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**Good, Robin L.**

**THE PSYCHOPHYSIOLOGICAL EXPERIENCE OF MENSTRUATION IN  
MOTHERS AND THEIR DAUGHTERS**

*City University of New York*

**Ph.D. 1982**

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THE PSYCHOPHYSIOLOGICAL EXPERIENCE OF MENSTRUATION  
IN MOTHERS AND THEIR DAUGHTERS

by  
Robin Good

A dissertation submitted to the Graduate Faculty  
in Psychology in partial fulfillment of the  
requirements for the degree of Doctor of  
Philosophy, The City University of New York

1982

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This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Abstract

THE PSYCHOPHYSIOLOGICAL EXPERIENCE OF MENSTRUATION  
IN MOTHERS AND THEIR DAUGHTERS

by

Robin Good

Adviser: Professor Laurence Gould

It has been frequently assumed that mothers and daughters share a similar experience of menstruation, yet few studies have empirically examined this notion. Such mother-daughter similarity has been proposed on the basis of psychosocial learning theory, or object-relations theory which focuses on the narcissistic elements of the mother-daughter bond. The contribution of heredity in influencing mother-daughter similarity has not been specifically investigated. The present study explored the extent of similarity between mothers' and daughters' menstrual symptomatology and attitudes, as well as the possible contribution of heredity factors.

Subjects were 60 mother-daughter pairs of which 47 were biologic and 13 were adoptive. All subjects filled out the Menstrual Symptom Questionnaire (MSQ), Semantic Differential (SD) rating scales of concepts related to menstruation and

the mother-daughter relationship, and a number of items eliciting relevant demographic information and menstrual-related characteristics and attitudes.

The MSQ data were used to test the three hypotheses of this study: (1) mother-daughter pairs would not differ significantly in their reports of paramenstrual symptomatology, (2) biologic and adoptive mother-daughter pairs would not differ regarding the extent of similarity in their reports of paramenstrual symptomatology, and (3) the contention of a dichotomy between congestive and spasmodic symptomatology would not be sustained.

The results are as follows:

Hypothesis #1: The findings were mixed. There was a mild degree of mother-daughter similarity for congestive but not spasmodic symptomatology.

Hypothesis #2: The biologic mother-daughter pairs were not more similar than the adoptive pairs, indicating the likelihood that hereditary factors did not substantially influence mother-daughter similarity in menstrual experience.

Hypothesis #3: A continuum was found between congestive and spasmodic symptomatology.

This study also explored the relationships within and between the groups of variables under investigation: paramenstrual symptomatology as reported on the MSQ,

menstrual-related characteristics and attitudes (SD ratings), as well as the demographic information. There were few substantial associations between paramenstrual symptomatology and the other variables. However, similarities and differences between mothers and daughters were evident amongst all groups of variables. Mother-daughter differences in menstrual-related characteristics and attitudes are understood as the result of differing socio-cultural influences prevalent during the eras when mothers and daughters grew up.

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My closest friends--for the intimacy and nurturance we share and thrive on.

Huff--for his importance in my life.

Fradl and Yasha--whose love and vitality I cherish.

Paul--my brother, friend, colleague, and someone with whom shared laughter is love and pathos.

And finally:

My mother--who has lovingly shown me how to live life to the fullest extent.

And, my father--with whom I entrust my very soul.

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## INTRODUCTION

The psychology of women has been an expanding field of study in the last two decades. Amongst the relatively new avenues of such study is the psychology of menstruation. Considering that a woman menstruates monthly for approximately 35 years of her life, that menstruation is a crucial reproductive phenomenon which has profound biological, social, religious and personal significance, as well as related problems, further social-psychological research in this field is long overdue.

The medical, gynecological profession has endeavored to study the physiological and endocrinological basis of menstruation and its disorders for the last 80 to 100 years. Such study in the biomedical sphere has been promoted by the fact that pain associated with menstruation (broadly defined as dysmenorrhea) is one of the most frequent complaints encountered in medicine and gynecology (Novak, Jones & Jones, 1975). While a full specification of the neuro-endocrine mechanisms controlling menstruation depends upon the development of appropriate medical techniques, these mechanisms are understood in rough outline. Although certain physiological knowledge of patterned hormonal fluctuations and bodily changes during the menstrual cycle has been determined, the relationship of these hormonal

patterns or bodily changes to the varied symptom, mood or behavior changes reported throughout the menstrual cycle is disputed amongst researchers and, as yet, unclear. According to Parlee (1973), statements which simply assume a direct causal relationship between physiological processes and complex psychological experiences and behaviors are abundant in the literature, but are inadequate as contributions to psychology. Parlee contends that these statements neither specify the nature of the hypothetical mechanism supposed to link physiological and psychological events nor make explicit the underlying beliefs about the conceptually complex relationship between mind and body. Despite the limitations of the medical profession in delineating the biological mechanisms controlling menstruation and in explaining their purported connections to psychological processes and symptoms associated with menstruation, the biological perspective has generated the most empirical research and is currently the most widely accepted by the scientific world and the general public.

The fact that menstruation is not just a physiological event but also an important social, psychological event is too often overlooked or underestimated by biomedical researchers. The need for extensive examination of menstrual experience from a psychosocial perspective is being increasingly recognized. Another indication for further research from a psychosocial perspective is that a great

many women suffering from painful menstruation have no substantiated organic impairment of the pelvic organs. Although a physiological cause may exist but be unknown in these cases, attempting to understand such cases from a psychosocial theoretical perspective might yield further knowledge.

Looking to the largely unexplored domain of the psychosocial perspective to understand the nature of womens' menstrual experience brings into focus the important influence of family, peers, education, culture, and the media. It would seem to this author that the single most influential social-psychological parameter affecting most womens' menstrual experience is the mother-daughter relationship. Chodorow (1978) discusses the nature of intra-familial relations and the differential influence of womens' mothering on sons and daughters in the context of modern society and family structure. It is her view that in a society where mothers provide nearly exclusive care and certainly the most meaningful relationship to the infant and growing child, the child develops its sense of self mainly in relation to her. Insofar as the relationship with its mother has continuity, the child comes to define aspects of its self in relation to internalized representations of aspects of its mother and the perceived quality of her care. Chodorow contends that how the growing child understands, fantasizes, symbolizes, internally represents and feels about his or her physiology

is a product of developmental experience in the family, is related in many possible ways to this physiology, and perhaps is shaped by considerations completely apart from it. It is precisely in this vein that the study of menstrual experience in mothers and daughters can encompass the physiological components menstruation entails without negating them, and yet attempt to explore to what extent the mother's psychophysiological experience of menstruation and attitudes toward it may have an impact on her daughter's own experience by virtue of the prolonged and primary nature of their relationship. Chodorow explains that a girl does not simply identify with her mother or want to be like her. Mother and daughter maintain elements of their primary relationship which means they will feel alike in fundamental ways.

The central aim of this study is to address the empirical question as to whether daughters' particular psychophysiological experience of menstruation tends to be similar to the experience of their mothers. If the specific attitudes and experience of daughters is similar to their mothers, then we have learned something about the impact of the mother-daughter relationship of influencing how a daughter will experience her menses, and possibly what some of those influences might be. To assess the potential influence of heredity on menstrual experience, the similarities and differences in the menstrual experience of two

groups of mother-daughter pairs will be compared: adoptive and biological mother-daughter pairs.

This study will explore both positive and negative dimensions of menstrual experience, in contrast to the bulk of prior medical and psychological research which has focused almost exclusively on its distressing, negative qualities. An interesting explanation for this can be drawn from the data contributed by the psychosocial and anthropological studies of menstruation. Such data has offered extensive documentation of the protracted, rather isomorphic, social significance of menstruating women cross-culturally. Dating back almost 2,000 years and with relatively minor modifications since then in some cultures, menstruating women have been viewed as sacred, mysterious, powerful or threatening as well as outright evil, disgusting, polluting and poisoning. The residues of history are evident today in that some women still refer to their periods as "the curse." Nevertheless, researchers need to extricate themselves from history and tradition in their almost exclusive focus on the negative, distressing aspects of menstruation. The progression of at least science, education and time has undoubtedly broadened the ways of relating to menstruation in our culture. The realm of positive feelings about menstruation has seemed nonexistent, but this may be only because such positive reactions have not been sufficiently examined by researchers.

## Chapter I

### REVIEW OF THE LITERATURE

#### Dysmenorrhea: Definitional Difficulties

The term "dysmenorrhea" is derived from a Greek word meaning difficult monthly flow. Today, dysmenorrhea generally refers to paramenstrual pain or distress. The paramenstruum includes those days immediately preceding menstruation as well as the days of menstruation itself. There is a fundamental classification of dysmenorrhea as primary or secondary. Primary dysmenorrhea (intrinsic, idiopathic, essential) is paramenstrual pain in the absence of organic impairment of the pelvic region. Secondary dysmenorrhea (extrinsic, acquired) refers to paramenstrual pain that is related to organic pelvic disease or abnormality such as endometriosis, and chronic inflammatory diseases. When accurately diagnosed, primary and secondary dysmenorrhea are two different clinical entities. This study is concerned with the former type.

Almost all women feel some discomfort around the time of menstruation (Ylikorkala & Dawood, 1978). These authors make the important point that the differentiation between "normal" paramenstrual symptoms and primary dysmenorrhea is difficult because of the scarcity of methods to quantify

pain and thus to assess dysmenorrhea objectively and quantitatively. As a result, for years researchers and practitioners have differentially defined dysmenorrhea in regard to the severity of the pain as well as to the nature and timing of the pain, such that there is no consensus as to a precise definition or to its incidence in the general population.

With regard to the severity of pain, some medical researchers claim that a diagnosis of dysmenorrhea is justified if a woman seeks relief for her pains either from a physician or by self-medication (Ylikorkala & Dawood, 1978). Israel (1967) suggests that since the intensity of pain is subjective and cannot be gauged by means other than the behavior of the woman during an attack, and since almost all women experience some degree of pelvic discomfort preceding and during the menstrual flow, it is logical to apply the term "dysmenorrhea" only to that type of painful menstruation which forces the woman to relinquish for days or hours her mode of living and to seek medical advice for relief of the condition. Golub, Menduke and Lange (1959), with a slightly different taint, suggest that whether a given female is or is not considered a true dysmenorrheic depends on both the subjective evaluation of the severity of the symptomatology by the patient herself and on the more or less critical assessment by the physician. Novak, Jones and Jones (1975) assert that the line between what is considered

normal discomfort and what is considered real dysmenorrhea is a very shadowy one, and the distinction is commonly made subjectively by the patient herself, on the basis of the incapacity produced.

Since pain is a complex, multidimensional, subjective phenomenon and thereby difficult to objectively or operationally assess in a meaningful way, the degree of paramenstrual pain felt by any given woman and her reaction to that pain is relative to many intervening factors and spans a wide continuum. Whether or not a woman responds to paramenstrual distress by taking it in stride, by consulting a physician, by staying home or cancelling appointments, or by taking medication may have to do with a variety of factors such as attitudes about menstruation (whether one believes she is "unwell"), pain thresholds and tolerance, secondary gain, and possibly a host of other sociocultural and personality dimensions. Coppen and Kessel (1963) assert that the prevalence of paramenstrual symptoms is very high, yet only a fraction of women bring these symptoms to their doctor. They claim that it is unlikely that severity by itself is the most important reason for consulting a doctor. This study is not concerned with determining the operational criteria by which a decision is made that a woman's paramenstrual pain is such that it is deemed "abnormal" versus "normal." It would seem that a great deal needs to be learned about paramenstrual distress and pain perception and

tolerance before such a determination could be made with clarity and confidence. Certainly, many physicians make diagnoses of "dysmenorrhea" in the context of the medical model and almost automatically consider it "abnormal" paramenstrual distress. Maybe because paramenstrual distress is so widespread as well as inadequately understood, many researchers seem to use the term "dysmenorrhea" as the referent for various degrees and forms of paramenstrual distress without necessarily implying a clear-cut sense of "abnormality," per se. In light of this, the present author will be using the terms "dysmenorrhea" and "paramenstrual distress" interchangeably, given the inherent difficulties in evaluating the relative normality of abnormality of the distress. It is important to highlight the fact that the present study is concerned with exploring the particular quality of paramenstrual experience as it is subjectively experienced by mothers and their daughters.

#### Incidence of Dysmenorrhea

The wide variability in the criteria employed in the determination of dysmenorrhea results in varied incidence figures which are not necessarily comparable. For example, Golub, et al. (1959), reported that the incidence of dysmenorrhea in school girls ranged from 17% to 86%, and in one particular study found a range of 50 to 85% in 16 Philadelphia high schools. According to Ylikorkala and

Dawood (1978), approximately 52% of postpubescent female subjects are affected by dysmenorrhea and about 10% of these are incapacitated for one to three days each month. It is generally stated in gynecological textbooks that primary dysmenorrhea is the most common menstrual disorder occurring in 30 to 50% of young women. Apparently, it is the greatest single cause of lost working hours and school days among women, with in excess of 140 million working hours estimated to be lost annually (Novak, et al., 1975).

The Symptom Picture of Dysmenorrhea and the  
Premenstrual Syndrome: Variations in  
their Classification

As stated previously, dysmenorrhea has been defined in different ways by different researchers and practitioners. These definitional differences have applied to the severity of distress as well as to the symptom-complex descriptive of dysmenorrhea and to the timing of symptoms. Parlee (1973) states that there is clearly a need for a more precise definition of the premenstrual syndrome and for a specification of the symptoms supposedly entailed, along with the methods used to identify them. In fact, Parlee contends that there is no established proof that a measurable premenstrual syndrome even exists. It is important to note the problematic presentation and comparison of studies in the literature given the lack of clarity in the definition of these frequently addressed syndromes.

Many researchers and practitioners (Israel, 1976; Novak, et al., 1975) narrowly define dysmenorrhea, essentially distinguishing it from the "premenstrual tension syndrome" or "premenstrual syndrome" (PMS), initially delineated by Frank (1931). Even these authors, however, suggest that there may be some overlap of symptoms between the two syndromes which they distinguish. Based on the views of these authors, one of the few agreed upon distinctions between these syndromes is when they occur temporally. Characteristically, dysmenorrheic pain is said to begin with the onset of menstruation, or a few hours before the flow begins, and many continue for hours or a few days. The pain is described as intermittent, sharp, colicky and usually limited to the lower abdomen, but can also radiate to the back and thighs. Systemic symptoms such as syncope, nausea and vomiting can accompany attacks of dysmenorrhea. The gradations of distinctiveness accorded dysmenorrheic symptomatology in relation to the symptomatology of the PMS vary widely amongst authors. Generally speaking, the PMS is characterized by advanced warning of menstruation for several days during which time symptoms are increasing crescendo-like until they quickly taper off when menstrual bleeding begins. The general description of the premenstrual distress is of increasing heaviness or swelling of the breasts, ankles and abdomen, a dull aching pain in the lower abdomen, back and other parts of the body, headaches

and mood swings typically involving depression, irritability and lethargy. Although Israel (1967) distinguishes the two syndromes, he notes that the dull heavy ache of the back and upper thighs, considered typical of the PMS may accompany the colicky pain of dysmenorrhea, but is not a distinctive feature. Ylikorkala and Dawood (1978) also define the symptoms of dysmenorrhea somewhat loosely, such that the symptom picture they elaborate can encompass systemic symptoms which have been traditionally attributed to the PMS by others, i.e., headache and nervousness.

The Syndromes of Paramenstrual Distress:  
Are They Dichotomous or Continuous?

Despite the fact that the literature on paramenstrual distress often separately addresses dysmenorrhea and the PMS, the lines of demarcation between these supposedly distinctive syndromes are quite unclear and sometimes blurred altogether. Golub, et al. (1959) assessed a variety of premenstrual and dysmenorrheic symptoms in a study of 24 high school girls and found that symptoms before the period were essentially the same as those during the period, usually with a slight increase in severity during the period flow. Based on these and other findings, they concluded that the syndrome of dysmenorrhea must include not only those symptoms coincident with menstrual bleeding but also those before the appearance of blood. The lack of clarity

about the supposedly distinct clinical syndromes of premenstrual distress continues to exist, despite further research and Dalton's (1969) newly proposed terminology; under the supraordinate heading of dysmenorrhea, Dalton suggests the subclassification of spasmodic and congestive dysmenorrhea. The continuing confusion is highlighted, in a sense, when she says that congestive dysmenorrhea is more accurately called the PMS. Dalton (1978) implies that congestive dysmenorrhea is one of the many presentations of the PMS, that it has all the characteristics of the PMS with the addition of period pains. Although Dalton typically differentiates the two types of distress on a variety of counts, the preceding statement would seem to suggest some overlap between the two types of distress, not necessarily in the kind of symptoms, but in terms of the temporal occurrence of symptoms. In Dalton's view, a woman suffers from either spasmodic or congestive dysmenorrhea, but never from both. Since her terminology was proposed, the term "dysmenorrhea" has begun to be used in a broad and inclusive sense, referring to premenstrual symptoms as well as those symptoms occurring during menstruation. Maddux (1975), among others, uses the term "dysmenorrhea" broadly, to include menstrual or premenstrual pain and discomfort. As mentioned earlier, Golub, et al. (1959) proposed just such an inclusive use of the term, however they found that the symptom picture before and during menstruation was

essentially the same. There are many researchers who still posit two basically distinct symptom pictures, but for whom the traditional terminology of the "PMS" and "dysmenorrhea" has been replaced by the more recent labels, "congestive dysmenorrhea" and "spasmodic dysmenorrhea," respectively.

The terminological confusion which has been a part of the difficulties repeatedly encountered in the taxonomic specification of paramenstrual symptomatology may signify the unlikeliness that this symptomatology presents itself in such distinct, dichotomous form. In part, the diagnostic difficulties may reflect the fact that symptomatology before and during menstruation spans a continuum from congestive symptoms to spasmodic symptoms, with a substantial proportion of women experiencing some combination of each around the time of their periods. The Menstrual Symptom Questionnaire (MSQ), developed by Chesney and Tasto (1975), tests the two-type theory of symptomatology. The MSQ psychometrically identifies the two types of paramenstrual distress: spasmodic and congestive dysmenorrhea. Chesney and Tasto found that subjects' scores distributed themselves in two clear-cut groups and thereby concluded that two quite distinct types of dysmenorrhea exist. The findings of Cox (1977) suggest that the congestive-spasmodic MSQ dimension is continuous rather than dichotomous; an equal proportion of the respondents' scores were in each third of the distribution. Kantero and Widholm (1971) found that in 5,103

Finnish girls, 11.2% had dysmenorrhea (spasmodic) only, 25.6% had premenstrual (congestive) symptomatology only, and 41.6% had a combination of both. In 1,408 mothers, 13.6% had dysmenorrhea only, 13.4% had premenstrual symptomatology only, and 62.4% had a combination of both. These findings would seem to clearly support the notion of a continuum between the two types of symptomatology. Coppen and Kessel (1963) also found a significant correlation between symptoms of dysmenorrhea (spasmodic type) and the PMS (congestive type).

One might ask why it is important to determine whether there are, in fact, distinct types of paramenstrual symptomatology. Whether or not there are consistently demonstrated syndromes of distress, which might have specific etiologies, has implications for treatment considerations, just as the repeated success or failure of specific treatment approaches has implications for the potential confirmation of these purported syndromes and their purported etiologies. With respect to the present study, if two distinct types of paramenstrual distress exist, then it is possible to ascertain whether mother and daughter share the same type of distress. However, whether the purported types of paramenstrual distress are dichotomous or continuous, of specific interest to this study is the degree of similarity between the particular symptom profiles of mother and daughter.

### The Etiology of Paramenstrual Distress

The periodic fluctuations in emotion and physical symptoms typically attributed to the occurrence of the menstrual cycle in women have become the subject of much theoretical debate and research. One of the issues of debate is the extent to which these fluctuations occur in direct response to physiological processes regulating the cycle (or postulated biophysiological abnormalities), or whether social and psychological factors play an important role in the expression of such symptoms. There are very few extreme proponents of one or the other of these positions. The majority of researchers stress one perspective more than the other, but recognize the complex interplay of both physiological and social-psychological factors in attempting to understand how a woman experiences menstruation. As yet, there has not been an etiologic explanation advanced which has attained universal acceptance. The possibility of a single causal model may be implausible if one recognizes the ever present, interactional influences of psyche and soma, especially with regard to a biologically and psychologically meaningful event like menstruation. Considering that certain types of paramenstrual distress are said to prevail, this would further suggest the unlikeliness of a single causal model of distress.

Since the various etiologies proposed tend to emphasize either the biological or the psychosocial factors thought to

be involved in paramenstrual distress, they will be discussed separately. Some reference will be made to applied treatments, since the effectiveness of certain treatments has bearing on the soundness of particular etiologic explanations. Israel (1967) makes the important point, however, that the various forms of treatment that have been applied and, at times, differentially effective emphasize the ambiguity and multiplicity of the etiologic factors involved in paramenstrual distress. Prior to a review of purported biological etiologies, the physiology of the menstrual cycle will be outlined.

#### An Outline of the Physiology of the Menstrual Cycle

The hypothalamus of the brain, the pituitary gland, the ovaries and a variety of hormones are the main regulators of the menstrual cycle. By way of hormones transmitted through the bloodstream, the hypothalamus signals the pituitary, which then signals the ovaries, which in turn signal the hypothalamus, thus forming an intricate hormone feedback system capable of regulating the many facets of the menstrual cycle. Three important sets of physiological events overlap in each cycle: the feedback system itself; the process of ovulation in the ovaries; and the series of cyclic changes in the reproductive organs resulting from variation in hormone levels.

The hypothalamus is sensitive to the fluctuating levels of hormones (progesterone and estrogen) produced by the ovaries. If one taps into the cycle at the phase of menstrual bleeding, as one cycle ends and the next one begins, the low level of estrogen at that time chemically triggers the hypothalamus to stimulate the pituitary to release follicle-stimulating hormone (FSH). This triggers the growth of ovarian follicles, only one of which normally matures fully. As the follicles grow, they secrete estrogen in increasing amounts. The estrogen affects the lining of the uterus (endometrium), signaling it to grow or proliferate. When the egg approaches maturity inside the fully maturing follicle, the follicle secretes a burst of estrogen. The surge of estrogen apparently signals the hypothalamus to signal the pituitary to secrete both FSH and, in even greater degree, luteinizing hormone (LH). The peaking of these hormones probably signals the follicle to release the egg (ovulation). Given the average cycle length of 28 days, ovulation occurs at approximately Day 14. The first half of the cycle preceding ovulation is called the proliferative or follicular phase. As will become clear, the second half of the cycle is called the secretory or luteal phase.

Under the influence of LH, the follicle changes its function. Now called a corpus luteum, the follicle secretes decreasing amounts of estrogen and increasing amounts of

progesterone. The progesterone influences the estrogen-primed uterine lining to secrete nourishing fluids to prepare for the possibly fertilized egg. Immediately after ovulation, FSH returns to a baseline level. LH declines more gradually as the progesterone increases. If the egg is not fertilized, the corpus luteum degenerates until it becomes nonfunctioning. It is not entirely known why the corpus luteum degenerates if no pregnancy ensues. Some researchers state that the endometrium of the uterus produces another hormone, prostaglandin, which is responsible for the degeneration of the corpus luteum and the subsequent fall in levels of progesterone and estrogen. At any rate, the declining hormone levels fail to maintain the endometrium and menstruation results. The removal of endometrial debris, which constitutes the menstrual flow, is accomplished by contractions of the smooth musculature of the uterus (myometrium). Prostaglandins have now been found to stimulate smooth muscle contraction (Halbert, Demers & Jones, 1976; Pickles, 1957).

Biological Etiology of Paramenstrual Distress:  
Theory and Research

According to the literature the major biological factors implicated in paramenstrual distress are:

(1) constitutional, (2) obstructive, and (3) endocrine.

Constitutional and obstructive factors seem to be

essentially considered in reference to the presumably spasmodic type of distress ("spasmodic dysmenorrhea" or "dysmenorrhea" in the narrow, traditional use of the term). Endocrine factors have received the most interest and are implicated in both alleged types of distress: spasmodic dysmenorrhea as well as congestive dysmenorrhea or, otherwise called, the PMS.

#### Constitutional Factors Implicated in Spasmodic Dysmenorrhea

Constitutional debility of one sort or another, possibly due to certain diseases (Novak, et al., 1975) or to defective posture, particularly in an asthenic body type (Israel, 1967), is thought to cause a lowering of the threshold of pain, primarily because of physical factors but often with a strong admixture of nervous and psychic factors as well. Although these practitioners and others speak of constitutional debility with respect to dysmenorrhea, such debility is more often seen as a predisposing factor rather than a causative one. Kantero and Widholm (1971) found higher incidences of dysmenorrhea in the pyknic body type than in other types. They assert the important influence of constitutional body type on menstrual patterns.

#### Obstructive Factors Implicated in Spasmodic Dysmenorrhea

One of the first theories proposed to explain dysmenorrhea was obstruction of the cervical canal and a consequent

stagnation of menstrual blood due to cervical stenosis, malposition of the uterus, etc. Since these obstructive conditions are found in a number of women, only some of whom present with dysmenorrhea, Israel (1967) suggests that obstructive factors are only one of several predisposing causes of dysmenorrhea. Moreover, the relative infrequency of significant narrowing of the cervical canal in many dysmenorrheic women, as shown by the hystero-graphic studies of James (1963), attests to the unlikeliness that cervical obstruction is the sole cause of dysmenorrhea. Nevertheless, there is research which indicates that parturition and treatment of dysmenorrhea by prolonged dilatation of the cervix often results in alleviation of symptoms. According to Ylikorkala and Dawood (1978), while relief from dysmenorrhea occurs after the first childbirth, the alleviation is only temporary for many women. Israel (1967) explains that in a number of women treated with prolonged dilatation of the cervix, the dysmenorrhea returns in a year or more, though not with its original severity. This finding is in accordance with those of Coppen and Kessel (1963) and Kantero and Widholm (1971) that there is a reduction in dysmenorrhea with parity. Another rationale as to why cervical obstruction may lead to dysmenorrhea is because it may produce increased uterine or myometrial activity. The dysmenorrhea associated with an intrauterine device may be an example of this (Novak, et al., 1975).

### Endocrine Factors Implicated in Spasmodic Dysmenorrhea

Dalton (1978) is an explicit proponent of the endocrine theory which claims that spasmodic dysmenorrhea is a consequence of a hormonal imbalance wherein there is an estrogen deficiency and a consequent excess of progesterone relative to estrogen. Dalton's support for this theory is rooted in a variety of factors which, in her view, characterize spasmodic distress and which are directly related to the hormonal imbalance she postulates. Medical practice has repeatedly evidenced that the administration of birth control pills or estrogen markedly relieves spasmodic dysmenorrhea, which Dalton sees as support for her theory of estrogen deficiency.

It would seem that the major disqualifier of Dalton's imbalance theory is that neither a lack nor an excess of the two hormones can be proved by assays of the blood and urine of dysmenorrheic women (Israel, 1967). Even if this were possible, Ylikorkala and Dawood (1978) point out that circulating or urinary hormone levels do not reflect local intracellular events at the endometrial level, which have not been reported and which are of greater importance. Novak, et al. (1975) also state that no hormonal abnormality has been demonstrated and the normal hormonal balance is attested by the ability of most dysmenorrheic women to retain a normal reproductive function.

Many researchers and practitioners (Filler & Hall, 1970; Halbert, et al., 1976; Novak, et al., 1975; Ylikorkala & Dawood, 1978) agree with Dalton that anovulatory cycles tend to be free of distress, suggesting that ovulation or ovulatory cycles are necessary for dysmenorrhea. One of the main explanations for this, which does not focus on Dalton's idea of estrogen deficiency per se, is that a secretory endometrium (which results from ovulation) and progesterone are necessary in the formation or release of the neuro-hormones, prostaglandins, which are thought to be the crucial etiologic factor in spasmodic dysmenorrhea (Halbert et al., 1976; Ylikorkala & Dawood, 1978). Although there are unanswered questions about the precise role of prostaglandins in dysmenorrhea, their stimulatory effects on uterine contractility and their systemic effects are clear. Systemic signs (nausea, vomiting, diarrhea, syncope) suggestive of prostaglandin effects during menses are a well known clinical aspect of spasmodic dysmenorrhea (Halbert, et al., 1976). Prostaglandins are in higher concentrations during the secretory phase of the menstrual cycle than the follicular phase (Pickles, Hall, Best & Smith, 1965), which is in accordance with the observation that spasmodic dysmenorrhea occurs in ovulatory cycles only. It is well-established that exogenously administered prostaglandins produce intense uterine contractions and menstrual-like cramps in non-pregnant women (Roth-Brandel, Bygdeman & Wijkvist, 1970).

Recent studies have demonstrated that dysmenorrheic women have significantly higher than normal concentrations of prostaglandins in the endometrium, in endometrial jet washings and in the menstrual fluid (Halbert et al., 1976; Pickles, et al., 1965). Such high concentrations may be due to increased production, abnormal release or decreased breakdown.

Concordant with the findings on prostaglandins, research in the specific domain of uterine contractility patterns during menstruation, in women with and without distress, has clearly demonstrated that a significant degree of myometrial hyperactivity of one sort or another exists in dysmenorrheic women (Filler & Hall, 1970; Israel, 1967; Ylikorkala & Dawood, 1978). There does not seem to be a typical or characteristic pattern of activity, however. It is thought that the hyperactivity of the uterine musculature can lead to vasoconstriction, relative ischemia of the myometrium, and the associated spasmodic or intense pain. Finally, the encouraging preliminary reports on the response of spasmodic dysmenorrhea to compounds that inhibit prostaglandin synthesis or antagonize its action add further support to the etiologic role of prostaglandins in dysmenorrhea (Marx, 1979; Ylikorkala & Dawood, 1978).

Dalton's (1978) theory of hormonal imbalance, specifically estrogen deficiency, as the major determinant of spasmodic distress has been called into question by the research on prostaglandins, as well as a number of other

research findings. According to Ylikorkala and Dawood (1978), there is evidence which strongly suggests that the relief from dysmenorrhea achieved by the inhibition of ovulation by birth control pills is possibly effected by the reduction of menstrual fluid prostaglandin and subsequent altered uterine motility. This latter point is addressed in a study by Filler and Hall (1970), who found that the main therapeutic effect of progestogens (birth control pill components) administered to dysmenorrheic women was seemingly a decrease in resting tone of the myometrium during the secretory and early menstrual phases. In their view, that relaxation of the myometrium is the actual effect rather than inhibition of ovulation is supported by their findings with methyltestosterone, which does not inhibit ovulation in the dosage they used but achieved the same effects.

Despite the advancing avenues of research, the precise etiology of spasmodic dysmenorrhea is still unclear. Certain contradictory evidence exists. For instance, Israel (1967) claims that despite the doctrine that dysmenorrhea does not occur during anovulatory cycles, his findings of nonsecretory endometrium in some dysmenorrheics refutes the absolute, doctrinaire quality of this belief. Although it is widely believed that the first year or so of menses are mostly, if not totally, anovulatory, high percentages of young girls have been found to experience dysmenorrheic

pain in their very earliest cycles (Brooks-Gunn & Ruble, 1979; Kantero & Widholm, 1971). These reports of dysmenorrhea in apparently anovulatory cycles would seem to call into question the universal role of prostaglandins in dysmenorrhea, thus highlighting the likelihood of multiple etiologic factors.

Endocrine Factors Implicated in  
Congestive Dysmenorrhea  
(or the PMS)

The etiology of congestive dysmenorrhea has been imputed to hormonal imbalance, the nature of which is not proved. The alleged endocrine disturbance is thought to involve estrogen and progesterone as well as aldosterone. Generally speaking, the hormonal alteration has been held responsible for the secondary effect of retention of the sodium ion, giving rise to excessive fluid in various tissues, which is the basis for various congestive symptoms (Israel, 1967).

Congestive symptomatology is thought to be the result of an estrogen-progesterone imbalance with a relative excess of estrogen due to a deficiency of progesterone (Dalton, 1977; Israel, 1967; Morton, 1950). Differences of opinion emerge with respect to the reasons for this supposed imbalance, and with regard to some of the specific effects of the imbalance. It has been said that the hormonal imbalance is due to defective renal excretion of estrogen (Frank, 1931),

as well as to malfunctioning of the progesterone feedback pathway (Dalton, 1977). According to Morton (1950), the unopposed estrogen displays its activity by stimulating increased epithelial proliferation in the breasts and pelvic organs, by altering electrolyte and water metabolism to allow increased retention of tissue fluid, and by altering carbohydrate metabolism to permit increased sugar tolerance. This latter effect, hypoglycemia, clinically manifests itself as shakiness, weakness and fatigue which are frequent congestive symptoms. Dalton (1978) asserts that the effectiveness of administered progesterone in alleviating congestive distress supports the etiologic role of progesterone deficiency in congestive dysmenorrhea.

At this juncture, it may be important to highlight that Dalton's view of the two types of dysmenorrhea as distinct and preclusive, at least in a given cycle, and her view of the reciprocal hormonal imbalances and reciprocal hormonal treatments for each syndrome are not seen in such black and white terms by other researchers. Others admit not knowing enough about dysmenorrhea and why it happens in any form, and many researchers do not agree that women cannot suffer from both varieties of dysmenorrhea during the same cycle (Maddux, 1975).

Another major etiologic rationale involving endocrine disturbance addresses secondary aldosteronism, described as hypersecretion of aldosterone and characterized by tissue

edema (Israel, 1976; Novak, et al., 1975). According to Novak, et al., the condition of premenstrual tension and edema seems to be due to secondary aldosteronism, with three major components which contribute to the pathogenesis. First, and fundamental, is the type of nervous system; second, the environmental stress; and third, the shifting ovarian physiology which is, so to speak, the "straw that breaks the camel's back," in producing the secondary aldosteronism.

Although there are differences in opinion as to the mechanisms or hormonal interrelationship ultimately responsible for congestive dysmenorrhea, that the secondary effect of fluid retention results in many of the congestive symptoms is fairly widely accepted. Although the primary treatment in the view of Dalton (1978) and Morton (1950) should be correction of the alleged hormonal imbalance, a fairly effective treatment, for some women, is salt restriction or administered diuretics.

What Biomedical Researchers Have to Say About  
Psychosocial Factors: A Prelude to the  
Psychosocial Etiology of  
Paramenstrual Distress

Although their exploration of psychogenic factors is typically limited, there are biomedical researchers who, at least, agree that psychogenic factors play some role in paramenstrual distress. Novak, et al. (1975) point to such

factors as psychic trauma related to the menstrual periods, lack of knowledge as to the significance and normality of the menstrual function, and attitudes and exemplary behavior of an overly anxious mother with respect to menstruation.

The empirical findings of Paul, Glickman, Cushner & Reynolds (1956) highlight the potentially powerful influence of psychological factors in dysmenorrhea. In a study not intending to deal with the psychological realm, these researchers found that psychosomatic factors (tension states, etc.) affected uterine tonus sufficiently that menstrual cycle phase recordings of cervical contractions without "control" of such factors tended to render observations difficult to interpret. Kelly (1962) found that a fearful stimulus provoked increased uterine activity or tension in each of eight women in his study.

Speaking to the psychogenic overlay in spasmodic dysmenorrhea, Israel (1967) says the following:

The persistent taboos and ignorant superstitions, unending modern evidence of ancient folklore that surrounds all aspects of the menstrual cycle, make the psychogenic aspect of dysmenorrhea inevitable. . . . Psychogenic seeding during adolescence, leading to fear and anxiety is probably an important contributory factor in the etiology of primary dysmenorrhea. Such unconscious social conditioning of girls by older women in their environment, although perhaps not entirely causative, does quite conceivably conduce faulty reactions. It is perhaps significant that the vernacular terminology for menstruation in practically all languages, manifesting the customary relationship between linguistic and cultural behavior, includes a group of words that point to inconvenience and disability--unwell, indisposed, sick, the curse, etc. . . . Thus an

anxiety neurosis regarding menstruation may develop as a result of such linguistic suggestion, coupled with ever-indulgent coddling of the daughter by a mother who herself may have or have had dysmenorrhea. (p. 136)

As in the case of Israel, there have been frequent claims for the presence or absence of neuroticism and other personality disturbances related to paramenstrual distress. Such findings will be addressed at this juncture. Coppen and Kessel (1963) found that spasmodic dysmenorrhea was not significantly correlated with neuroticism, but that certain premenstrual or congestive symptoms (irritability, depression, tension, headaches, swelling) were significantly correlated with neuroticism. According to Gill (1943), associations were found between dysmenorrhea (spasmodic type) and severe depression, increased suicide rates, neuroticism and general maladjustment. Wittkower and Wilson (1940) did a biographical study of spasmodic dysmenorrheic women and compared them to a control group of women who never suffered from dysmenorrhea. As children, the dysmenorrheic group showed psychological maladjustment four times as often as the control group. In the view of these authors, their findings suggest that dysmenorrhea predominantly occurs in what would seem to be maladjusted individuals with certain psychological characteristics which antedated the onset of their complaint. Hirt, Kurtz, and Ross (1967) and Schuck (1951) found that the relationship between spasmodic dysmenorrhea and neuroticism was negligible.

As is evident, these findings are hardly uniform. Methodological differences between studies make meaningful comparisons difficult. On the matter of methodology, Ylikorkala and Dawood (1978) say that a major drawback of many psychogenic studies of paramenstrual distress is the failure to demonstrate the existence of such factors prior to the development of distress in the same group of patients. They are concerned that what may seem to be psychogenic factors may actually be the consequence of suffering distress, rather than the cause of the distress.

Support for psychogenic factors in congestive dysmenorrhea, or the PMS, comes from the fact that symptomatology is often out of proportion to the quantity of salt and water retained and that psychotherapy alone influences the cycles in some cases (Thorn, 1957). That diuretics are sometimes ineffective in relieving the psychiatric symptoms (Rees, 1953), causes one to question whether the sodium and water retaining properties of aldosterone are the sole etiologic factors causing the psychiatric symptoms.

#### Psychosocial Etiology of Paramenstrual Distress: Theory and Research

Prior to elaborating the various psychosocial etiologic viewpoints, it seems important to note that this domain of theory and research suffers from the same ambiguities in the diagnosis and classification of paramenstrual distress as does the biological domain. The following discussion of

purported psychosocial determinants of paramenstrual distress will address the analytic as well as the nonanalytic formulations. This division of the literature into analytic and nonanalytic positions is by no means clear-cut or absolute. To a greater or lesser extent, psychoanalytic viewpoints do consider sociocultural factors just as non-analytic viewpoints often consider psychodynamic factors. The analytic/nonanalytic division is similar to the division of the literature into the biological and psychosocial etiologies of paramenstrual distress; these divisions are based on emphasis and are not mutually exclusive. They are nonetheless useful in organizing the body of literature on menstruation. The import of the mother-daughter relationship or parameter is understood in a psychoanalytic context as well as in a nonanalytic context. For this reason and because this parameter is of central significance to this research investigation, it will be discussed separately.

#### The Analytic Formulations

Delaney, Lupton and Toth (1976) suggest that psychoanalytic studies of the trauma of the menarche and subsequent menstruations have been limited to analytic patients, that is, women whose reactions are significantly aberrant from the normal woman's. It is true that the psychoanalytic literature on women's experience of menstruation draws largely on the data provided by women in analytic

treatment, and that this is a relevant consideration. It does not necessarily follow, however, that the reactions of these women are significantly aberrant from the "normal" woman's reaction. One need only consider the widespread incidence of paramenstrual distress, and the fact that it occurs in many women who are not in treatment and who even appear quite normal and mature (Silbermann, 1950).

Psychoanalytic writings suggest that a woman's perception of her menstrual flow or imminent menstruation intensifies her preexisting conscious and unconscious conflicts about pregnancy, having a child, castration fears (mutilation, parturition and death), uncleanness, lack of control of bodily function, penis-envy and masturbation (Deutsch, 1944). The intensification of these conflicts, triggered by the coming of menstruation or its onset, can contribute to paramenstrual distress. Silbermann (1950) proposes that the increased heterosexual desire emerging during puberty and with the onset of menstruation revives oedipal wishes which activate guilt feelings, pregenital urges and regression. The rejection of one's femininity or feminine role, or otherwise stated, the devaluation of self in relation to femininity are considered contributory to paramenstrual distress by some authors (Berry & McGuire, 1972; Deutsch, 1944; Paulson, 1961; Shainess, 1961).

According to Deutsch (1944), menstruation is important not only because of its connection with puberty and the

difficulties of that phase, not only because it is the expression of sexual maturity, and has a special relation to reproduction, but also because it is a bleeding which mobilizes many aggressions, ideas of self-destruction and anxieties. Deutsch refers to the crucial "period of expectation" for every girl as she reaches puberty and says that this period is a long one in which the girl is unconsciously prepared for femininity. Even when the girl does not know about menstruation intellectually, it acquires a crucial psychological existence which largely determines her reaction to the later real and personal experience. On the topic of intellectual knowledge of menstruation or preparation for menarche, psychoanalytic experience seems to suggest that disturbed reactions to the menarche have very little to do with intellectual ignorance, in and of itself (Deutsch, 1944; Silberman, 1950). Wittkower and Wilson (1940) found that there was no striking difference between a group of spasmodic dysmenorrheic women and a control group of menstrually nondistressed women in terms of prior instruction or preparation for the menarche. Given that there are varied sources of information, Deutsch (1944) claims that the young girl's lack of knowledge about menstruation and disturbed reactions to the menarche despite existing knowledge are the results of repression in most cases. The motive for such repression is anxiety; the approaching

adulthood and sexuality are experienced as a threatening danger.

Observations suggest that whether or not the girl is given intellectual knowledge about menstruation, the menarche is usually experienced as a trauma (Deutsch, 1944). It is the viewpoint of some analysts that paramenstrual distress is largely derived from the conflicts and meanings called forth by the first menstruation, which are then typically repeated, in modified or weakened form, for each subsequent menstruation (Deutsch, 1944; Silbermann, 1950). Shainess (1962) claims that at a time when the body physiologically recapitulates the experience of the menarche, there is a compulsive repetition of the emotional climate of the experience. Deutsch (1944) describes how the difficulty of adolescence resides in conflicts between progressive and regressive forces; this is the context in which the first menstruation can possess powerful significance for the positive and negative experiences and feelings that have come before and that are feared or wished for in the future.

The intrapsychic conflicts or symbolic meanings called forth by menstruation have been described by numerous analytic theorists (Deutsch, 1944; Rodrigue, 1955; Shainess, 1961; Silbermann, 1950). The menstrual blood can represent symbolic castration, reminding the girl that she has forever lost her wished-for and imagined penis. The loss of menstrual blood is sometimes equated with lost children; the

"weeping uterus" expresses the disappointment in the failure to conceive. The first menstruation can represent punishment for prior masturbatory activity. In other cases, the adolescent unconsciously identifies menstrual blood with urine and feces, and thus with all their negative connotations. Considering that many girls have never explored their vaginas, it is not surprising that they often imagine that the blood and urine emanate from the same place. There is also a common fear of soiling one's clothing, dirtying, or losing control of urine or feces, just as the bleeding is not under one's control. The feeling of uncanniness that accompanies the period for many women may have to do with the anxiety stirred by the relatively fixed menstrual timing, provoking in the woman the sense that the inside of the body is controlled by alien, powerful forces (Rodrigue, 1955). Silbermann (1950) assumes that the psychic picture of the hormonal upheaval in the menstrual cycle varies considerably, in accordance with libidinal development and psychological structure. In his view, the earlier the libidinal fixation, the more traumatizing and symptomatic will be the monthly flux. He summarizes that menstruation means a cyclic return of the hormonally caused sexual excitation and of revived oedipal desires with reactions of fear, guilt and aggressions. The onslaught of unconscious conflicts, the wish to master the new forms of instinctual drives occurring at the menarche force the woman, with each

menstruation, to repeat her search for defenses. Unable to master the increased anxiety, the ego retreats and adaptation is attempted at a more primitive level. The symptoms of anxiety, narcissistic attitudes, oral and anal features, have all been associated with menstruation and reflect the regression, in Silbermann's view.

The power of psychodynamic factors in relation to the experience and vicissitudes of menstruation gain support from the data which suggests that menstruation often disappears under emotional stress. The stoppage of menses after a single appearance is usually found upon examination to be a "shock reaction" provoked by the horror with which the first bleeding was experienced (Deutsch, 1944). The close interrelationship of psyche and soma is seen in manic-depressive women who lose their menses when depressed and regain them with approaching recovery (Silbermann, 1950). Dalton (1969) notes that some women actually develop prolonged menstruation as a way to avoid sex.

A few psychoanalytic writers attempt to differentiate the analytic formulations that might correspond with aspects of the two purported types of paramenstrual distress. As mentioned, the nervous, depressive, symptoms before menses might relate either to the disappointment in the expectation of a child, or to the sense that many women have that something terrible is about to happen to them. The relief felt when the flow begins seems related to the fact that the

anxiously awaited event turns out to be only the ordinary physiological occurrence (Deutsch, 1944). This seems concordant with the formulation that the distress of congestive dysmenorrhea, or the PMS, represents a yearning for love, a state of helpless defenselessness, with certain symptoms (irritability, headache, nausea) representing an angry defensive reaction to the anticipation of attack and feelings of vulnerability (Shainess, 1961). Shainess sees these symptoms as signs of impoverishment of the ego, particularly relating to feminine self-acceptance. She believes that spasmodic dysmenorrhea often has a large physical component, however it may also relate to a somatization of anxiety in women with hypochondriacal tendencies. Wittkower and Wilson (1940) found that as children, women with spasmodic dysmenorrhea had often been either unusually aggressive tomboys resenting their feminine role, or ailing, complaining, dependent children possessing strong needs or cravings for sympathy and protection.

Psychoanalytic discussions of menstruation often lack a balanced conceptualization, one that presents the potentially positive as well as negative aspects of the phenomenon (Delaney, et al., 1976; Rodrigue, 1955). The latter authors also criticize the analysts for their insufficient account of seemingly crucial societal attitudes and factors. Clearly, there are analysts whose orientations are more sociocultural. Karen Horney has challenged some basic

Freudian ideas about female sexuality, particularly the concepts of female castration and masochism. Although she found a universal negativity toward the menstrual process in her patients, she is convinced that menstrual disorders are not solely an outlet for masochistic tendencies. The pain experienced must be seen as conditioned by the culture-complex and social organization in which the particular masochistic woman has developed (Horney, 1967). Delaney, et al. (1976) argue that society has chosen to reward the bearer of the penis, not the loser of the blood, and then has interpreted the woman's unease with her inferior status as a "problem" that requires realignment of her personality. A further discussion of sociocultural factors in paramenstrual distress will be dealt with in the following section.

#### The Nonanalytic Formulations

Denny and Gerrard (1979) believe that, when they are discovered, the relevant psychological factors in paramenstrual distress will appear in a form that is markedly different from that which has been traditionally explored. They assert that such factors will not appear as negative attitudes toward femininity or menstruation, nor as childhood traumas regarding these issues, and certainly not as the "weeping uterus" of psychodynamic theory. Instead, the most relevant psychological parameters will involve such

variables as life stress, anxiety and tension, pain threshold and tolerance, and coping strategies that some women spontaneously bring to bear on paramenstrual discomfort. It would certainly seem that these phenomena, in a general sense, have bearing on a woman's experience of menstruation, but to negate or diminish the anxiety, perceptions of pain and coping strategies that are inextricably linked to the personal meanings and attitudes a woman has toward menstruation would seem to deny a specific realm of experience.

Other major nonanalytic formulations of psychological or psychosocial factors in paramenstrual distress are quite interrelated and include: socialized negative attitudes toward menses because of primitive taboos and because of their essential continuation in contemporary life and educational practices, and the concept of the self-fulfilling prophecy.

When one has immersed oneself in the current and historical cultural literature on the significance of menstruation, the universally negative aura that surrounds it stands out dramatically. That many present-day negative attitudes toward menstruation are the sequel to such a universal history is not surprising. What is surprising, however, is that some researchers do not acknowledge or consider the impact of such negative attitudes on the psychophysiological experience of menstruation.

There is a vast literature on the primitive taboos connected with menstruation or menstruating women, as well as all the practices and ideology surrounding these taboos (Delaney, et al., 1976; Dobell, 1979; Maddux, 1975; Weideger, 1977). Dating back almost 2,000 years, it was proclaimed that a menstruating woman was the work of the devil, and must never be allowed to gaze upon the sacred sun or talk to a man, or even her own children. The ancient Persians kept menstruating women isolated in huts and, in more recent times, in special household rooms (Weideger, 1977). Along with the menstruating woman, the menstrual blood, itself, has been considered a volatile fluid capable of wide-ranging destruction. The laws of the priests of the Old Testament, Leviticus 15:19-30, forbade men to touch menstruating women since they were unclean and most everything they touched was rendered unclean. There is compelling evidence that the great witch hunts in Europe actually were unwitting persecutions of women's unholy sexuality or menstrual "pacts with the devil." Millions of women were burned as witches from 1484 to 1700 (Dobell, 1979). One could enumerate infinite examples such as these. To think that these beliefs and practices are the province of primitive peoples whose superstitions and conceptions of magic are quite literally more primitive and insubstantial than our own would be wrong (Weideger, 1977). Even today, an Orthodox Jewish woman is required to abstain from sex until

seven days after her period has ended and she has immersed herself in the mikveh, or ritual bath. In today's times, men and women who refrain from sex during a woman's period do not necessarily think of this as protection from evil spirits; instead, it is called religious practice, a matter of preference, or esthetics. It would seem that some possibly modified form of ancient belief and feeling persists just beyond the seeming neutrality of these rationales. Delaney, et al. (1976) devote a large section of their book, The Curse, to the menstruating woman in the popular imagination. They discuss the many titles given to menstruation and menstruating women, from those that are euphemistic to those that are outright derogatory. They elaborate on the many contemporary menstrual jokes which so vividly retain the primitive taboos and view menstruating women as inferior, as sexually passive, undesirable or nymphomaniacal, or as unpleasantly tied to the menstrual process by the paraphernalia women must use during their periods. These authors also discuss menstruation in advertising, which portrays the paramount need for secrecy, concealment, being in control of the uncontrollable so that embarrassment and humiliation are avoided. The repeated implication is that menstruation is something bad, something to be ashamed of. Whisnant, Brett and Zegans (1975) found that in their study of contemporary, commercial, educational materials (films, booklets) on menstruation, the main

message conveyed to girls is that menstruation is a hygienic crisis.

A variety of experimental studies address the impact of sociocultural beliefs or attitudes about menstruation on the experience of it. Theano (1968) studied Spanish girls, in comparison to English girls, in terms of the prevalence and severity of paramenstrual symptoms by administering a translation of the menstrual questionnaire used by Coppen and Kessel (1963) in their study of English girls. Theano found that the Spanish girls exhibited a much more adverse reaction to the menarche than did the English girls. She contends that this more disturbed reaction supports the supposition that Spanish girls are brought up with a more inhibited and less informed attitude toward menstruation. However, although Spanish girls tended to have more severe spasmodic dysmenorrhea than British girls, there was no evidence for an increased prevalence of congestive dysmenorrhea. This is surprising since congestive distress (or the PMS) was found to be associated with neuroticism in British subjects, and it might have been supposed that a more inhibited upbringing with regard to sex and menstruation would produce more neuroticism, and hence more premenstrual symptomatology.

Karen Paige (1973) argues that paramenstrual distress is, in large measure, the result of cultural conditioning. Contrary to the widely accepted analytic position that

paramenstrual distress is related to the rejection or devaluation of one's femininity, Paige proposes the opposite position. The distress may be greater among those women who have been socialized to adhere most closely to the traditional feminine role, namely an orientation toward home and motherhood versus achievement and occupational success, acceptance of the menstrual taboo regarding sex, etc. Paige explored the impact of religious training or background on paramenstrual distress: Catholics suffered the most distress, especially those who believed, "woman's place is in the home," and that careers were of no interest. Jews were the next most distressed group, especially those who accepted the taboo of sex during menstruation. Protestants suffered least.

Ruble (1977) and Parlee (1974) argue that subjective reports of, at least, certain paramenstrual symptoms (weight gain, performance decrements) have not been consistently shown by objective measures. These authors feel that self-report measures of symptoms are susceptible to various biases and may reflect cultural beliefs concerning the kinds of paramenstrual symptoms women experience. In Ruble's study, women were falsely told they were in a certain menstrual cycle phase which was different from their actual phase, yet they tended to report symptoms according to the phase they were told they were in. According to Ruble, her results do not suggest that women never experience pain or

water retention, nor that such symptoms never accompany the premenstrual phase. Instead, it is her view that learned associations or beliefs might lead a woman to overstate what she is actually experiencing or to perceive an exaggeration of naturally fluctuating bodily states when she believes she is premenstrual. Clark and Ruble (1978) propose that if the strongly negative cultural beliefs about menstruation and its symptomatology are incorporated by young girls, these beliefs could shape their own experience in conformity with the cultural view, as a kind of self-fulfilling prophecy. Their own data suggest that these cultural beliefs are readily accessible at a fairly young age. Parlee (1974) asked male and female subjects to fill out a menstrual symptom questionnaire according to what "women" experience. She found that both sexes gave extremely similar reports of the kind of symptoms occurring before and during menses. She contends that menstrual symptom reports may provide measures of cultural stereotypic conceptions of premenstrual and menstrual distress, rather than of any psychological states more directly related to hormonal fluctuations or biological phenomena. In summary, these studies suggest that an intriguing interplay of individual experiences, cultural beliefs and socialization contribute to the experience and report of paramenstrual distress (Brooks-Gunn & Ruble, 1979).

Formulations Regarding the  
Mother-Daughter Pair

The present author is in agreement with Chodorow (1978), that although the sociocultural perspective is important, it would seem to be limited by its tendency to adhere to a holistic concept of culture and a view that development consists in the direct internalization of the social and cultural world. This view would seem to bypass the specific implications of the actual social context in which the child learns, typically that of the family with its own internal affairs and relationships. Certainly, the culture or outside world affects the inner world of an individual, yet this is not a simple or unidirectional process of direct transmission of social reality to psychic reality. Not only does the family context intervene as a mediator of societal or cultural influences, but the child brings his or her own individual personality and psychic processes to bear on what will be eventually internalized. It is in this vein, that specific maternal attitudes and experience in relation to menstruation may reflect, to a greater or lesser extent, some of the broader cultural attitudes, but what may be most powerfully communicated to the daughter comes through the particular experience of the mother in the context of their relationship.

Although different in many ways, the context of the mother-daughter relationship may have certain important

elements in common. Chodorow (1978) addresses these common elements when she says the following:

Because they are the same gender as their daughters and have been girls, mothers of daughters tend not to experience these infant daughters as separate from them in the same way as do mothers of infant sons. In both cases, a mother is likely to experience a sense of oneness and continuity with her infant. However, this sense is stronger, and lasts longer, vis-a-vis daughters. Primary identification and symbiosis with daughters is more likely to retain and emphasize narcissistic elements, that is, to be based on experiencing a daughter as an extension or double of a mother herself. (p. 109)

Support for this notion can be found in the data compiled from interviews of over 75 mothers, daughters and grandmothers collected by Hammer (1976). Most of the daughters she interviewed had received enough support from their mothers to emerge from the stage of complete symbiosis in infancy. However, for the vast majority of mothers and daughters, this emergence was only partial. Hammer contends that at some level, mothers and daughters tend to remain emotionally bound up with each other in what might be called a semisymbiotic relationship, in which neither quite sees herself or the other as a separate person. One of the potential consequences of this, which is discussed by a number of theoreticians, is that mothers often cathect their daughters as narcissistic physical and mental experiences of themselves, attributing their own body feelings to them. Although daughters certainly experience a need to separate and individuate from their others as they develop, their

relationship to their mothers entails ambivalence; the ease of the identification and the security in the sense of continuity with mother conflict with the wish to separate and gain independence. Chodorow says that at puberty a girl confronts all the social and psychological issues of being a woman (relations to men, menstruation, and feminine reproductive functions). In a society in which gender differences are central, says Chodorow, this confrontation emphasizes the girl's tie to and identification with her mother. For a number of reasons, as well as the fact that mothers are typically with their children more than are fathers, Lynn (1959) professes that while males tend to identify with a cultural stereotype of the masculine role, females tend to identify with aspects of their own mother's role specifically.

There is not much research and theory which addresses the mother-daughter bond or relationship as it may specifically influence a daughter's experience of menstruation. Within the mother-daughter relationship, what is said or not said about menstruation, how the topic is handled, how the daughter's first menstruation is responded to, how the mother has experienced her own femininity and menses and in what manner this has been revealed to her daughter are issues which have been highlighted.

According to Deutsch (1944), many mothers are more likely to talk to their daughters about conception,

pregnancy and birth than about menstruation. Shainess (1962) suggests that girls without advance preparation for the onset of menstruation often report fantasies of being damaged or cut. She sees this as a rational fear in which the lack of special knowledge permits resort only to the usual context in which blood is seen--that is--as the result of some injury. She contends that one could symbolically represent the perceived injury as a castration by the mother: the result of her omission of information.

Others contend that learning about the menarche from an embarrassed or worried mother can cause negative reactions in the daughter, particularly when the mother uses the occasion to warn the girl about the dangers of becoming pregnant. Mothers who have learned to fear and resent their own bodies are likely to transfer negative feelings concerning menstruation to their daughters (Delaney, et al. 1976). Shainess (1961) discusses how the menarche focuses attention to attitudes relating to feminine sexuality and contains a summation of all the feminine feelings and attitudes up to that point, which have been undoubtedly influenced by mother-daughter relations. In her view, memories relating to the menarche frequently contain a few drops of the distillate of the mother-daughter relationship. In her preliminary study of 103 women, an analysis of maternal responses to subjects' first menstruation revealed that 15% reacted with pleasure, 60% showed negative, damaging

responses, and 10% were extremely destructive. Of the total group, only 13% of the women were consistently free of premenstrual symptomatology and these were the same women who felt very prepared for their first menstruation and whose mothers received the news of its occurrence with pleasure. Shainess concludes that a certain amount of anxiety inevitably accompanies the menarche, yet the degree of anxiety, the form it takes, the extent of its perpetuation, and the quality of the new awareness of self as a woman depends, in large part, on the nature of the mother-daughter relationship.

Paulson (1961), in a study of 255 women, found that whereas 58% of mothers of high premenstrual tension subjects were said to suffer painful menstruation and premenstrual dysfunctions, only 27% of the low premenstrual tension group reported their mothers as having such difficulties. Although the accuracy of daughters' judgements about their mothers' distress is unknown, Paulson asserts that his findings support the notion that maternal attitudes and feelings about menstruation are a predisposing agency to later difficulties in the daughter. Brooks-Gunn and Ruble (1979) claim that women who believe that menstruation is debilitating report more severe paramenstrual pain than women who believe it is not a debilitating event, while women who believe menstrual effects do not or should not exist report less severe pain for themselves. In this

regard, these researchers looked at daughters' perceptions of their mothers' menstrual experience. Three-fourths of the mothers were believed to experience cramping and to take medication for it. Those who believed their mothers experienced dysmenorrhea (spasmodic) reported more severe premenstrual and menstrual pain scores themselves, than those who did not believe their mothers had menstrual cramps. It may be that the mother's distress or lack of it, as perceived by the daughter, is a predisposing influence to the later degree of distress reported by the daughter.

Looking at a sample of approximately 5,000 mother-daughter pairs and providing menstrual questionnaires to all subjects, Kantero and Widholm (1971) found that, with respect to dysmenorrhea (spasmodic), 67% of daughters of symptom-free mothers had no dysmenorrhea. It should be noted, however, that dysmenorrhea in this study was defined very simply, as painful periods; mothers and daughters were asked whether their periods were painful and three response categories were provided: never, occasionally, continuously. It was also found that the daughters of mothers with dysmenorrhea suffered continuously from this symptom distinctly more often than the daughters of symptom-free mothers: 30% against 7%. Premenstrual symptomatology was also investigated. Mothers and daughters were asked whether they usually had fatigue, swelling and/or irritability before menses. Subjects were able to respond to each of

these symptoms independently. Over 60% of daughters of symptom-free mothers were also symptom-free, and only under 5% of their daughters had swelling. The incidence of swelling was highest among daughters of mothers with this symptom. If the mother had only nervous symptoms (fatigue and/or irritability), nearly 70% of daughters were similar.

Kantero and Widholm argue that acquired, unrecognized mimicking plays an important part in both alleged types of paramenstrual distress. This even affects the evaluation of the experienced symptoms and their importance as reported to the physician. In any case, these symptoms or freedom from symptoms were definitely repeated from mother to daughter. Significant correlations were also found for other menstrual patterns (age at menarche, duration of flow) between mothers and daughters. These authors concede that the question as to whether heredity or an acquired behavior plays the more important role in all of these correlations is still unclear. Pertaining to the variable of age at first menstruation in mothers and daughters, the findings of Gould and Gould (1932) suggest that heredity does exert a strong influence.

Maddux (1975) says that few detailed or thoroughgoing studies have been made of either type of paramenstrual distress with respect to mothers and daughters, but some general patterns seem to exist. It is her view that women who suffer from one form of distress often report having

mothers, aunts or sisters who suffer from the same variety. In such cases it is difficult to isolate whether hereditary factors are involved or whether this relationship results from behavior learned in the home. She contends that a daughter brought up by a mother who suffers from spasmodic dysmenorrhea is very likely to have learned how to respond to menstruation by her mother's example.

Given this need for more thoroughgoing studies of menstrual experience in mothers and daughters, the research investigation of the present author is a specific analysis of certain menstrual patterns, symptomatology and attitudes of mother-daughter pairs. The study by Kantero and Widholm certainly dealt with a very large sample of mother-daughter pairs, but their assessment of paramenstrual symptomatology was extremely undifferentiated. It remains to be seen whether mothers and daughters manifest similar symptom patterns when they are asked to report on their paramenstrual experience in a more refined, differentiated manner. The symptoms inquired about will range from those that are typically considered spasmodic to those that are typically considered congestive. The present study examines the psychophysiological experience of menstruation in two groups of mother-daughter pairs: biological pairs and adoptive pairs. This framework allows for an assessment of the potential influence of heredity on any mother-daughter similarity that may exist in this study with regard to the

experience of menstruation. As Kantero and Widholm (1971) and Maddux (1975) indicate, the question as to whether heredity or acquired behavior is essentially responsible for noted similarities between mothers and daughters is still unanswered.

### Hypotheses

Several apriori hypotheses are stated below which reflect the major interest of this research investigation and which emerge from the literature reviewed.

#### Hypothesis #1

There will be no significant difference in the reports of paramenstrual symptomatology of mother-daughter pairs.

The MSQ will be the instrument used to compare the symptom picture of mother and daughter. For each of the MSQ variables (see Results), statistical analyses will be performed to assess the degree of correlation of mother and daughter scores and the difference in central tendency between their scores.

#### Hypothesis #2

There will be no significant difference between biologic mother-daughter pairs and adoptive mother-daughter pairs in the degree of similarity of their reports of paramenstrual symptomatology.

Absolute mean differences between the biologic and adoptive mother-daughter pairs will be compared for each of the MSQ variables. It is the author's belief that any influence exerted by heredity will be insignificant in comparison to the influence of social-psychological factors affecting all mother-daughter pairs. This expectation derives from the important common elements which are thought to be the backdrop of the mother-daughter relationship as well as the tremendous opportunity for mimicry or learned responses to menstruation based on maternal patterns.

### Hypothesis #3

The claim of a dichotomy between spasmodic and congestive dysmenorrhea will not be sustained.

Specifically, the distribution of subjects' scores on the MSQ will reveal a continuum rather than a dichotomy or bimodal distribution. It is the author's contention that while some women seem to exclusively experience congestive or spasmodic symptoms, a great many women experience a combination of these symptoms spanning a continuum between the extreme forms of these syndromes.

The formal analysis of this thesis was restricted to the above hypotheses. Other dimensions of menstrual experience were also explored in this investigation and are briefly outlined below. Mother-daughter similarities and differences were examined with respect to various attitudes

toward menstruation, menarche, one's body, and the mother-daughter relationship, as well as certain behavioral responses to menstruation, perceptions of how important others feel about menstruation, and perceptions of the extent of similarity between mother and daughter regarding their menstrual experience. Characteristics of menstruation such as cycle regularity and flow were also compared for mothers and daughters. Interrelationships amongs all of these variables were explored for the daughters, the mothers and between daughters and mothers. For all subjects, demographic variables: race, religion, education, marital status and birth control usage, were queried and related to the aforementioned variables. Certain demographic variables were specific to the daughters: who they lived with, or to the mothers: career, work history, menopause, and the number of children.

## Chapter II

### METHOD

#### Subjects

Sixty women and their mothers served as subjects. The age range of the daughters was 17 to 35; the age range of the mothers was 35 to 73. Of the 60 subject pairs, 47 were biological mother-daughter pairs and 13 were adoptive pairs in which the child's age at adoption had to be younger than 5 years old (mean age = 7.7 months).

Several criteria were employed in accepting prospective subjects into the sample. All subjects were required to have had a gynecological examination within the prior two years, except for those daughters 20 years old or younger ( $n = 22$ ) who, on the basis of their youth, might not have been to a gynecologist. While half of these daughters had sought a routine examination, the other 11 had not yet been to a gynecologist. These 11 women were accepted into the study on the assumption that if a serious gynecological disorder existed, the woman probably would have been referred to a gynecologist or sought medical help herself. Recent gynecological examinations were required in order to exclude women who were diagnosed as having an organic impairment or disease of the pelvic region, e.g.,

endometriosis, pelvic inflammatory disease, ovarian cysts, fibroids, etc., which had not been removed, successfully treated, reversed by natural processes, or were present without any menstrually distressing effects perceptible to the woman herself. Prospective adoptive mothers were excluded on the basis of being amenorrheic, or having a disorder of ovulation resulting in mostly anovulatory cycles. Though a controversy exists, the predominant belief is that anovulatory cycles tend to be free of distress (Halbert, et al., 1976; Novak, et al., 1975; Ylikorkala & Dawood, 1978). In light of this assertion, daughters had to be 16 or older to increase the likelihood that they had been menstruating at least 4 years, which approaches gynecological maturity and indicates the regular presence of ovulatory cycles.

Demographic comparisons between the biologic and adoptive subsamples will be addressed in chapter 3 (Results), which includes a comparison of the menstrual patterns and attitudes of these two groups.

### Procedure

Subjects were recruited in the following ways:

(1) poster advertising placed in various locations on the campuses of major colleges and universities in the metropolitan area (see Appendix), (2) announcements made in undergraduate psychology classes at one private university

and one public college, (3) advertising in newsletters or speaking at meetings of organizations dealing with adoption (Adoptees Liberty Movement Association, Open Door Society, and Adoptive Parents Committee), and (4) personal contacts through colleagues. The latter two methods were used almost exclusively for recruiting the adoptive pairs, who were difficult to find.

Prospective subjects either telephoned the author in response to seeing an advertisement or they were personally addressed in a classroom setting or at a meeting. The majority of volunteers, who spoke to the author by phone or in person, described themselves as having some menstrual discomfort or pain. Others spoke only of their "interest" in the topic. Questionnaire packets were handed out to volunteers in classrooms or meetings and returned in the same setting unless a mailing was requested. Questionnaires were routinely mailed to and from prospective subjects who made contact by phone. If mother and daughter lived at different residences, questionnaires were sent to each. Postage paid, pre-addressed return envelopes were provided.

Subjects were made aware of the following information about the research regardless of how they initially learned of the study. Via announcements and phone conversations, they were told that the study was a detailed examination of womens' experience of menstruation. Since menstruation is both a biological and sociocultural event, womens' various

attitudes and physical reactions to menstruation were of interest; specifically, the study focused on the menstrual experience of daughters and their mothers in terms of possible similarities and differences between them. It was explained that the study was composed of many mother-daughter pairs. Adoptive subjects were told that biological and adoptive pairs were needed in the study to learn more about biogenetic and sociocultural influences on menstrual experience. The author made sure that prospective subjects, who were the daughters in the study, were between 16 and 35 years old, were willing to fill out a brief, anonymous questionnaire and also inform their mothers about the study so that they, too, would be willing to participate. If a mother did not wish to participate, the daughter was asked to simply return the questionnaire to the author. When, by a phone contact, a daughter was doubtful of her mother's willingness to participate, the mother's permission was requested before materials were mailed. Subjects were told that additional, specific directions for filling out the questionnaire were printed on the first page of the questionnaire packet (see Appendix). It was explained that subjects' phone numbers were requested on the questionnaire so that the author could contact a subject in the event that any responses were missing. Most subjects provided their phone numbers, thus allowing the author to obtain missing data and to potentially clarify information concerning

gynecological disorders. When speaking with prospective subjects, the author emphasized the importance of mother and daughter filling out the questionnaire independently, without discussing it with each other or anyone else.

### Instruments

A questionnaire composed of the following items was completed by each subject.

1. Chesney and Tasto's (1975) Menstrual Symptom Questionnaire (MSQ), to which the author made one modification.
2. Semantic Differential (SD) rating scales (Osgood, Suci & Tannenbaum, 1957).
3. A series of questions constructed by the author which address a wide variety of content areas such as demographic information, birth control use, menstrual-related characteristics and attitudes, and mother-daughter relations.

### The Menstrual Symptom Questionnaire

The MSQ, developed by Chesney and Tasto in 1975, tests the two-type theory of paramenstrual symptomatology typically labeled: spasmodic and congestive dysmenorrhea. The test was constructed by first developing items from the literature that characterize the symptoms of Dalton's (1969) spasmodic and congestive types of dysmenorrhea, and then

administering and factor analyzing the test items on two separate samples. Appropriate test revisions were made before the second sample was tested. The 56 subjects in the first sample and 48 in the second were volunteer female students in undergraduate psychology courses at Colorado State University, who described themselves as having menstrual discomfort. For each sample, a version of the MSQ was administered twice, two weeks apart, to yield test-retest reliability of the items. The first set of 51 items had mean test-retest reliabilities of .76 and yielded two clearly distinct factors in support of the two-type hypothesis. After revisions and when items with factor loadings less than  $\pm 0.35$  were discarded, 25 items remained which had test-retest reliabilities of .78. The retained items from the initial version of the questionnaire and the items from the second version loaded on the same factors both times. It was concluded that two types of dysmenorrhea do, in fact, exist and that the MSQ reliably differentiated them.

The first 24 items of the questionnaire were scored 1 through 5 for each item. Twelve of the items were symptoms characteristic of the spasmodic type of distress or dysmenorrhea, while the other 12 items were characteristic of the congestive type of distress or dysmenorrhea. The spasmodic and congestive items were scored in the reverse of each other. Spasmodic items were given a score of 1 if the subject said she "never" experienced that item or symptom

and a score of 5 if she "always" experienced that symptom. Conversely, congestive items were given a score of 1 if the subject said she "always" experienced that symptom and a score of 5 if she "never" experienced it. The scores of 2, 3, and 4 were also assigned in the reverse direction of each other for spasmodic versus congestive items, corresponding to the scoring paradigm described above. In essence, low scores were most indicative of the congestive picture of distress while high scores indicated the spasmodic type of distress.

The original 25th item, a forced choice question, was changed to a rating scale for the present study. Instead of limiting subjects to a choice between whether they more closely fit the spasmodic or congestive type of distress, subjects were allowed to rate (on a 6 point scale), the degree to which their symptoms approximated each type of distress. This modification allowed subjects to define themselves as being "in the middle" of the extreme symptom pictures. If a continuum exists between spasmodic and congestive syndromes, then a percentage of subjects might obtain total scores in the middle range in accord with perceiving themselves as having characteristics of each type of distress. The original format of the 25th item was scored 1 or 5 depending on whether the subject said she more closely fit the congestive type of distress (1), or the spasmodic type (5). For the present study, subjects'

ratings (1-6) of the degree to which they experienced congestive and spasmodic distress were included in their congestive and spasmodic subtotals (see Results for a discussion of the MSQ and the author's scoring modifications).

### The Semantic Differential

A woman's attitude or set regarding menstruation is composed of layers of meaning that range from unconscious to fully conscious. The Semantic Differential (Osgood et al., 1957) is a widely used method for ascertaining various levels of meaning, particularly the less conscious and perhaps the most salient when one is considering a psychophysiological process such as menstruation. The SD has proven to be an accurate and sensitive instrument for recording affective associations to stimuli (Heise, 1965; Jenkins, Russell & Suci, 1958).

A concept is presented to the subject who then rates the concept on a series of seven-point bipolar scales. Each bipolar scale is composed of two words which are paired opposites, i.e., good-bad, and which appear at either pole of the scale. The subject rates the concept by placing a mark somewhere along the scale's continuum depending on which pole of the scale is thought to be more closely associated with the concept.

Six concepts were rated by all subjects; four of the concepts involved the notion of menstruation viewed from different vantage points: "menstruation," "how I felt when I got my period for the first time," "how my mother seemed to feel when she learned that I had begun menstruating," and "how most men feel about menstruation." The remaining two concepts were "my body" and "my relationship with my mother/daughter."

#### Questions Constructed by the Author

Basic demographic information was collected: age, race, religion, extent of religious belief, education, career, mother's work history during childrearing years, parents' and daughter's marital status, daughter's residence, and the number and order of children in the family. The necessity of comparing the adoptive and biological subsamples on such background information was one reason for compiling this data. In addition, the exploratory nature of this research warranted an open-minded approach. To have excluded certain potentially relevant variables apriori would have foreclosed an investigation of a fairly new area of research. Such factors as religion, extent of religious belief, race, education and the career of all subjects help outline the sociocultural characteristics of the family milieu. Since relationships between sociocultural factors and menstrual experience have been documented or inferred in

prior studies, this domain was of interest in the present study.

A central hypothesis of the present study is based on the notion that aspects of the mother-daughter relation strongly influence the manner in which a daughter will experience her menses. As indicated in chapter 1, some of the important aspects of the mother-daughter relation involve the greater time mothers typically spend with their children, the tendencies for daughters to identify with their own mother's role specifically (Lynn, 1959), the sense of oneness and continuity especially present between mother and daughter, hence the narcissistic elements inclining mothers to cathect their daughters as physical and mental extensions of themselves (Chodorow, 1978; Hammer, 1976). In the present study, the intensity (part-time or full-time) and duration of mother's work history outside the home before the daughter was 10 years old was obtained as an indication of how mother's time was apportioned. In the same vein, the number and order of children in the family was also obtained. Whether the daughter in this study is an only child or an only daughter may be relevant to how a mother relates to her and how strongly she bonds with her daughter.

Other questions addressed the subject's gynecological history and characteristics: how or from whom did the subject first learn about menstruation; the age of menarche;

who the subject told about menarche and how the person(s) reacted; terms used to refer to menstruation; the time of subject's last gynecological examination along with any history regarding pelvic disorders, diseases, or surgery, including when and why surgery was performed; number of pregnancies and/or abortions; and a history of usage of the birth control pill and the intrauterine device (IUD), since both are capable of affecting menstrual experience. Regarding specific menstrual patterns, questions dealt with cycle regularity, missed periods, intensity and days of flow, and current cycle phase. Possible indices of paramenstrual distress, such as whether the subject ever consulted a physician because of painful periods, stayed home or cancelled appointments, or took prescribed medication were also queried.

The final series of questions dealt with how subjects felt about sexual activity or intercourse during menstruation and whether they engaged. Subjects were then asked the same questions in terms of how they imagined most men felt and if they engaged or not. Giving consideration to various areas of their lives, all the women were asked to rate the degree to which they perceived themselves as traditional or conventional versus liberated or radical. Finally subjects judged the degree to which they perceived their menstrual symptoms and attitudes as similar to those of their mother or daughter also in the study, and their level of confidence

in making this judgement. Daughters, only, were asked to rate the extent to which their overall relationship with their mother influenced their physical and mental response to menstruation.

The general intent of the questions presented was to detail the woman's emotional and physical experience of menstruation. In addition to the bodily sensations she feels, how she learned about menstruation, who she chose to tell about menarche, what she calls her period, how she relates to sex during menstruation, are all relevant aspects of the experience which may or may not be similar for mother and daughter.

### Chapter III

#### RESULTS

The results of this study are presented in an analysis-by-instruments format. The variables derived from each instrument: the MSQ, the SD rating scales and those parts of the questionnaire packet constructed by the author, will be defined in each section prior to a report of statistical tests performed on the data. Two categories of variables were derived from questions constructed by the author, the demographic and menstrual-related variables. A number of questions were raised in the process of working with the MSQ data which resulted in several modifications as to its content and scoring procedures. These modifications are described at the outset.

##### Modifications of the MSQ

A reliability analysis of the MSQ in respect of the two factors that compose it revealed that certain item to whole correlations were very low (.20 and .26), and, in one case, negative (-.27). Two of the items, #17 and #19, were congestive; the other item, #6, was spasmodic (see Appendix). The putative congestive items were intercorrelated and it was found that items #17 and #19 had insignificant rank difference correlations with the other congestive items.

The spasmodic item was repeatedly negatively correlated with the other spasmodic items. As a result of this information, the three items were removed from the MSQ and hence their respective congestive and spasmodic worlds. Post hoc Spearman correlations performed for the congestive and spasmodic items confirmed the wisdom of removing the three dubious items. A final reliability analysis for each group of items revealed a mean spasmodic correlation of .62 for the 11 spasmodic items, and a mean congestive correlation of .65 for the 10 congestive items, with all items within each group intercorrelating at the .001 level of significance. The interitem reliability coefficients for the congestive and spasmodic items were .85 and .86 respectively.

While the removal of items #6, #17 and #19 improved the respective cohesiveness of the separate spasmodic and congestive factors, a main feature of the original scoring system raised doubts about its efficacy when these two factors were dealt with as a total score. The reversed scoring paradigm for the congestive vs. spasmodic items appeared to dilute these factors when they were summed and related to other variables such that all intercorrelations were insignificant. Moreover, the original scoring system did not take into account the possibility of a bias for subjects to respond affirmatively to all items, typically referred to as "yeahsaying." Based on these observations, the congestive items were rescored so as to be in the same

direction as the spasmodic items. Consequently, higher spasmodic or congestive subtotals indicate the subject's greater tendency to experience that type of distress or symptomatology. Consistent with the unidirectional scoring pattern established, it was possible to add each subject's global spasmodic self-rating (1-6), and global congestive self-rating (1-6), on the 25th item, to her respective spasmodic and congestive subtotals (see Appendix). While the original version of the 25th item was a forced choice question rather than a rating scale, the original procedure was to add the subject's score on that item to her MSQ total score. An additional reason for adding the global spasmodic and congestive self-ratings to their respective subtotals was based on the relatively high Spearman correlations, for all subjects, between the spasmodic subtotal and the global spasmodic self-rating ( $r = .57, p < .001$ ), and for the congestive subtotal and the global congestive self-rating ( $r = .50, p < .001$ ).

MSQ Variables and the Issue of a Continuum or  
Dichotomy Between Spasmodic and  
Congestive Symptomatology

Table 1 reveals the respective frequency distributions of subjects' spasmodic and congestive subtotals. The possible range of the spasmodic subtotal is from 12 to 61, and for the congestive subtotal, from 11 to 56. Means and standard deviations are listed for each variable for the daughters, the mothers and all subjects.

Table 1  
Frequency Distribution of Congestive and  
Spasmodic Subtotals

| Subtotal<br>Interval | Congestive |        |       | Spasmodic |        |       |
|----------------------|------------|--------|-------|-----------|--------|-------|
|                      | Daughter   | Mother | Sum   | Daughter  | Mother | Sum   |
| 11-14                | 2          | 2      | 4     | 1         | 5      | 6     |
| 15-18                | 3          | 6      | 9     | 5         | 10     | 15    |
| 19-22                | 7          | 6      | 13    | 6         | 6      | 12    |
| 23-26                | 10         | 5      | 15    | 14        | 10     | 24    |
| 27-30                | 5          | 13     | 18    | 6         | 12     | 18    |
| 31-34                | 7          | 6      | 13    | 5         | 6      | 11    |
| 35-38                | 14         | 8      | 22    | 9         | 3      | 12    |
| 39-42                | 11         | 6      | 17    | 8         | 5      | 13    |
| 43-46                | 0          | 5      | 5     | 3         | 2      | 5     |
| 47-50                | 0          | 3      | 3     | 1         | 0      | 1     |
| 51-54                | 1          | 0      | 1     | 2         | 1      | 3     |
| <u>M</u>             | 30.82      | 30.52  | 30.67 | 30.50     | 26.35  | 28.42 |
| <u>SD</u>            | 8.58       | 9.62   | 9.08  | 9.68      | 9.36   | 9.71  |

The author developed a third variable from the MSQ, spasmodic percent, which replaced Chesney and Tasto's MSQ total score. This variable indicates the proportion or percent of the total MSQ score (spasmodic and congestive subtotals) which is spasmodic. The rationale for a spasmodic percent score instead of a straightforward MSQ total was twofold. The spasmodic percent variable considered the input of both the spasmodic and congestive factors without diluting each by simply adding them. Secondly, the spasmodic percent variable controlled for the possible effect of yeahsaying. However, post hoc analyses of yeahsaying for the daughters and mothers taken separately revealed no systematic effects, i.e., correlating the spasmodic and congestive subtotals for the 30 subjects with the smallest MSQ totals and the 30 subjects with the largest totals revealed insignificant correlations and insignificant differences between the correlations. Despite the absence of a systematic effect of yeahsaying, the spasmodic percent variable seemed to be the most prudent method for a combined consideration of the spasmodic and congestive factors without diluting either factor in the process of combining them. Table 2 is a frequency distribution of spasmodic percent scores with the means and standard deviations for daughters, mothers, and all subjects. The possible range of spasmodic percent, given the highest and lowest scores on each factor, is from 17.6% to 84.5% with a middle score of 51.2%.

Table 2  
Frequency Distribution of Spasmodic Percent Scores

| Spasmodic Percent<br>Interval | Daughter | Mother | Sum   |
|-------------------------------|----------|--------|-------|
| 27-30                         | 1        | 0      | 1     |
| 31-34                         | 2        | 3      | 5     |
| 35-38                         | 2        | 4      | 6     |
| 39-42                         | 8        | 13     | 21    |
| 43-46                         | 7        | 14     | 21    |
| 47-50                         | 11       | 10     | 21    |
| 51-54                         | 11       | 8      | 19    |
| 55-58                         | 9        | 3      | 12    |
| 59-62                         | 5        | 4      | 9     |
| 63-66                         | 3        | 1      | 4     |
| 67-70                         | 0        | 0      | 0     |
| 71-74                         | 1        | 0      | 1     |
| <u>M</u>                      | 49.57    | 46.17  | 47.87 |
| <u>SD</u>                     | 8.51     | 7.70   | 8.11  |

The frequency distribution of spasmodic percent scores for all subjects is of particular interest at this juncture. This distribution of scores addresses the issue of whether there is a continuum or dichotomy between the spasmodic and congestive dimensions of distress tapped by the MSQ. Contrary to Chesney and Tasto's (1975) finding of a dichotomy or bimodal distribution between spasmodic and congestive distress (assessed by a distribution of total MSQ scores), the spasmodic percent distribution of all subjects revealed in Table 2 is clearly unimodal and continuous. There are no gaps in the array of scores. While the spasmodic percent distribution documents the contention of a continuum between spasmodic and congestive distress, the distribution reveals that the majority of subjects, 60.8%, scored in the approximate middle third of the distribution, thus reflecting the balanced mix of symptomatology experienced by these subjects. Subjects who scored in the lower third of the distribution, 27.5%, experienced more congestive than spasmodic symptomatology, while 11.7% of subjects scored in the upper third of the distribution and experienced more spasmodic than congestive distress.

The final variable developed from the MSQ, spasmodic percent difference, is an absolute difference between the spasmodic percent scores for each mother-daughter pair. Absolute differences in spasmodic percent for mother-daughter pairs range from .1% to 28.6%, with a mean

difference of 9.5%. As will be seen in the latter part of the results section, the formation of a spasmodic percent difference score allowed for comparisons of mother-daughter similarity or difference on the MSQ with other variables, including mother-daughter differences on those variables.

The Extent of Mother-Daughter Similarity in  
Paramenstrual Symptomatology as  
Reported on the MSQ

Two basic statistical procedures were used in assessing mother-daughter similarity on the MSQ variables as well as the other menstrual-related variables and SD ratings (positivity scores), which will be defined more specifically later in the results section. Mother and daughter scores on these variables were examined in terms of differences in central tendency as well as the extent to which their scores correlated with each other. Both of these statistics address the similarity between mothers and their daughters on a particular variable, yet each statistic offers a distinctive type of information. Due to the many correlations performed on the data, between variables and for mother and daughter scores on a particular variable, the .01 level of confidence was designated the minimum probability level necessary to consider a result as a significant finding. However, given the conventional acknowledgement of the .05 level as significant, all statistics reaching that probability level were noted for the reader's reference.

Such results were highlighted in text when they were of particular interest or when they seemed to be consistent with other findings.

The central hypothesis of this study was that mothers and their daughters would not differ significantly in their reports of paramenstrual symptomatology on the MSQ. As shown in Table 3, while the mean differences in MSQ scores for mothers and their daughters were not significant at the .01 level of confidence, mother and daughter scores were not significantly correlated. Mothers and their daughters were more similar on the congestive dimension as evidenced by the moderate correlation of their scores ( $r = .26$ ,  $p < .05$ ), and the insignificant mean difference between their scores ( $t = .21$ ,  $p = .84$ ). For both of the spasmodic variables, there was almost no correlation between mother's and daughter's scores and a moderate mean difference between their scores at the .05 level of confidence.

#### The SD Rating Scales and the Index of Positivity

Given the interrelatedness of many of the bipolar scales or dimensions as well as a fairly similar response pattern for mothers and daughters, it seemed plausible to conceive of a positivity index reflecting each subject's stable, consolidated evaluation of the positivity of each concept. Of the original 20 scales used to assess each concept, four bipolar scales were not included in the

Table 3  
Pearson Correlations and Related t-Values for  
Mother-Daughter Pairs on the MSQ Variables

| MSQ Variable      | <u>r</u> | <u>t</u> |
|-------------------|----------|----------|
| Congestive        | .26*     | .21      |
| Spasmodic         | .08      | 2.49*    |
| Spasmodic Percent | .05      | 2.34*    |

\*p < .05.

positivity index. The objective/subjective and erotic/non-erotic scales were the only two scales that did not significantly intercorrelate with the others and were not used in the index for that reason. Two other scales, small/large and shared/separate were dropped because of excessive ambiguity and/or inconsistency in applying the dimension to the various concepts in light of the positivity motif. The index, then, is a summation of the 16 bipolar ratings per concept, wherein a rating of 1 is always at the negative pole and a rating of 7 is always at the positive pole (see Appendix, p. 146). For any concept, the index ranges from a low of 16 to a high of 112, with a middle score of 64 which is equidistant from either the negative or positive extremes of the index.

Table 4 reveals the positivity score means and standard deviations for mothers and daughters for each concept, as well as Pearson correlations and related  $t$ -values between mother and daughter scores. Mothers and daughters were most positive about their bodies and their relationship with each other. They were fairly neutral or slightly positive about the concepts, Menstruation, I Felt and Mother Felt, and they perceived most men as feeling rather negatively about menstruation (Men Feel). Mean differences between mother and daughter positivity scores were not significant for any of the concepts except Mother-Daughter Relationship; mothers felt significantly more positive about their daughters than

Table 4  
Pearson Correlations and Related t-Values of  
Positivity Scores for Mother-Daughter  
Pairs on the SD Concepts

| Concept                         | Daughters |           | Mothers  |           | <u>r</u> | <u>t</u> |
|---------------------------------|-----------|-----------|----------|-----------|----------|----------|
|                                 | <u>M</u>  | <u>SD</u> | <u>M</u> | <u>SD</u> |          |          |
| Menstruation                    | 67.48     | 16.25     | 68.68    | 13.75     | .27*     | -.51     |
| My Body                         | 83.45     | 15.47     | 81.15    | 16.79     | .40**    | 1.01     |
| I Felt                          | 66.02     | 20.54     | 65.92    | 18.35     | .19      | .03      |
| Mother Felt                     | 75.75     | 16.33     | 68.50    | 19.73     | .02      | 2.22*    |
| Men Feel                        | 55.70     | 13.92     | 57.83    | 14.36     | .33**    | -1.01    |
| Mother-Daughter<br>Relationship | 82.62     | 19.80     | 91.83    | 14.44     | .13      | -3.11**  |

Note. I Felt = How I felt when I got my period for the first time; Mother Felt = How my mother seemed to feel when she learned I had begun menstruating; Men Feel = How most men feel about menstruation; Mother-Daughter Relationship = My relationship with my mother/daughter.

\*p < .05.

\*\*p < .01.

daughters felt about their mothers. For the concept, Mother Felt, daughters tended to perceive their mothers as more positive about their first period than the mothers felt about their own mothers' reactions ( $t = 2.22, p < .05$ ). Two of the concepts, My Body and Men Feel, were significantly correlated for mothers and daughters, while the concept, Menstruation, was correlated at the .05 level of confidence.

#### The Interrelationships of the SD Concepts

The interrelationships of the various concepts for daughters, mothers and between the two groups is shown in Table 5. The concept, Menstruation, had strong positive intercorrelations with My Body and I Felt. The concept, Mother Felt, was significantly positively correlated with I Felt and Men Feel, though the latter intercorrelation was notably weaker for the daughters. The concept, Mother-Daughter Relationship, intercorrelated at the .05 level or better with several of the other concepts. A strong positive correlation was found between daughters' positivity toward their relationship with mother and how positively they felt mother reacted to their first period. Interestingly, there was a negative correlation between mothers' positivity toward their relationship with daughter and how positive daughters were about how most men feel about menstruation. For the daughters, however, their positivity about how most men feel about menstruation was positively

Table 5  
Pearson Correlation Matrix of Positivity Scores on the SD Concepts  
Within and Between Daughters and Mothers

|              |   | <u>My Body</u> |       | <u>I Felt</u> |       | <u>Mother Felt</u> |      | <u>Men Feel</u> |       | <u>M-D Relationship</u> |        |
|--------------|---|----------------|-------|---------------|-------|--------------------|------|-----------------|-------|-------------------------|--------|
|              |   | D              | M     | D             | M     | D                  | M    | D               | M     | D                       | M      |
| Menstruation | D | .50***         | .41** | .13           | .11   | .27*               | .10  | -.18            | .06   | .04                     | -.02   |
|              | M | .10            | .60   | .09           | .39** | .07                | .08  | -.21            | -.04  | -.05                    | .22    |
| My Body      | D |                |       | .07           | .08   | .06                | .05  | .16             | .14   | .20                     | .04    |
|              | M |                |       | -.02          | .22   | .18                | .03  | -.15            | -.07  | .01                     | .27*   |
| I Felt       | D |                |       |               |       | .37**              | -.04 | .13             | .15   | .12                     | .04    |
|              | M |                |       |               |       | -.02               | .33* | -.14            | .04   | -.27*                   | -.03   |
| Mother Felt  | D |                |       |               |       |                    |      | .29*            | -.08  | .58***                  | .17    |
|              | M |                |       |               |       |                    |      | -.05            | .36** | -.26*                   | -.04   |
| Men Feel     | D |                |       |               |       |                    |      |                 |       | .29*                    | -.35** |
|              | M |                |       |               |       |                    |      |                 |       | -.11                    | .01    |

Note. D = Daughter; M = Mother

\*p < .05.

\*\*p < .01.

\*\*\*p < .001.

correlated with their positivity toward the Mother-Daughter Relationship. There were two negative correlations at the .05 level of confidence which suggest that the more negatively mothers felt about their first period and their mothers' reaction to it, the more positively their own daughters feel toward their relationship with each other. This raises the question whether daughters' positivity toward their relationship with these mothers comes about as a response to some effort on the part of these mothers to compensate for their past experiences by offering their daughters more support or positiveness toward their menses.

#### The Relationship Between Positivity Scores on the SD Concepts and the MSQ Variables

Pearson correlations between subjects' positivity scores on the SD concepts and the MSQ variables were not significant for the daughters or the mothers. At the .05 level of confidence, mothers' spasmodic scores were negatively correlated with their positivity scores for the concept, My Body.

#### The Menstrual-Related Variables

A set of nine variables were derived from questionnaire items constructed by the author. Many of the questionnaire items were combined with other items based on intercorrelations amongst them. Recoding of the variables occurred

because of these combinations and due to the range of subjects' responses on the scales provided. The policy was to collapse response categories with less than three cases. The final set of variables: cycle regularity, flow, severity, sex during period for men, sex during period for you, male reaction to menarche, female reaction to menarche, liberalness and generational similarity, are defined below (see Appendix for original questionnaire items). The coding of these variables is shown in Table 6 along with the frequency distribution of mothers' and daughters' responses.

The variable, cycle regularity, was ultimately defined as: regular (period rarely late or early more than one to three days), and irregular (period usually late or early four to six days or cycle length unpredictable). The variable, flow, was constructed from the combination of two original questionnaire items: days of flow and heaviness of flow, which were strongly correlated. A subject's score was arrived at by summing her response to heaviness of flow, which ranged from 1 (light) to 3 (heavy), and days of flow, which ranged from 1 (two to three days) to 3 (more than six days). The current flow scale ranges from 2 to 6 such that the low end of the scale tends to reflect a shorter, lighter flow while the high end reflects a longer, heavier flow. The variable, severity, was developed from three questionnaire items dealing with reactions to paramenstrual pain or distress: staying home, consulting a doctor, and taking

Table 6  
The Coding and Response Frequency for the  
Menstrual-Related Variables

| Variable                       | Coding                            | Daughter | Mother |
|--------------------------------|-----------------------------------|----------|--------|
| Cycle Regularity               | 1. Regular                        | 36       | 50     |
|                                | 2. Irregular                      | 24       | 10     |
| Flow                           | 2. Light and Short                | 1        | 4      |
|                                | 3. ↓                              | 8        | 8      |
|                                | 4. ↓                              | 28       | 27     |
|                                | 5. ↓                              | 16       | 12     |
|                                | 6. Heavy and Long                 | 7        | 9      |
| Severity                       | 0. ↓                              | 2        | 1      |
|                                | 1. (Number of severe              | 29       | 22     |
|                                | 2. ↓ reactions to                 | 29       | 35     |
|                                | 3. ↓ menstruation)                | 0        | 2      |
| Sex During Period<br>for Men   | 1. Would not have sex             | 28       | 46     |
|                                | 2. Have sex but feel uneasy       | 24       | 10     |
|                                | 3. Have sex and not at all uneasy | 8        | 4      |
| Sex During Period<br>for You   | 1. Would not have sex             | 23       | 39     |
|                                | 2. Have sex but feel uneasy       | 21       | 10     |
|                                | 3. Have sex and not at all uneasy | 16       | 11     |
| Male Reaction to<br>Menarche   | 1. No reaction/no males told      | 45       | 57     |
|                                | 2. Neutral                        | 5        | 2      |
|                                | 3. Positive                       | 10       | 1      |
| Female Reaction to<br>Menarche | 1. Slightly negative              | 8        | 7      |
|                                | 2. Neutral                        | 15       | 21     |
|                                | 3. Slightly positive              | 13       | 15     |
|                                | 4. Very positive                  | 24       | 17     |
| Liberalness                    | 1. Traditional/Conventional       | 8        | 24     |
|                                | 2. ↓                              | 21       | 21     |
|                                | 3. Liberated/Radical              | 31       | 15     |
| Generational<br>Similarity     | 1. Extremely similar              | 9        | 12     |
|                                | 2. Moderately similar             | 24       | 26     |
|                                | 3. Slightly similar               | 17       | 13     |
|                                | 4. Not at all similar             | 10       | 9      |

prescribed medication. Each original item was ultimately scored: 0 (no) or 1 (yes). The scores for these three items were summed such that the range of severity is from 0 to 3, indicating the number of severe reactions to menstruation. The variables, sex during period for men and sex during period for you were coded in the same manner (see Table 6). On the questionnaire, subjects were asked how they related to sex during their period and how they thought most men felt about it. Each variable originated from two questionnaire items which addressed whether one would have sex during menstruation, and the degree of comfort or discomfort associated with this behavior. Liberalness was recoded due to subjects' range of use of the original scale. The compressed version is a rating scale from 1 (traditional/conventional) to 3 (liberated/radical). Generational similarity deals with mothers' and daughters' perceptions of the degree of similarity in their paramenstrual symptoms and attitudes (see Table 6 for coding). The variables, male reaction to menarche and female reaction to menarche, were coded slightly differently (see Table 6), based on use of the original scale, i.e., many more subjects told females about their first period than told males. The final score for each variable was derived from an average rating of the reactions of those males or females told about menarche. The original rating scale ranged from 1 (negative reaction) to 6 (positive reaction).

Table 7 includes the means and standard deviations for mothers and daughters for the menstrual-related variables, as well as Spearman correlations and Wilcoxin  $z_t$ -values of the difference in central tendency between mothers and daughters for each variable. Interestingly, while none of the menstrual-related variables were significantly correlated for mothers and daughters, there was a correlation at the .05 level of confidence between mothers' and daughters' perceptions of similarity to each other regarding menstrual attitudes and symptomatology. There were significant differences in central tendency for the mothers and daughters on three variables: sex during period for men, male reaction to menarche and liberalness. Daughters perceived men as more comfortable with sex during a woman's period and experienced males as having reacted more positively to their menarche. The latter finding was due to the fact that five times as many daughters than mothers told males about menarche. Daughters rated themselves as more liberated than their mothers rated themselves. At the .05 level of confidence, there were mother-daughter differences in central tendency for the variables, cycle regularity and sex during period for you. Compared to the daughters, mothers were more regular in their cycles but less comfortable having sex during their period.

Table 7

Spearman Correlations and Wilcoxin  $z_t$ -Values for Mother-Daughter  
Pairs on the Menstrual-Related Variables

| Variable                       | Daughters       |                  | Mothers         |                  | $r$  | $z_t$   |
|--------------------------------|-----------------|------------------|-----------------|------------------|------|---------|
|                                | $\underline{M}$ | $\underline{SD}$ | $\underline{M}$ | $\underline{SD}$ |      |         |
| Cycle Regularity               | 1.40            | .49              | 1.17            | .38              | .00  | 2.40*   |
| Flow                           | 4.33            | .91              | 4.23            | 1.08             | .15  | .62     |
| Severity                       | 1.45            | .57              | 1.63            | .58              | -.04 | 1.57    |
| Sex During Period<br>for Men   | 1.67            | .71              | 1.30            | .59              | .10  | 2.75**  |
| Sex During Period<br>for You   | 1.88            | .80              | 1.53            | .79              | .21  | 2.29*   |
| Male Reaction to<br>Menarche   | 1.42            | .77              | 1.07            | .31              | .21  | 3.11**  |
| Female Reaction<br>to Menarche | 2.88            | 1.09             | 2.70            | 1.01             | -.03 | .90     |
| Liberalness                    | 2.38            | .72              | 1.85            | .80              | .16  | 3.33*** |
| Generational<br>Similarity     | 2.48            | .95              | 2.32            | .97              | .28* | .82     |

\* $p < .05$ .

\*\* $p < .01$ .

\*\*\* $p < .001$ .

The Interrelationships of the  
Menstrual-Related Variables

As seen in Table 8, there were very few intercorrelations at the .05 level of confidence or better for the menstrual-related variables. Liberalness was significantly positively correlated with subjects' comfortableness with having sex during menstruation, for both the daughters and mothers. For the mothers, comfortableness with sex during menstruation was also significantly correlated with perceived similarity to their daughters regarding menstrual symptoms and attitudes. The other significant correlation for the mothers was between the length and heaviness of their period flow and a tendency to have irregular cycles.

The Interrelationship of the Menstrual-Related  
Variables with the MSQ Variables and  
Positivity Scores for the SD Concepts

Table 9 reveals the intercorrelations of the menstrual-related variables with the MSQ variables and the positivity scores for the SD concepts for the daughters and mothers. Of the menstrual-related variables, only cycle regularity, flow and severity correlated with the congestive and spasmodic subtotals at the .05 level of confidence or better. Spasmodic percent did not substantially intercorrelate with any menstrual-related variables. It is noteworthy that, contrary to what might be expected, severity was negatively correlated with both the congestive and spasmodic variables.

Table 8

Spearman Correlation Matrix of the Menstrual-Related Variables Within and Between Daughters and Mothers

|                                |   | 2    |       | 3    |      | 4    |      | 5    |      | 6     |      | 7    |      | 8     |       | 9     |        |
|--------------------------------|---|------|-------|------|------|------|------|------|------|-------|------|------|------|-------|-------|-------|--------|
|                                |   | D    | M     | D    | M    | D    | M    | D    | M    | D     | M    | D    | M    | D     | M     | D     | M      |
| 1. Cycle Regularity            | D | -.08 | -.13  | -.01 | .01  | -.11 | .04  | -.13 | -.23 | -.08  | -.19 | .15  | .11  | -.10  | .06   | .12   | .01    |
|                                | M | -.05 | .36** | .03  | -.20 | .11  | .20  | .01  | -.14 | -.26* | -.10 | -.17 | -.19 | -.16  | -.14  | .24   | .30*   |
| 2. Flow                        | D |      |       | -.04 | -.07 | .02  | .04  | .12  | -.11 | .04   | .01  | .17  | -.20 | -.02  | -.01  | -.02  | .08    |
|                                | M |      |       | -.05 | -.18 | .07  | -.21 | .04  | .03  | -.14  | .03  | .00  | -.03 | -.24  | .01   | -.04  | .06    |
| 3. Severity                    | D |      |       |      |      | -.13 | -.12 | .08  | -.02 | -.05  | .09  | -.07 | .01  | .23   | .18   | .06   | .00    |
|                                | M |      |       |      |      | -.08 | .15  | .03  | .17  | .16   | .02  | .07  | -.08 | -.07  | .14   | -.14  | -.06   |
| 4. Sex During Period for Men   | D |      |       |      |      |      |      | .19  | .13  | .04   | -.23 | .22  | .00  | .26*  | .10   | -.02  | -.14   |
|                                | M |      |       |      |      |      |      | .09  | .22  | .05   | -.13 | .15  | -.09 | .04   | -.03  | -.06  | -.02   |
| 5. Sex During Period for You   | D |      |       |      |      |      |      |      |      | .24   | -.07 | .03  | -.03 | .41** | .02   | -.06  | -.11   |
|                                | M |      |       |      |      |      |      |      |      | -.15  | .02  | .12  | -.13 | .22   | .36** | -.23  | -.35** |
| 6. Male Reaction to Menarche   | D |      |       |      |      |      |      |      |      |       |      | .15  | .18  | .07   | -.10  | .22   | -.19   |
|                                | M |      |       |      |      |      |      |      |      |       |      | -.05 | -.01 | -.11  | -.07  | -.20  | -.01   |
| 7. Female Reaction to Menarche | D |      |       |      |      |      |      |      |      |       |      |      |      | -.03  | .17   | -.29* | -.12   |
|                                | M |      |       |      |      |      |      |      |      |       |      |      |      | .04   | -.13  | .03   | -.21   |
| 8. Liberalness                 | D |      |       |      |      |      |      |      |      |       |      |      |      |       |       | -.23  | -.17   |
|                                | M |      |       |      |      |      |      |      |      |       |      |      |      |       |       | -.01  | -.10   |
| 9. Generational Similarity     | D |      |       |      |      |      |      |      |      |       |      |      |      |       |       |       |        |
|                                | M |      |       |      |      |      |      |      |      |       |      |      |      |       |       |       |        |

Note: D = Daughter; M = Mother.

\*p &lt; .05.

\*\*p &lt; .01.

Table 9  
Spearman Correlations of the Menstrual-Related Variables With the MSQ  
Variables and Positivity Scores on the SD Concepts

|                             | Congestive |        | Spasmodic |       |         |      | Menstruation |       |         |      | My Body |      |             |       | I Felt   |       |                  |      | Mother Felt |   |   |   | Men Feel |   |   |   | M-D Relationship |  |  |  |
|-----------------------------|------------|--------|-----------|-------|---------|------|--------------|-------|---------|------|---------|------|-------------|-------|----------|-------|------------------|------|-------------|---|---|---|----------|---|---|---|------------------|--|--|--|
|                             |            |        | Spasmodic |       | Percent |      | Menstruation |       | My Body |      | I Felt  |      | Mother Felt |       | Men Feel |       | M-D Relationship |      |             |   |   |   |          |   |   |   |                  |  |  |  |
|                             | D          | M      | D         | M     | D       | M    | D            | M     | D       | M    | D       | M    | D           | M     | D        | M     | D                | M    | D           | M | D | M | D        | M | D | M |                  |  |  |  |
| Cycle Regularity            | D          | .30    |           |       | .01     | .14  | -.21         | -.27* | -.16    | -.19 | -.03    | -.01 | .14         | -.13  | .02      | -.22  | .05              | -.12 |             |   |   |   |          |   |   |   |                  |  |  |  |
|                             | M          | .01    | .31*      | .14   |         |      |              |       |         |      |         |      |             |       |          |       |                  |      |             |   |   |   |          |   |   |   |                  |  |  |  |
| Flow                        | D          | .19    | .16       | .29*  | .06     | .20  | -.18         | -.23  | -.05    | -.06 | -.01    | .05  | -.11        | -.07  | -.01     | -.07  | -.09             | .15  |             |   |   |   |          |   |   |   |                  |  |  |  |
|                             | M          | .07    |           |       |         |      |              |       |         |      |         |      |             |       |          |       |                  |      |             |   |   |   |          |   |   |   |                  |  |  |  |
| Severity                    | D          | -.38** | -.19      | -.33* | .12     | -.13 | -.03         | .09   | -.06    | .02  | -.05    | .01  | -.09        | -.15  | .04      | -.18  | -.02             | .07  |             |   |   |   |          |   |   |   |                  |  |  |  |
|                             | M          | -.23   |           |       |         |      |              |       |         |      |         |      |             |       |          |       |                  |      |             |   |   |   |          |   |   |   |                  |  |  |  |
| Sex During Period for Men   | D          | -.05   | -.17      | -.01  | -.07    | .03  | .28*         | -.09  | .10     | -.02 | .24     | -.07 | .27*        | -.09  | .17      | .16   | .18              | -.01 |             |   |   |   |          |   |   |   |                  |  |  |  |
|                             | M          | -.07   |           |       |         |      |              |       |         |      |         |      |             |       |          |       |                  |      |             |   |   |   |          |   |   |   |                  |  |  |  |
| Sex During Period for You   | D          | -.07   | -.03      | .03   | -.01    | .11  | .10          | .31*  | -.06    | .31* | .05     | -.01 | -.11        | -.08  | -.20     | -.07  | -.23             | .28* |             |   |   |   |          |   |   |   |                  |  |  |  |
|                             | M          | -.06   |           |       |         |      |              |       |         |      |         |      |             |       |          |       |                  |      |             |   |   |   |          |   |   |   |                  |  |  |  |
| Male Reaction to Menarche   | D          | .01    | .01       | -.10  | -.04    | .05  | .20          | -.17  | .18     | -.09 | .07     | -.13 | .12         | .14   | -.06     | -.15  | .07              | -.13 |             |   |   |   |          |   |   |   |                  |  |  |  |
|                             | M          | -.13   |           |       |         |      |              |       |         |      |         |      |             |       |          |       |                  |      |             |   |   |   |          |   |   |   |                  |  |  |  |
| Female Reaction to Menarche | D          | .07    | .12       | .11   | .11     | .01  | .25          | .20   | .22     | .09  | .36**   | .21  | .35**       | .40** | .16      | .38** | .42**            | -.02 |             |   |   |   |          |   |   |   |                  |  |  |  |
|                             | M          | .11    |           |       |         |      |              |       |         |      |         |      |             |       |          |       |                  |      |             |   |   |   |          |   |   |   |                  |  |  |  |
| Liberalness                 | D          | -.06   | -.15      | -.18  | -.09    | -.15 | .25          | .24   | .02     | .22  | .17     | .06  | .03         | -.16  | .08      | -.22  | -.09             | .21  |             |   |   |   |          |   |   |   |                  |  |  |  |
|                             | M          | -.05   |           |       |         |      |              |       |         |      |         |      |             |       |          |       |                  |      |             |   |   |   |          |   |   |   |                  |  |  |  |
| Generational Similarity     | D          | -.15   | -.14      | .11   | -.02    | .16  | -.32*        | .01   | -.10    | -.25 | -.38**  | -.12 | -.30*       | -.09  | -.07     | -.18  | -.26*            | -.08 |             |   |   |   |          |   |   |   |                  |  |  |  |
|                             | M          | .01    |           |       |         |      |              |       |         |      |         |      |             |       |          |       |                  |      |             |   |   |   |          |   |   |   |                  |  |  |  |

Note: D = Daughter; M = Mother.

\* $p < .05$ .

\*\* $p < .01$ .

Female reaction to menarche was the only menstrual-related variable which significantly correlated with many of the SD concepts for the daughters and mothers. However, the intercorrelations of female reaction to menarche with Mother Felt are almost obligatory since most subjects told their mothers about menarche and the mothers' reaction, among other females' reactions, was included in the average rating that determined the final score for female reaction to menarche. For the daughters, generational similarity was significantly, negatively correlated with I Felt and was negatively correlated, at the .05 level, with Menstruation, Mother Felt, and Mother-Daughter Relationship. In other words, the more positively daughters felt toward these concepts, the more similarly they perceived their mothers and themselves regarding menstrual attitudes and symptoms (see Table 6 for coding on generational similarity). At the .05 level of confidence, sex during period for men was positively correlated with Menstruation and Mother Felt for the daughters. For the mothers, sex during period for you was positively correlated with Menstruation, My Body and Mother-Daughter Relationship, also at the .05 level.

#### The Demographic Variables

Most of the demographic variables do not require explanation as to their coding or derivation and are listed in Table 10. The final coding of the variables: career,

Table 10  
The Coding and Response Frequency for the  
Demographic Variables

| Variable                  | Coding                                   | Daughter | Mother |
|---------------------------|------------------------------------------|----------|--------|
| Age <sup>a</sup>          |                                          | 23.95    | 51.10  |
| Religion <sup>b</sup>     | 1. Protestant                            | 10       |        |
|                           | 2. Catholic                              | 24       |        |
|                           | 3. Jewish                                | 19       |        |
|                           | 4. Other                                 | 7        |        |
| Race <sup>b</sup>         | 1. White                                 | 40       |        |
|                           | 2. Non-white (Black, Hispanic, Oriental) | 20       |        |
| Religiousness             | 1. None/Minimal                          | 25       | 24     |
|                           | 2. Moderate/Strong                       | 35       | 36     |
| Education                 | 1. $\leq$ High school graduate           | 8        | 22     |
|                           | 2. Some college or graduate              | 34       | 28     |
|                           | 3. Beyond college graduate               | 18       | 10     |
| Birth Control Pill Usage  | 1. No                                    | 37       | 43     |
|                           | 2. Yes (> 6 months)                      | 23       | 17     |
| IUD Usage                 | 1. No                                    | 52       | 53     |
|                           | 2. Yes (> 6 months)                      | 8        | 7      |
| Daughter's Marital Status | 1. Single                                | 50       |        |
|                           | 2. Married                               | 10       |        |
| Daughter's Residence      | 1. With parent                           | 27       |        |
|                           | 2. Alone or with other                   | 33       |        |
| Mother's Career           | 1. Blue collar                           |          | 23     |
|                           | 2. White collar, housewife, student      |          | 37     |

Table 10--Continued

| Variable                        | Coding                                                                       | Daughter | Mother         |
|---------------------------------|------------------------------------------------------------------------------|----------|----------------|
| Mother's Work<br>Schedule       | 1. None/Light<br>2. Moderate/Heavy                                           |          | 36<br>24       |
| Mother's Menopause              | 1. No evidence<br>2. Has begun but < 3 years<br>3. Menopausal $\geq$ 4 years |          | 21<br>21<br>18 |
| Mother's Marital<br>Status      | 1. Married<br>2. Separated or divorced                                       |          | 48<br>12       |
| Mother's Number<br>of Daughters | 1. One daughter<br>2. > One daughter                                         |          | 25<br>35       |

<sup>a</sup>Mean ages are reported.

<sup>b</sup>Religion and race were the same for mothers and daughters.

birth control usage and mother's work schedule, is discussed below. As is evident in Table 10, several demographic variables are specific to the mothers as a subgroup or to the daughters and are labeled accordingly.

The variable, career, was not applicable to daughters, most of whom were in school and in the process of choosing a career or defining their future plans. For the most part, the mothers had already chosen careers or life courses. Two categories were defined: 1 (blue collar worker) and 2 (white collar worker, housewife, student). Blue collar included clerical or factory workers, craftsmen and laborers. White collar included managerial, professional and semi-professional work. This variable tends to address mother's social class as well as her vocation. Birth control pill and IUD usage, both of which can affect menstruation, were queried in specific detail. Interestingly, the majority of subjects had never used the pill or IUD. As a result, each birth control method had a yes or no response as to the subject's use of that method at any time in her life for a minimum of six months. The original questionnaire item asking about mother's work history during daughter's childhood (before age 10) was ultimately coded in binary form. Mothers who never worked and those who worked less than 5 years on a part-time basis were categorized jointly, i.e., none/light work schedule. Mothers who worked less than 5 years but full-time and those who worked more

than 5 years were also grouped and labelled: moderate/heavy work schedule.

The Interrelationship of the Demographic  
Variables with the MSQ Variables and  
Positivity Scores for the SD Concepts

As seen in Table 11, there were few correlations between the demographic and MSQ variables at the .05 level of confidence or better. Usage of the IUD was negatively correlated with spasmodic subtotals and spasmodic percent scores for the daughters. Since the IUD has been known to promote spasmodic-type cramps during the period flow for many women, it is not surprising to find a relationship between a greater degree of spasmodic symptomatology and non-use of the IUD. Interestingly, daughters who used the IUD were the daughters of mothers with higher congestive scores.

Regarding the demographic variables in relation to the positivity scores for the SD concepts, mothers' religiousness was negatively correlated with daughters' positivity scores for how men feel about menstruation. In addition, daughters tended to view men as more positive about menstruation if their parents were separated or divorced, and if their mothers worked heavily when they were children. There were two interesting results at the .05 level of confidence that mutually applied to mothers and their daughters. Both tended to be more positive about their

Table 11

## Pearson Correlations of the Demographic Variables With the MSQ Variables and Positivity

Scores on the 50 Concepts Within and Between Daughters and Mothers

|                   | Age |       | Religiosity |      |        |      | Pills |        |      |       | IUD  |      |      |       | Education <sup>a</sup> |       |      |   | No. of Daughters | HMS pause <sup>a</sup> | HMS | M's Career | D's Residence | DMS |
|-------------------|-----|-------|-------------|------|--------|------|-------|--------|------|-------|------|------|------|-------|------------------------|-------|------|---|------------------|------------------------|-----|------------|---------------|-----|
|                   | D   | M     | D           | M    | D      | M    | D     | M      | D    | M     | D    | M    | D    | M     | D                      | M     | D    | M |                  |                        |     |            |               |     |
| Congestive        | D   | .28*  | .19         | -.03 | .01    | .02  | -.20  | .18    | .00  | .07   | -.02 | -.18 | -.23 | .09   | .10                    | -.06  | .25  |   |                  |                        |     |            |               |     |
|                   | M   | -.04  | -.19        | -.02 | .23    | .07  | .06   | .41**  | .01  | -.12  | -.23 | -.01 | -.06 | .21   | .05                    | .00   | -.11 |   |                  |                        |     |            |               |     |
| Spasmodic         | D   | .10   | -.01        | .21  | -.12   | -.10 | -.08  | -.26*  | -.04 | -.24  | .00  | .12  | .09  | .28*  | -.08                   | .07   | .14  |   |                  |                        |     |            |               |     |
|                   | M   | .03   | -.06        | .01  | -.08   | .20  | -.02  | .11    | -.17 | -.04  | -.22 | .09  | -.16 | .03   | .11                    | -.18  | .07  |   |                  |                        |     |            |               |     |
| Spasmodic Percent | D   | -.15  | -.17        | .23  | -.14   | -.10 | .07   | -.40** | .01  | -.29* | .05  | .27* | .31* | .16   | -.19                   | .11   | -.09 |   |                  |                        |     |            |               |     |
|                   | M   | .09   | .13         | .03  | -.27*  | .14  | -.11  | -.24   | -.20 | .09   | -.02 | .09  | -.12 | -.19  | .04                    | -.21  | .17  |   |                  |                        |     |            |               |     |
| Menstruation      | D   | .03   | .03         | -.08 | -.24   | .11  | .22   | .05    | -.16 | -.04  | .01  | -.06 | -.04 | .01   | .12                    | .18   | -.06 |   |                  |                        |     |            |               |     |
|                   | M   | -.20  | -.09        | .02  | .15    | -.03 | .07   | .02    | .09  | -.06  | .09  | -.09 | .18  | -.06  | -.04                   | -.02  | .01  |   |                  |                        |     |            |               |     |
| My Body           | D   | .08   | -.03        | .17  | -.09   | .07  | .04   | .08    | -.03 | -.19  | -.16 | .03  | .13  | .23   | .05                    | .11   | .06  |   |                  |                        |     |            |               |     |
|                   | M   | -.16  | -.07        | .05  | .10    | -.10 | .17   | .05    | .16  | -.07  | .05  | -.03 | .24  | .14   | .06                    | .09   | -.21 |   |                  |                        |     |            |               |     |
| I Felt            | D   | .00   | -.03        | -.24 | -.19   | .07  | .09   | .00    | .27* | .06   | .25  | -.12 | -.04 | -.03  | -.14                   | .01   | -.06 |   |                  |                        |     |            |               |     |
|                   | M   | -.01  | .18         | .07  | .13    | .13  | -.09  | -.10   | -.11 | -.04  | .09  | -.10 | .04  | -.08  | .11                    | .09   | .11  |   |                  |                        |     |            |               |     |
| Mother Felt       | D   | -.09  | -.16        | -.12 | -.20   | -.04 | .27*  | -.20   | .02  | -.04  | .22  | .21  | -.02 | .12   | -.10                   | -.16  | .03  |   |                  |                        |     |            |               |     |
|                   | M   | .01   | .22         | -.01 | .14    | .09  | -.22  | .00    | -.18 | .04   | .03  | -.05 | -.01 | -.09  | .12                    | .04   | .14  |   |                  |                        |     |            |               |     |
| Men Feel          | D   | .06   | -.11        | .14  | -.35** | -.06 | .16   | -.01   | .06  | -.08  | .16  | .02  | -.10 | .34** | .01                    | .29*  | .04  |   |                  |                        |     |            |               |     |
|                   | M   | .08   | .02         | -.01 | .06    | .23  | -.09  | .17    | -.01 | .08   | .09  | -.12 | -.15 | .20   | .03                    | -.07  | .06  |   |                  |                        |     |            |               |     |
| M-D Relationship  | D   | -.04  | -.31*       | .16  | -.02   | -.02 | .21   | -.07   | .16  | -.11  | .10  | .13  | -.05 | .11   | -.21                   | -.26* | .05  |   |                  |                        |     |            |               |     |
|                   | M   | -.28* | -.18        | -.16 | .13    | .09  | .31*  | .02    | .11  | .22   | -.06 | -.01 | .09  | -.13  | -.10                   | -.29* | -.05 |   |                  |                        |     |            |               |     |

Note: D = Daughter; M = Mother; HMS = Mother's Marital Status; HMS = Mother's Work Schedule; DMS = Daughter's Marital Status.

<sup>a</sup> Intercorrelations with Menopause and Education are Spearman vs. Pearson.

\*p &lt; .05.

\*\*p &lt; .01.

relationship with each other when the other was younger. It was also the case for both mothers and daughters that their positivity toward their relationship was greater when the mothers had not worked or had only a light work schedule during daughters' childhood.

The Relationship Between the Demographic Variables  
and the Menstrual-Related Variables

Table 12 reveals that sex during period for you was the only menstrual-related variable which significantly inter-correlated with many of the demographic variables. For the daughters, several of the positive intercorrelations would seem to interrelate, predominantly on the basis of age: daughters' relative comfortableness having sex during menstruation was positively correlated with their age, mothers' age, and the amount of time their mothers have been menopausal, a variable clearly related to mothers' age. Daughters' educational level, usage of the birth control pill, and residence (not living with parents) were also significantly, positively correlated with their comfortable-ness having sex during menstruation. Based on race, daughters who are White vs. non-White were more comfortable having sex during their period. For the mothers, comfortable-ness having sex during menstruation was positively correlated with their usage of the birth control pill and the IUD.

Table 12  
Spearman Correlations of the Demographic Variables With the Menstrual-Related Variables  
Within and Between Daughters and Mothers

|                                | Age                 |                  | Religiosity       |                  | Pills            |                  | IUD               |                  | Education <sup>2</sup> |                   | No.<br>of Da      | MMS               | MMS<br>pause | MMS              | M's<br>Career    | D's<br>Residence | DMS              |
|--------------------------------|---------------------|------------------|-------------------|------------------|------------------|------------------|-------------------|------------------|------------------------|-------------------|-------------------|-------------------|--------------|------------------|------------------|------------------|------------------|
|                                | D                   | M                | D                 | M                | D                | M                | D                 | M                | D                      | M                 |                   |                   |              |                  |                  |                  |                  |
| Cycle Regularity               | D .03               | .14              | .07               | .11              | .08              | .06              | -.12              | -.09             | -.06                   | -.05              | .18               | .00               | .02          | -.16             | -.25             | -.06             | -.15             |
|                                | M -.08              | .00              | .11               | .00              | .11              | .02              | -.04              | -.16             | .02                    | -.11              | .08               | -.17              | -.11         | -.03             | -.09             | -.20             | -.05             |
| Flow                           | D .16               | .17              | -.05              | -.02             | -.10             | -.22             | -.09              | .03              | .02                    | .05               | .06               | -.09              | .10          | .12              | .13              | .19              | .01              |
|                                | M -.12              | -.09             | -.02              | .03              | .12              | .16              | -.01              | -.05             | .13                    | .02               | .01               | -.21              | -.10         | .04              | -.02             | .01              | -.02             |
| Severity                       | D -.09              | -.07             | -.09              | -.02             | -.12             | .08              | -.12              | -.12             | .04                    | -.11              | .22               | .01               | -.09         | -.01             | .25              | -.12             | -.03             |
|                                | M -.04              | -.06             | .21               | -.14             | -.21             | .16              | -.04              | .12              | -.11                   | .08               | .07               | -.03              | -.05         | -.24             | .10              | -.12             | .00              |
| Sex During Period<br>for Men   | D .14               | .12              | .14               | -.21             | .25              | .05              | -.08              | .03              | -.11                   | .11               | -.23              | -.26 <sup>g</sup> | -.05         | .11              | -.05             | -.11             | .27 <sup>g</sup> |
|                                | M .19               | .09              | .07               | -.19             | .08              | .18              | -.08              | .14              | .06                    | .02               | -.04              | -.04              | .23          | -.11             | -.07             | -.23             | .18              |
| Sex During Period<br>for You   | D .27 <sup>g</sup>  | .38 <sup>g</sup> | -.31 <sup>g</sup> | -.16             | .34 <sup>g</sup> | .04              | .06               | -.14             | .38 <sup>g</sup>       | .10               | -.40 <sup>g</sup> | -.22              | -.04         | .36 <sup>g</sup> | -.01             | .05              | .47 <sup>g</sup> |
|                                | M -.22              | -.24             | -.05              | -.11             | -.03             | .34 <sup>g</sup> | .00               | .37 <sup>g</sup> | .01                    | .16               | .09               | .14               | .08          | -.22             | .08              | .10              | .00              |
| Male Reaction to<br>Menarche   | D .27 <sup>g</sup>  | .32 <sup>g</sup> | -.07              | -.10             | .21              | .06              | -.10              | -.04             | .15                    | .17               | -.25              | -.05              | -.08         | .21              | .07              | .13              | .39 <sup>g</sup> |
|                                | M .01               | .09              | .04               | .03              | -.18             | -.14             | -.09              | -.08             | .19                    | .18               | .16               | -.12              | -.12         | .02              | .12              | .18              | .06              |
| Female Reaction<br>to Menarche | D .26 <sup>g</sup>  | .00              | -.17              | -.17             | .17              | .13              | .13               | -.07             | .07                    | .21               | .02               | .02               | .18          | -.04             | -.09             | -.19             | .15              |
|                                | M .00               | .11              | .08               | .26 <sup>g</sup> | .14              | -.10             | .08               | -.09             | -.09                   | .05               | -.05              | .06               | .07          | .13              | -.16             | .03              | -.04             |
| Liberalness                    | D -.04              | .23              | -.30 <sup>g</sup> | -.15             | .01              | .11              | -.04              | -.01             | .01                    | -.02              | -.24              | -.02              | .08          | .23              | .10              | -.03             | .18              |
|                                | M -.31 <sup>g</sup> | -.24             | -.17              | -.15             | -.16             | .48 <sup>g</sup> | -.30 <sup>g</sup> | .20              | -.18                   | .11               | .13               | .14               | .19          | -.14             | .30 <sup>g</sup> | -.10             | -.18             |
| Generational<br>Similarity     | D -.02              | -.15             | .27 <sup>g</sup>  | .13              | -.01             | -.20             | -.03              | -.16             | -.21                   | -.35 <sup>g</sup> | .22               | .07               | .15          | .03              | -.10             | -.22             | -.21             |
|                                | M .08               | .00              | .15               | .08              | -.05             | -.21             | -.17              | -.17             | .06                    | -.26 <sup>g</sup> | .04               | -.14              | -.02         | .07              | -.17             | -.19             | -.10             |

Note: D = Daughter; M = Mother; MMS = Mother's Marital Status; MMS = Mother's Work Schedule; DMS = Daughter's Marital Status.

<sup>g</sup>p < .05.

<sup>gg</sup>p < .01.

<sup>ggg</sup>p < .001.

There were three other significant correlations between the two groups of variables. Daughters' perception of how favorably males reacted to their menarche was positively correlated with daughters' current residence, i.e., not living with parents. For the mothers, liberalness was positively correlated with usage of the birth control pill. Mothers' educational level was negatively correlated with daughters' perception of their similarity to their mothers vis-a-vis menstrual symptoms and attitudes, and for the mothers' perception of their similarity to their daughters, though at the .05 level of confidence. In other words, both mothers and daughters tended to perceive each other similarly, regarding menstrual symptoms and attitudes, when the mothers were more educated.

The Interrelationships of the Positivity Scores  
on the SD Concepts, the Menstrual-Related  
Variables and the Demographic Variables  
with the MSQ Variable: Spasmodic  
Percent Difference

Since the reader has been familiarized with all the variables of this study, the analysis of the MSQ variable, spasmodic percent difference, in relation to all other variables can now be explained. To review, the spasmodic percent difference score is the absolute difference between a mother's and daughter's spasmodic percent scores. The distribution of absolute differences ranges from .1% to 28.6%, with a mean difference of 9.5%. This variable was

utilized to define two groups of mother-daughter pairs who obtained relatively small vs. relatively large spasmodic percent difference scores. Based on the distribution of difference scores, 20 mother-daughter pairs with a 5.0% spasmodic difference or less were contrasted with 20 pairs who obtained a spasmodic percent difference of 12.6% or greater. Dichotomizing the mother-daughter pairs in terms of those who reported relatively similar vs. different paramenstrual symptomatology allowed for an exploration of which other variables, if any, related to mother-daughter similarity or difference on the MSQ. Except for the demographic variables, the interrelationship of the positivity scores and menstrual-related variables with the two groups of mother-daughter pairs were examined in terms of mean scores for the daughters, the mothers, and also absolute mean difference scores between mothers and their daughters. With respect to the two groups of mother-daughter pairs, t-tests were performed for the positivity scores on the SD concepts and for the variable, age, while Mann-Whitney U--Wilcoxin Rank Sum W tests and chi-square tests were performed for the menstrual-related and demographic variables. Except for one significant finding as defined by the .01 level of confidence or better, none of the other results were significant. For the menstrual-related variables, the group of mother-daughter pairs who reported relatively similar symptomatology had a larger mean difference with

respect to cycle regularity ( $U_2^1 = -2.84$ ;  $p < .01$ ) and severity ( $U_2 = -2.05$ ;  $p < .05$ ), than the group that reported relatively different symptomatology. Interestingly, at the .05 level of confidence, it was found that the group of mother-daughter pairs who reported similar paramenstrual symptomatology had mothers with a younger mean age than the group that reported relatively different symptomatology ( $t = -2.12$ ;  $p < .05$ ). In addition, the group that reported more similar symptomatology had mothers with a higher mean positivity score regarding their relationship with daughter ( $t = 2.31$ ;  $p < .05$ ).

#### The Comparison of the Biologic and Adoptive Mother-Daughter Pairs with Respect to All Variables

One of the hypotheses of this study was that there would be no difference in reports of paramenstrual symptomatology on the MSQ between biologic and adoptive mother-daughter pairs. For each of the MSQ variables, absolute difference scores were obtained for all mother-daughter pairs. The absolute mean differences between the biologic and adoptive pairs were compared using  $t$ -tests and no significant differences were found for any of the MSQ variables.

The same statistical procedure was used to compare the two groups of mother-daughter pairs with respect to the

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<sup>1</sup>Mann-Whitney  $U$  tests were corrected for ties and expressed as normal deviates.

positivity scores for the SD concepts; for the menstrual-related variables, Mann-Whitney  $U$ --Wilcoxin Rank Sum  $W$  tests were performed. Again, there were no significant differences found between the biologic and adoptive pairs on any of these variables.

The demographic variables (as listed in Table 12) were correlated with subject status, i.e., biologic subjects were coded 1 and adoptive subjects were coded 2. Four of the demographic variables were significantly correlated with subjects' biologic or adoptive status. Adoptive mothers tended to be older than biologic mothers ( $r = .38$ ;  $p < .01$ ). Biologic mothers tended to have more daughters than adoptive mothers ( $r = -.46$ ;  $p < .001$ ). Subjects who are White were more likely to have an adoptive status ( $r = -.36$ ;  $p < .01$ ). Lastly, adoptive daughters were more likely to be married vs. single than biologic daughters ( $r = .53$ ;  $p < .001$ ). The frequency distribution for biologic and adoptive subjects on these four demographic variables can be seen in Table 13. Despite the relationship between these demographic variables and subjects' biologic or adoptive status, no significant differences were found for any of the variables in this study between biologic and adoptive mother-daughter pairs.

Table 13  
 Response Frequency for the Four Demographic Variables  
 Correlated with Subjects' Biologic or  
 Adoptive Status

| Demographic Variable      | Biologic <sup>a</sup> | Adoptive <sup>b</sup> |
|---------------------------|-----------------------|-----------------------|
| Mothers' Age <sup>c</sup> | 49.54                 | 56.62                 |
| Number of Daughters       |                       |                       |
| One daughter              | 14                    | 11                    |
| More than One Daughter    | 33                    | 2                     |
| Race                      |                       |                       |
| White                     | 27                    | 13                    |
| Non-White                 | 20                    | 0                     |
| Daughters' Marital Status |                       |                       |
| Single                    | 44                    | 6                     |
| Married                   | 3                     | 7                     |

<sup>a</sup> $\underline{n}$  = 47.

<sup>b</sup> $\underline{n}$  = 13.

<sup>c</sup>Mean age is reported.

Addendum: Subjects' Source of Knowledge about  
Menstruation and Terms Used to Refer  
to Menstruation

As seen in Table 14, the majority of subjects first learned about menstruation from their mothers. Comparing the number of daughters vs. mothers who learned about menstruation from their mothers rather than other sources, it is clear that more daughters learned from their mothers. Female friends were the next most frequent source of information for both mothers and daughters. Interestingly, not one subject learned about menstruation from a male.

The vast majority of subjects used only technical terms to refer to menstruation. A small number of subjects used positive or negative terms, sometimes in addition to technical terms. The daughters tended to use technical and/or positive terms somewhat more frequently than the mothers. While few subjects used negative terms, the mothers used such terms more than the daughters did.

Summary Results

There was a slight indication of mother-daughter similarity for congestive but not spasmodic symptomatology on the MSQ. The group of 20 mother-daughter pairs who demonstrated the most similar symptomatology consisted of mothers who were slightly younger and more positive about the mother-daughter relationship, than the mothers in the 20

Table 14  
Response Frequency for Subjects' Source of  
Knowledge About Menstruation and Terms  
to Refer to Menstruation

| Variable                            | Daughter         | Mother           | Sum               |
|-------------------------------------|------------------|------------------|-------------------|
| Source of Knowledge                 |                  |                  |                   |
| Mother                              | 41               | 30               | 71                |
| Sister                              | 1                | 3                | 4                 |
| Female Friend                       | 11               | 15               | 26                |
| School                              | 4                | 2                | 6                 |
| Book                                | 1                | 1                | 2                 |
| Other                               | 1                | 7                | 8                 |
|                                     | ( <u>n</u> = 59) | ( <u>n</u> = 58) | ( <u>n</u> = 117) |
| Terms Used to Refer to Menstruation |                  |                  |                   |
| Technical Only                      | 48               | 41               | 89                |
| Positive/Neutral                    | 9                | 4                | 13                |
| Negative                            | 2                | 6                | 8                 |
|                                     | ( <u>n</u> = 59) | ( <u>n</u> = 51) | ( <u>n</u> = 110) |

Note. Other = female relative, camp counselor, housekeeper or maid. Technical Only = menstruation, menses, menstrual cycle, period. Positive/Neutral = friend, visitor, condition, Santa Claus, cherry pie time, patty, jig, time of month, private time, Mary Lou or Jane. Negative = woman trouble, unwell, curse, on rag, rag time, falling off the roof, sick. Positive/neutral and negative terms were sometimes used in addition to technical terms.

pairs that reported the most different symptomatology. There was no significant difference in the degree of mother-daughter similarity for any of the measures of paramenstrual symptomatology between the biologic and adoptive mother-daughter pairs. Based on the distribution of spasmodic percent scores for all subjects, there was no evidence for a dichotomy between spasmodic and congestive symptomatology, but rather clear evidence of a continuum between these dimensions of distress.

Interestingly, subjects' positivity toward the various concepts rated did not significantly relate to the frequency or type of paramenstrual symptoms reported. Regarding the SD concepts rated, mothers and daughters displayed an associated degree of positivity toward the concept, Menstruation, and an even stronger association for My Body and Men Feel. Based on the mean difference between their positivity scores, mothers and daughters differed in their positivity toward their relationship and toward the concept, Mother Felt. For all subjects, there were correlations between the concepts, My Body and Menstruation, and also between Mother Felt, I Felt, and Men Feel. For the daughters, their positivity toward the mother-daughter relationship was very strongly associated with their perception of positivity in their mothers' reaction to their first period. Interestingly, the more positively daughters viewed mens' feelings about menstruation, the less positively their mothers felt

about the mother-daughter relationship. For the mothers, their positivity toward menstruation was associated with their positivity about their first period.

With respect to the menstrual-related variables, there was a slight association between mothers' and daughters' perceptions of similarity to each other vis-a-vis menstrual symptoms and attitudes. Most prominent, however, were the substantial mean differences between them on the variables: sex during period for men, sex during period for you, male reaction to menarche, liberalness, and cycle regularity. Compared to the mothers, daughters perceived men as more comfortable having sex during menses, and, themselves, were more comfortable. They more frequently told males about their first period and rated themselves as more liberal than their mothers rated themselves. Mothers, however, reported more cycle regularity. Within the menstrual-related variables, comfortableness having sex during menstruation was correlated with liberalness for all subjects. For the mothers, comfortableness having sex during menstruation was associated with perceived similarity to their daughters vis-a-vis menstrual symptoms and attitudes. In addition, a tendency to have irregular cycles was correlated with a longer and heavier flow for the mothers.

Of the menstrual-related variables, only cycle regularity, flow and severity substantially or consistently inter-correlated with the MSQ variables, while female reaction

to menarche and generational similarity were the only menstrual-related variables which correlated significantly and/or repeatedly with the positivity scores on the SD concepts. The more positively daughters felt toward the concepts, Menstruation, I Felt, Mother Felt, and the Mother-Daughter Relationship, the more similarly they perceived their mothers and themselves regarding menstrual symptoms and attitudes.

With respect to the demographic variables, only IUD usage was significantly related to the MSQ variables; non-use of the IUD was associated with relatively higher spasmodic and spasmodic percent scores for the daughters. Daughters who had used the IUD had mothers with relatively higher congestive subtotals.

There were several significant or consistent relationships between the demographics and the positivity scores on the SD concepts. Daughters who perceived men as relatively positive about menstruation were the daughters of mothers who were less religious, separated or divorced, and who worked heavily during daughters' childhood. For both mothers and daughters, their positivity toward their relationship with each other was associated with the other one being relatively younger in age and with mothers having worked minimally during daughters' childhood.

Between the demographics and menstrual-related variables, the variable, sex during period for you, was signifi-

cantly and repeatedly related to the demographics. For the daughters, comfortableness having sex during menstruation was associated with their being White, somewhat older, more educated, with living apart from their parents, and with use of the birth control pill. For the mothers, both the use of the birth control pill and the IUD were associated with comfortableness having sex during menses. Interestingly, mothers' liberalness was positively correlated with use of the birth control pill. There was a significant finding between daughters current residence, i.e., not living with their parents, and their perception that males reacted favorably to their menarche. Lastly, both mothers and daughters perceived themselves to be more similar to each other vis-a-vis menstrual symptoms and attitudes, the more educated the mothers were.

## Chapter IV

### DISCUSSION

This chapter is divided into two basic parts. The first deals with a discussion of paramenstrual symptomatology as assessed by the MSQ. Results pertaining to the three apriori hypotheses are discussed in terms of the relevant literature and their general implications. The interrelationships of the MSQ variables with all other variables are also examined. The second part of the chapter deals with the interrelationships of the positivity scores on the SD concepts, the menstrual-related variables and the demographics. Several findings reveal the interesting relationships between these groups of variables and even within the groups. However, the focus of the discussion is on how certain variables interrelate between mothers and daughters including the similarities and differences between them with regard to their attitudes and experience of menstruation. Mother-daughter similarities are generally understood in terms of psychosocial learning and object-relations theory. Most of the mother-daughter differences are understood in terms of diverging sociocultural influences prevalent during the eras when mothers and daughters grew up.

Part One--Paramenstrual Symptomatology  
as Assessed by the MSQ

Mother-Daughter Similarity or Difference  
with Respect to All Subject Pairs  
(Hypothesis #1)

The expectation of no significant difference in the reports of paramenstrual symptomatology of mothers and their daughters was not systematically supported by the study's findings. Comparisons of mothers and their daughters on the MSQ variables revealed a correlation between their congestive subtotals at the .05 level of confidence, but practically no correlation for their spasmodic subtotals and spasmodic percent scores. Moreover, there were mean differences at the .05 level between mother and daughter scores for the latter two variables, though not for the congestive variable. These results may be due to several possibilities. Many of the congestive symptoms listed on the MSQ (see Appendix) involve observable or emotional responses to the paramenstruum, e.g., feeling irritable, tired, depressed, tense or nervous. These responses are not only internal sensations but are likely to be detectable on an interpersonal level. It may be that daughters are more like their mothers regarding congestive symptomatology because there is more opportunity for daughters to simply observe and identify their mothers' experience, without necessarily discussing it. An alternative explanation, consistent with the view of Parlee (1974) and Ruble (1977), is that several

congestive symptoms in particular (weight gain, bloatedness, depression and irritability) are commonly associated with menstruation and may reflect cultural beliefs or stereotypes which strongly influence what all women expect to experience during the paramenstruum. The lack of correlation between mothers and daughters for the spasmodic variables and the notably lower mean spasmodic and spasmodic percent scores for the mothers may be due to the fact that several researchers have found a diminution in spasmodic symptomatology with parity (Dalton, 1977; Israel, 1967; Kantero & Widholm, 1971), though others have asserted that the diminution is only temporary (Ylikorkala & Dawood, 1978).

Mother-daughter similarity or difference in reported MSQ symptomatology was further examined by contrasting all other variables with the 20 mother-daughter pairs who had the most similar spasmodic percent scores and the 20 most different pairs. Interestingly, the group of mother-daughter pairs who reported the most similar paramenstrual symptomatology consisted of somewhat younger mothers who tended to be more positive about their relationship with their daughters than the other group of mother-daughter pairs. Whether greater mother-daughter similarity in paramenstrual symptoms is influenced by mothers who are younger and quite positive about their relationship with their daughter or that mothers' positivity toward the relationship is an outcome of the similarity between them in

their paramenstrual experience is not decided by these findings. Since these interrelationships are only suggested by the .05 level of confidence, they would first need to be replicated and then further investigated to clearly understand the nature of the influences at work. One could speculate that, vis-a-vis menstrual symptomatology, daughters are more likely to emulate or identify with mothers' experience when their mothers are younger and quite positive about the mother-daughter relationship. Another interpretation is that mothers feel narcissistically affirmed when their psychophysiological experience of menstruation is shared or demonstrated by their daughters, hence they feel more positively about the mother-daughter relationship.

Mother-Daughter Similarity or Difference  
with Respect to Biologic and Adoptive  
Pairs (Hypothesis #2)

This study failed to find a significant difference between biologic and adoptive mother-daughter pairs with regard to the extent of similarity of MSQ reports of paramenstrual symptomatology. That the biologic group of mother-daughter pairs was not more similar in MSQ symptomatology than the adoptive group fails to support the notion that hereditary factors account for existent mother-daughter similarity. However, the limited degree of mother-daughter similarity in symptomatology for all subject pairs suggest that neither psychosocial learning nor the narcissistic

elements of the mother-daughter bond is as powerful or overriding an influence affecting mothers' and daughters' menstrual experience as was predicted by this author and others. The few prior studies which found evidence for mother-daughter similarity in paramenstrual symptomatology consisted of gross measures of menstrual experience which may have facilitated obtaining such findings. There is a need for more research between mothers and daughters, using various, fairly differentiated measures of paramenstrual symptomatology, before a clearer determination of mother-daughter similarity or difference can be ascertained. In addition, given the relatively small number of adoptive mother-daughter pairs used in this study, in terms of assessing the potential contribution of heredity, future studies with a larger adoptive sample are needed.

The Issue of a Continuum or Dichotomy  
Between Congestive and Spasmodic  
Symptomatology (Hypothesis #3)

Contrary to Chesney and Tasto's (1975) finding of a dichotomy between congestive and spasmodic dysmenorrhea, this study found these syndromes to be continuous. The current finding of a continuum is supported by the results of Cox (1977), who also used the MSQ in examining whether spasmodic and congestive symptomatology was continuous or dichotomous. While there are researchers (Dalton, 1978) who have asserted the distinctiveness, if not preclusiveness of these syndromes, many others have found evidence for an

overlapping of these syndromes (Coppen & Kessel, 1963; Golub et al., 1959; Kantero & Widholm, 1971). In the author's opinion, the taxonomic confusion delimiting these syndromes, which is so evident in the literature, further suggests the likelihood that the syndromes are continuous. The current finding that 60.8% of all subjects had spasmodic percent scores that were in the approximate middle third of the spasmodic percent distribution, reveals the balanced combination of symptomatology experienced by these subjects. While the menstrual symptom assessment used by Kantero and Widholm (1971) was unrefined, they found that 41.6% of 5,103 Finnish girls, and 62.4% of 1,408 mothers reported a combination of spasmodic and congestive symptoms, compared to 36.8% of the girls and 27% of the mothers, who experienced either syndrome exclusively. These findings indicate that women experience symptoms of both types of distress more frequently than they experience either syndrome exclusively. While a bioendocrine explanation may be found to account for this finding, the possibility exists that the bioendocrine factor does not predominate but is only one variable, of many, affecting menstrual experience.

#### The Interrelationship of All Other Variables with Paramenstrual Symptomatology

Interestingly, subjects' positivity toward the various concepts rated did not significantly relate to any of the measures of paramenstrual symptomatology.

While the MSQ was developed to assess the quality of a woman's paramenstrual experience, it also measures the frequency of experienced symptoms which taps the degree of distress according to frequency of symptoms, though not the severity, per se. Despite the reasonable supposition that greater distress is linked to a greater frequency of symptoms, the variable, severity, was negatively correlated with congestive scores for the daughters and with the spasmodic scores for the mothers. Even those intercorrelations that were not significant were negative. These results suggest that neither the frequency or type of paramenstrual symptoms is what influences a woman to seek medical help, take medication or stay home due to her period. Possibly, the frequency of symptoms as tapped by the MSQ is an insufficient indication of distress. It may be necessary to question women more directly about the degree of pain or discomfort associated with various symptoms. Several researchers have also observed that while the prevalence of paramenstrual symptoms is high, only a fraction of women seek medical help and that it is unlikely that severity, by itself, is the most important reason for doing so.

While severity was negatively correlated with paramenstrual symptomatology, cycle regularity was positively associated with congestive and spasmodic scores for the daughters, i.e., cycle irregularity was associated with

greater frequency of both types of symptomatology. For the mothers, more spasmodic symptomatology was associated with a longer and heavier flow.

Neither dimension of paramenstrual symptomatology was significantly related to any of the demographic variables, except for use of the IUD. As stated previously, daughters with high spasmodic and spasmodic percent scores did not tend to use the IUD, most likely because the IUD is known to exacerbate menstrual cramps.

Part Two--Interrelationships Between the  
Positivity Scores on the SD Concepts,  
the Menstrual-Related Variables,  
and the Demographics

Similarities Between Mothers and  
Their Daughters

Mothers' and daughters' positivity toward the concepts, My Body and Men Feel, were strongly related, with a small mean difference between their scores. These findings not only reveal mothers' and daughters' associated degree of positivity toward these concepts but also the relative stability or lack of generational change in their positivity toward these concepts. Based on the absolute value of their scores, the women in this study reported very positive feelings about their bodies, but perceived men as feeling somewhat negatively about menstruation. Apparently, women feel that men are less positive about menstruation than they are, as evidenced by the higher mean positivity scores for

the concept, Menstruation vs. Men Feel. Compared to the concepts, My Body and Men Feel, mothers' and daughters' positivity toward the concept, Menstruation, was less strongly correlated. The minimal mean difference between mothers' and daughters' positivity scores for the concept, I Felt, suggests a consistent or similar degree of positivity about this concept across the generations. However, there was no systematic relationship between mothers and their daughters in how positively they experienced their first period.

For both mothers and daughters, the concepts, My Body and Menstruation, were strongly correlated. It was found that daughters' positivity toward the concept, Menstruation, was associated with mothers' positivity toward the concept, My Body. This relationship does not inform us as to whether mothers' positivity toward their bodies has influenced daughters to be more positive toward their menses, or that daughters' positivity toward menstruation has influenced their mothers' positivity toward their bodies. Still another interpretation, based on the writing of Erik Erikson (1963), is that parents develop with their children such that their involvement with them entails a series of potentialities for changing patterns of mutual regulation.

Another area of similarity and possibly mutual influence between mothers and daughters involved the association between the concepts, I Felt, Mother Felt, and Men Feel.

For all subjects, their positivity toward menarche was related to their perception of positivity in their mothers' response to their menarche as well as to mens' positivity about menstruation. While this data does not address who is influencing whom or whether the influence is mutual, it is clear that these concepts are experienced positively in coordination with each other by all subjects, and hence, both generations of women.

#### Differences Between Mothers and Their Daughters

The lack of correlation and substantial mean difference between mothers' and daughters' positivity scores for the concept, Mother Felt, reveals the pronounced generational shift in how positively subjects experienced their mothers' reaction to their first period. Mothers in this study perceived their mothers as responding less positively to their first period than the daughters' perception of their mothers' reaction. Between the two generations of mothers, this would seem to reflect an evolving trend toward increasing acceptance and positivity toward menstruation as a part of feminine development, at least in terms of daughters' perception of their mothers' reaction.

Evolving changes in womens' attitudes toward menstruation can also be inferred from subjects' source of knowledge about menstruation and terms used to refer to it. Possibly consistent with the finding just described, daughters in

this study learned about menstruation from their mothers more often than the mothers learned about it from their mothers. The generational shift toward more mothers informing their daughters about menstruation may reflect mothers' increasing comfort with the topic and possibly a desire to integrate the experience into the mother-daughter relationship. While there is a marked parallelism in the terms mothers and daughters used to refer to menstruation, the subtle differences are noteworthy. Technical and positive terms were used more often by the daughters, while negative terms were used more often by the mothers. That the great majority of women in this study used technical terms would seem to reflect the fairly recent educational efforts, in schools and through the media, to at least acknowledge menstruation as a natural biological process. The use of positive terms more than negative ones for all subjects, as well as the use of negative terms by fewer daughters than mothers suggests an evolving positive orientation toward menstruation.

There were substantial mean differences between mothers and daughters on several menstrual-related variables. In terms of subjects' comfortableness having sex during menstruation and their perception of mens' comfortableness doing so, daughters were more comfortable having sex during menstruation than their mothers, and daughters perceived men as more comfortable than their mothers did. In addition,

partly because daughters told males about their menarche far more frequently than the mothers did, they experienced men as reacting more positively to their news. Daughters also rated themselves as more liberated than their mothers rated themselves. It is not surprising that the two generations would differ with respect to liberalness and sexuality, in general, given the differing sociocultural mores and practices prevalent during their development as women. It is also not surprising that these differing sociocultural influences extend to the domain of menstruation; apparently, the daughters in this study feel relatively more comfortable than their mothers in sharing that element of their experience as women with men, either by having told men about their menarche or by feeling comfortable enough in themselves to be sexually intimate with men during menses and sufficiently trusting that men will also be comfortable enough to engage.

Characteristics of Mothers and Daughters  
which are Related to Attitudes Involving  
Sexuality and Menstruation as well as  
Liberalness

Both the mothers and daughters in this study reported more comfortableness having sex during menstruation if they rated themselves as being relatively liberated, i.e., regarding the role of women with respect to work, sexuality, family, etc. If one agrees with the notion that this type of liberalness is to some degree a product of the fairly

contemporary influences emanating largely from the women's movement, then, to the extent that the mothers and even daughters in this study have assimilated the generational shift toward more liberated views regarding women's issues, they are also more comfortable having sex during menstruation. For the daughters, comfortableness having sex during menses was also associated with their age, mothers' age, and the duration of mothers' menopause, a variable clearly related to mothers' age. As one might expect, daughters' and mothers' ages were also highly correlated ( $r = .65$ ,  $p < .001$ ). Since the age range of the daughters in the study is from 17 to 35, it is not surprising that older daughters who are likely to have more heterosexual experience and maturity, reported more comfortableness having sex during menstruation. Daughters were also more comfortable with sex during menses if they were less religious, on the birth control pill, more educated, not living with their parents, and White. Considering that sex during menstruation is taboo in most religious doctrine, it is reasonable that daughters who engage in this practice are less religious. It is also reasonable that more educated daughters who protect themselves from pregnancy and live on their own are more comfortable with sex during menstruation. The correlation between race and comfortableness with sex during menses may be due to a socioeconomic factor, i.e., daughters from White families may have the economic freedom

or ability to pursue higher education and not live with their parents. For the mothers, use of the birth control pill and the IUD were associated with their comfortableness having sex during menses, and may simply reflect their greater ease having sex when they are well protected regarding pregnancy. It is interesting, however, that liberalness was associated with use of the birth control pill but non-use of the IUD for the mothers. Mothers' liberalness was also correlated with their having worked more during daughters' childhood. Finally, mothers' liberalness was negatively related to daughters' age such that mothers' perceived themselves as more liberal, the younger their daughters were. For the daughters, liberalness was associated with being less religious.

#### The Mother-Daughter Relationship

As regards mothers' and daughters' positivity toward their relationship, the mothers' overall experience of the relationship was more positive than their daughters' experience. In addition, there was no systematic relationship between the positivity scores of mother-daughter pairs. That the daughters were less positive about the mother-daughter relationship than their mothers may reflect a gradual decathexis of the relationship with mother, which allows daughters to gain increasing independence and to eventually set up families of their own if they so choose.

On the other hand, the mothers' greater positivity toward the relationship is likely to reflect their investment in the success of their mothering and all that motherhood has demanded from them, no less their ongoing involvement with their daughters. Given the lack of association between mothers and their daughters in their positivity toward their relationship, it becomes interesting to note features of menstrual-related experience or other characteristics pertaining to either mothers or daughters that appear to coincide with positivity toward the mother-daughter relationship. For example, daughters' positivity toward their relationship with mother was associated with having perceived their mothers as reacting positively to their first period. In addition, both daughters and mothers were more positive about their relationship when the other one was younger and when mother worked less during daughter's childhood. One might speculate that mothers are especially positive about their relationship with their daughter when she is somewhat younger and possibly more dependently tied to mother. Daughters may feel more able to share with or relate to their mothers when their mothers are younger, hence daughters in this study reported more positivity toward their relationship with such mothers. The reader is reminded that mothers rated themselves as more liberal when their daughters were relatively younger in age, and that this association tended to be the case for mothers' age as

well ( $r = -.24$ ), though the correlation did not reach the .05 level of confidence. It was also the case that mothers were less positive about the mother-daughter relationship when their daughters perceived men as being relatively positive about menstruation. There were additional associations between daughters' greater positivity toward the concept, Men Feel, and their mothers being less religious, separated or divorced, and their mothers having worked more during their childhood. If these associations meaningfully interrelate it is not clear as to how they interrelate. What has been documented is that mothers' positivity toward the mother-daughter relationship was negatively related to mothers having worked more during daughters' childhood. This finding may be responsible, in part, for the negative correlation between daughters' positivity toward Men Feel and mothers' positivity toward the mother-daughter relationship.

#### Perceived Similarity Between Mothers and their Daughters

It is interesting that mothers and daughters tended to be in agreement regarding their perceptions of the extent of similarity or difference between them in their menstrual symptoms and attitudes. However, while some of their symptoms and attitudes were found to correlate, many others did not.

The more educated the mothers were, the more they perceived themselves as similar to their daughters regarding menstrual symptoms and attitudes, and the more their daughters perceived themselves as similar to their mothers. Since the vast majority of daughters in this study are pursuing college and higher degrees, it is not surprising that the higher the educational level of their mothers, the more they each perceived themselves as similar to the other in their menstrual attitudes and experience. To the extent that mothers and daughters have sought higher education along with the exposure it offers to contemporary issues and thinking, they tend to perceive themselves as having more similar menstrual attitudes and experience. It is as though the educational process and exposure it offers compensates, to some degree, for the differing sociocultural influences which have affected mothers and daughters menstrual-related attitudes, at least in terms of their perceptions of similarity to each other vis-a-vis menstrual attitudes and experience.

Daughters who perceived themselves as more similar to their mothers in menstrual experience, tended to be quite positive about menstruation, their menarche, their mothers' reaction to their menarche, and their relationship with their mother. It may be that daughters who feel positively about menstruation, and menarche as well as mothers' reaction to their menarche and their relationship with each

other, tend to feel more identified with their mothers vis-a-vis menstrual symptoms and attitudes. It seems less likely that this type of selective identification would preceed the experience of menarche, though positive feelings toward the mother-daughter relationship, existing from an early age, could certainly pave the way for such a specific identification with mother vis-a-vis menstrual experience.

## Appendix

Please note that the Menstrual Symptom Questionnaire and the Semantic Differential ratings of the six concepts were completed by all subjects. For those questions constructed by the author, two slightly different versions were devised: one for the daughters and one for the mothers. Both of these versions of the questionnaire are included in the appendix and labelled accordingly.



# ADOPTED DAUGHTERS \*

## YOUR HELP IS NEEDED!

If you are between the ages 16 and 35 and you are willing to fill out a brief, anonymous questionnaire on menstrual experience, you will make an important contribution to research on women and for women.

QUESTIONNAIRES ARE MAILED RIGHT TO YOU  
AND RETURN POSTAGE IS PROVIDED !

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**PLEASE CALL: (212) 874-0930**

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Dissertation Research  
Clinical Psychology Doctoral Program  
The City University of New York

\* Other posters simply read, "Daughters", instead of, "Adopted Daughters".

Dear Participant,

My name is Robin Good and I am a graduate student in clinical psychology at City University of New York. The purpose of this research is to learn more about how menstruation is experienced by mothers and daughters, and about the many feelings and attitudes that females have about menstruation. Since the findings of this research project will hopefully be published in the near future, your participation in this study is a contribution to the current knowledge of how menstruation is experienced. The public, the scientific world, and we women benefit from the knowledge that comes from our sharing and detailing of our menstrual experience.

You will not put your name on any of the pages of this questionnaire so that no one will know who filled it out. Since your responses will be anonymous, hopefully you will represent your feelings and attitudes about menstruation exactly as you feel them.

Please read the following instructions carefully. I thank you, in advance, for your participation!

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#### INSTRUCTIONS

1. Before you begin, please WRITE THE CODE NUMBER (which is on your questionnaire envelope) at the bottom of this page.
2. Please respond to the questions on the following pages IN THE ORDER IN WHICH THEY ARE PRESENTED. Proceed through the questionnaire, page by page, in the order the pages are presented.
3. Please read ALL the questions. Occasionally, depending upon whether you answered "yes" or "no" to a specific question, it may or may not be necessary for you to answer certain related questions. Therefore, READ ALL THE QUESTIONS VERY CAREFULLY so that you respond to all those questions you are supposed to answer.
4. Please respond to the questions ON YOUR OWN, without discussing them with anyone else. I am interested in your personal reactions, feelings and attitudes about menstruation.

YOUR CODE NUMBER: \_\_\_\_\_

**MENSTRUAL SYMPTOM QUESTIONNAIRE**

(Code):

**Directions:** For each item, circle only one of the responses offered at the right.

|                                                                                                                                                  | <b><u>NEVER</u></b> | <b><u>RARELY</u></b> | <b><u>SOMETIMES</u></b> | <b><u>OFTEN</u></b> | <b><u>ALWAYS</u></b> |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------|-------------------------|---------------------|----------------------|
|                                                                                                                                                  | (N)                 | (R)                  | (S)                     | (O)                 | (A)                  |
| 1. I feel irritable, easily agitated, and am impatient a few days <u>before</u> my period.                                                       | N                   | R                    | S                       | O                   | A                    |
| 2. I have cramps that <u>begin</u> on the first day of my period.                                                                                | N                   | R                    | S                       | O                   | A                    |
| 3. I feel depressed for several days <u>before</u> my period.                                                                                    | N                   | R                    | S                       | O                   | A                    |
| 4. I have abdominal pain or discomfort which begins one day <u>before</u> my period.                                                             | N                   | R                    | S                       | O                   | A                    |
| 5. For several days <u>before</u> my period I feel exhausted, lethargic or tired.                                                                | N                   | R                    | S                       | O                   | A                    |
| 6. I only know that my period is coming by looking at the calendar.                                                                              | N                   | R                    | S                       | O                   | A                    |
| 7. I take a prescription drug for the pain <u>during</u> my period.                                                                              | N                   | R                    | S                       | O                   | A                    |
| 8. I feel weak and dizzy <u>during</u> my period.                                                                                                | N                   | R                    | S                       | O                   | A                    |
| 9. I feel tense and nervous <u>before</u> my period.                                                                                             | N                   | R                    | S                       | O                   | A                    |
| 10. I have diarrhea <u>during</u> my period.                                                                                                     | N                   | R                    | S                       | O                   | A                    |
| 11. I have backaches several days <u>before</u> my period.                                                                                       | N                   | R                    | S                       | O                   | A                    |
| 12. I take aspirin for the pain <u>during</u> my period.                                                                                         | N                   | R                    | S                       | O                   | A                    |
| 13. My breasts feel tender and sore a few days <u>before</u> my period.                                                                          | N                   | R                    | S                       | O                   | A                    |
| 14. My lower back, abdomen, and the inner sides of my thighs <u>begin</u> to hurt or be tender on the first day of my period.                    | N                   | R                    | S                       | O                   | A                    |
| 15. <u>During</u> the first day or so of my period, I feel like curling up in bed, using a hot water bottle on my abdomen, or taking a hot bath. | N                   | R                    | S                       | O                   | A                    |
| 16. I gain weight <u>before</u> my period.                                                                                                       | N                   | R                    | S                       | O                   | A                    |
| 17. I am constipated <u>during</u> my period.                                                                                                    | N                   | R                    | S                       | O                   | A                    |
| 18. <u>Beginning</u> on the first day of my period, I have pains which may diminish or disappear for several minutes and then reappear.          | N                   | R                    | S                       | O                   | A                    |
| 19. The pain I have with my period is not intense, but a continuous dull aching.                                                                 | N                   | R                    | S                       | O                   | A                    |
| 20. I have abdominal discomfort for more than one day <u>before</u> my period.                                                                   | N                   | R                    | S                       | O                   | A                    |

**MENSTRUAL SYMPTOM QUESTIONNAIRE**

(Code):

(page 2)

- |                                                                             | <u>NEVER</u> | <u>RARELY</u> | <u>SOMETIMES</u> | <u>OFTEN</u> | <u>ALWAYS</u> |
|-----------------------------------------------------------------------------|--------------|---------------|------------------|--------------|---------------|
|                                                                             | N            | R             | S                | O            | A             |
| 21. I have backaches which <u>begin</u> the same day as my period.          |              |               |                  |              |               |
| 22. My abdominal area feels bloated for a few days <u>before</u> my period. | N            | R             | S                | O            | A             |
| 23. I feel nauseous <u>during</u> the first day or so of my period.         | N            | R             | S                | O            | A             |
| 24. I have headaches for a few days <u>before</u> my period.                | N            | R             | S                | O            | A             |
25. For each description below (TYPE 1 and TYPE 2), indicate to what extent it fits with your menstrual experience.

**TYPE 1**

The pain begins on the first day of menstruation, often coming within an hour of the first signs of menstruation. The pain is most severe the first day and may or may not continue on subsequent days. Felt as spasms, the pain may lessen or subside for awhile and then reappear. A few women find this pain so severe as to cause vomiting, fainting or dizziness; some others report that they are most comfortable in bed or taking a hot bath. This pain is limited to the lower abdomen, back and inner sides of the thighs.

Type 1 describes my experience: (Check one)

NOT AT ALL ( 1 ) ( 2 ) ( 3 ) ( 4 ) ( 5 ) ( 6 ) EXTREMELY  
ACCURATELY ACCURATELY

**TYPE 2**

There is advanced warning of the onset of menstruation during which the woman feels an increasing heaviness, and a dull aching pain in the lower abdomen. This pain is sometimes accompanied by nausea, lack of appetite, and constipation. Headaches, backaches, and breast pain are also characteristic of this type of menstrual discomfort.

Type 2 describes my experience: (Check one)

NOT AT ALL ( 1 ) ( 2 ) ( 3 ) ( 4 ) ( 5 ) ( 6 ) EXTREMELY  
ACCURATELY ACCURATELY

DAUGHTERS' VERSION OF THOSE QUESTIONS  
CONSTRUCTED BY THE AUTHOR

(Code):

Your telephone number: ( ) \_\_\_\_\_

Date of Birth: Month\_\_\_\_ Day\_\_\_\_ Year\_\_\_\_

Age: \_\_\_\_\_ yrs. \_\_\_\_\_ mo.

Weight: \_\_\_\_\_ lbs.

Height: \_\_\_\_\_ ft. \_\_\_\_\_ in.

Are you: Single\_\_\_\_ Married\_\_\_\_ Separated\_\_\_\_ Divorced\_\_\_\_ Remarried\_\_\_\_

Are you currently living with your parent(s)? Yes\_\_\_\_ No\_\_\_\_

If not, with whom do you live? \_\_\_\_\_

Is your father still living? Yes\_\_\_\_ No\_\_\_\_

Please indicate below your religious background, the extent to which you practice or believe in your religion, your race/ethnicity, and your native language. Please check off this information for your parents also.

|                                               | <u>YOU</u>       | <u>MOTHER</u>   | <u>FATHER</u>   |
|-----------------------------------------------|------------------|-----------------|-----------------|
| <u>RELIGIOUS BACKGROUND</u>                   |                  |                 |                 |
| Protestant                                    | _____            | _____           | _____           |
| Catholic                                      | _____            | _____           | _____           |
| Jewish                                        | _____            | _____           | _____           |
| Agnostic                                      | _____            | _____           | _____           |
| Atheist                                       | _____            | _____           | _____           |
| (Other)                                       | _____            | _____           | _____           |
|                                               | (specify) _____  | (specify) _____ | (specify) _____ |
| <u>EXTENT OF RELIGIOUS BELIEF OR PRACTICE</u> | <u>YOU</u>       |                 |                 |
|                                               | (past) (present) |                 |                 |
| Not at all                                    | _____            | _____           | _____           |
| Minimal                                       | _____            | _____           | _____           |
| Moderate                                      | _____            | _____           | _____           |
| Strong                                        | _____            | _____           | _____           |
| <u>RACE/ETHNICITY</u>                         |                  |                 |                 |
| White                                         | _____            | _____           | _____           |
| Black                                         | _____            | _____           | _____           |
| Hispanic                                      | _____            | _____           | _____           |
| Oriental                                      | _____            | _____           | _____           |
| (Other)                                       | _____            | _____           | _____           |
|                                               | (specify) _____  | (specify) _____ | (specify) _____ |
| <u>NATIVE LANGUAGE</u>                        |                  |                 |                 |
| English                                       | _____            | _____           | _____           |
| Spanish                                       | _____            | _____           | _____           |
| (Other)                                       | _____            | _____           | _____           |
|                                               | (specify) _____  | (specify) _____ | (specify) _____ |

If you are presently a student, answer the following questions.

What is your grade in school? \_\_\_\_\_

If you are studying for a certain career or job, what is it? \_\_\_\_\_

If you are not in school now, please answer the following questions.

What is the highest grade you have completed? \_\_\_\_\_

Are you working? Yes\_\_\_\_ No\_\_\_\_

What do you do? \_\_\_\_\_

Do you plan to return to school in the future? Yes\_\_\_\_ No\_\_\_\_

(Code):

Do you think you'll almost always work outside the home in the future on a part-time or full-time basis? Yes\_\_\_ No\_\_\_

What kind of work does your mother do? \_\_\_\_\_

Did your mother ever work outside the home before you were 10 y.o.? Yes\_\_\_ No\_\_\_

If yes: How old were you when she went to work? \_\_\_\_\_

Did she work 5 years or more? Yes\_\_\_ No\_\_\_

Did she work: Part-time\_\_\_ Full-time\_\_\_

What kind of work does your father do? \_\_\_\_\_

Have your parents always lived together? Yes\_\_\_ No\_\_\_

If not: Are they: Separated\_\_\_ Divorced\_\_\_

How old were you when they got separated or divorced? \_\_\_\_\_

Is your mother remarried? Yes\_\_\_ No\_\_\_

If yes, how old were you when she remarried? \_\_\_\_\_

Have you been to a gynecologist for a check-up within the last year? Yes\_\_\_ No\_\_\_

If not, how long ago was your last gynecological check-up? \_\_\_\_\_

Do you have any disorders, diseases, or impairments of your female organs (pelvic area) which a doctor has diagnosed? Yes\_\_\_ No\_\_\_

If yes, please state disorder: \_\_\_\_\_

\*\*Answer "yes" above if you have any of the following: Endometriosis, Intrauterine Polyps, Ovarian Cysts, or any Pelvic Inflammatory Disease

Have you ever had surgery on your pelvic organs? Yes\_\_\_ No\_\_\_

If yes, please describe what kind of surgery and why it was performed: \_\_\_\_\_

If you have any other type of physical disorder or disease that may affect menstruation, please state: \_\_\_\_\_

Have you ever been pregnant? Yes\_\_\_ No\_\_\_

If yes: How many times have you been pregnant? \_\_\_\_\_

How many children do you have, if any? \_\_\_\_\_

How many abortions have you had, if any? \_\_\_\_\_

Have you ever used Birth Control Pills? Yes\_\_\_ No\_\_\_

If yes: What is the amount of time, to date, that you have used the Pill? \_\_\_\_\_

Are you currently taking Birth Control Pills? Yes\_\_\_ No\_\_\_

If you are not taking the Pill now, but took it in the past, how long have you been off the Pill? \_\_\_\_\_

Have you ever used an Intrauterine Device (IUD)? Yes\_\_\_ No\_\_\_

If yes: What is the amount of time, to date, that you have used an IUD? \_\_\_\_\_

Are you currently using an IUD? Yes\_\_\_ No\_\_\_

If you had an IUD in the past but had it removed, how long has it been since it was removed? \_\_\_\_\_

(Code):

As exactly as you can remember, how old were you when you got your first period? \_\_\_\_ yrs. \_\_\_\_ mo.

How consistent have your periods been throughout your life? Note: Please ignore times of pregnancy. (Check one)

- ☐ Never missed a period  
☐ Missed one or two  
☐ Missed three to five  
☐ Missed six to ten  
☐ Missed more than ten

Generally speaking, how regular is the length of your period cycle? (Check one)

- ☐ Extremely regular (rarely late or early more than one day)  
☐ Regular (rarely late or early more than two or three days)  
☐ Irregular (usually late or early four to six days)  
☐ Extremely irregular (I'm often unsure when period will come again)

How heavy is your period flow typically? (Check one)

- ☐ Light  
☐ Medium  
☐ Heavy

How many days do you flow typically? (Check one)

- ☐ Two to three days  
☐ Four to five days  
☐ Six to seven days  
☐ More than seven days

Have you ever consulted a physician because of painful periods? Yes\_\_\_ No\_\_\_

If you have taken prescribed medication for painful periods, what is the name of the medicine? \_\_\_\_\_

Do you ever cancel appointments or stay home from school or work because of painful periods? (Check one)

- ☐ Never                      ☐ Rarely                      ☐ Sometimes                      ☐ Often                      ☐ Always

Please indicate below where you are in your menstrual cycle as of the day you fill out these questionnaires. (Check one)

- ☐ Premenstrual (one to seven days before period is due)  
☐ Menstrual (currently menstruating)  
☐ Postmenstrual (finished period one to seven days ago)  
☐ Midcycle

What terms or term do you use to refer to menstruation? \_\_\_\_\_

What term(s) do members of your family use to refer to menstruation? \_\_\_\_\_

From which source did you first learn about menstruation? (Check one)

- ☐ Mother                      ☐ Female friend                      ☐ Book  
☐ Father                      ☐ Male friend                      ☐ Other  
☐ Sister                      ☐ At school  
☐ Brother                      (teacher, movie)                      (please specify)

(Code):

Please indicate below who you told when you got your period for the first time. (Check as many as apply - place checks in column at far left)

|                                        |                          |                                                                                                                                                                                                                                                                                      |
|----------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Nobody        |                          | (In this column, for each person that you told, please rate their overall reaction to your news. Rate their reaction (as you experienced it) on a scale from <u>1 to 6</u> . (1,2,3,4,5, or 6). where <u>1 = a very negative reaction</u> and <u>6 = a very positive reaction.</u> ) |
| <input type="checkbox"/> Mother        | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                      |
| <input type="checkbox"/> Father        | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                      |
| <input type="checkbox"/> Sister        | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                      |
| <input type="checkbox"/> Brother       | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                      |
| <input type="checkbox"/> Female friend | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                      |
| <input type="checkbox"/> Male friend   | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                      |
| <input type="checkbox"/> Other         | <input type="checkbox"/> | (please specify)                                                                                                                                                                                                                                                                     |

Do you think most men would engage in sexual activity or intercourse with a girlfriend or wife when she has her period? Yes\_\_\_ No\_\_\_

Whether or not men actually engage in sexual activity or intercourse with a woman during her period, how do you think most men feel about it? (Check one)

- ☐ Extremely uneasy or uncomfortable  
☐ Moderately uneasy or uncomfortable  
☐ Slightly uneasy or uncomfortable  
☐ Not at all uneasy or uncomfortable  
☐ Men enjoy sex most when a woman has her period.

Would you engage in sexual activity or intercourse with a boyfriend or husband when you have your period? Yes\_\_\_ No\_\_\_

If not, is it because of: (Check one)

- ☐ Painful menstruation only  
☐ Feelings of uneasiness or awkwardness only  
☐ Both of the above  
☐ Other \_\_\_\_\_  
 (please specify)

Whether or not you actually engage in sexual activity or intercourse during your period, what is your mental attitude or feeling about it? (Check one)

- ☐ Extremely uneasy or uncomfortable  
☐ Moderately uneasy or uncomfortable  
☐ Slightly uneasy or uncomfortable  
☐ Not at all uneasy or uncomfortable  
☐ I enjoy sex most during my period.

With regard to your views about the identity and role of women in relation to work, children, family life, relationships with men, sexuality, dress or appearance, etc., please rate the way you see yourself on a scale from 1 to 6 (1,2,3,4,5, or 6), where 1 = extremely traditional/conventional, and 6 = extremely liberated/radical. (Check one)

Extremely traditional ☐ (1) ☐ (2) ☐ (3) ☐ (4) ☐ (5) ☐ (6) Extremely radical or liberated

In your opinion, to what extent are your menstrual symptoms and attitudes about menstruation similar to those of your mother? (Check one)

- ☐ Extremely similar  
☐ Moderately similar  
☐ Slightly similar  
☐ Not at all similar

(Code):

Based on the previous question, how confident are you about judging the extent of similarity between you and your mother? (Check one)

- ☐ Extremely confident in my judgement
- ☐ Moderately confident in my judgement
- ☐ Slightly confident in my judgement
- ☐ Not at all confident in my judgement

In your opinion, to what extent has your overall relationship with your mother influenced your attitudes about menstruation and your mental and physical reactions to it? (Check one)

- ☐ Extremely influenced
- ☐ Moderately influenced
- ☐ Slightly influenced
- ☐ Not at all influenced

Please feel free to use the space below to explain your response to the previous question or to comment on anything else you feel is important. If you did not tell your mother when you got your period for the first time, would you please briefly explain why not.

MOTHERS' VERSION OF THOSE QUESTIONS  
CONSTRUCTED BY THE AUTHOR

(Code):

Your telephone number: ( ) \_\_\_\_\_

Date of Birth: Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

Age: \_\_\_\_\_ yrs. \_\_\_\_\_ mo.

Weight: \_\_\_\_\_ lbs.

Height: \_\_\_\_\_ ft. \_\_\_\_\_ in.

Please circle the highest grade in school you have completed.

Grammar School: 1 2 3 4 5 6 7 8  
 High School: 9 10 11 12  
 College: 13 14 15 16 (B.A. or B.S. degree)  
 Graduate School: 17 18 or Master's degree 19 20 or Doctoral degree

Would you now underline the highest grade completed by the father of your daughter, who is a subject in this study.Please fill out the following chart which requests information about your children and please include any who have died. List the children in order of age, starting with the oldest.

| <u>Child's age</u> | <u>Child's sex</u> | <u>If adopted, age of child when you became guardian</u> | <u>If child knows he/she is adopted, at what age was child told?</u> | <u>Check here if child has died</u> |
|--------------------|--------------------|----------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------|
| 1. _____           | _____              | _____                                                    | _____                                                                | _____                               |
| 2. _____           | _____              | _____                                                    | _____                                                                | _____                               |
| 3. _____           | _____              | _____                                                    | _____                                                                | _____                               |
| 4. _____           | _____              | _____                                                    | _____                                                                | _____                               |
| 5. _____           | _____              | _____                                                    | _____                                                                | _____                               |
| 6. _____           | _____              | _____                                                    | _____                                                                | _____                               |
| 7. _____           | _____              | _____                                                    | _____                                                                | _____                               |
| 8. _____           | _____              | _____                                                    | _____                                                                | _____                               |
| 9. _____           | _____              | _____                                                    | _____                                                                | _____                               |
| 10. _____          | _____              | _____                                                    | _____                                                                | _____                               |

Have you been to a gynecologist for a check-up within the last year? Yes \_\_\_ No \_\_\_

If not, how long ago was your last gynecological check-up? \_\_\_\_\_

Do you have any disorders, diseases or impairments of your female organs (pelvic area) which a doctor has diagnosed? Yes \_\_\_ No \_\_\_

If yes, please state disorder: \_\_\_\_\_

\*\*Answer "yes" above if you have any of the following: Endometriosis, Ovarian Cysts or any Pelvic Inflammatory Disease

If you have any other type of physical disorder or disease that may affect menstruation, please state: \_\_\_\_\_

Have you ever had surgery on your pelvic organs? Yes \_\_\_ No \_\_\_

If yes, please describe what kind of surgery and why it was performed: \_\_\_\_\_

(Code):

Have you ever used Birth Control Pills? Yes      No       
If yes: What is the amount of time, to date, that you have used  
the Pill?                       
Are you currently taking Birth Control Pills? Yes      No       
If you are not taking the Pill now but took it in the past,  
how long have you been off the Pill?                     

Have you ever used an Intrauterine Device (IUD)? Yes      No       
If yes: What is the amount of time, to date, that you have used  
an IUD?                       
Are you currently using an IUD? Yes      No       
If you had an IUD in the past but had it removed, how  
long has it been since it was removed?

(CODE):

As exactly as you can remember, how old were you when you got your first period? \_\_\_\_ yrs. \_\_\_\_ mo.

Have you gone through menopause as of this time (completely stopped menstruating)? Yes \_\_\_\_ No \_\_\_\_

If yes, how long ago did your periods finally stop? \_\_\_\_

Have you begun menopause as of this time, i.e., irregular periods or hot flashes, sweats, etc.? Yes \_\_\_\_ No \_\_\_\_

If menopause has begun or is over, at what age did it begin? \_\_\_\_

How consistent have your periods been throughout your life? Note: Please ignore times of pregnancy and any inconsistency due to menopause. (Check one)

- ☐ Never missed a period
- ☐ Missed one or two
- ☐ Missed three to five
- ☐ Missed six to ten
- ☐ Missed more than ten

Generally speaking, how regular is the length of your period cycle? (Check one)

- ☐ Extremely regular (rarely late or early more than one day)
- ☐ Regular (rarely late or early more than two or three days)
- ☐ Irregular (usually late or early four to six days)
- ☐ Extremely irregular (I'm often unsure when period will come again)

How heavy is your period flow typically? (Check one)

- ☐ Light
- ☐ Medium
- ☐ Heavy

How many days do you flow typically? (Check one)

- ☐ Two to three days
- ☐ Four to five days
- ☐ Six to seven days
- ☐ More than seven days

Have you ever consulted a physician because of painful periods? Yes \_\_\_\_ No \_\_\_\_

If you have taken prescribed medication for painful periods, what is the name of the medicine? \_\_\_\_\_

Do you ever cancel appointments or stay home from school or work because of painful periods? (Check one)

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Often
- ☐ Always

Please indicate below where you are in your menstrual cycle as of the day you fill out these questionnaires. (If you are menopausal, skip this question)

- ☐ Premenstrual (one to seven days before period is due)
- ☐ Menstrual (currently menstruating)
- ☐ Postmenstrual (finished period one to seven days ago)
- ☐ Midcycle

What term(s) do you use to refer to menstruation? \_\_\_\_\_

From which source did you first learn about menstruation? (Check one)

- ☐ Mother
- ☐ Brother
- ☐ At school (teacher/movie)
- ☐ Father
- ☐ Female friend
- ☐ Book
- ☐ Sister
- ☐ Male friend
- ☐ Other \_\_\_\_\_

(please specify)

(Code):

Please indicate below who you told when you got your period for the first time. (Check as many as apply - place checks in column at far left)

|                                        |                          |                                                                                                                                                                                                                                                            |
|----------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Nobody        | <input type="checkbox"/> | (In this column, for each person that you told, please rate their overall reaction to your news. Rate their reaction (as you experienced it) on a scale from 1 to 6, (1,2,3,4,5 or 6), where 1= a very negative reaction and 6= a very positive reaction.) |
| <input type="checkbox"/> Mother        | <input type="checkbox"/> |                                                                                                                                                                                                                                                            |
| <input type="checkbox"/> Father        | <input type="checkbox"/> |                                                                                                                                                                                                                                                            |
| <input type="checkbox"/> Sister        | <input type="checkbox"/> |                                                                                                                                                                                                                                                            |
| <input type="checkbox"/> Brother       | <input type="checkbox"/> |                                                                                                                                                                                                                                                            |
| <input type="checkbox"/> Female friend | <input type="checkbox"/> |                                                                                                                                                                                                                                                            |
| <input type="checkbox"/> Male friend   | <input type="checkbox"/> |                                                                                                                                                                                                                                                            |
| <input type="checkbox"/> Other         | <input type="checkbox"/> |                                                                                                                                                                                                                                                            |

(please specify)

Do you think most men would engage in sexual activity or intercourse with a girlfriend or wife when she has her period? Yes \_\_\_ No \_\_\_

Whether or not men actually engage in sexual activity or intercourse with a woman during her period, how do you think most men feel about it? (Check one)

☐ Extremely uneasy or uncomfortable  
☐ Moderately uneasy or uncomfortable  
☐ Slightly uneasy or uncomfortable  
☐ Not at all uneasy or uncomfortable  
☐ Men enjoy sex most when a woman has her period.

Would you engage in sexual activity or intercourse with a boyfriend or husband when you have your period? Yes \_\_\_ No \_\_\_

If not, is it because of: (Check one)

☐ Painful menstruation only  
☐ Feelings of uneasiness or awkwardness only  
☐ Both of the above  
☐ Other \_\_\_\_\_  
 (please specify)

Whether or not you actually engage in sexual activity or intercourse during your period, what is your mental attitude or feeling about it? (Check one)

☐ Extremely uneasy or uncomfortable  
☐ Moderately uneasy or uncomfortable  
☐ Slightly uneasy or uncomfortable  
☐ Not at all uneasy or uncomfortable  
☐ I enjoy sex most during my period.

With regard to your views about the identity and role of women in relation to work, children, family life, relationships with men, sexuality, dress or appearance, etc., please rate the way you see yourself on a scale from 1 to 6 (1,2,3,4,5 or 6), where 1= extremely traditional/conventional, and 6= extremely liberated/radical.

My rating = \_\_\_\_\_

In your opinion, to what extent are your menstrual symptoms and attitudes about menstruation similar to those of your daughter, who is also in this study? (Check one)

☐ Extremely similar                      ☐ Slightly similar  
☐ Moderately similar                      ☐ Not at all similar

Based on the above question, how confident are you about judging the extent of similarity between you and your daughter? (Check one)

☐ Extremely confident                      ☐ Slightly confident  
☐ Moderately confident                      ☐ Not at all confident



(Code):

MENSTRUATION

|   |             |          |   |  |   |  |   |  |   |  |   |          |               |
|---|-------------|----------|---|--|---|--|---|--|---|--|---|----------|---------------|
|   | Weak        | <u>1</u> | : |  | : |  | : |  | : |  | : | <u>7</u> | Strong        |
|   | Active      | <u>7</u> | : |  | : |  | : |  | : |  | : | <u>1</u> | Passive       |
|   | Sad         | <u>1</u> | : |  | : |  | : |  | : |  | : | <u>7</u> | Happy         |
| * | Small       |          | : |  | : |  | : |  | : |  | : |          | Large         |
|   | Warm        | <u>7</u> | : |  | : |  | : |  | : |  | : | <u>1</u> | Cool          |
|   | Proud       | <u>7</u> | : |  | : |  | : |  | : |  | : | <u>1</u> | Ashamed       |
| * | Objective   |          | : |  | : |  | : |  | : |  | : |          | Subjective    |
|   | Tense       | <u>1</u> | : |  | : |  | : |  | : |  | : | <u>7</u> | Relaxed       |
| * | Shared      |          | : |  | : |  | : |  | : |  | : |          | Separate      |
|   | Good        | <u>7</u> | : |  | : |  | : |  | : |  | : | <u>1</u> | Bad           |
|   | Shallow     | <u>1</u> | : |  | : |  | : |  | : |  | : | <u>7</u> | Deep          |
|   | Dirty       | <u>1</u> | : |  | : |  | : |  | : |  | : | <u>7</u> | Clean         |
|   | Healthy     | <u>7</u> | : |  | : |  | : |  | : |  | : | <u>1</u> | Sick          |
|   | Rough       | <u>1</u> | : |  | : |  | : |  | : |  | : | <u>7</u> | Smooth        |
| * | Erotic      |          | : |  | : |  | : |  | : |  | : |          | Non-erotic    |
|   | Creative    | <u>7</u> | : |  | : |  | : |  | : |  | : | <u>1</u> | Destructive   |
|   | Ugly        | <u>1</u> | : |  | : |  | : |  | : |  | : | <u>7</u> | Beautiful     |
|   | Comfortable | <u>7</u> | : |  | : |  | : |  | : |  | : | <u>1</u> | Awkward       |
|   | Easy        | <u>1</u> | : |  | : |  | : |  | : |  | : | <u>7</u> | Clear         |
|   | Important   | <u>7</u> | : |  | : |  | : |  | : |  | : | <u>1</u> | Insignificant |

\* These scales were not included in the positivity index.

(Code):

**MY BODY**

|             |       |               |
|-------------|-------|---------------|
| Weak        | _____ | Strong        |
| Active      | _____ | Passive       |
| Sad         | _____ | Happy         |
| Small       | _____ | Large         |
| Warm        | _____ | Cool          |
| Proud       | _____ | Ashamed       |
| Objective   | _____ | Subjective    |
| Tense       | _____ | Relaxed       |
| Shared      | _____ | Separate      |
| Good        | _____ | Bad           |
| Shallow     | _____ | Deep          |
| Dirty       | _____ | Clean         |
| Healthy     | _____ | Sick          |
| Rough       | _____ | Smooth        |
| Erotic      | _____ | Non-erotic    |
| Creative    | _____ | Destructive   |
| Ugly        | _____ | Beautiful     |
| Comfortable | _____ | Awkward       |
| Mazy        | _____ | Clear         |
| Important   | _____ | Insignificant |

(Code),

HOW I FELT WHEN I GOT MY PERIOD FOR THE FIRST TIME

Weak \_\_\_\_\_ Strong  
 Active \_\_\_\_\_ Passive  
 Sad \_\_\_\_\_ Happy  
 Small \_\_\_\_\_ Large  
 Warm \_\_\_\_\_ Cool  
 Proud \_\_\_\_\_ Ashamed  
 Objective \_\_\_\_\_ Subjective  
 Tense \_\_\_\_\_ Relaxed  
 Shared \_\_\_\_\_ Separate  
 Good \_\_\_\_\_ Bad  
 Shallow \_\_\_\_\_ Deep  
 Dirty \_\_\_\_\_ Clean  
 Healthy \_\_\_\_\_ Sick  
 Rough \_\_\_\_\_ Smooth  
 Erotic \_\_\_\_\_ Non-erotic  
 Creative \_\_\_\_\_ Destructive  
 Ugly \_\_\_\_\_ Beautiful  
 Comfortable \_\_\_\_\_ Awkward  
 Hazy \_\_\_\_\_ Clear  
 Important \_\_\_\_\_ Insignificant

(Code):

HOW MY MOTHER SEEMED TO FEEL WHEN SHE LEARNED THAT I HAD BEGUN MENSTRUATING

Weak \_\_\_\_\_ Strong  
 Active \_\_\_\_\_ Passive  
 Sad \_\_\_\_\_ Happy  
 Small \_\_\_\_\_ Large  
 Warm \_\_\_\_\_ Cool  
 Proud \_\_\_\_\_ Ashamed  
 Objective \_\_\_\_\_ Subjective  
 Tense \_\_\_\_\_ Relaxed  
 Shared \_\_\_\_\_ Separate  
 Good \_\_\_\_\_ Bad  
 Shallow \_\_\_\_\_ Deep  
 Dirty \_\_\_\_\_ Clean  
 Healthy \_\_\_\_\_ Sick  
 Rough \_\_\_\_\_ Smooth  
 Erotic \_\_\_\_\_ Non-erotic  
 Creative \_\_\_\_\_ Destructive  
 Ugly \_\_\_\_\_ Beautiful  
 Comfortable \_\_\_\_\_ Awkward  
 Masy \_\_\_\_\_ Clear  
 Important \_\_\_\_\_ Insignificant

(Code):

HOW MOST MEN FEEL ABOUT MENSTRUATION

Weak \_\_\_\_\_ Strong  
 Active \_\_\_\_\_ Passive  
 Sad \_\_\_\_\_ Happy  
 Small \_\_\_\_\_ Large  
 Warm \_\_\_\_\_ Cool  
 Proud \_\_\_\_\_ Ashamed  
 Objective \_\_\_\_\_ Subjective  
 Tense \_\_\_\_\_ Relaxed  
 Shared \_\_\_\_\_ Separate  
 Good \_\_\_\_\_ Bad  
 Shallow \_\_\_\_\_ Deep  
 Dirty \_\_\_\_\_ Clean  
 Healthy \_\_\_\_\_ Sick  
 Rough \_\_\_\_\_ Smooth  
 Erotic \_\_\_\_\_ Non-erotic  
 Creative \_\_\_\_\_ Destructive  
 Ugly \_\_\_\_\_ Beautiful  
 Comfortable \_\_\_\_\_ Awkward  
 Hazy \_\_\_\_\_ Clear  
 Important \_\_\_\_\_ Insignificant

(Code):

**MY RELATIONSHIP WITH MY MOTHER \***

|             |       |               |
|-------------|-------|---------------|
| Weak        | _____ | Strong        |
| Active      | _____ | Passive       |
| Sad         | _____ | Happy         |
| Small       | _____ | Large         |
| Warm        | _____ | Cool          |
| Proud       | _____ | Ashamed       |
| Objective   | _____ | Subjective    |
| Tense       | _____ | Relaxed       |
| Shared      | _____ | Separate      |
| Good        | _____ | Bad           |
| Shallow     | _____ | Deep          |
| Dirty       | _____ | Clean         |
| Healthy     | _____ | Sick          |
| Rough       | _____ | Smooth        |
| Erotic      | _____ | Non-erotic    |
| Creative    | _____ | Destructive   |
| Ugly        | _____ | Beautiful     |
| Comfortable | _____ | Awkward       |
| Hazy        | _____ | Clear         |
| Important   | _____ | Insignificant |

\* For the mothers' version of the questionnaire, this concept read, "My Relationship With my Daughter".

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