation, was the associated emotional symptoms. These findings suggests that for women with PMS, the associated emotional changes accompanying menstruation, are the most distressing aspect thereof. In

contrast, 50% of the controls, reported that the physical aspects of menstruation, such as cramps, were the most bothersome aspect thereof.

6.4.1. Euphemisms for menstruation

Euphemisms for menstruation, reveal both cultural and individual attitudes to menstruation. Various terms, words and euphemisms, were used by subjects, when speaking of menstruation to others.

PMS GROUP: All of the PMS subjects, used one of the following words or terms, when speaking of menstruation: period; menstruation; "that time of the month"/"dis my tyd"; or "I am sick"/"Ek is siek". Less common were "ouma het kom kuier" or "my aunt has come to visit with her red car." Some of the subjects recalled hearing menstruating women referred to as "the woman is washing" or "the woman has gone to the moon". A rather unique and poetic term for menstruation, reported by one of the pilot subjects, was "the tears of the endometrium".

CONTROLS: All of the control subjects referred to menstruation by one or more of the following terms: period; "that time of the month"; or menstruation.

The usage of the more conventional terms, such as period or menstruation, by the control group, suggests a more natural and neutral attitude to menstruation. In contrast, the usage of terms such as "I am sick" by the PMS group, suggests that menstruation may be regarded as a sickness by the PMS group. The usage of terms, such as "ouma het kom kuier" by the PMS group, also suggests that menstruation may be regarded, as something to be hidden.

6.5. SOCIO-CULTURAL ASPECTS OF MENSTRUATION

Socio-cultural factors are considered to influence experiences of menstruation, in that cultural myths or attitudes regarding menstruation, may be internalised by individuals, thereby influencing experiences of menstruation. The data in this section, addresses the extent to which socio-cultural factors, influenced the experiences of menstruation, within the study group.

6.5.1. Restriction of activities

The restriction of activities during menstruation, as well as changes in behaviour during menstruation, may be influenced either by individual beliefs, or adherence to

cultural/religious norms. Subjects were asked which of their activities they avoided, or restricted, during menstruation. Table 10 lists the responses to this question.

TABLE 10. RESTRICTION OF ACTIVITIES DURING MENSTRUATION

ACTIVITY AVOIDED	PMS GROUP	CONTROL GROUP
Sex	46%	25%
Exercise	23%	12,5%
None	31%	62,5%

Reasons for the restriction of activities were as follows:

(a) Sex was avoided for one of the following reasons: low libido during menstruation; sex was regarded as unhygienic and/or messy; subjects felt embarrassed; or their partners did not like it.

(b) Exercise was avoided due to the lack of energy during menstruation and/or discomfort, arising from cramps.

As can be seen from Table 10, notably more of the PMS group (69%) than the control group (37,5%), reported that they restricted certain of their activities, during menstruation. This data suggests that menstruation may have been regarded as more debilitating, by the PMS group. In addition, it appears that menstruation interfered to a larger extent, with everyday activities, within the PMS group. In contrast, for the majority of the control group, menstruation appeared to have little influence on life-style or activities.

6.5.2. African cultural prescriptions for menstruating women

Acknowledgement of the effects of menstruation and cultural prescriptions for behaviour during menstruation, vary across cultures. These influences range from denial of the effects of menstruation in many Western societies, to public acknowledgement of menstruation, in the more traditional societies.

Two of the woman in the study, who had spent part of their childhoods in traditional rural African environments, had many tales to tell of menstrual taboos and prescriptions for behaviour, during menstruation. It was reported that women within the African culture, were reluctant to talk of menstruation to others. If a menstruating woman were

to tell another woman that she was menstruating, this would frequently be met with annoyance and the retort "don't tell me, you will bring on my flow". In accordance with these beliefs, menstruating woman should stay at home and keep away from other women, so as not to affect or disturb the cycles of those who were not menstruating.

One subject reported that she had recollections of menstrual huts in some remote rural areas of Lesotho. These huts were also used by woman after childbirth. Two canes would be placed on the roof of the hut, to indicate that no one should enter (aside from old women in the case of childbirth). The floors of the huts would be layered with cow dung, which would absorb the menstrual flow. The same subject reported that within the urban areas (where she was now living), it was considered preferable to use cloths rather than sanitary towels or tampons, for the absorption of the menstrual flow. This was due to the fact that people would become very offended, if they were to see a used tampon or sanitary towel in the toilet. If sanitary towels were to be used, it would be preferable to burn them after use. An advantage of cloths over manufactured sanitary products, was that the blood could be washed from the cloths and thus need not be seen by anyone else. However, even the washed cloth itself, should be hung to dry where no one would see it. Husbands, in particular, should not see anything that had to do with menstruation.

Various other cultural prescriptions of behaviour, during menstruation, were reported by these two women, although, these were not necessarily adhered to. For example, a menstruating woman should not attend church, touch the clothing of a man, or share a bed with a man. In addition, menstruating woman should avoid working and cooking. In the rural areas, menstruating woman should avoid walking between the cattle and should rather pass around them. One subject reported that on reaching menarche, the girl was thereafter not supposed to eat eggs (or the insides of cows) since eggs would build her bones, which would give her problems in childbirth.

Other cultural prescriptions of behaviour, were that the woman should not stand straight up (but should rather crouch down) since standing straight, would increase her flow. Related to this was that a menstruating woman should not bath in warm water, since this would also increase the flow. Furthermore, she should not stand in the frame of an open door (the reason for this was not known).

The preceding discussion indicates that within the more traditional African cultures, the effects of menstruation are acknowledged, as reflected in the restriction of

certain activities such as work. However, primitive myths regarding the menstruating women and the menstrual flow as unclean, also appear evident.

6.6. ON BEING A WOMAN

Feminine role identity and adherence to traditional roles, may influence premenstrual tension. In order to compare the two groups with regard to feelings of satisfaction and dissatisfaction, about being a woman, subjects were asked to complete the following open-ended questions:

-I wish I were a man....
-I am glad I was born a woman....
-For me the best thing about being a woman is....
-For me the worst thing about being a woman is....

The responses to these questions are presented in two sections. The first deals with the positive aspects of being a woman and the second, with the negative aspects of being a woman.

6.6.1. Positive aspects of being a woman

Various of the responses given by subjects, indicated that subjects perceived being a woman, to have certain advantages and positive aspects over being a man. These responses are presented below.

PMS group

Traditional female role and motherhood: 70% of subjects mentioned that one of the most positive aspects of being a woman, was related to motherhood and childbearing. Many subjects stated that they were glad they were women because of "being given the privilege of being able to bear children"; "to bring life to the world"; "to be a loving mother"; and because the mother-child relationship/bond is "special" and not the same for men. Related to this was the enjoyment of being able to "create a home out of a house" and to make one's family and husband happy.

Femininity: 46% stated that one of the positive aspects of being a woman, was being feminine, dressing up attractively and enjoying their bodies, in relation to their "femininity".

Emotional lives of women: Three subjects stated that women were able to be intimate, close, and "sensitive" and that being a woman, meant being "more balanced." Women were also allowed to "show emotions" as opposed to men, who had to be emotionally controlled. One subject was glad she was not a man since she felt that men had far more responsibilities.

Relationships with men: Two subjects reported that an important and pleasing aspect of being a woman, was the respect and love of men. One subject added that "men will always protect me and treat me as a valuable asset".

Controls

Androgyny: 50% of controls stated that they were glad that they were women, since they could "have the best of both worlds" by having both a career as well as a home, husband and children. Women were perceived to have more options, in comparison to men, whose lives (and options) were perceived to be more narrow.

Traditional female role: Only one subject mentioned that she was glad she was a woman because of her ability to become a mother.

Femininity and relationships with men: 37,5% of the controls stated that they were glad they had been born women, because they liked to be pretty, dress nicely and be feminine. One subject added that she was glad she was born a woman, because "I enjoy being feminine and loved by a man. I love dressing and make up and special hairdo's" and the best thing about being a woman, for her, was that "one can feel pretty and good about oneself by paying attention and pampering yourself and being loved by a man." Another subject liked being a woman because women are treated with respect.

Women's emotional lives and relationships: One subject mentioned the richness of women's emotional lives and interpersonal relationships, as being a positive aspect of being a woman. She stated that she was glad that she was born a woman because "women's experience of life is so rich. We are full rounded beings" and the best thing about being a woman was the "ability to love and really care about life in general and people," as well as "the ability to give unselfishly". She said that she never wished to be a man because " men have a long way to go to become fully human beings. By living up/conforming to sexual stereotypes they are alienated from their true selves/potential as human beings."

Unusual responses included that of one subject who stated that the best part of being a woman was "being able to say I am a feminist". Another subject was glad she was a woman because she felt that expectations of women were lower and praise higher when a woman achieves.

As is evident from the preceding findings, the greatest difference between the PMS group and the controls, was that the former were more traditional in their attitudes towards the female role.

6.6.2. Negative aspects of being a woman

Aside from the positive aspects of being a woman, various negative aspects were also described by subjects.

PMS group

Sexual discrimination: 54% of the subjects stated that one of the worst parts about being a woman was the discrimination ("mistreatment"; "women are considered the lower class"), and unequal workloads ("men don't have as many chores"; "men have few responsibilities"). One subject said that she sometimes wished she were a man because "If I were a man I wouldn't be burdened with kids and housework. I would just watch T.V., read newspapers and call for food when I am hungry."

Masculine physical prowess: Three subjects said that one of the negative aspects of being a woman, was that women were physically weak, vulnerable and defenceless, which meant that men had more freedom than women, to do as they pleased without cultural restraint, and that "men get away with things women can't."

Role conflict and strain: Three subjects regarded the stress of trying to do "everything" and "al die druk" as a negative aspect of being a woman. One subject stated that she sometimes wished she were a man, because men have an advantage in pursuing their careers.

Menstruation and premenstrual depression, was cited by two of the women in the PMS group, as being one of the worst things about being a woman.

Men's emotional lives: One subject stated that she sometimes thought it would have been nice to be a man, because men were not so emotional.

Controls

Sexual discrimination: For 62,5% of the control group, one of the worst things about being a woman was work discrimination and being taken for granted, with regard to cooking, washing and cleaning. One subject stated that "women are seen as dumb" and for another subject, a negative aspect of being a woman was having to live according to a model. One subject stated that for her, the worst thing about being a woman was that she felt "a collective responsibility for women who have not yet had the opportunity to understand how oppressed they are."

Hormonal changes: One subject envied the fact that men didn't have cyclic changes in their performance levels.

Other: One subject envied men in that they didn't have to spend hours deciding what to wear; another envied the fact that men appeared able to compartmentalise (separate out) the different aspects of their lives (e.g. work, relationships).

One of the controls stated that there was nothing which she disliked about being a woman.

Summary of positive and negative aspects of being a woman

(a) Over half of the PMS subjects regarded the traditional female role as being one of the most positive aspects of being a woman. In contrast, half of the controls regarded the potential to function in both the traditional female world (motherhood) and the traditional male world (professional work/career), as being the most positive aspect of being a woman.

(b) The second most positive aspect of being a woman, for both groups, was the ability to enjoy being "feminine" in relation to dress, appearance etc.

(c) For both groups, the most negative aspect of being a woman, was sexual discrimination in the work place, as well as role discrimination in the home.

6.7. CONFLICT, SATISFACTION AND DISSATISFACTION

6.7.1. Conflict

In order to determine whether any differences existed between the control and PMS groups, with regard to inner conflict, subjects were asked to complete the following open-ended question:

"The greatest conflict in myself relates to..."

The responses to this question are listed in Table 11.

TABLE 11. PRIMARY SOURCE OF INNER CONFLICT

CONFLICT	PMS GROUP	CONTROLS
Low self-acceptance	70%	50%
Role conflicts	15%	-
Interpersonal relationships	15%	-
Religious or social norms	-	25%
Studies	-	12,5%
Integrating different aspects of the self	-	12,5%

The data in the preceding table suggests that low self-acceptance, role conflicts and interpersonal discord, were more characteristic of subjects in the PMS group, than in the control group. Low self acceptance included factors such as the dislike of personal characteristics, e.g. pessimism, or insecurity. Physical characteristics which generated conflict, included weight in two subjects, and physical appearance in another subject.

6.7.2. Life satisfaction

In order to determine which life experiences had been the most pleasing, for the two groups, subjects were asked to complete the following open-ended question:

The greatest thing in my life has been....

The responses to this question are presented in the following table (Table 12). The category 'other' in Table 12 included: independence, professional training and a trip to Malawi.

TABLE 12. LIFE SATISFACTION

SATISFACTION	PMS GROUP	CONTROLS
1. Traditional roles	62%	-
2. Interpersonal relationships	15%	75%
3. Self growth	8%	12,5%
4. Other	15%	12,5%

The data in Table 12 indicates that within the PMS group, traditional roles such as marriage, pregnancy, childbirth and motherhood, constituted the most satisfying life experiences. In contrast, interpersonal relationships were the most satisfying life experiences for controls. These differences need to be interpreted in the light of the fact that half of the PMS group had children, whereas none of the controls had children. It also needs to be pointed out that the categories of 'traditional role' and 'interpersonal relationships' are not mutually exclusive, in that motherhood and marriage, is centred around interpersonal relationships. Thus, while the data suggests that the traditional role is more important for the PMS group, it also suggests that interpersonal relationships, per se, are important life experiences for women in both groups.

6.7.3. Dissatisfaction and regrets

In order to investigate whether any differences existed, between the two groups, with regard to life dissatisfaction, subjects were asked to complete the following open-ended question:

What would you change if you had your life over...

The responses to this question are presented below, in Table 13. The category 'other' in Table 13 included the following responses: "the attitudes of some men to woman"; missed opportunities; and the age of parents. The data in Table 13 suggests that fewer controls would have changed aspects of their lives, if given the opportunity to do so. This suggests lower dissatisfaction, within the control group. In contrast, all the subjects in the PMS group would have wanted to change something about their past lives, if they were able to do so.

TABLE 13. LIFE DISSATISFACTION

DISSATISFACTION	PMS GROUP	CONTROL GROUP
Personal characteristics	38%	25%
Education/Career	31%	-
Life events	23%	-
Choice of partner (e.g. marital)	-	25%
Other	8%	25%
Nothing	-	25%

Summary of conflict, life satisfaction and dissatisfaction

(a) More of the PMS group (70%) than the control group (50%) stated that their primary source of conflict, originated from low self-acceptance.

(b) Childbirth, mothering and marriage constituted the greatest life experience, for 61% of the PMS group, whereas for the majority of controls (75%), the most satisfying life experience had arisen from interpersonal relationships with others. The difference between the two groups, with regard to the most satisfying life experience, may have been related to the fact that none of the controls had children, whereas 46% of the PMS group had children. It is not clear whether parity (in the PMS group) was associated with age, or alternatively, with the preference for traditional roles. Controls, were on average, younger than the PMS group, however, some of the childless women, within the PMS group, were in their 30's. Nevertheless, the categories of traditional roles and interpersonal relationships, are not mutually exclusive. The data suggests that for women within both groups, interpersonal relationships with others, constituted the most important and satisfying life experiences.

(c) All the subjects in the PMS group (100%) would have liked to change some past aspect of their lives, if they had the opportunity to do so, whereas 75% of controls would have wanted to do so. These findings suggest higher life satisfaction and acceptance, for some of the subjects in the control group.

6.8. THE PREMENSTRUAL SYNDROME

Most of the data in this section has to do with the actual premenstrual syndrome itself. The focus is, therefore, largely on the PMS group of subjects. Data is presented on premenstrual symptoms, premenstrual experiences, and the effects of PMS on the lives of women with severe PMS.

6.8.1. Development of PMS

In order to determine whether any specific temporal events, were associated with severe premenstrual symptoms, subjects were questioned about the history and development of their premenstrual symptoms. The data presented below outlines some of the factors associated with PMS, as reported subjectively by PMS subjects.

6.8.2. Onset

Age: Three of the subjects stated that PMS had been present throughout adolescence, from the time of menarche. Five subjects reported that although they had experienced menstrual cramps during adolescence, the severe emotional symptoms associated with PMS had only appeared during their twenties.

One of the subjects, who stated that PMS developed only after adolescence, reported that while her symptoms had been very severe from the age of 18 up until 24 years of age, symptoms had disappeared at the age of 24, following her first (and only) pregnancy. A great sadness for this subject had been the stillbirth of her unborn child. This loss, as well as the stress generated by the outcome of her pregnancy, had contributed to the dissolution of an already tense and unhappy marriage. Following these events, her symptoms had disappeared, only to reappear again at 29 years of age. She was now 32 years of age and for the past three years, her symptoms had again been severe.

Parity: Four of the subjects in the PMS group reported that the distressing premenstrual symptoms which they currently experienced, had developed only after their pregnancies.

Specific life events: One subject reported that her premenstrual symptoms had only developed at the age of 25, when she had been widowed. Since that time, her premenstrual symptoms would become intolerable each year, during the winter months, particularly in June, which was the anniversary of her husband's death. Although it had been nine years since she was widowed, she still mourned for her husband. His death had shattered

her life and destroyed her dreams and expectations of having children and sharing the rest of her life with him. She had never remarried and her sadness about being single and childless, was brought into focus each year, at the time of his death. It was then, that her premenstrual symptoms became worse, and while they abated during the spring and summer months, they would reappear again the next winter. This subject stated that this time of year, was very stressful for her and she believed that the severity of her symptoms may have been related to this.

6.8.3. Variations in symptom severity

The severity of premenstrual symptoms is known to vary from month to month, for most individuals. One of the subjects, in the PMS group, stated that this was the case for her, but two of the subjects stated that the severity of their symptoms was constant and did not appear to be influenced by any specific life events. For the remainder of the PMS group, both psychological and physical factors were associated with increased symptom severity.

PMS group

Stress: 39% of the PMS subjects, reported that symptoms had been more severe, during times of stress.

Age: 23% stated that specific symptoms (such as cramps, depression or anxiety) had been worse during adolescence. For one subject, premenstrual depression was worse, during adolescence, due to an underlying depression during that time. For another subject, symptoms of anxiety had been worse during adolescence, due to the fact this subject was extremely anxious about the irregularity of her periods, during adolescence.

Contraceptive usage: For 15% of the subjects, contraceptive usage was associated with severity of premenstrual symptoms. One subject reported that symptoms became worse when she was on the pill. Another subject stated that specific symptoms, such as cramps, were more severe when she had an IUD inserted.

Physical factors: In addition to the abovementioned factors, one subject stated that her symptoms were worse during ovulatory cycles, as well as during longer cycles. Another subject stated that her emotional symptoms, were worse in cycles, during which symptoms of water retention, were greater than usual. One of the other subjects reported that her symptoms were more severe, during times of fatigue or exhaustion and also when she was not eating adequately. This particular subject had a tendency to

neglect her nutritional needs and had previously been hospitalised due to malnutrition.

Controls

Even though the controls had only minimal, or no premenstrual changes (as confirmed on the PAF), it seemed important to enquire whether there had been any times in their lives, when premenstrual symptoms had appeared more severe. Twenty five percent of controls said that there had been no such times.

Stress: Twenty five percent of controls said that symptoms had been worse during times of stress.

Contraceptive usage: For 12,5% of the control group, symptoms had been worse when they were not on the pill. For a further 12,5% symptoms had been worse during times of hormonal change, such as the immediate period, following termination of oral contraception.

Age: For 12,5% of the control group, symptoms had, on occasion, been more noticeable since the age of 21.

Exercise: For the remainder of the control group (12,5%) physical symptoms appeared to be worse, during times of abstinence from exercise.

6.8.4. Family history

PMS GROUP: 39% reported that either their mothers and/or their sisters had experienced problematic menstrual or premenstrual symptoms. Fifteen percent stated that they did not know whether any of their female relatives had experienced menstrual and/or premenstrual difficulties. One of the subjects with severe PMS reported that her grandmother had committed suicide during a period of severe post-partum depression.

CONTROLS: 50% said that either their mothers and/or their sisters had experienced problematic menstrual and/or premenstrual symptoms.

In comparison to the control group, fewer of the PMS group knew whether their mother or other female relatives had experienced distressing premenstrual or menstrual symptoms. These findings may suggest a closer mother-daughter relationship within the control group.

6.9. PREMENSTRUAL SYMPTOMS

The most frequently rated severe symptoms, as reported retrospectively on the Premenstrual Assessment Form, by the PMS group, are listed in Table 14.

TABLE 14. FREQUENCIES OF SEVERE SYMPTOMS

PREMENSTRUAL SYMPTOM OR COMPLAINT	FREQUENCY
PSYCHOLOGICAL	
Dissatisfaction with appearance	69%
Feel can't cope or feel insecure	69%
Feel depressed	62%
Irritability/bad temper/nagging/quarrelling	62%
Intolerance or impatience	54%
Weeping, crying or feeling lonely	54%
Feeling anxious or under stress	54%
PHYSICAL	
Feelings of weakness	54%
Abdominal discomfort/pain	54%
Feel bloated	54%

Many of the symptoms reported in this study confirm those found by other PMS researchers, with the exception of symptoms of water retention and breast pain. The frequencies with which these symptoms were rated as severe in this study were as follows:

(a) Water retention was rated as severe by 46% of the PMS group.
(b) Breast pain was rated as severe by 38% of the PMS group.

The rating of **dissatisfaction with personal appearance** as extreme by 69% of the subjects was unexpected and unusual, in comparison to the most frequently reported symptoms in other studies. The following questions arise with regard to this 'symptom':

(a) Did subjects rate their usual/normal state instead of the premenstrual phase or are PMS subjects generally dissatisfied with their appearance?
(b) Could this be a cultural phenomenon relating possibly to emphasis on appearance?

These questions will be elaborated on in the discussion chapter.

6.9.1. The premenstrual experience

The severe and distressing premenstrual symptoms experienced by the women with PMS were influencing both their emotional and physical well-being, as well as their interpersonal relationships. In addition, two subjects, one of whom had recently been involved in a car accident during the premenstrual phase, complained about clumsiness and accident proneness. The effect of PMS on the lives of these women, as well as those close to them is depicted below.

6.9.1.1. Physical well-being

Physical symptoms such as pain, nausea and water retention influenced the way many of the subjects felt, not only physically, but also emotionally. One subject stated that she believed her emotional symptoms, arose as a result of the painful physical symptoms. Commenting on the physical changes during the premenstrual phase, another subject wrote that "During and after menstruation everything gets to normal except the swelling of the breasts that takes long to fade, even after menstruating they're still painful. One other thing that bothers me is the gaining of weight. This occurs premenstrually and it makes me feel inferior about myself and sexually unattractive. Again I experience loss of appetite, rash/pimples on the forehead, irritation of the eyes, too much vaginal discharge, all of these bothers/worries me a lot and everything disappears just after menstruation. It makes me wonder all the time, what's the cause for all that and that makes me to hate it most, the period of ovulation or the PMT because it changes me absolutely from my normal being."

6.9.1.2. Emotional well-being

During the interview, many of the women reported that they were prone to weeping spells, felt worthless and had absolutely no self-esteem during the premenstrual phase. A few subjects reported that their premenstrual tendency towards harsh self-criticism often reinforced their feelings of worthlessness. For many of the subjects, a common premenstrual symptom was that of depression. In some subjects, feelings of depression would on occasion be accompanied by thoughts of suicide. Another common premenstrual emotional symptom was that of anxiety. For all the subjects, the distressing emotional symptoms would lift either as soon as menstruation started, or within a few days thereafter.

Continuity: While some of the women pointed out that they had a predisposition to certain of these states, the intensity was reported to increase in the premenstrual phase. One subject said that even though she was by nature unsure, tense and negative,

she would become more so during the premenstrual phase. Another described herself premenstrually as "Very irritated, frustrated and crying but also feel that how I am feeling is stupid (usually if someone tells me)...Usually calm and easy going although I am a little anxious all the time."

Discontinuity: For others, there was a noticeable difference between their premenstrual phase and their usual state. Many of these women complained that it felt as though they became a different person during the premenstrual phase. One subject reported that "the main feeling is one of stress, as well as discomfort due to water retention...The feeling of stress sometimes makes me become a person whom I do not recognise as myself any longer."

Exacerbation: Another aspect of PMS which disturbed many of the subjects, was that matters of little importance would become magnified in the premenstrual phase. One subject described this change as follows: "During my premenstrual state things of little significance can grow to unreal importance and I tend to brood on negative things and become self-pitying. Usually I would be able to control myself better and be more objective, active and tolerant. I would procrastinate less and be less pre-occupied with myself."

6.9.1.3. Interpersonal relationships

Many women complained that during the premenstrual phase, they would become extremely irritable which in turn, often resulted in interpersonal conflict and discord. Subsequently one of the most disturbing aspects of PMS for many of the subjects was the impact of symptoms, such as irritability, on interpersonal relationships. One subject wrote that "During premenstrual tension, I become so irritable that I tend to become tearful - which is mostly caused by a short temper".

While some of the women felt generally irritable, others reported that it was in relation to specific people or demands that irritability would manifest. One subject reported that she became irritable with men, in particular, although her boyfriend was an exception. Another subject stated that her irritability was heightened when people made demands on her, for nurturance. At other times she was quite happy to comply. However, in the premenstrual phase she would become highly agitated which would confuse those around her as this was 'out of character' and very different from the usual concern, support and understanding which marked her interactions with others.

Sensitivity in the premenstrual phase was another factor which was reported to affect interpersonal relationships. One subject said "I'm easily irritated and very sensitive, the slightest harsh words leave me in tears. I become quiet and withdrawn at times, but sometimes my mood becomes angry and aggressive". Another subject stated that during the premenstrual phase, she would become very sensitive and would constantly analyze the actions of her husband and friends. For another subject, premenstrual symptoms of insecurity and pessimism affected her relationship with her boyfriend, in that she would become highly insecure and pessimistic about the long term outcome of the relationship. Consequently, she predictably broke off this relationship approximately five days before she started menstruating each month, only to reconcile with her boyfriend again, after menstruation had commenced.

Marital discord and mother-child relationships: One of the subjects described the impact of PMS on her relationships with her family as follows: "Premenstrually, I develop a negative attitude towards my husband and kids. I feel totally neglected by my husband and I tend to hate him, thinking that he's uncaring, not loving, self-centred and inconsiderate. I don't want to hear my youngest baby cry, scream or hang around me. I don't have time for my eldest daughter as well, and I'd never attend to her school problems either. But once I commence with my menstruation, I am a very peace-loving wife, affectionate towards my husband and understanding, and always prepared and longing to be with my children and husband."

Work: For many subjects, both interpersonal relationships at home, as well as those at work, were affected by premenstrual symptoms. One subject reported that during a recent premenstrual phase, she had been so irritable at work and had slammed things around so much, that her male boss had not spoken to her for a week thereafter. For other subjects, productivity at work was influenced by premenstrual changes in energy levels. One of the subjects wrote that "Shortly before and upon commencement of menstruation, I also experience an extreme feeling of having no energy - to lift a hand is an effort." Another described her changes in energy levels as follows: "I have also noticed an increase of energy before the PMS starts, during which I tend to do a lot of work, because I know that I simply will not feel like doing it in a few days".

Homemaking: Work around the home was also reported to be influenced by premenstrual symptoms. One subject stated that "When I am premenstrual...I easily become tired...I'm not active, have less interest in most of the household chores...in my normal condition...I do housework and other odd jobs without a problem, my skin becomes a bit smooth, my eyes become bright..."

Significant others: All the women in the PMS group stated that the people around them, such as husbands, boyfriends, mothers, close friends and/or bosses, noticed their premenstrual changes. Some husbands reportedly told their wives to "Control it" only to be met with the response "I can't". Other women stated that husbands would negate the importance of issues brought up in premenstrual arguments, by saying "Oh it's your period". One of the subjects wrote on the daily rating form that "my man hoop julle leer my om min mislik te wees! Ek behandel hom glo soos n hond."

Controls

In contrast to the above descriptions provided by women with severe PMS, the descriptions by controls, of their premenstrual phase, differed not only in relation to the severity described above, but also with regard to their perceptions and interpretations of the premenstrual changes. Many of the control subjects said that they experienced no changes, aside from one or two mild physical changes, the day before menstruation. One subject said "Ek vergeet gewoonlik self dat ek dit het. Nog niemand so ver ek weet kom agter wanneer dit sulke tyd is."

One of the control subjects stated that while those around her might see her as a little depressed, this was not how she saw herself. Another said that she was emotional by nature and "cannot say it is PMS." Yet another said that while she may have felt a little irritable or touchy, she often did not realise that the reason for this was her premenstrual state. One of the control subjects described her premenstrual state as "very calm...passive...broody...tend to be a bit negative...challenge people all the time...test my friends' love for me..."

6.10. QUANTITATIVE ANALYSIS

The statistical testing of the quantitative data is presented in this section. Non-parametric statistical tests were used to test the hypotheses. The main factor which determined the decision to use non-parametric statistical tests, as opposed to parametric tests, was the fact that the sample was very small.

Mann-Whitney test

The Mann-Whitney test is one of the most powerful of the non-parametric tests and is an excellent alternative to the parametric t-test (Siegel, 1956). It can be used to determine: (a) whether two independent groups have been drawn from the same population, and (b) whether any differences exist between two groups. This test was used to compare the PMS group and the control group on the following variables:

(a) Recent life events stress.
(b) Attitudes to menstruation.
(c) Incidence of psychosomatic illnesses and complaints.

The direction of the anticipated differences was stated in the hypotheses and a one tailed level of significance was thus used.

Wilcoxon matched-pairs signed ranks test

The non-parametric Wilcoxon matched-pairs signed-ranks test is used to test for differences between measurements, in two dependent (matched) groups (Siegel, 1956). This test measures both the direction and the magnitude of the differences. It was used to test for differences in pre- and post-research PMS scores in the PMS group. A one-tailed level of significance was used, since the direction of the expected differences was stated in the hypotheses.

Binomial test

The non-parametric Binomial test is used to compare ratios. It was used to test for significant differences between the proportional scores of each group, on the following variables:

(a) Coping styles.
(b) Current stress.

6.10.1. Hypothesis 1

Women with PMS have higher scores on measures of stress, when compared to women with mild/minimal premenstrual changes.

6.10.1.1. Recent stress

The mean score of the PMS group (M=240,76) on the Schedule of Recent Events, was notably higher than that of the control group (M=125,5). However, the range of raw scores was large in both groups. Within the PMS group scores ranged from 76-473. For controls, scores ranged from 0-351. Approximately half (54%) of the PMS group had scores of over 200 on the SRE (which may possibly place them at risk for the development of a psychosomatic illness), in contrast, only 25% of the controls had scores above 200.

The Mann-Whitney test was used to compare the two groups on levels of recent life events stress. The data in Table 15 indicates that no significant differences were found between the two groups on levels of recent life events stress.

TABLE 15. RECENT LIFE EVENTS STRESS

MANN WHITNEY U VALUE	n1	n2	SIGNIFICANCE
32	13	8	-

6.10.1.2. Extreme scorers

A disadvantage of using statistical techniques to compare group differences, is that extreme scorers are absorbed into the group average, yet extreme scorers may highlight certain tendencies. For this reason, it was decided to further analyze those subjects, who were extreme scorers on the Schedule of Recent Events (SRE). Due to the fact that the SRE does not measure daily stress or certain current stressors, data from the MBQ, the DRF, as well as the interviews, were used in this analysis.

The examination of the two most extreme scorers on the SRE revealed that both subjects were also the most extreme scorers, with regard to the severity of premenstrual symptoms. In addition, both of these women were black women living in Soweto and having to contend with the stress of daily political violence. One of these subjects rated the "fighting in the townships" as a current stressor. The other subject stated that one of the stressful aspects of her job was having to commute to work by train from Soweto. The unpredictable violence on the public transport systems was endemic at the time of

the study. It was not long after this subject rated commuting to work as a current stressor, that she was faced with the traumatic and life threatening experience of being a passenger on a train, on which such a violent massacre took place. This subject had to flee for her life and while she managed to escape near death, the daily necessity of commuting to work remained a life threatening stressor.

Another stressor in relation to the threat of political violence, occurred for the same subject when the area in which she was living, experienced an electricity black out. The extreme anxiety and fear which pervaded life in the townships, was heightened by such factors as electricity black outs, due to the never-ending threat of outbreaks of political violence.

The fact that both the extreme scorers on the recent life events scale, were living in the midst of socio-political turmoil, makes it evident that such turmoil is placing those living in the midst of such conditions, under very extreme stress. The impact of such turmoil on life events such as housing, family life, the loss of close friends, relatives and associates through death, as well as the interference with everyday activities such as sleep, work and well-being, is immense.

As mentioned above, the raw scores of the above two subjects suggested that a relationship might be found between extreme life events stress and premenstrual symptom severity. In order to determine whether this was so, the Pearson product moment correlation co-efficient was computed for the following two variables:

Variable 1: Recent life events stress

Variable 2: Premenstrual symptom severity

No significant relationship was found within the PMS group, between the variables of recent life events stress and premenstrual symptom severity ($r = 0,527$; $p = 0,062$).

6.10.1.3. Current stress

Open-ended questions from the MBQ were used to assess current stressors. Table 16 lists current continuing stressors in the lives of the study group. The category 'other stress' included many diverse events, such as illness in the family, housing problems, financial stress, and township violence. The Binomial test was used to compare the two groups. The results are presented in Table 16.

TABLE 16. CURRENT STRESS

STRESSFUL EVENT	PMS GROUP	CONTROLS	z	p	SIGNIFICANCE
Work or studies	23%	37,5%	-0,217	1,164	-
Relationships	46%	25%	0,499	0,616	-
Other stress	23%	0	0,821	0,411	-
No current stress	8%	37,5%	1,500	0,133	-

The data in the above table indicates that no significant differences were found between the two groups on levels of current stress. Fewer of the controls considered themselves to currently be experiencing stress, however, this difference did not reach statistical significance. While more of the PMS group rated interpersonal relationships as a current source of stress, no significant differences on this variable, were found between the groups. It is of interest to note that the incidence between the two groups varied, with regard to the domain of stress, e.g. interpersonal relationships versus work.

6.10.2. Hypothesis 2

Women with PMS have more negative attitudes to menstruation than women without PMS.

In order to compare the two groups on attitudes to menstruation, the data obtained from the Menstrual Attitude Questionnaire was analyzed using the Mann-Whitney test. The results of this analysis are presented in Table 17.

TABLE 17. ATTITUDES TO MENSTRUATION

ATTITUDE	MANN-WHITNEY U VALUE	n1	n2	SIGNIFICANCE
Debilitating	6,5	8	13	**
Prediction of onset	13	7	13	*
Natural	37	7	13	-
Bothersome	43	8	13	-
Denial of effects	26	7	13	-

** p<0,001

* p<0,01

Significant findings

Menstruation as debilitating

Women with PMS viewed menstruation as significantly more debilitating than did controls (p<0,001). This finding suggests that in comparison to controls, women with PMS experience menstruation (and the premenstrual phase) as more interfering and debilitating, in relation to everyday activities, as well as physical and emotional well-being.

Anticipation and prediction of onset of menstruation

Women with PMS scored significantly higher on the anticipation and prediction of the onset of menstruation (p<0,01). This difference suggests that women with PMS are more able to anticipate and predict the onset of menstruation, based on the premenstrual changes which precede it. By implication, it would appear that controls either do not experience such changes to the same extent, or otherwise that they are less sensitive and vigilant to the changes.

Non-significant findings

Menstruation as natural

No significant differences were found between the two groups in perceptions of menstruation as a natural event. An analysis of the raw scores indicated that both groups accepted the naturalness of menstruation.

Menstruation as bothersome

The two groups did not differ significantly in their perceptions of menstruation as a bothersome event. An analysis of the raw scores indicated that there was a trend for both groups to regard menstruation as bothersome.

Denial of effects of menstruation

No significant differences were found between the two groups on the denial of the effects of menstruation. The denial scores were low for both groups, thus suggesting that neither of the groups denied the fact that menstruation could be accompanied by distressing emotional and physical changes.

6.10.3. Hypothesis 3

Women with PMS tend to utilise different coping mechanisms with regard to emotional stress, when compared to women with mild/minimal premenstrual changes.

In order to compare differences in coping styles between the two groups, the proportion of subjects using a specific coping mechanism, within each group, was computed. The two groups were then compared using the binomial test. It needs to be pointed out that the use of a particular coping mechanism by an individual, does not preclude the use of other coping mechanisms. Most subjects used a wide array of coping mechanisms in response to emotional stress. Table 18 presents the data pertaining to this hypothesis.

TABLE 18. COPING WITH EMOTIONAL STRESS

COPING STYLE	PMS GROUP	CONTROLS	z	p	SIGNIFICANCE
Problem focused	70%	87,5%	-0,389	1,274	-
Over control	85%	25%	2,289	0,022	*
Somatisation	38%	25%	0,137	0,891	-
Withdrawal	77%	50%	0,798	0,424	-
Social support	85%	100%	-0,376	1,266	-
Avoidance	92%	50%	1,662	0,096	-

As can be seen from Table 18, significantly more of the PMS group reacted to emotional stress by attempting to control their emotions and feelings. No other significant differences were found.

Table 19. COPING WITH ILLNESS

COPING STYLE	PMS GROUP	CONTROLS	z	p	SIGNIFICANCE
Sick role	15%	12,5%	-0,486	1,322	-
Denial	54%	75%	-0,499	1,328	-
Withdrawal	23%	25%	0,423	0,671	-
Ambivalence	38%	25%	0,137	0,891	-
Social support	0	12,5%	-0,251	1,188	-
Problem focused	85%	62,5%	0,650	0,515	-

No significant differences were found between the two groups in relation to the type of coping mechanisms used, when coping with illness. Fewer of the PMS group than the controls, used denial as a coping style, however, this difference did not reach statistical significance. In contrast, fewer of the controls, than PMS subjects coped with illness through problem-focused coping, however, this difference also failed to reach statistical significance.

6.10.4. Hypothesis 4

Women with PMS have a history of more psychosomatic illness than do women without PMS.

This hypothesis was tested using the Mann-Whitney U test. The results are presented in Table 20.

TABLE 20. PSYCHOSOMATIC ILLNESSES AND COMPLAINTS

DEVELOPMENTAL PERIOD	MANN-WHITNEY U VALUE	n1	n2	SIGNIFICANCE
Adulthood	28	8	13	*
Adolescence	50	8	13	-
Childhood	44,5	8	13	-

* $p<0,05$

The above data indicates that in comparison to controls, women with severe PMS had a significantly higher incidence of psychosomatic illnesses and complaints, as adults ($p<0,05$). No significant differences were found between the two groups in the incidence of psychosomatic illnesses during childhood or adolescence. These findings suggest that women with PMS, may have a predisposition or tendency to react psycho-

somatically (i.e. develop psychosomatic illnesses) under stress (see appendix 2 for a list of the illnesses assessed).

A few of the subjects in the PMS group reported various other previous medical illnesses. One subject had a history of endometriosis and ovarian cysts. Another had previously received medication for an underactive thyroid. One subject reported that she had a history of excessive androgen levels. The latter subject also reported a family history of depression (both bipolar and unipolar) and 'nervous breakdowns'.

6.10.5. Hypothesis 5

The daily monitoring of symptoms in women with PMS over a period of two menstrual cycles will result in diminished symptom severity.

The data from the Premenstrual Assessment Form was analyzed using the Wilcoxon matched-pairs signed-ranks test. A significant group difference ($p<0,005$) was found between the premenstrual ratings of symptoms prior to starting the study and those of the last premenstrual cycle during the study. The data is presented in Table 21.

TABLE 21. PRE- AND POST RESEARCH PMS SCORES

SUBJECT	PAF 1 SCORE	PAF 2 SCORE	d	RANK OF d	RANK WITH LESS FREQUENT SIGN
1	309	225	84	10	
2	196	226	-30	-3	3
3	421	433	-12	-1	1
4	373	243	130	13	
5	367	307	60	8	
6	240	154	86	11	
7	259	274	-15	-2	2
8	239	195	44	6	
9	321	269	52	7	
10	344	307	37	5	
11	233	144	89	12	
12	377	360	17	4	T=6*
13	294	234	60	9	

* $p<0,005$

The data in the above table (Table 21) presents the pre and post-research PMS scores (PAF I and PAF II respectively). As is evident from Table 21, there was a significant reduction in symptom severity, across the study period, within the PMS group, as a whole. Symptoms of the last menstrual cycle, during the study period, were less severe than those rated for the three months preceding participation in the study. Various factors such as the actual research process (i.e. monitoring of symptoms), as well as changes in individual life circumstances may have accounted for the positive improvement in symptom levels. These factors will be discussed in greater detail in the final chapter.

6.10.6. DAILY EVENTS

Table 22 lists the daily events and stressors experienced by the PMS group during the period of research.

TABLE 22. DAILY EVENTS

POSITIVE DAILY EVENT	NEGATIVE DAILY EVENT
Shopping (clothes etc)	Persistent insomnia
Did well in exams	Fatigue/exhaustion
Stress management course	General aches and pains
Job "promise"	Cold, flu, ill, migraines
Birthday	Premenstrual symptoms
Birth of friend's baby	Family member ill
Nieces christening	Car accident
Got engaged	Death of friend, relative
Family wedding	Interpersonal and/or marital conflict
Family reunion	End of relationship
Outing for the day	Changes or retrenchments at work
Short holiday/weekend away	Stress/pressure at work
Enjoyable social activities	Friends marriage ends
Church activities	Stressful social activities
Rewarding artistic activities	Violent encounter

As depicted in Table 22, numerous positive and negative daily events occurred during the research period. According to subjective reports, these events affected the way particular subjects felt on certain days. The number of entries for each subject varied and while some events were common (e.g. flu), others were experienced by individual subjects only. In addition, the same event occurred repeatedly, on various days, for some subjects. For this reason, only the events and not the frequencies, are listed. The classification of events as negative or positive, was based on the subject's emotional response to the event, for example, feeling happy, feeling sad/depressed, feeling irritable, feeling angry.

In addition to the information about specific daily events and stressors, the daily rating forms also provided valuable information about individual personality traits and coping styles. For example, the tendency to ambivalence in one subject was reflected well in entries regarding her relationship with her boyfriend. At the beginning of the research she wrote that she was having problems with her boyfriend. These problems continued over many days until she wrote "Boyfriend out of house at last - sense of relief and control over my own life and time and mind." A few days later she was missing him and a few days after that she was back with him.

Entries by another subject reflected a tendency to generalised anxiety when she wrote "Worry about future of self, country, government, universe...!" In a few of the subjects there appeared to be a tendency to somatise. In these subjects, daily diaries were filled with great detail about minor somatic aches and pains, such as sore or swollen feet, colds etc.

The use of daily diaries in prospective research appears to provide a rich source of information, in relation to stressful life events, as well as personality and coping styles, in response to the occurrence of daily events and hassles.

SUMMARY OF SIGNIFICANT FINDINGS

(a) The PMS group had experienced more psychosomatic illnesses than the control group suggesting a psychosomatic response tendency in PMS subjects.

(b) The PMS group regarded menstruation as more debilitating than the control group.

(c) In contrast to controls, PMS subjects were more able to predict the onset of menstruation based on the premenstrual changes which preceded it.

(d) Within the PMS group, there was a significant reduction in premenstrual symptom severity over the study period.

(e) Significantly more of the PMS group than the control group, utilised the defense mechanism of over-control as a means of coping with emotional stress.

SUMMARY OF NON-SIGNIFICANT FINDINGS

(a) No significant differences were found between the two groups on levels of recent life events stress or current stress.

(b) Within the PMS group, no significant relationship was found between recent life events stress and premenstrual symptom severity.

(c) The PMS group did not regard menstruation as more bothersome than the control group.

(d) Neither the control group nor the PMS group, denied the effects of menstruation.

(e) Both groups regarded menstruation as natural.

CHAPTER 7

DISCUSSION & CONCLUSIONS

Every question answered generates new ones
Freedman, 1992

7.1. INTRODUCTION

The broad research aim outlined in Chapter 1, was to compare women with PMS and women without PMS, on certain psychological measures. The purpose thereof, was to investigate whether any salient differences existed, which might have accounted for differences in symptom severity between the groups. This concluding chapter presents a discussion of the findings, in relation to the stated research aims. The implications of the current findings, for future research, as well as the limitations of the current study, are also discussed.

7.2. DISCUSSION OF RESULTS

7.2.1. Menarche and menstruation

Menarche is an important turning point in female development, in that it represents the dawning of adult sexuality. While it may present a potential crisis, the findings of this study suggest that this is not the case for all young girls. Thirty one percent of the PMS subjects and 37,5% of the control subjects, reported that they felt proud and satisfied when they experienced their first period.

The control group, were on average, one year younger than the PMS group at menarche. The majority of subjects in both groups had been prepared for menarche prior to its occurrence, however, the fact that 23% of the PMS subjects and 12% of the control subjects were uninformed about menstruation, prior to menarche, is of concern. Any unexplained physical bleeding is likely to arouse anxieties, due to the fact that bleeding is usually associated with injuries or death. The findings of this study, confirm those of Ferreira and Viljoen (1985) who found that 16% of their South African sample were not informed or educated about menstruation, prior to menarche. It thus appears that education regarding the female reproductive system, is essential.

The reason for the ignorance of young girls, regarding menstruation, is not clear. Nevertheless, questions arise as to whether this ignorance extends to that of the implications of menstruation, namely, reproductive maturity and the potential for pregnancy. Given the high incidence of teenage pregnancies in South Africa, further research regarding the ignorance of the female reproductive system, among young girls, appears necessary.

The lack of education, within the study group, may have accounted for the fact that 15% of the PMS group and 12% of the control group, reacted to menarche with feelings of shock and fear. Reactions of shame and humiliation, as well as feelings of being out of control of bodily functions, were reported by 31% of the PMS group and 37,5% of control subjects. One interpretation of these findings would be that menarche evoked earlier anal conflicts regarding the control of eliminatory functions. This interpretation would confirm Deutsch's (1944) theory, that the first menstrual period may evoke fantasies regarding loss of eliminatory control, together with associated conflicts regarding dependency, as well as issues of autonomy and control.

The mother's reaction to menarche may reveal how she feels about her daughter's sexual development (Shapiro, 1988). Considerably more mothers of control subjects (75%) than PMS subjects (23%) responded to their daughter's menarche, with matter of fact acceptance. A further 23% of the PMS group, reported that their mothers had responded to menarche with embarrassment. This was not the case for any of the subjects in the control group. These findings suggest that the mothers of control subjects were more matter of fact and accepting, in relation to their daughter's sexual development.

Only half of the PMS group, in comparison to 72% of the control group, had been informed about menstruation by their mother. These findings suggest that the mother-daughter relationship, within the control group, may have been more open.

7.2.3. Attitudes towards menstruation

Various authors have suggested that the experience of menarche, as well as the mother-daughter relationship, may influence later experiences of menstruation and attitudes towards menstruation (Deutsch, 1944; Shapiro, 1988). In comparison to the control group, the PMS group regarded menstruation as significantly more debilitating ($p<0,001$).

One possible interpretation of these findings would be that attitudes of debilitation, may have been influenced by experiences of menstruation. Woods (1985) states that attitudes of debilitation may be a function of experience. The fact that the PMS group regarded menstruation as more debilitating than controls, may have been due to the fact that the menstrual and premenstrual phase, was associated with more symptomatic distress for PMS subjects. It has been found (Woods, 1985) that negative emotional symptoms exert the greatest influence on attitudes of debilitation and disability.

An alternative explanation for the findings of this study might be that attitudes of debilitation, contribute to menstrual and premenstrual distress. The direction of the relationship between attitudes of debilitation and premenstrual distress, is not clear. Nevertheless, the findings of this study support those of other studies (Brooks-Gunn & Ruble, 1980; Woods, 1985) which have found a positive association between attitudes of debilitation and premenstrual symptoms.

The perception within the PMS group, of menstruation as debilitating, concurs with the responses on the open-ended questions regarding menstruation. These responses suggested that in comparison to controls, PMS subjects were more aware of the negative aspects of menstruation. The fact that the PMS group regarded menstruation as more debilitating than controls, may also explain why more PMS subjects (69%) than control subjects (37,5%) restricted certain of their activities during menstruation.

Women with PMS scored significantly higher on the anticipation and prediction of the onset of menses ($p<0,01$). This difference suggests that in comparison to controls, women with PMS were more able to predict the onset of menses, based on the preceding premenstrual changes. By implication, it would appear that controls either did not experience premenstrual changes to the same extent, or alternatively, that they were less sensitive and vigilant to these changes. These findings confirm those of Brooks-Gunn and Ruble (1980) who found that the ability to predict the onset of menses, was related to premenstrual symptomatology.

Both groups perceived menstruation to be bothersome, although, both groups also regarded menstruation as natural. These findings confirm those of other studies (Brooks-Gunn & Ruble, 1980) which suggest that perceptions of menstruation as natural, do not negate the bothersome or debilitating aspects thereof. Furthermore, the findings suggest that symptoms of premenstrual and menstrual distress, are not associated with perceptions of menstruation as natural.

No differences were found between the two groups in relation to the denial of the effects of menstruation. Neither group denied that menstruation could in fact be distressing for some women. These findings suggest that even though controls do not themselves experience distressing premenstrual and menstrual symptoms, they nevertheless acknowledge the fact that menstruation may be distressing for some women. Acknowledgement of the distressing effects of menstruation thus does not appear to be associated with premenstrual symptom severity.

In sum, while controls did not perceive menstruation to be debilitating or disruptive, they nevertheless perceived it to be bothersome. In contrast, PMS subjects perceived menstruation to be both debilitating and bothersome. Both groups regarded menstruation as natural and acknowledged the fact that menstruation could be distressing for some women. These findings indicate the importance of conceptualising attitudes to menstruation as multi-dimensional.

7.2.4. Premenstrual symptoms

The majority of the PMS group regarded the emotional changes or symptoms accompanying menstruation, as the most bothersome and distressing aspect thereof. This was not the case for any of the control subjects, 50% of whom, perceived the physical aspects of menstruation, such as cramps, to be aversive.

One explanation for these findings would be that controls simply did not experience premenstrual emotional changes to the same extent as did the PMS group. The fact that controls did not rate such symptoms as severe, would confirm this interpretation, as well as the findings of other studies, which indicate that non-PMS women have a lower incidence of premenstrual emotional changes (Metcalf, Livesey, Wells & Braiden, 1990; Woods, 1985).

Another interpretation might be that controls did not attribute such symptoms to menstruation, or alternatively, that controls may have found the premenstrual emotional changes less distressing than the PMS group.

The development and onset of severe premenstrual symptoms varied. Factors subjectively reported to be associated with the development of PMS, were age and parity. Five PMS subjects stated that their symptoms had developed after adolescence, whereas four PMS subjects reported that symptoms had evolved following their pregnancies.

The most frequent severe symptoms were: dissatisfaction with appearance, anxiety (and the inability to cope), depression (and weeping), irritability, bloating, abdominal pain, and feelings of weakness. These findings largely concur with those reported by other authors (Ablanalp, 1985; Demarest, 1985) with the exception of two symptoms: (i) breast symptoms; and (ii) dissatisfaction with appearance.

Breast symptoms are one of the most commonly reported PMS symptoms in other studies (Demarest, 1985). Thirty eight percent of the PMS subjects rated breast symptoms as severe. The difference between the findings of this study and that of others, may be explained by the fact that the frequencies of symptoms were calculated only for the PMS group. Alternatively, cross-cultural variations in symptomatology, may have accounted for this difference.

The extreme premenstrual dissatisfaction with appearance within 69% of the PMS group, is very unusual, in comparison to the most commonly reported symptoms in other studies. Possible explanations of this finding might be that this 'symptom' may reflect the premenstrual exacerbation of a trait, which is characteristic of PMS women. An alternative explanation would be that dissatisfaction with the self, may have been related to changes in body-image during the premenstrual phase. Furthermore, dissatisfaction with the self and self-deprecation may have been part of the premenstrual depression. Fitzgerald (1990) states that faulty cognitions, are part of the depressive state and are related to negative self-perception.

An alternative explanation of these findings might be that the dissatisfaction with appearance, may have been related to cultural factors, such as the emphasis on appearance, within the South African society. It is possible that premenstrual physical changes, as well as changes in body-image, contribute to feelings of unattractiveness. Dissatisfaction regarding appearance may then be heightened, due to internalised cultural values regarding attractiveness and appearance.

7.2.4.1. Interpersonal relationships

According to subjective reports, PMS exerted a negative influence on interpersonal relationships. Irritability was reportedly the most distressing complaint, with regard to the impact thereof on interpersonal relationships. Some subjects reported that demands made upon them by family members, close friends, or people at work, heightened premenstrual feelings of irritability and agitation.

One interpretation of these findings might be that PMS women are self-denying, during the intermenstrual phase. However, during the premenstrual phase, when feelings of vulnerability and sensitivity are heightened, it may become difficult to deny certain needs, as well as to contain feelings of anger aroused by the demands of others. Research findings (Hicks et al, 1986; Stout & Steege, 1985) suggest that women with PMS are self-denying and do not express their anger. In addition, women with PMS also appear to be self-critical (Hicks et al, 1986).

The findings of this study suggest that women with PMS are more self-critical and less self-accepting than controls. Notably more of the PMS group (70%) than the control group (50%) reported that their greatest source of inner conflict related to difficulty accepting certain aspects of the self. Specific aspects mentioned by different subjects included characteristics, such as pessimism, or laziness. One subject felt dissatisfied with her personal appearance and two subjects stated that they were dissatisfied with their weight. These findings suggest a tendency to self-deprecation and self-criticism in PMS women. If there is such a tendency, this might explain the extreme premenstrual dissatisfaction with personal appearance, reported by 69% of the PMS group.

7.2.5. Sex roles and identity

It is noteworthy that over half of the PMS group identified the traditional female role as being the best part of being a woman. In contrast, 50% of the controls identified the possibilities for functioning in both the traditional female role (e.g. childbearing) as well as the traditional male role (work), as the most positive aspect of being a woman. Although both groups valued the female role in relation to factors such as the ability to bear children, controls also regarded the ability to work, as important.

This data suggests that women with PMS were more traditional in their attitudes towards the female role, whereas controls were more androgynous. Role values and attitudes, however, need to be differentiated from sex role identity. Both groups regarded femininity in relation to the physical self (e.g. dress, appearance, sensuality), as one of the best things about being a woman. The above findings suggest that both groups identified with the feminine sex role (femininity, pregnancy, motherhood) but that the PMS group was more traditional in their sex role attitudes.

Recent studies (Heilbrun et al, 1990) on PMS and the female role, suggest that women with traditional female role attitudes, as well as feminine role identities,

experience more menstrual distress. In contrast, feminine contemporary women (i.e. women with a feminine role identity and contemporary or androgynous sex role attitudes) appear to experience less menstrual distress (Heilbrun et al, 1990).

7.2.6. Stress

No significant differences were found between the two groups on recent life events stress. However, the mean stress score was higher for the PMS group, than for that of the controls. Approximately half of the PMS group had scores of over 200 on the SRE; which suggests that the effects of recent life events stress on premenstrual symptoms, may play a role in the development of PMS, in some women. Thirty nine percent of the PMS group subjectively reported that symptoms were more severe during times of stress. The latter reports emphasise the importance of considering individual variations in the aetiology of PMS.

The raw scores of the PMS group also suggested that a relationship existed between extreme scorers on recent life events and extreme scorers on premenstrual symptom severity. However, no significant correlation was found between these two variables. Although more of the PMS group (92%) than the control group (62,5%) considered themselves to currently be under stress, no significant differences were found between the groups, with regard to current stress.

These non-significant results contrast those of other studies (Woods et al, 1985), which have found a positive correlation between life events stress and certain premenstrual symptoms, such as negative affect, performance impairment and pain. One explanation of this disparity may be that the relationship between recent life events stress and <u>specific</u> premenstrual symptoms was not assessed in this study.

Another explanation of the inconsistent findings regarding stress and PMS, may be that the specific type of stressor needs to be taken into account in PMS research. Woods et al (1985) found that daily stressors were more influential than cumulative life event stressors in PMS severity, and that a generally stressful life context was more influential than episodes of stressful experiences. Gerdes (1980) also found indications that continuing stress, over a long period of time, was more damaging than an acute stressor, over a short period of time. The latter studies emphasise the importance of delineating the specific stressor and its duration, when assessing the role of stress in female gynaecological disorders.

7.2.6.1. Coping

Coping styles and social support may affect reactions to stress (Cobb, 1976; Holahan & Moos, 1985). Avoidance coping, in particular, has been associated with increased stress (Cronkite & Moos, 1984; Holahan & Moos, 1985). Ninety two percent of the PMS group, in comparison to 50% of the control group, used avoidance coping in response to emotional distress. However, this difference did not reach statistical significance.

The only statistically significant difference between the groups with regard to coping mechanisms, was that significantly more of the PMS group than the control group, reacted to emotional distress with the defense mechanism of over-control. These findings suggest that issues of control are important to women with PMS, since more of the PMS group reacted to emotional stress, with the need to control and suppress feelings.

One of the most frequent premenstrual complaints is the feeling of being out of control (Rome, 1986). Given the fact that the premenstrual phase is accompanied by both physical and emotional changes, the need for control within the PMS group, may partially explain the severe distress associated with the premenstrual phase, in women with PMS.

It has been speculated that menstruation may precipitate regressive tendencies to the anal phase and evoke associated conflicts regarding control (Deutsch, 1944). It is possible that the need to control emotions (within the PMS group) may be displaced to the need to control bodily functions. If this were so, it would be expected that the impending menstruation would induce anxieties and concerns, centred around control, since menstruation is a bodily function over which one has no control. These anxieties may in turn influence hypervigilance to premenstrual changes.

It has been suggested that women who experience severe premenstrual emotional symptoms are more likely to feel out of control and in need of help than those who experience only physical symptoms (Walton & Youngkin, 1987). Lack of emotional control appears to be much more threatening to self-esteem than do the physical symptoms (Walton & Youngkin, 1987). The findings of this study, however, suggest that lack of control per se, may be more threatening to women with PMS, than controls.

7.2.7. Psychosomatic illness

There is some indication that psychosomatic illness may be associated with the defense mechanism of over-control (Gerdes, personal communication, 1992). In comparison to controls, women with PMS were found to have a significantly greater history of psychosomatic illnesses during adulthood ($p<0,05$). These findings suggest a psychosomatic response tendency in women with PMS. Gerdes (1979) found that symptomatic menopausal women had a significantly greater psychosomatic response tendency than asymptomatic women. The findings of the latter study, as well as of this study, suggest that a psychosomatic response tendency, may be an important factor in certain of the female gynaecological disorders, such as distressing premenstrual and menopausal symptoms.

7.2.8. Socio-cultural factors

Cultural and environmental factors may influence perceptions, experiences and attitudes towards menstruation. Two subjects regarded menstruation as a cleansing or physical detoxification process. These findings confirm those of other studies (World Health Organisation, 1981) which suggest that primitive cultural misconceptions regarding the function of menstruation and the nature of the menstrual flow, as unclean, still exist today. The restriction of activities, such as sex and exercise, by subjects in this study, as well as the reasons for the restriction of such activities (e.g. hygiene, health, aesthetic) also confirms those reported in other studies (Paige, 1973; World Health Organisation, 1981).

Cultural prescriptions for the behaviour of menstruating women, are not always adhered to (World Health Organisation, 1981). Two of the subjects reported various African cultural prescriptions for behaviour during menstruation, which have also been reported in other cross-cultural studies (World Health Organisation, 1981). Although not necessarily adhered to, these prescriptions included not bathing in warm water, the restriction of religious and social activities, crouching during menstruation, as well as isolation. The reported reluctance, among African women, to talk of menstruation has also been reported in other cultures (Akhtar, Sharma, Verma & Jangid, 1990).

7.2.9. Symptom improvement

A confounding factor with regard to the treatment of PMS, is that PMS appears to respond to just about any type of intervention, including that of keeping daily diaries (McDaniel, 1988). The placebo response in PMS treatment trials is also high (Brooks-Gunn, 1986; Hart, Coleman & Russell, 1987). A significant improvement in

symptom severity ($p<0,005$) was found, within the PMS group, between symptom levels prior to starting the study and those of the last cycle during the study. These findings confirm those of previous studies (Gise, Lebovitz, Paddison & Strain, 1990) and reports (Cumming, Fox & Cumming, 1990; McFarlane & MacBeth Williams, 1990) which suggest that the daily monitoring of symptoms may lead to a reduction in symptom severity and distress.

The reduction in symptom severity may possibly have been due to the daily monitoring of symptoms. However, it may also have been due to other factors, such as spontaneous remission, or changing life circumstances, which may have initially contributed to symptoms. Longitudinal research is necessary to determine whether the reported improvement is maintained over time. However, questions arise as to whether the improvement may have been part of the placebo response.

It has been suggested (Alberts & Alberts, 1990) that symptoms may improve simply because the experiences of distress are validated and taken seriously. Until recently, many of the primary female syndromes were not taken seriously by the medical profession. Ablanalp (1985) states that past attitudes to syndromes such as PMS, have frequently been that "it's all in your head." An illustration of a label on a medicine bottle, in a magazine article about PMS (cited in Chrisler & Levy, 1990), illustrates this point. The label reads "Dr Dubious's PMS remedy for ladies..."

The exact mechanisms of the placebo response are not known. However, Leon Eisenberg (in Alberts & Alberts, 1990, p.75) suggests that the placebo response be called "'*the response to care*'*...in order to emphasise that it is (a) powerful, (b) no less 'real' than drug actions and (c) embedded in every therapeutic transaction...Its mechanisms are some compound of the arousal of hope, the comfort of reassurance, taking an active rather than a passive role in managing the illness experience, and reinterpreting the meaning of the illness.*

7.3. LIMITATIONS OF THE CURRENT STUDY

One of the limitations of the current study, was that a small sample was used. The main disadvantage of using a small sample is that the findings cannot be generalised. Caution therefore needs to be exercised with regard to the findings of this study. A further limitation of a small sample, is that the criteria for statistical significance are extremely stringent. Consequently, significant differences, may appear non-

significant when small samples are used. The non-significant findings of this study, for example those pertaining to stress, should thus be interpreted with caution.

Another limitation of the study was that its purpose was not disguised. Some studies (AuBuchon & Calhoun, 1985) have found that the failure to disguise the purpose of menstrual studies, may increase symptom ratings. More recent studies (Gallant et al, 1992) however, suggest that this is not necessarily the case. Gallant et al (1992) found that knowing the purpose of the study, did not affect the ratings of women reporting severe symptoms. However, increased reports of symptom severity, were found in asymptomatic women, when compared with subjects blind to the purpose of the study. These findings may explain the fact that various of the control subjects had to be excluded from the data analysis, due to the fact that symptoms were rated as moderate or even severe, on measuring instruments (i.e. false negatives). False negatives or false positives may result in either underdiagnosis or overdiagnosis of PMS. Ideally, daily ratings should be obtained for subjects who volunteer as controls for PMS research.

An additional limitation of the study was that subjects were not medically screened, although, they were questioned about current medical or psychiatric disorders and excluded from the study, if there was any indication of such disorders. However, this limitation may have resulted in the inclusion of subjects, who evidenced undiagnosed medical or psychiatric disorders. Yankuaskas (1990) has emphasised the differential diagnosis of PMS. (i.e. other disorders which may present as PMS). These include: endometriosis; pelvic inflammatory disease; ovarian cysts, thyroid disorder; hyperprolactinemia; nutritional deficiency; and psychiatric illness.

Three of the PMS subjects, reported a previous medical history of some of these disorders. One subject reported a history of endometriosis and ovarian cysts. Another reported a history of hypothyroidism. The third subject reported a history of excess androgen levels, as well as nutritional deficiencies. Similarly, there were some individuals with a history of affective disorders, such as depression and anxiety.

A further limitation of the current study was that reliable and standardised measures of sex role identity, self-acceptance and coping, were not used. Other than this, the measuring instruments used in the current study were found to be adequate. However, some dissatisfaction was experienced with regard to one of the dimensions on the MAQ, namely, the denial of the effects of menstruation. This dimension appeared to assess

attitudes towards women with distressing premenstrual symptoms, as opposed to the denial of the effects of menstruation.

7.4. FUTURE RESEARCH

A promising area of future research appears to be in the identification of sub-groups which may explain the wide individual variations between individuals. The findings of this study suggest that different factors may have been more influential, with regard to symptom severity, in different individuals. For example, in certain PMS subjects, biological factors appeared to play an important role in PMS symptomatology. For other subjects, stress appeared to be linked to symptom severity. In addition, distress regarding childlessness, appeared to influence the menstrual experiences of certain of the subjects.

It also appears important to investigate which psychological characteristics increase vulnerability to certain of the female gynaecological syndromes. There was some indication of certain similarities between symptomatic PMS women in this study, and symptomatic menopausal women in Gerdes (1979) study. These similarities included a tendency to psychosomatic illness, as well as low self-acceptance.

In addition, the tendency to emotional over-control within the PMS group, requires further investigation, since it may be that this tendency, results in the physical expression of emotions, through the development of psychosomatic illnesses.

7.5. CONCLUSIONS

The main aim of the study was to explore differences between women with PMS and women without PMS, on certain psychological indices. The purpose thereof was to investigate factors which may have accounted for differences in symptom severity. The findings suggest that there were such differences between the groups, with regard to certain attitudinal dimensions, as well as psychosomatic response tendency. In addition, more subjects within the PMS group responded to emotional stress, with over-control. Data from the exploratory questions, although tentative, suggests that there may be differences between the two groups, with regard to the mother-daughter relationship, as well as adherence to female sex-role stereotypes. The findings of this study thus suggest that certain psychological factors may be associated with premenstrual symptom severity.

CHAPTER 8

APPENDIX

8.1. APPENDIX 1

DSM-III(R) diagnostic criteria for Late Luteal Phase Dysphoric Disorder (in Kaplan & Sadock, Comprehensive Textbook of Psychiatry/V, Vol 2, p.1333).

A. In most menstrual cycles during the past year, symptoms in B occurred during the last week of the luteal phase and remitted within a few days after the onset of the follicular phase. In menstruating females, these phases correspond to the week before and a few days after, the onset of menses. (In non-menstruating females who have had an hysterectomy, the timing of luteal and follicular phases may require measurement of circulating reproductive hormones).

B. At least five of the following symptoms have been present for most of the time during each symptomatic late luteal phase, at least one of the symptoms being either (1), (2), (3), or (4):

(1) Marked affective lability, e.g. feeling suddenly sad, tearful, irritable or angry.

(2) Persistent and marked anger or irritability.

(3) Marked anxiety, tension, feelings of being "keyed up" or "on edge".

(4) Markedly depressed mood, feelings of hopelessness or self-deprecating thoughts

(5) Decreased interest in usual activities, e.g. work, friends, hobbies.

(6) Easy fatigability or marked lack of energy.

(7) Subjective sense of difficulty in concentrating.

(8) Marked change in appetite, overeating, or specific food cravings.

(9) Hypersomnia or insomnia.

(10) Other physical symptoms, such as breast tenderness or swelling, headaches, joint or muscle pain, a sensation of bloating, weight gain.

C. The disturbance seriously interferes with work or with usual social activities or relationships with others.

D. The disturbance is not merely an exacerbation of the symptoms of another disorder, such as Major Depression, Panic Disorder, Dysthymia, or a Personality Disorder (although it may be superimposed on any of these disorders).

E. Criteria A, B, C and D are confirmed by prospective ratings during at least two symptomatic cycles. (The diagnosis may be made provisionally prior to this confirmation).

8.2. APPENDIX 2: MINI-BIOGRAPHY QUESTIONNAIRE (MBQ)

MINI-BIOGRAPHY QUESTIONNAIRE

(adapted from **A MINI-BIOGRAPHY QUESTIONNAIRE** by L.C. Gerdes)

This questionnaire is an important part of a study of women and aspects of life, which are important to her as a person. It will be expected of you to answer a large number of questions. We would like to stress that there are no right or wrong answers. What is true for you, is the answer we want. It is better not to answer a question you prefer to omit, than to give an incorrect answer. But do try to answer them all.

ALL INFORMATION IS TREATED AS ABSOLUTELY CONFIDENTIAL

Name:

Age:

Address:

Home language:

Religion:

Occupation:

Marital status:

Number of children:

Education:

Below is a list of illnesses and complaints. By means of a cross in the right column show when you suffered from any of them and how badly. You may have had them throughout your life or only during a certain period or not at all. Indicate <u>all</u> times when you had them

Complaints and Illnesses	Period when experienced								
	during childhood			as an adolescent			as an adult		
	Badly	Moderately	Mildly	Badly	Moderately	Slightly	Badly	Moderately	Slighly
1.Nervousness									
2.Sleeplessness									
3.Worry about health									
4.Overweight									
5.Underweight									
6.Pounding heart									
7.Heartburn									
8.Feelings of Weakness									
9.Asthma									
10.High Blood pressure									
11.Eczema or Skin Complaints									
12.Bedwetting									
13.Nail biting									
14.Allergy									
15.Fainting attacks									
16.Constipation									
17.Diarrhoea									
18.Extreme tiredness									
19.Ulcers									
20.Diabetes									
21.Fits or Convulsions									
22.Frequent urination									
23.Hay Fever									
24.Colds									
25.Inability to concentrate									
26.Thrombosis									
27.Excessive Appetite									
28.Nervous Breakdown									
29.Poor Appetite									
30.Arthritis or Rheumatism									
31.Migraine									
32.Tension									
33.Headaches									
34.Depression									
35.Violent Temper									
36.Dizziness									
37.Low Blood Pressure									
38.Excessive Sleepiness									
39.Low Blood Sugar									
40.Thyroid Disturbance (Under or Overactive)									

2. Name serious or recurring illnesses not mentioned under 1 which you have had.....
.....
.....

3. Have you ever had to take daily medication for longer than a month? Specify for what reason.....
.....

4. Name any serious or recurring illnesses in your family (sisters/brothers/parents/ grandparents).....
.....

5. Whenever you are ill, how do you mainly tend to react?

A. Go to bed immediately
B. Keep going until you collapse
C. Keep going but rest as much as possible
D. Go to bed but arrange thing carefully and organise others to carry on

6. When you are ill, do you tend to:

A. Feel better if given a great deal of attention and sympathy
B. Like to be left alone
C. Feel you need sympathy and attention, but are also resentful of it
D. Try to be a model patient and accept as little help as possible
E. Be a co-operative patient and gladly accept help from others

We all have our own ways of expressing our feelings and attitudes. We would like to know how you generally react. Mark the answer which most closely describes you. Try to mark only one alternative, but if there are two equally strong tendencies, you may mark two alternatives.

7. When you are really angry, do you mainly:

A. Lose your temper
B. Keep silent
C. Talk it over
D. Feel quite ill
E. Escape to a peaceful place
F. Keep changing your mind about what to do

8. At times of crisis do you mainly:

A. Keep very calm but collapse when the crisis is over
B. Simply go to pieces and feel unable to cope
C. Become aggressive
D. Start organising things to help
E. Are torn by indecision
F. Feel sick

9. When feeling threatened or afraid, do you mainly:

A. Want to fight back
B. Want to run away
C. Feel paralysed by uncertainty
D. Feel ill with anxiety
E. Concentrate on hiding your fear
F. Work out a way of coping with the situation

10. When worried or distressed do you tend to mainly:

A. Seek the comfort and presence of other/friends/family
B. Want to be alone
C. Just want to fight everybody

11. When you are very excited or happy do you mainly:

A. Tell everyone about it
B. Just feel good about it but keep your feelings to yourself
C. Feel sick with excitement
D. Do something absurd
E. Rush around not knowing what to do

12. When feeling sad or depressed do you mainly:

A. Look for comfort from others
B. Want to be left alone
C. Just feel fed-up with everybody

13. If you feel you need help to cope with your worries or depression, do you:

A. Go and see your family doctor
B. Go and see a psychologist or psychiatrist or counsellor
C. Go and see your minister or an active member of your church for spiritual help
D. Go and see your best friend
E. Talk to your husband/boyfriend/partner
F. Try to find help from books
G. Go to your mother/father (delete what does not apply in G)
F. Do nothing

The following questions concern recent or current stressors in your life.

14. Has there ever been a continuing stress in your life?

[Yes] [No]

15. For how long did it go on?

[A few months] [1-2 years] [2-3 years] [4-5 years] [Indefinitely]

16. Could you briefly explain what this stress was.....
.....
.....

17. Is there a current stressor in your life? Explain.....
.....
.....

If there is a current stressor in your life, please answer the following three questions:

18. Is there any adult person with whom you have been able to talk to about this stressor?

[Yes] [No]

19. Has this person expressed an interest and concern in your well-being?

[Yes] [No]

20. Has this person comforted you and offered to assist you where possible?

[Yes] [No]

The following questions relate to your marriage. Remember that there are no right or wrong answers. Whatever is true for you is what we would like to know. If you have been married more than once, refer to your present marriage below.

21. Mark the main sources of satisfaction in your marriage. Mark all relevant items.

A. Companionship
B. Shared interests
C. Sexual relationship
D. Love and affection
E. Financial security
F. Emotional support

22. Mark the main sources of stress in your marriage:

A. Different interests
B. Financial problems
C. In-laws
D. Ill-health
E. Disagreements over children
F. Unfaithfulness
G. Lack of love and affection
H. Sexual problems
I. Incompatibility
J. Jealousy
K. Housing problems
L. Drinking/drugs
M. Violence/aggression
N. Communication problems

The following two questions relate to your occupation.

23. Mark the main sources of satisfaction in your occupation:

A. Work is interesting/stimulating
B. Financial reward
C. Fellow-workers pleasant
D. Work environment
E. Boss is pleasant
F. Working conditions
G. Achievements recognised rewarded

24. Mark the main sources of stress in your occupation

A. Long distance travel
B. Long working hours
C. Workload too much
D. Workload too little
E. Salary insufficient
F. Work environment
G. Insufficient training
H. Fellow workers unpleasant
I. Boss unpleasant
J. Work is boring

A woman faces many gynaecological experiences and changes in the course of her life. The following questions are concerned with some of these changes.

25. How old were you when you had your first menstrual period?.....

26. How many days do your periods usually last?.....

27. Are your periods:

[Heavy] [Normal] [Light]

28. Was your reaction to your first period one of:

A. Pride in being a woman
B. Matter of fact acceptance
C. Shock
D. Fear
E. Satisfaction
F. Irritation/annoyance
G. Shame
H. Humiliation

29. Who explained your first menstruation to you?

A. Mother
B. Grandmother
C. Sister
D. Friend
E. Other (specify).....

30. Was this before you experienced your first menstruation?

[Yes] [No]

31. Who did you tell about your first menstruation?

A. Mother
B. Sister
C. Grandmother
D. Friend
E. Other (specify).....

32. What was your mother's reaction to your first period?

A. Pride
B. Matter of fact acceptance
C. Embarrassment
D. Irritation
E. Surprise
F. Mother absent
G. Other (specify).....

33. What was your father's reaction to your first period?

A. Pride
B. Surprise
C. Embarrassment
D. Father absent
E. Did not discuss it with him
F. Other (specify).....

34. How did your mother feel about her own menstruation?

A. Pride
B. Matter of fact acceptance
C. Irritation
D. Don't know
E. Other (specify).....

35. Which of your female relatives have had any premenstrual or menstrual problems (specify which problem)?

A. Mother
B. Grandmother
C. Sister/s

36. Have there been any specific times in your life when you have had more premenstrual problems than at other times?

[Yes] [No]

37. If your answer to 36 is Yes, specify at which times and what you think was the reason for these changes.....
.....

38. Which actions (if any) do you talk to help with distressing premenstrual changes?

A. Stay in bed
B. Ignore symptoms
C. See a doctor
D. Do nothing
E. Take medicine (specify).....
F. Accept it as part of a woman's lot
G. Ask a friend or family member what they think you should do
H. Other (specify).....

39. Many different words are used when women speak about menstruation. Mark which words you use to explain to others that you are menstruating:

A. Period
B. Menstruation
C. The curse
D. I am sick
E. That time of the month
F. Other (specify).....

40. Certain activities are avoided by some women during menstruation. Mark any activities which you avoid during menstruation:

A. Exercise/sport
B. Washing hair
C. Sex
D. Bathing
E. Other (specify).....

41. If you avoid any activity, explain the reason why you avoid each activity.....
.....

42. The one thing I would like to change most about menstruation is:

A. Cramps
B. Menstrual flow
C. Emotional changes
D. Sanitary towels/products
E. Other (specify).....

Complete the following sentences

43. To me menstruation is.....

44. The one thing I like most about my body is.....

45. The one thing I like least about my body is.....

46. I wish I were a man:

[Mostly] [Often] [Seldom] [Never]

Because.....

47. I am glad I was born a woman:

[Mostly] [Often] [Seldom] [Never]

Because.....

48. For me the best thing about being a woman is.....

49. For me the worst thing about being a woman is.....

50. The greatest thing in my life has been.....

51. If I had my life over again what I would like to change the most is.....
.....

52. The greatest conflict in myself relates to.....

8.3. APPENDIX 3: STRUCTURED INTERVIEW

Name:

Age:

Education:

Menstrual cycles regular?

Length of menstrual cycles:

Main distressing symptom:

Onset, Duration, history (i.e. developmental period associated with onset):

Events temporally associated with PMS:

Treatment for PMS:

Personality changes during premenstrual phase?

Changes in feelings about important people?

How has PMS affected life and personal relationships?

To what does the subject attribute the cause of PMS?

DSM-III(R) checklist:

A. Symptoms for past three months and most of the past year.

B. Symptoms occur in last week and remit a few days after onset.

C. At least five of the following symptoms, at least one to be 1-4:

1. Affective lability.
2. Persistent and marked anger/irritability.
3. Marked anxiety, tension, feeling on edge.
4. Depressed/sad.
5. Decreased interest in usual activities.
6. Easily tired/lack of energy.
7. Difficulty concentrating.
8. Changes in appetite.
9. Hypersomnia or insomnia.
10. Other physical symptoms, e.g. water retention.

CHAPTER 9

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