FEMALE SEXUALITY AND BODY IMAGE DURING PREGNANCY

ILZA BOTHA

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SUPERVISOR : DR A M KELLERMAN
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to Rudi
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ABSTRACT

This explorative study, partially based on the psychological and developmental perspectives, evaluated female sexuality and body image during pregnancy and the postnatal period.

A cross-sectional and longitudinal research design was used. Several female \((n = 208)\) and male \((n = 84)\) subsamples were evaluated. Assessment included a Biographical Questionnaire, Female and Male Sexuality Scales rated on 3- and 5-point scales, and the Rorschach Inkblot Test, scored for Barrier and Penetration responses.

Parametric and non-parametric statistical techniques were employed in the cross-sectional data analysis. The biographical background of the subjects was homogeneous. Predominantly all of the women were educated, had planned their pregnancies, attended prenatal classes and were informed about the process of pregnancy. Chi-square tests on the single items measuring female sexuality, from prior to conception to during pregnancy, and after childbirth, showed a significant decline in females' sexual satisfaction and in the intensity with which they experienced orgasms. Excluding the retrospective data, a significant decline was found on female sexual desire and enjoyment during pregnancy and during the postnatal period. Physiologically related reasons were commonly associated with declined sexual desire. Few pregnant
or postnatal women abstained from sexual intercourse or introduced coital methods and positions unfamiliar to them.

A factor analysis of the single sexuality variables revealed four factors, Sexual Responsivity, Sexual Orgasmic Ability, Multiple Orgasmic Ability and Sexual Motivation. The data subjected to a multivariate analysis of variance yielded a significant linear downward trend of Female Sexual Responsivity over the gestation period and after childbirth. The conclusion is drawn that female sexuality, specifically referring to the psychological dimension (Factor 1) was not related to a specific trimester (or stage). No significant differences were evident on the physiological dimension of female sexuality referring to Orgasmic Ability or Sexual Motivation.

Female body image was assessed both qualitatively and quantitatively. The descriptive analysis showed that pregnant women felt overweight, and unacceptable by social standards, yet they viewed these bodily states as temporary. The projective account of body image yielded no significant differences. The conclusion was drawn that women consciously rejected their pregnant body image, but subconsciously it formed part of their identity.

Expectant fathers only experienced a significant decline in sexual satisfaction and initiated less sexual activity during their wives’ pregnancy. It was concluded that male
sexuality was minimally affected by their partner's pregnancy.

Finally, pregnancy was found to be a natural and positive event.
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CHAPTER 1

INTRODUCTION

The original aim of this study was to explore female sexuality during pregnancy and the postnatal period. However, as the multi-faceted nature of female sexuality became apparent from the literature, it also became clear that female body image during pregnancy should be incorporated as a core variable.

A number of considerations motivated the interest of the present study. Hawton (1985) suggested that female sexuality was historically viewed as fascinating, but it seldom elicited scientific research. Recently more publicity has been given to women's experience of pregnancy, yet notably less attention has been given to female sexuality and female body image during this period. This state of affairs seems particularly evident in South Africa. Consequently, research in this neglected field of study is indicated. Noteworthy are the comments of Offit that the so-called "prophets of a new sexuality [for women of the eighties] included sex during pregnancy as one of the wonders we do not sufficiently know" (1981, p. 96).

Body image was one of the many variables cited, which could possibly influence female sexuality during pregnancy (Holtzman, 1976; Leifer, 1980; Reamy, White, Daniell & Le Vine, 1982; Tolor & Di Grazia, 1977). However, this was not
assessed by earlier researchers. The emphasis on this variable was also prompted by the writings of the psychoanalysts (Deutsch, 1944, 1945; Freud, 1949; Heiman, 1965), and the developmental theorists (Bibring, Dwyer, Huntington & Valenstein, 1961). According to them, female sexuality and body image development occurred simultaneously and finally reached maturation and fulfillment in motherhood. Interest and exploration in the one area, therefore, necessitates the recognition of the other area. Irrespective of the suggested interrelatedness of female sexuality, body image and pregnancy, no studies investigating this type of topic could be found. The recent media coverage given to physical health, fitness and general body awareness, further prompted the interest in this area. There seems to be an upsurge of women who are more body aware through, inter alia, exercises (Orbach, 1986). Furthermore, it suggests that a woman's appearance is crucial to her sexuality. Grice underlined this notion in the statement that "Hollywood sold us [women] a bill that female sexuality and a good body were partners" (1988, p. 113).

A review and evaluation of the empirical studies concerning female sexuality during pregnancy and the postnatal period showed that prior to the work of Masters and Johnson (1966), few researchers assessed this area of female psychology (Landis, Poffenberger & Poffenberger, 1950; Pleshette, Asch & Cheese, 1956). Following on the work of Masters and Johnson (1966), who concluded that female
sexuality declined during the first and third, but not the second trimester of pregnancy, a limited number of studies were done abroad (Falicov, 1973; Kenny, 1973; Reamy et al., 1982; Tolor & Di Grazia, 1976). Studies, however, were characterised by different definitions of female sexuality, assessment techniques and interpretation of the data. Although these isolated studies are valuable in that they pinpoint certain trends regarding female sexuality during pregnancy, there remains a dearth of integrated information. Furthermore, the impression was gained that the majority of the past researchers found that female sexuality was negatively influenced by the pregnancy experience. Few, however, explored possible reasons for their findings. Their findings were often based on the comparisons of retrospective sexuality accounts of women during pregnancy (Falicov, 1973; Holtzman, 1976; Kumar, Brant, Robson & Kay, 1981; Masters & Johnson, 1966).

Paucity of research was also evident concerning female body image and sexuality during pregnancy. Some researchers reported that a poor body image and loss of attractiveness during pregnancy may result in decreased sexual activity (Gansberg & Mostel, 1985; Holtzman, 1976; La Rossa, 1979; Solberg, Butler & Wagner, 1973; Wagner & Solberg, 1974). Yet it appeared that no in-depth studies evaluated female body image and the indices of female sexuality during pregnancy.

Against this background the present study followed an explorative approach. The study is similar to that of Reamy
et al. (1982) on female sexuality during pregnancy, yet wider in scope to include the assessment of female body image. The Reamy et al. (1982) study offered a questionnaire specifically designed for the assessment of female sexuality during pregnancy, while no such instrument was available in South Africa. It seemed worthwhile to use their questionnaire and adapt it to accommodate the needs of this South African study. The present study was further expanded to obviate the numerous pitfalls encountered in this field by past researchers. Limited use was made of retrospection, sample sizes were relatively big, and a control group was introduced. Suffice to state that this approach did not result in a flawless study. The use of volunteers was only one of the limitations this researcher had to contend with.

The research included both a cross-sectional and a longitudinal research design. The cross-sectional approach was used in the major part of the study, and consisted of three groups of women separated into the three recognised stages (trimesters) of pregnancy ($n = 121$). A group of postnatal women ($n = 36$) was also tested. Smaller samples of expectant fathers ($n = 48$) and "new" fathers ($n = 22$) were also evaluated on their sexuality during their partners' pregnancy or during her postnatal period. In addition, a small sample of 12 women pregnant in the first trimester formed the longitudinal sample. They were evaluated on three occasions during pregnancy and once during the postnatal period. A group of non-pregnant women ($n = 39$) was introduced.
as a control group. The latter decision was taken as the reliability of retrospective data on pregnancy and/or sexuality was often questioned (McCauley & Ehrhardt, 1976; Williams, Williams, Griswold & Holmes, 1975).

Notwithstanding the serious attempts to draw a representative sample, the nature of the research necessitated a reliance on volunteers. Therefore, the present sample could only be viewed as a sample of convenience. Despite the selection procedures, an analysis of the biographical data revealed that the various samples were mostly well educated and financially secure. Many participated in prenatal (antenatal) classes, and/or exercise classes. This indicated a homogeneous sample, which appealed to the researcher because it curtailed the numerous variables which could have influenced the research findings.

The assessment of female sexuality was based on the workable definition of Masters and Johnson (1966). This evaluation involved the rating of 12 single indices representative of female sexuality on the slightly adapted Marital Life and Pregnancy Questionnaire of Reamy et al. (1982). In turn, Fisher and Cleveland’s (1958a) definition of female body image was used in this study and body image was evaluated by means of the Rorschach Inkblot Test. This projective technique was chosen to minimize the possible conscious contamination of responses sometimes encountered when people are asked to describe their bodily attitudes. Gray (1977) earlier assessed female body image during
pregnancy by means of the Rorschach Inkblot Test. The choice of this assessment technique was further strengthened by her comments that this projective technique could possibly reflect the sexual adjustment of pregnant women. Fisher and Cleveland (1958b) postulated that the technique possessed the potential to elicit information about human sexuality. Ultimately this added to the exploratory nature of this study.

The statistical analysis of data was both qualitative and quantitative. Both parametric and non-parametric statistical techniques were employed.

At this stage it seems appropriate to refer to the saying of the Chinese philosopher, Laotse, "that a journey of a thousand miles begins with one single step". The initial interest of this researcher in the sexuality of women was the 'first step'. The progressive development of the study, familiarization with the great number of fragmented writings on the topic, analyses of the present findings, and the gradual maturation of the researcher herself, seemed to characterise the 'thousand mile journey', which will become apparent in the following chapters which speak for themselves.
CHAPTER 2

THEORETICAL VIEWPOINTS ON FEMALE SEXUALITY, FEMALE BODY IMAGE AND PREGNANCY

The present study is concerned mainly with female sexuality and body image during the pregnancy experience. In order to motivate this interest it seems necessary to turn to existing theoretical viewpoints and identify certain assumptions which inspired the present study.

For the purpose of clarity this chapter is divided into two sections. The first section deals with theoretical viewpoints on the development of female sexuality and body image. These issues are discussed together, as most theorists appear to suggest that female sexuality and body image development are interrelated. This prompted the researcher to conclude that the evaluation of female sexuality necessitates the evaluation of female body image and vice versa.

The second section deals more specifically with viewpoints on the psychology of pregnancy. Special reference is also made to female sexuality and body image within the pregnancy experience. This forms the central issue of the present research.

The chapter concludes with a general overview and synthetization of theoretical assumptions relevant to this study.
Viewpoints on the Development of Female Sexuality
and Female Body Image

Literature on the above-mentioned topic appeared to be linked to the historical era in which they were written.

Between 1830 and 1950 the existence of female sexuality was taboo in the absence of conception, childbirth and motherhood. After 1950, pioneering scientific research on female sexuality by Kinsey, Pomeroy, Gebhard and Gebhard (1953) as well as Masters and Johnson (1960, 1962, 1966) prepared the ground for greater recognition on the independence of female sexuality. This contributed to acknowledgement of female sexual desire independent of procreation, as well as non-procreative marital sexuality.

The neo-Freudian and social learning theories followed and introduced social aspects as being influential factors in the development of female sexuality. These factors included postponement of marriage and women's participation in the economy. The sociocultural writers, in turn, stressed that familial upbringing with concomitant cultural beliefs influenced the sexual states of women (Gordon & Shankweiler, 1971).

Recently, wider media coverage of female sexuality, more research into female anatomy, and a greater awareness of female bodily health and fitness established female sexuality as an important issue, worthy of recognition and debate.
Psychoanalytical Perspectives

Turning to specific theoretical viewpoints, most of the psychoanalytical literature on the development of female sexuality and body image reflects the theoretical formulations outlined by Freud (1905, 1923; 1925, 1927, 1931, 1933a, 1933b, 1949, 1950).

According to him, human beings are born with an awareness level, named the id. It consists of life and death instincts of which the sexual desire is the most important. Therefore sexuality is present at birth and governs human behaviour. Only in later developmental stages do the awareness levels, the ego and the superego, become apparent.

Freud (1950) outlined several psychosexual developmental stages, wherein each stage the sexual life force (libido) is concentrated on a specific body zone. Up to the age of three years boys and girls pass through similar pregenital developmental stages, named oral and phallic. With the advent of the phallic stage, however, the sexual zones become the primary erogenous zones and here the sexes diverge in their sexual and body image development. This results from anatomical differences. As the present study only focused on female sexuality, attention was only given to female sexual development.

Upon entering the phallic (inner-genital) stage, girls become aware of the vagina and lack of a penis. This discovery results in feelings of sexual inadequacy, narcissistic injury, body damage, deprivation, penis envy and
the Oedipus/Electra complex. Briefly defined, the Oedipus/Electra complex portrays a girl's sexual desire for her father as he possesses a penis, whilst she exhibits hostility towards her mother and blames her for her castrated state.

To achieve successful female sexual development and enter into the genital psychosexual developmental stage, Freud (1931), as well as psychoanalyst Lampl-de-Groot (1933), proposed that a girl

- renounces her sexual desire for her father;
- develops a relationship with her mother on the basis that all females share the same sexual fate;
- adjusts from active clitoral sexuality and recognises her vagina as her truly feminine passive sexual zone;
- develops a maternal desire and transfers her sexual desire from her father to a more realistic desire for a child.

Freud (1933a, 1933b) therefore proposed that females only reach sexual maturity upon the acceptance of their anatomical inferiority and through childbirth and motherhood. Motherhood inevitably forms part of a woman's body image development.

Additionally, he referred to passivity, masochism and narcissism. Passivity results from low levels of libido in females, as well as the renouncement of clitoral sexuality. Narcissism reflects body preoccupation, love and social attraction.
Female sexual development takes place simultaneously with female body image development. According to Freud (1905, 1925) women develop a satisfactory body image when each psychosexual developmental stage and what it represents is integrated. He proposed that several female body image disturbances become apparent if a woman fails to integrate these instinctual drives into her body image as well as to resolve the Oedipus/Electra complex. These body image disturbances include masculine behaviour, masculine careers, sexual frigidity, sexual inhibitions, physical unity, narcissism, moral deficiency and displaced somatic disturbances. Research done by Federn (1926), Fenichel (1945) and Sheldon and Stevens (1942) verified this.

In later writings, Freud (1949) proposed that the ego also influences female body image development and that it consists not only of instinctual variables but also social and organizational variables. Psychoanalyst Keiser (1952) was in agreement with this assumption.

Freud (1949, 1950) was criticized inter alia for his patriarchal view on female sexuality and female body image, his reliance on case histories, and his disregard for the input of cultural and societal influences on the mentioned issues (Fisher, 1973; Horney, 1926, 1967; Kaplan, 1974; Levin, 1966; Masters & Johnson, 1966; Money & Ehrhardt, 1972; Rohrbaugh, 1979; Stoller, 1968). It seems irrelevant to review all such criticism, as his theory only applies to the present study with regard to the interrelatedness with which he viewed
female sexuality and female body image. This suggests that female sexuality forms part and parcel of female body image and vice versa.

The psychoanalytical writings of Deutsch (1944, 1945) reiterated much of what was stated by Freud (1925, 1931, 1933a, 1933b). Nevertheless, she revised his viewpoints on female narcissism, masochism and passivity as well as rejected his assumption that female sexuality was a consequence of inferior female anatomy.

According to her, narcissism, masochism and passivity are truly feminine traits (Cavell, 1974; Greer, 1970; Wimpfheimer & Schafer, 1977). Deutsch (1944, 1945) added that societal taboos, environmental pressures and women's strong need to be loved, made them sexually more passive. Later, psychoanalyst Bonaparte (1953) proposed that cultural morality, over and above female anatomy, influences female sexual development.

Of interest to the present study, is Deutsch's (1944, 1945) proposal that female sexuality consists of a duality. Females not only partake in sexual activities for procreative purposes but also for personal erotic motives and sexual satisfaction. Furthermore, Deutsch (1944, 1945) divided female sexuality into clitoral and vaginal sexuality and stated that clitoral sexuality is linked to personal erotic pleasure, whereas vaginal sexuality is associated with procreation, childbirth and motherhood.
These two types of female sexuality appear to be at war during pregnancy - "they are so fundamentally different from emotional manifestations of motherhood that we are compelled to accept the opposition of sexuality and eroticism on the one hand and reproduction instinct and motherhood on the other" (Deutsch, 1944, Vol. 1, p. 151).

Analytical Approach

Unlike the psychoanalytical theorists who emphasized sexual desire as a human life force, the analytical theorist Jung (1931, 1959a, 1959b, 1960) only thought of it as one of several life forces which form a part of human behaviour.

Although his contribution on the development of female sexuality and female body image was more vague, he referred to the 'innate caring commitment' of women. He labelled this trait "Eros" and suggested that it is a central feature of female sexual development. In contrast to the psychoanalysts, he linked female passivity to this caring commitment of women and their general ability to act as negotiators.

Over and above this, Jung's (1960) referral to the "mandala concept" is interesting. He proposed that the female body image portrays a protective container, which develops through processes of individuation and growth. It symbolizes the prevention of disintegration of these containing properties, which are especially evident during sexual relations and pregnancy. As was pointed out by Fisher and Cleveland (1956, 1958a) this proposal of the containing
properties of the female body, suggests the existence of body image dimensions which can be assessed. Furthermore, psychological assumptions could possibly be derived from body image dimensions (Fisher & Cleveland, 1958a). Within the present research, female body image dimensions are determined and compared with female sexuality.

In the earlier writings of Rank (1929) and Reich (1949) mention was also made of the protective containing properties in body image development. According to Rank (1929), persons often seek to convert their bodies into protective containers, either through visualization or physical measures, i.e. body armour. This could suggest that stressful circumstances result in stronger closure of body boundaries and introversion. With reference to childbirth, Rank (1929) associated maternal symbols exhibiting containing properties i.e. vessel, with a woman's body image. This could therefore indicate that body image changes are evident during childbirth.

Reich (1949) outlined several factors which influence the extent to which an individual will "armor" the body. Firstly, the degree to which the person identifies with a frustrating reality; secondly, situations which result in inhibition of motor expression and aggression and, lastly, fear of punishment of sexual wishes and repressed sexuality. This gives rise to speculation that subsequent body image alterations and closure of body boundaries are caused by inhibited motor or body expressions during pregnancy, and
possible changes in female sexuality. Moreover, Reich's (1949) suggestion, of how peoples' sexuality can be portrayed through body image dimensions and boundaries, forms a key component in the present research. It seems to imply that the evaluation of body image gives insight into female sexuality.

**Neo-analytical or Neo-Freudian Perspectives**

The neo-analytical or neo-Freudian theorists criticized the psychoanalysts for their emphasis on female anatomy and instincts in the development of female sexuality (Horney, 1926, 1967; Jones, 1927, 1955; Millett, 1970; Moulton, 1970; Thompson, 1942, 1943). They added that cultural and societal variables influence female sexual development, as well as body image development, and they disagreed with Freud (1949) that females were 'sexual castrates'.

These considerations were verified by extensive research by Stoller (1968) on gender identity. He concluded that over and above female sexual anatomy and penis envy, women's sexual development is influenced by being placed in an underprivileged social and economic position. Additionally, female sexuality is influenced by the values and prestige society places on motherhood, as well as the economic demands of the reality. It seems important to acknowledge that a woman's attitude towards pregnancy and motherhood, planned or not, could have bearing on her sexuality and body image.

The proposal by Stoller (1968) that economic status also influences female sexuality is important in the present study,
and research participants were questioned on their economic and financial situation.

Interestingly, Stoller (1968) referred to the biological timetable of female sexuality and proposed that this forms part of a woman’s experience of her sexuality, femininity and motherhood. Other neo-analysts, such as Galenson and Roiphe (1974); Mahler, Pine and Bergman (1975) and Miller (1976) agreed with this statement.

The present study considers whether a woman’s age will influence her sexuality and consequently her perceptions of her body and pregnancy.

In a similar vein, Sherfey (1972) pointed out that female sexuality emerged from hormonal changes brought about by menstruation and puberty. These developmental stages are also linked to a female’s age. Additionally, she outlined several factors which influence women to invest less in genital sexuality. These include the internal nature and lack of erogeneity of the female sexual organs, as well as the emphasis society places on female body image. According to her, girls are acutely aware of body changes and body sensuality in their sexual development. In addition, culture emphasizes the exterior of the female body whilst little attention is given to the internal reproductive organs. Consequently, women are ambivalent towards their bodies. On the one hand, it represents a source of sexual pleasure and a means of securing love, while on the other it is seen as more maternal and linked to childbirth and motherhood.
The definite association of female sexuality and body image, therefore stresses that one issue should not be studied without referral to the other. Furthermore, Sherfey (1972) suggested that women may experience an ambivalence about their bodies and sexuality, due principally to the dual roles attached to their bodies. This duality was also noted in the psychoanalytical theory of Deutsch (1944, 1945) and is investigated in the present study.

Later neo-analysts Janeway (1974), Millett (1970) and Moulton (1970) elaborated on this viewpoint. According to them, female traits, i.e. passivity, narcissism, emotionality and flexibility, are mechanisms by which women adapt socially to a society of male domination, as well as to varied public roles. According to Janeway (1974), women act simultaneously as sexual partner, wife and mother. This influences their sexual experiences and body image. These experiences are further complicated by cultural attitudes and the varied view of women as being naive, pure, spiritual, sexual and erotic. Janeway (1974) also referred to cultural restrictions in society which limit women in their becoming independent. She pointed out that women often move from home into marriage and then motherhood, leaving little leeway for them to become independent.

Of further interest, is Janeway's (1974) reference to sexual upbringing and sexual attitude. It appears that if a mother communicates sexual ambivalence to her daughter, or if a girl experiences a negative sexual upbringing, it influences
her later sexual development. More recently, Wolman and Money (1980) also emphasized this relationship. In the present study, prior to the assessment of female sexuality within the pregnancy period, women were questioned on their sexual history i.e. menstruation and premarital sexual life.

Most relevant too, is Janeway’s (1974) reference to the simultaneous roles of women, such as sexual partner, wife and mother. The present study attempted to evaluate whether women undergo a change in their sexuality during pregnancy, such as being less erotic as a sexual partner while fulfilling the more maternal role.

**Ego Psychology**

Another viewpoint concerning the development of female sexuality and body image was outlined by Erikson (1959, 1968a, 1968b). Unlike Freud (1949), who based his theory of psychosexual development on the id, Erikson (1959) proposed that the ego influences human development.

Against this background he outlined eight psychosocial developmental stages, where a critical conflict is introduced in each. Opposing Freud (1949) he emphasized the social nature of each stage and suggested that these conflicts are resolved through positive guidance from the environment. It is not within the framework of this study to elaborate on these stages. Nevertheless, in the early psychosocial developmental stages, Erikson (1968a, 1968b), like Freud (1925), referred to a girl’s envy of a male penis. According to him, as well
as later theorists, this is purely due to sexual curiosity and not due to female sexual anatomy (Bardwick, 1971; Burns, 1979; Wolman & Money, 1980). These authors proposed that a sensitive approach to the treatment of childhood sexual curiosity and positive feedback on the physical attributes of both sexes form the core components of body image development.

In addition, Erikson (1968a, 1968b), Staffieri (1967) and Blaesing and Blockhaus (1972) indicated that sexual stereotypes for boys and girls are different. Females sense that their bodies are viewed and utilized differently to those of boys. This in turn influences their body image development, as well as their sexual development (Blaesing & Blockhaus, 1972; Burns, 1979; Kolb, 1959). Kurtz (1969) added that a woman learns that body attributes contribute to the value she places on herself.

Cognitive Developmental Theories

Later, the cognitive developmental theorist Kohlberg (1966), like Erikson (1959, 1968a, 1968b), adhered to a developmental approach to female sexuality and body image. To a greater extent, however, he emphasized that both sexes learn about sexuality in the same way that they learn about inanimate objects.

Kohlberg (1966) classified female sexual and body image development into:

_ Gender Identity: From the age of two, girls naturally label themselves as female and hence categorize people
superficially by gender. At the age of six or seven they discover that their gender and anatomy differ from the gender and anatomy of boys. Although Kohlberg (1966) suggested that this could result in sexual anxiety, he disagreed with Freud (1925, 1931) who said that women feel sexually inferior.

Sex Typing: A girl acts in accordance with a universal female sexual stereotype. This stereotype typifies female sexuality and body image as consisting of nurturance, childcare, passivity, and lack of aggression, power and competence.

Complementary modelling takes place and a girl models herself on her father to learn about a masculine stereotype. In this way, she can react in an expected feminine manner to men. Simultaneously she imitates her mother as they share the same social stereotypes concerning their body image and female sexuality.

Although much of Kohlberg's (1966) description of female sexual development was vague, the relevance of his theory to the present study is the assumption, that a woman's experienced sexuality is influenced by the way in which she views her body. In addition, it appears that set sexual cues and environmental influences also have an impact on the way a
woman feels about her body and her sexuality (Galenson, 1971; Roiphe, 1968).

Social Learning Theories

In strong contrast to all the previously mentioned theories, the social learning theorists regarded female sexuality as being independent of female sexual anatomy (Bandura, 1965, 1969; Bandura & Walters, 1963; Maccoby, 1959; Mischel, 1966, 1970).

This group of theories is an extension of the traditional learning theories of classical conditioning (Pavlov, 1928, 1941) and operant conditioning (Skinner, 1953).

The social learning theorists concentrated on the development of habit hierarchies and set out basic principles which support the learning process. These principles are:
- Generalization vs. Discrimination;
- Learning vs. Performance;
- Initiation;
- Higher Order Conditioning.

Referring specifically to female sexual development, the first task for a girl is to discriminate between reward patterns for her behaviour. Once she knows what behaviour is rewarded, she generalizes such behaviour to similar situations in her environment. Secondly, she labels herself as female and establishes her sexual identity. Thirdly, she imitates her parental figures in the development of her femininity. In this regard, Mischel (1966) pointed out that girls naturally
imitate their mothers, because both are subjected to the same reward patterns, and therefore act accordingly. Lastly, through higher order conditioning and external reinforcement, she develops a complex system of thoughts, feelings and anticipation which governs her female body image and female sexual identity (Mischel, 1966, 1970).

The social learning theories appear to be very simplistic and tend to underplay the existence of internal emotions which govern sexual behaviour. Nevertheless, the social learning theorists introduced consideration of the influence of social factors and expectations as an apparent force in the development of female sexuality and body image. This cannot be disregarded in the study of female sexuality.

Sociocultural Theories

Sociocultural theorists like Kagan and Kagan (1970), and Simon and Gagnon (1969), concurrent with the cognitive developmental theory of Kohlberg (1966), concluded that girls were taught certain cultural sex role standards, and therefore developed and evaluated their body image according to those set cultural standards. They proposed that while psychosexual development is a universal phenomenon, each culture defines sexual scripts, words and labels which describe the sexual behaviour sequences the sexes must follow. These sexual scripts are built on cues, i.e. physical attributes, behaviour patterns, interpersonal characteristics and psychological
characteristics, and differ for males and females (Simon & Gagnon, 1969).

Girls are taught sex role standards with specific reference to female sexual and body image development. Hence they tend to evaluate themselves physically, psychologically and interpersonally against these standards. Additionally, values, images and feelings of female sexuality are absorbed. With the advent of adolescence and marked biological changes, girls gain the capacity to become sexually active and they start exploring their sexuality. Personal relations tend to be complicated by the experience of menstruation and female sexual orgasm. Body attractiveness can also be linked to sexuality. Simon and Gagnon (1969), however, pointed out that, whereas boys are trained that sexual arousal is erotic, girls often gain the impression that they should be committed to romantic love and a relationship. Additionally they learn that cultural sex role standards, and sexual performances are linked to the acquisition of a marital partner and eventually childbirth.

These theorists' suggestions that both bodily attractiveness and culture influence a woman's experience of her sexuality, is applicable to this study. Pregnant women were questioned as to whether they viewed the pregnant body as unattractive and at odds with the cultural demands of the female body image.

Against the background of the above-mentioned theory, several researchers speculated on the importance of culture in
the development of female sexuality and body image. Two researchers, Jourard and Secord (1955), and later Murray (1972a, 1972b) referred to the cultural image of the ideal woman, as set up by society. Comments in the publication of "Our Bodies, Ourselves" (1973) and those made by Darden (1972) suggested that the ideal female body image norm, set up by society, seldom reflects the actual body size of women, instead it often represents an unattainable body size. Nevertheless, women generally strive to conform to such an ideal. Deviation from the norm may result in feelings of personal inadequacy, lack of self-acceptance and sexual inferiority (Berscheid & Walster, 1969; Lederer & Jackson, 1973).

More recently, Cook and McHenry (1978) indicated that as representatives of society and culture, the media often peddle a false image of female sexuality and body attractiveness. The media also tend to link female sexuality and female body image to societal views on fashion and beauty (Our Bodies, Ourselves, 1973). According to several researchers, many women may sculpt and mould their bodies through corsetry, cosmetics and exercise to attain the ideal as set out in the media (Hammer, 1977; Jourard & Secord, 1955; Kurtz, 1969; Sleet, 1968). Cook and McHenry (1978) suggested that a consumer society tends to associate a woman's self-worth with her sexuality and that the underlying assumption of much of the media is that physically attractive girls are sexually adequate.
The women's liberation movement tried to minimize the impact of culture and the media on female sexuality and body image. Fransella and Frost (1977) commented that culture, society and the media continue to influence a woman's feelings about her body and her sexuality.

Whilst the present study focuses more specifically on female sexuality and body image during pregnancy, the above-mentioned issues are still relevant. More recently lay magazines are giving attention to the physical attributes of the pregnant woman's body. The question is raised whether irrespective of their physiological state, pregnant women rate themselves against an ideal portrayed in the media.

After considering the viewpoints on the psychology of pregnancy below, a summary of the above theoretical viewpoints will be incorporated in the final overview.

**Viewpoints on the Psychology of Pregnancy**

From the time of the early writings of Hippocrates and Vedas around 400 and 500BC, many theorists have debated the issue of pregnancy and many viewpoints are offered in this regard (Taussig, 1936).

The perspectives reviewed below include the psychoanalytical and developmental perspectives; the ego psychological perspective; the psychosomatic and psychosocial viewpoints; the conditioning perspective and lastly the object relations approach.
Psychoanalytical Perspectives

The psychoanalytical writers contributed much to the literature on pregnancy and were the first to recognize psychological aspects inherent in the process of pregnancy.

Freud (1925, 1933a) implied that pregnancy and motherhood are a natural consequence of a female's identity. According to him, the most important task of a young girl is the renunciation of her wish for a penis whilst substituting this wish with a more attainable one, namely a child. Although he did not explicitly discuss the process of pregnancy, childbirth and motherhood, he clearly associated female sexual maturity with the process of pregnancy.

Deutsch (1944, 1945) was the first psychoanalyst to propose a comprehensive theory on pregnancy, motherhood and female sexuality. She agreed with Freud (1933a, 1933b) and viewed pregnancy as a natural fulfillment of the deepest most powerful wish of women. She stated that "in every woman even the most mature and best balanced imminent motherhood is a fulfillment of a wish and a consumation of an old promise that destiny and her educators gave her at the moment of birth when she recognized and accepted her feminine nature" (Deutsch, 1945, p. 140).

Deutsch's (1944, 1945) division of the pregnancy process into two phases, as well as her association of female sexuality with the pregnancy experience is relevant to the present study. According to her, the first phase of pregnancy includes the act of fertilization (incorporation) and is
marked with heightened narcissism. During this phase narcissism is maintained through great quantities of pregenital libido drawn to the mother-child unit after conception. The movement of the foetus (quickening) introduces the second phase of the pregnancy process. During this period on account of becoming pregnant, the pregnant woman's libido which was earlier directed to her sexual partner becomes self-directed. It develops into secondary narcissism and she tends to withdraw. In addition, the pregenital relationship to the foetus may be transferred to a phallic relationship, and the future mother may withdraw further from the external environment.

Therefore, Deutsch (1944, 1945) suggested that the process of pregnancy introduces changes concerning a woman's libido, with subsequent withdrawal from the environment, which appears to be a natural process. This suggestion was evaluated in this study.

As discussed earlier, Deutsch (1944, 1945) viewed female sexuality as a dichotomy. Interestingly, she referred to the duality of female sexuality within the pregnancy process. Prior to pregnancy a woman's love is filled with eroticism, a need for personal sexual satisfaction, as well as an overevaluation of her husband. However, once a woman expresses a need for a child her sexuality becomes maternal. She may stop overevaluating her husband and transfer her idealised image of him to her unborn child. This could result
in a strong unity with the foetus to the exclusion of her husband.

The present study examined whether or not female sexuality changes from pre-pregnancy, to during the course of pregnancy and the postnatal period. It is speculated that women may be more active sexually and may view themselves as more erotic prior to pregnancy, than after conception. Furthermore, in pregnant women sexuality may be associated with a more maternal feeling and greater recognition of the reproductive abilities of their sexual make up.

Also of interest is Deutsch's (1944, 1945) comment that once a woman desires a child her sexuality undergoes a change. It is therefore necessary to ascertain in this study, if women planned their pregnancies, as this could be relevant to their psychosexual states.

Deutsch (1944, 1945) placed the husband-wife relationship central to the pregnancy process. The present researcher thought it important to include the expectant father in this study, as Deutsch (1944, 1945) commented that the husband-wife relationship is altered sexually during the pregnancy experience.

Body image during pregnancy was another issue of interest to the present study. Similarly to the duality prevalent in female sexuality during pregnancy, Deutsch (1944, 1945) proposed a duality apparent in a pregnant woman's body image. She thereby suggested that female sexuality and female body image are interwoven dimensions of the pregnancy process.
Deutsch (1944, 1945), like Freud (1949) concluded that finally the fulfillment of female sexual maturity is closely tied to motherhood.

Central to a woman's body image development is the awareness that her body will eventually house a foetus. Deutsch (1944, 1945) further stated that pregnancy involves a constant struggle between the conscious and subconscious mind of a woman, which entails a conflict between a female's reproductive instincts and her vanity. The physiological changes of pregnancy result simultaneously in an enlargement of her body and a limitation in her physical mobility and existence. Additionally, her body is in the service of someone else, the foetus, and she has little control over the physiological changes accompanying the pregnancy process (Deutsch, 1944, 1945).

Within this study, the researcher investigated a possible conflict during pregnancy between a woman's vanity, her physical attractiveness, and her stature. Women were questioned as to whether they naturally experienced their pregnant bodies as protective containers for their babies, and whether the physical changes were seen as temporary and natural.

Deutsch (1944, 1945) also postulated that many organic processes of pregnancy are often used by pregnant women in a psychological fashion. They may express emotional conflicts from a pre-pregnancy phase. These conflicts could include old anxieties, hostilities, guilt feelings as well as feelings of
destruction and preservation of the foetus, through nausea, vomiting, excessive food cravings, stomach complaints and lack of appetite.

In addition, Deutsch (1944, 1945) indicated that a pregnant woman's relationship with her own mother may influence her pregnancy experience.

Opposing Deutsch (1944, 1945), a later psychoanalyst Kestenberg (1956, 1968, 1975) viewed pregnancy as a new inner genital phase in female sexual development, and not as the revival of pregenital Oedipal wishes.

According to Kestenberg (1975), pregnant women appear to be regressive throughout the three trimesters of pregnancy. The first trimester is characterized by oral conflicts such as nausea, food cravings and oral fixations. During the second trimester, or transition phase, earlier genital phases and sensations are relived. Physical changes of pregnancy become apparent, and consequently a pregnant woman may withdraw from the external world. This includes the withdrawal of narcissistic libido from the environment as well as from her husband. Libido is transferred to the foetus. With the advent of the third trimester, she redirects her libido and motherliness to an external and unattached baby.

Kestenberg (1956, 1968) emphasized that the narcissistic withdrawal and redirection of libido and bodily changes by pregnant women were natural. After childbirth and during motherhood women tend to enter a new genital phase and direct their libido to their environment.
The psychoanalyst Heiman (1965) reiterated several of the viewpoints held by Freud (1949) and Deutsch (1944, 1945). He pointed out that pregnancy forms part of a woman’s biological destiny, and said that little girls desire babies during the Oedipal developmental phase. As the body only reaches conceptive maturity after puberty, girls develop a conflict at the time of their initial wish for a child. This conflict to fulfil a maternal need, as well as the necessity to curb it, continues throughout a woman’s life.

Heiman (1965) was of the opinion that the pregnancy period is accompanied by psychological regressive phenomena, i.e. childhood anxieties, fears and ambivalence. The period also arouses conflicts regarding a woman’s sexuality, her reproductive function, as well as her relationships with others such as her own mother, husband and siblings. Of particular relevance is Heiman’s (1965) emphasis on the concomittant difficulties in the woman’s relationship with her husband and consequently the importance of the husband in the experience of pregnancy. This point was also made earlier by Deutsch (1944, 1945).

In agreement with both of these psychologists, Chertok (1973) proposed that pregnancy reflects a time of identity crisis and conflict for women. None the less, it seems to constitute the basis on which women develop and expand the role of motherhood. This results in growth for them. As with the previous psychoanalytical viewpoints, Chertok’s (1973) perspective interrelates female sexuality, female body image
and femininity and is relevant to the present study. According to her, pregnancy is the symbol of prolonged coitus and reflects the physical experience of femininity. In addition, Chertok (1973) linked the concept of narcissism to female body image during pregnancy, and proposed that a pregnant woman tends to withdraw physically from her environment and often lovingly confuses her body and the foetus. The researcher therefore speculated that the physical withdrawal and closure of body boundaries during pregnancy could be an expected natural result of conception.

**Developmental Theories**

Although the developmental theorists agreed with much of what was written on pregnancy by the psychoanalytical theorists, they generally emphasized that pregnancy is a normal developmental crisis for women, similar to puberty and the menopause. It involves temporary personality disturbances and emotional upheaval, which in turn results in positive growth and development and does not denote pathology.

According to the developmental theorist Bibring (1959, 1965), the pregnancy experience reflects a period of biophysical and psychological disequilibrium. Like puberty and the menopause, pregnant women are confronted with a libidinal imbalance, and significant somatic and psychological conflicts of earlier developmental stages are reintroduced. Resolution of this disequilibrium takes place through maturational reorganization.
Expanding on this developmental perspective, Bibring et al. (1961) proposed that the maturational process of pregnancy consists of specific sequences and alterations in a woman's object libidinal position, as well as in her narcissistic position. The first phase of pregnancy is marked with "an intense object relationship with the sexual partner" (1961, p. 151) which leads to impregnation. Within this process a love object becomes part of the self. After conception and with the advent of physiological changes a pregnant woman needs to alter her libidinal position from her partner, the original object, to herself. This "leads to the integration of, and merging with, this foreign body, turning it into an integral part of herself" (Bibring et al., 1961, p. 151).

Furthermore, these authors proposed a second adjustment of libidinal energy once the foetus starts moving; in their opinion, during this phase the foetus must be recognized as a separate object within the pregnant woman's body.

In agreement with the early writings of Deutsch (1944, 1945), Bibring et al., (1961) referred to the intrapsychic tasks of pregnancy as being changes to female sexuality, libido and body.

Regarding female sexuality, the developmental theorists pointed out that the recognition of bodily changes by women in early pregnancy activates the withdrawal of libido from the external world and the redirection of libido to themselves (Bibring, 1959; Bibring et al., 1961; Bibring & Valenstein, 1976). This, however, is not necessarily viewed as negative,
but as an inseparable part of the integration of the foetus into the pregnant woman's self-concept. Additionally, they proposed that the intrapsychic task of pregnancy for women also involves the acceptance of the foetus within her body as a representation and extension of her sexual partner. This appears to suggest that whilst the woman adjusts to the integration and in late pregnancy separation of the foetus from herself, the sexual relationship between husband and pregnant wife may undergo some change. It can therefore be speculated that body image changes may become apparent as the pregnant woman first views the baby as part of herself and later translates it into an object apart from herself.

To conclude, the developmental theorists pointed out that successful maturation through the process of pregnancy depends on several key issues:

- the marital relationship;
- the nature of a couple's pre-pregnant sexual relationship;
- the pregnant woman's ability to accept that she is carrying her partner's child;
- her willingness to share her pregnant body and sexuality with her partner;
- reorganization of her relationships, especially with her own mother;
- reorganization of her status and roles;
- appropriate parental care and support.
Some of these issues were taken into consideration in the planning of the present investigation of female sexuality and body image during pregnancy.

**Ego Psychology**

Erikson (1959, 1968a), similarly to the mentioned developmental theorists, associated the life cycle of a woman with her reproductive cycle, beginning at menstruation and ending in the menopause. According to him, pregnancy reflects a crisis-point in female sexual identity, as it spells the end of an independent single person and the beginning of an unchangeable mother-child relationship. Although a crisis, this transition results in development.

He furthermore agreed with the psychoanalytical beliefs of Freud (1950) and Deutsch (1944, 1945) saying that pregnancy reflects the core of female sexual development. According to him, a female’s wish for motherhood starts in childhood, fluctuates throughout her development and only peaks when fulfillment is possible, in the generative stage of adulthood. Therefore, pregnancy cannot be studied without the recognition of female sexuality.

Like Deutsch (1944, 1945) and Chertok (1973), he associated sensations and moods particular to the pregnancy process with the transformation of the body image of pregnant women.

Newton and Newton (1972) agreed with the developmental theorists in saying that pregnancy is a period of growth,
change and crisis. Similarly, Delliquadri and Breckenride (1980) viewed the pregnancy period as a time of psychological and physiological transition for women. They made the interesting observation that a woman’s body image develops from her familiar appearance, capabilities and physical sensations. However, throughout the pregnancy period, the woman’s body is in a state of disequilibrium. Furthermore, Delliquadri and Breckenride (1980) suggested that psychological and physiological changes are interrelated, and that body image resulted from an interaction of the mind and the body. Each mental state and every body event contains within itself dimensions of the other. The emotional state of pregnant women should therefore be acknowledged in the study of pregnancy and related bodily changes.

Psychosomatic and Psychosocial Viewpoints

In contrast to all the above-mentioned viewpoints, a psychosomatic and psychosocial orientation about pregnancy is also present in the literature. In the same way as the developmental theorists, theorists who subscribed to this viewpoint indicated that the hormonal cycle of women influences their sexuality and experience of pregnancy. Additionally, psychosexual aspects, such as the marital relationship and environmental systems are seen as aspects which influence the process and experience of pregnancy.

Anthony and Benedek (1970) viewed pregnancy as both a psychosomatic condition and a developmental stage, closely
linked to the menstrual cycle of women. The menstrual cycle consists of two phases: firstly, the oestrogenic phase, when oestrogen is secreted and secondly, the progesterone phase, with increased progesterone secretion. Pregnancy is seen as the intensification of the progestational phase of the menstrual cycle which evokes mood changes, surface conflicts and shifts in intrapsychic systems. Although the present study concentrated on pregnancy, sexuality and body image as psychological issues, it is also important to acknowledge the influence of hormones on these issues.

Benedek (1970) declared that pregnant women experience changes in their sexuality. They exhibit increased libidinous feelings toward themselves and a calm narcissistical state of wellbeing. However, they also simultaneously experience anxiety and exhibit regressive tendencies. Anthony and Benedek (1970) pointed out that such tendencies may be due to high levels of progesterone secretion, feelings of gratification of a woman's basic wish for a child, as well as the intense concentration of a pregnant woman on her own body. Developmental theorists expounded their psychosomatic perspective and added that female body image development during the state of pregnancy is influenced by fantasies, parental attributes, sociocultural experiences, opportunities and achievements in life (Anthony & Benedek, 1970, Benedek, 1970).

Caplan (1960a), who also supported a psychosomatic perspective on pregnancy, initially described the pregnancy
process as a biologically determined period of stress resulting from hormonal and metabolic changes inherent in the pregnancy process. Later he, like Erikson (1968a, 1968b), reassessed the process of pregnancy and inferred that it is not a crisis per se, but rather a period of increased susceptibility to crisis for women. It involves role changes, a search for a female identity, as well as major physiological changes (Caplan, 1960a).

Caplan's (1960a) postulation that pregnancy results in body image changes for a woman is relevant to this study. Whether a pregnant woman copes with these changes, or not, depends on several factors which he suggested, namely, her pattern of behaviour, responses from the environment and her coping mechanisms. In part, this suggests that the way a husband reacts to his wife's pregnant body will influence her feelings toward her own body.

Along with body image changes, Caplan (1961) also proposed that female sexuality changes during pregnancy. Pregnant women exhibit an increased need for love and affection, whilst also becoming introverted and passive. As this is contrary to the traditional role of a mother who is always supposed to be giving and active, he suggested that the expectant family ought to be informed of such changes and may need support.

Changes to female sexuality during pregnancy also depend on a woman's personality, sexual development history, her psychological development as a mother, and her reaction to her
own or foster mother (Caplan, 1960a, 1960b). Therefore, as stated earlier, a study of female sexuality during pregnancy calls for the assessment of a woman’s pre-pregnant sexual history as well as the involvement of those closely connected with her, particularly her husband.

Offerman-Zuckerberg (1980), a more recent follower of the psychosomatic and psychosocial perspective on pregnancy, emphasized that pregnancy is an adaptive, therapeutic and integrative experience for women. It consists of two central psychological processes similar to those outlined by Deutsch (1944, 1945). Firstly, the process of incorporation involving the acceptance of the foetus and, secondly, the process of separation, which occurs when a mother needs to view the foetus as an object separate from herself.

The first phase of pregnancy is characterized by various emotional and physiological conflicts such as abortion, nausea, vomiting, fear of loss of control over the body and obsessional thinking. Offerman-Zuckerberg (1980) pointed out that women enter the pregnancy experience with 'constitutionally predictable physiological response styles' which are prevalent prior to pregnancy. These response styles influence her behaviour during pregnancy. For instance, if a woman somatised prior to falling pregnant, it is likely that she will do the same during pregnancy.

More relevant to this study is the fact that during both the first and second stages of pregnancy, shifts in a pregnant woman’s narcissistic libido take place. It is redirected from
one object to another, that is, from her husband to the foetus or herself (Offerman-Zuckerberg, 1980). However, this is not seen as negative. Offerman-Zuckerberg (1980) pointed out that a pregnant woman’s self-directed libido is necessary. It helps her to clarify her varied roles toward her husband, namely as a sexual partner and a wife, as well as the role of parent towards her child.

Body preoccupation, fantasy and nesting behaviour (such as preparation of the baby’s room) are all viewed as adaptive measures by which pregnant women control the emotional symptoms inherent in the transitional crisis of pregnancy. In addition, developmental issues such as autonomy and dependency towards meaningful people in her environment, particularly her mother, are renegotiated (Offerman-Zuckerberg, 1980).

**Conditioning Perspectives**

In opposition to many of the previous opinions, theorists like Friedan (1963) and Rossi (1967, 1968, 1970) propagated a conditioning perspective and viewed pregnancy as a negative developmental stage in a woman’s life. Although not relevant to the theoretical assumptions of the present study, it is important to note that these theorists believed that women, irrespective of their own needs, have little choice and are forced into motherhood. Even though some women react positively to such a role, others become frustrated, resentful and regress. A woman therefore suffers emotional and physiological setbacks during the maternal years.
It is the opinion of the researcher that, as a result of the increased availability of contraception nowadays, women have a greater freedom to choose whether they wish to fall pregnant. Nevertheless, it is important to enquire about a woman’s motivation to fall pregnant and whether the pregnancy was planned, as this could certainly influence her experience of pregnancy.

Object-Relations Approach

In the more recent literature on pregnancy Ballou (1978a, 1978b) reported an object-relations approach. She proposed that pregnancy involves the gestation of a person with feelings, emotions, motivations and intentions, which the pregnant woman must acknowledge and accommodate. Various object-relations shifts take place during this process. In the early stages the foetus is part of the mother (self) whereas after quickening (movement of the foetus), the foetus should be experienced as a separate object from the mother (self).

Of more concern in the present research is the object relations shift which takes place between the expectant couple. According to Ballou (1978a, 1978b), a pregnant woman views her partner maternally and paternally. He is seen as a supportive mother to her, an Oedipal father and a sexual partner. Central to these shifts in relationships are aspects such as fantasy, dreams, planning, prenatal preparation of the mother as well as dependency issues between the expectant
woman and her own mother. Ballou (1978a, 1978b) proposed that a pregnant woman accepts her future child's dependency on her if she acknowledges her dependency on her own mother or maternal substitute.

To conclude, Ballou (1978a, 1978b) stressed that the successful resolution of relationship shifts of the expectant couple results in feelings of competence and effectiveness. It also provides a foundation for the development of a mother-child relationship.

**Overview**

From the above discussion and review, it is apparent that the psychoanalytical writers generally viewed pregnancy as the ultimate in female sexual development and female body image development (Bonaparte, 1953; Deutsch, 1944, 1945; Freud, 1950; Jones, 1927, 1955; Kestenberg, 1956, 1968, 1975; Lampl-de Groot, 1933; Macy & Falkner, 1979; Racamier, 1979).

Freud (1950) stated that female sexuality is only valuable when associated with motherhood. Deutsch (1944, 1945) and Heiman (1965) disagreed and offered a more realistic portrayal in their psychoanalytical writings. According to them, female sexuality is a twofold issue. It contains erotic sexual motives for the woman's personal sexual satisfaction as well as sexual motives linked to procreation. However, they agreed ultimately that complete female sexual maturation is only reached during pregnancy and motherhood.
Referring to body image and pregnancy, Freud (1933a, 1933b) stated that body narcissism during pregnancy is associated with pre-Oedipal conflicts. Deutsch (1944, 1945) and Chertok (1973) viewed pregnant women's self-directed libido and body preoccupation as a positive part of the psychology of the pregnancy process.

Jung (1931, 1960) gave little attention to the issue of pregnancy and female sexuality, but described the female body as a protective container, which ultimately houses the foetus. He also spoke of "psychic pregnancy" which reflects a time of introversion and an awareness of the internal processes of the body. His theory vaguely suggests that during pregnancy, women may enter into a period of incubation, with a concomitant closure of their bodies to external influences. This protects the foetus and so maintains the containing properties of their bodies.

The writings of the developmental theorists adhered to the psychoanalytical viewpoint that pregnancy and motherhood are the biological destiny of women. On the other hand, they emphasized that it only denotes a temporary emotional and physiological disequilibrium and is not a conflict period per se. Ultimately pregnancy and motherhood result in growth and maturation for women (Bibring, 1959, 1965; Bibring et al., 1961; Bibring & Valenstein, 1976). These theorists referred to marked changes in female sexual libido, during the period of pregnancy, and proposed that the marital relationship of expectant couples are affected. Primarily however, these
changes were viewed as natural (Bibring et al., 1961). They also suggested that women generally experience their bodies prior to impregnation, as more erotic, whereas after conception an appreciation of the maternal qualities and functions of their bodies take place (Bibring et al., 1961). Over and above this they viewed pregnancy as a sexual crisis similar to those which women undergo during the onset of menstruation and the menopause.

The neo-analytical theorists criticized the psychoanalysts for denying the importance of the social environment and cultural variables on female sexual development and female body image, and consequently, a female's experience of pregnancy (Horney, 1926, 1967; Janeway, 1974; Millett, 1970; Moulton, 1970; Sherfey, 1972). Sherfey (1972) made the interesting observation that culture and society view the female body both as sexual and maternal, which may result in women feeling ambivalent about their bodies.

Psychomathic and psychosocial theorists noted the importance of hormonal levels on female sexuality, body image and pregnancy (Benedek, 1959; Caplan, 1960a, 1960b; Grossman, 1980). They also suggested, as did the developmental theorists, that pregnant women become introverted and increasingly concerned with their bodies. A simultaneous withdrawal of libido from the external world, and an increased need for love and support also appear to manifest in pregnant women (Caplan, 1960a; Offerman-Zuckerberg, 1980).
Kohlberg, in his (1966) cognitive developmental theory, together with other learning theorists, postulated that learning outweighed biological attributes in female sexual development and female body image development (Bandura, 1965, 1969; Mischel, 1966, 1970; Mischel & Liebert, 1966; Money, 1965). Opposing Freud, (1950) and Erikson (1959), they denied that femininity is an innate female trait. They stated that femininity is based upon the behaviour for which females are rewarded by society.

Similarly the sociocultural theorists referred to the impact of cultural beliefs and societal values on female sexual and body image development (Kagan & Kagan, 1970; Simon & Gagnon, 1969). They also linked a female's attitude toward her body to the way she perceived herself compared to the ideal female body norm set up by society. A woman's experience of pregnancy appears to be linked not only to such stereotypes, but also to the state of her marital relationship.

Ballou's (1978a, 1978b) object-relations approach to female sexuality, pregnancy and female body image emphasized the shifts which take place between an expectant couple, showing that an expectant father forms part of pregnancy.

In conclusion, it is apparent that a variety of views on female sexuality, body image and pregnancy exist. Even though some theories contradicted one another, they also showed great interrelatedness. For the purpose of this study, no one
theory was found to be suitable, to the exclusion of all others. Therefore, in the present study, theoretical formulations were drawn from a variety of viewpoints and explored.

Throughout the discussion, the researcher tried to relate the relevance of certain theoretical formulations to this study. Suffice to state that central to this study, was the evaluation of Deutsch's (1944, 1945) suggestion that female sexuality and body image contain a duality, which may become evident in a woman's transition to motherhood. In keeping with the developmental theorists, pregnancy is viewed as a temporary period of disequilibrium in a woman's life - finally resulting in growth.
In a multi-faceted study such as this, it seems relevant to outline the concepts of female sexuality and pregnancy. This chapter is divided into two sections. The first section deals with the definition of female sexuality and also briefly reviews some general research on the core components of female sexuality. The second section clarifies certain concepts peculiar to pregnancy. It also outlines the specific stages of pregnancy. Even though this chapter deals with conceptualization, it is applicable to briefly discuss the physiological changes accompanying pregnancy, as they are relevant to any study of pregnancy. This is followed by a general conclusion.

Female Sexuality

Since the Victorian days a keen interest has been shown in human sexuality. While many theorists, discussed in Chapter 2, were severely criticised for their thinking, they contributed to the growth of knowledge on human sexuality.

Early theorists, such as Ellis (1928) and Van de Velde (1926), argued for the recognition of individual differences in human sexuality and emphasized that sexual enjoyment is evident during sexual relations, not only in males, but also in females. Following this line of thought, Dickinson (1933)
analysed female sexual habits, and also discussed female anatomy. Such writings resulted in a greater acceptance of female sexuality.

Standardized techniques in the study of human sexuality was introduced by Hirschfeld (1935, 1940). The work of Kinsey et al. (1953), however, was the first to provide a more in-depth source of information on human sexuality. Despite criticism on various issues i.e. sampling techniques and the use of analogies between human and subhuman behaviour (Graber & Graber, 1975; Morrison & Borosage, 1977), they made it clear that female sexuality is not really reserved for procreation alone.

Following them, Masters and Johnson (1960, 1962, 1966) were hailed as researchers who added extensively to the then limited knowledge on female sexuality. Through laboratory methods and interviews they researched the anatomy and physiology of female sexuality and opposed earlier findings of Freud (1950), Kinsey et al. (1953) and Van de Velde (1926). Although Masters and Johnson (1966) were criticized, they established that female sexuality is worthy of thorough research. They proposed key components of female sexuality still relevant today (Graber & Graber, 1975; Morrison & Borosage, 1977; Singer, 1973).

Publications of books such as "The Sensuous Woman" ("J" 1969) and "My Mother Myself" (Friday, 1977), further enlightened women on their sexuality. Other forms of female
sexual activity, as well as sensuality, often absent in pure technical books on sexuality, were emphasized.

With the advent of women's rights groups, and the feminist movement, female sexuality was further debated. This movement tried to negate some of the social, economic and legal restraints on female sexuality and tried to establish it independently of male involvement (Firestone, 1972; Firestone & Koedt, 1970; Koedt, 1970).

Since then an expansion of physiological knowledge on female sexuality, and more open discussion thereof, was evident (Diamond, 1985; Fisher, 1973; Hite, 1976; Janda & Klenke-Hemel 1980; Kitzinger, 1983; Ladas, Whipple & Perry, 1982; Lake, 1981; Lief, 1981; Seaman & Seaman, 1977). Female sexual issues such as premarital sex, masturbation and alternative sexual activities, are more openly discussed in books and magazines. Despite this, many researchers have pointed out that female sexuality is still linked to some role stereotypes of women, as well as to sexual restraints in female sexual upbringing (Calderone, 1983; Rotkin, 1972, Seaman & Seaman, 1977, Sherman, 1972). Over and above this, there appears to be increased evidence of sexual problems, despite this growth of knowledge, and more publications on the treatment of sexual disorders have recently become available (Hawton, 1985; Levinsohn, 1984; Lief, 1981).
Defining the Concept

General definitions on human sexuality were offered in the literature. Johnson defined human sexuality as follows: "[it] can be considered a dimension of personality, a more or less consistent way of responding to a particular class of stimuli" (1968, p. 5). Hazell suggested "it was the ability to create and experience erotic pleasure in one's self and in others" (1969, p. 12).

According to Lake "sexuality is the term used to refer to any human activity which differs according to which sex you are, or which involves the use of sex" (1981, p. 225). Recently Goldenson and Anderson defined sexuality as "the capacity to behave sexually, that is, to respond to erotic stimuli and to obtain pleasure from sexual activities such as foreplay, intercourse and masturbation. Sexuality involves not only the genital organs but all the erogenous zones of the body, as well as all wishes, desires and fantasies associated with sex" (1987, p. 235).

Although elements of female sexuality are described in the general definitions mentioned above, several theorists referred to the interaction of biological, hormonal, sociocultural and psychological factors in female sexuality (Goodchild, 1984; Lake, 1981; Masters & Johnson, 1966; Money, 1965; Offerman-Zuckerberg, 1980; Perloff, 1949; Perloff & Ramwell, 1970).
For the purpose of this study, female sexuality is operationally divided into three components, as suggested in the writings of Masters and Johnson (1966):

- Female sexual desire and interest;
- Female sexual activity and intercourse;
- Female sexual orgasm and multiple orgasms.

Female Sexual Desire and Interest

In their study of female sexuality early on, Epstein and Smith (1957), utilized Murray’s definition of a sexual need as "to seek and enjoy the company of the opposite sex. To have sexual relations, to fall in love" (1943, p. 10).

Later theorists, Frank, Anderson and Rubinstein (1978) viewed female sexual drive as synonymous with female sexual desire and stated that it forms a critical stage of any form of sexual expression. According to them, the sex drive forms an instinctual drive of human beings, and is linked to the pain and pleasure centre of the brain.

More recently, Hawton suggested that female sexual desire and sexual intercourse could be "assessed through her willingness to seek opposite sexual contacts, the occurrence of sexual fantasies, as well as the frequency of sexual activities" (1985, p. 11). With this definition he outlined key issues which influence female sexual desire and interest, which can be cognitively utilized in its assessment.

The study of Frank et al., (1978) is interesting with reference to some general research on female sexual desire and
interest. These authors investigated by means of a questionnaire the sexuality of 100, mostly middle-class couples recruited from various sources. They found that 77% of the females admitted to experiencing sexual difficulties. Sexual disinterest was mentioned by 23% of these women. These findings appeared to vary with their age and length of marriage, and seemed to be common in young couples in their twenties.

In a study by Lopicollo and Lopicollo (1978), 40% of couples who had undergone sex therapy in the 1970's indicated that their problem was a low level of sexual desire. In 70% of these cases the woman was depicted as the partner having a low level of sexual desire.

The study of Garde and Lunde (1980a), on 225 Danish women showed results similar to those mentioned above. Whereas 35% of women experienced sexual difficulties, 42% indicated a lack of sexual desire. A third of the group reported the non-existence of spontaneous sexual desire. In a later study these findings of decreased sexual interest were more prominent in lower class females than in the higher social strata (Garde & Lunde, 1980b).

Sexual research has received limited attention in South Africa (Olivier, 1984, 1986a, 1986b, 1987; Uken, 1980). Only recently Olivier (1987) conducted a study on female sexuality and the South African woman. The study included 4000 volunteers who responded to an extensive questionnaire on a variety of sexual issues, published in a popular magazine.
Despite being biased toward the White English-speaking woman, and relying on volunteers, this study was a major breakthrough in South Africa. It also offers a basis for some comparison with the present study which would minimise reliance on sex surveys done abroad. Olivier (1987) found that inhibition of sexual desire was reported most prominently by married women (21.5%), whereas 19.5% of widows and divorced women showed a lack of sexual desire. Sexual inhibition, and hence a lack of sexual desire seem to be a major issue in the sexual profile of South African women (Olivier, 1984, 1986a, 1986b, 1987).

Female Sexual Activity and Intercourse

Parker (1974), in agreement with Johnson (1970), pointed out that the most profound aspect of a heterosexual union is sexual intercourse, emphasising that it reflects the sharing of human feelings. Fromme defined sexual intercourse and sexual relationships as "a willingness to shed reserves and to be completely oneself. This obviously requires a feeling of freedom with one's love, a sense of being accepted. If either of the partners does not enjoy this confidence in other aspects of the relationship, it is extremely difficult to enjoy sex" (1970, p. 8). He furthermore noted that a sexual encounter is a twofold issue. Firstly, it strengthens warmth, friendliness and love, and secondly, intimacy strengthens the joys of sexual unity. Recently Goldenson and Anderson defined sexual activity as "a general term covering any kind of behaviour such as petting, flagellation, masturbation and
intercourse (coitus), whose purpose is to produce sexual excitement" (1987, p. 232). Sexual intercourse they defined as coitus, "usually but not always involving penetration of the penis into the vagina" (1987, p. 47).

The extensive work of Masters and Johnson (1962, 1966, 1970, 1975) greatly contributed to a clarification of female sexual activity and intercourse. They identified four progressive phases of female sexual arousal, labelled the excitement, plateau, orgasmic and resolution phases. Each phase develops from the physical and mental stimulation of a woman, and is accompanied by several physiological changes such as vasocongestion and increased muscle tension.

In contrast to the sexual response cycle described by Masters and Johnson (1966), Kaplan (1974) postulated a biphasic model of female sexual activity. The first phase contains a vasocongestive reaction which results in vaginal lubrication, whilst the second phase consists of reflexive clonic muscular contractions which constitute orgasm. These phases are caused by activity of the female nervous system.

Many theorists debated possible norms existing for female sexual activity and intercourse. Sherman (1972) was of the opinion that women peak sexually in their mid-thirties, when love and sensuality is more important and the conflicts surrounding adolescence have passed. In addition, women know their bodies better in their late thirties. This view was supported by Kaplan and Sager (1971), Kaplan (1974), and by
the findings of the "Red Book Report" on female sexuality (Tavris & Sadd, 1977).

Frequency of sexual intercourse appears to fluctuate and to depend on several issues. Tavris and Sadd (1977) rated frequency of sexual intercourse by satisfaction. Their findings showed that the majority (80%) of women rated one to five sexual encounters per month as an acceptable, satisfying rate of intercourse. However, sexual satisfaction in the marital relationship is not necessarily related to frequency of intercourse (Tavris & Sadd, 1977). They also noted that sexual intercourse declines with length of marriage and the woman's age. Further, a cause and effect circle of sexual behaviour was indicated, namely, that women who partook in more sexual activity reported being happier in their marital life, and rated their sexual lives as better, which in turn led to an increase in sexual activity.

Respondents in the study of Lopicollo and Lopicollo (1978), aged between 30 and 40 years and married for 15 years, reported sexual intercourse, on the average, two to two-and-a-half times per week. Later research by Golanty and Harris (1982) found that women participated in sexual intercourse three to four times per week.

Olivier (1987) acknowledged the existence of much variation in the frequency with which women partake in sexual intercourse, and also stressed that no set standards can be applied to female sexual activity and intercourse.
Female Sexual Orgasm

The definition of female sexual orgasm appears to be difficult, especially as a result of the controversy about the existence of different types of female sexual orgasms (Bunzl & Mullen, 1974; Lowen, 1965; Masters & Johnson, 1966; Singer, 1973).

The early writings of Freud (1931) stated that the vaginal orgasm is indicative of a mature, healthy woman. Masters and Johnson (1966) and Koedt (1970), on the other hand, stressed the importance of clitoral orgasm, whilst other researchers reported that women have no knowledge of the existence of different types of sexual orgasm (Seaman & Seaman, 1977; Sherfey, 1972).

Kaplan (1974), in turn, distinguished between a clitoral orgasm which represents the sensory component of the orgasm and causes sexual arousal, and the vaginal orgasm, which represents the motor component. The latter is the orgasmic condition which discharges the enjoyment and tension that accumulates during sexual arousal.

Several theorists proposed that a female sexual orgasm is a complete body phenomenon involving more than just the vagina and clitoris (Fisher, 1973; Hegeler, 1963; Hite, 1976; Masters and Johnson, 1966). The experience of orgasm, however, depends on a variety of physical and psychological issues, such as the female psychosexual drive, body image, sexual attitude prevalent in the culture and society, as well as a sexual partner's attitude of tenderness, patience and

Whether or not female sexual arousal necessarily results in the experience of a sexual orgasm is another much debated point (Lydon, 1970). In their early study, Kinsey et al. (1953) found that 1% of married women reported the total inexperience of an orgasm, while Terman (1951) found that 30% of women only rarely, if ever, experienced sexual orgasm. Fisher’s (1973) research, which compared a selected group of educated American women, found that two-thirds of them seldom reached an orgasm with any consistency. Hite’s (1976) study, although not representative of the entire population, is worth noting: While 12% of the women in her study never experienced a sexual orgasm, 7% rarely experienced it, which resulted in feelings of sexual inadequacy, depression and frustration. Women also referred to the unrealistic portrayal of female sexuality and female sexual orgasmic ability in the popular literature. Hite’s (1976) findings agree with those of Bardwick and Behrman (1967), as well as those of Tavris and Sadd (1977). Seaman (1972) however, expressed the view that the discussion of sexuality in the media enlightened people and subsequently several researchers also supported the open discussion of female sexuality (Frank et al. 1978; Seaman & Seaman, 1977).

Regarding South African research, Uken (1980) compared orgasmic and non-orgasmic women and found that motherliness
was positively and anxiety negatively associated with the occurrence of female sexual orgasm. Furthermore, she associated a good and satisfying marital relationship, frequent sexual activity, a positive sexual developmental history and good relations between a mother and her daughter with the regular orgasmic function in women. Olivier (1987) in turn, proposed that the inability of women to achieve orgasm is a major problem experienced by many South African women. In her study 6% of divorced, widowed and, surprisingly, married women, had never experienced an orgasm, while 8% of single women reported the absence of sexual orgasms during sexual activity. In addition, 5% of these respondents admitted that they faked orgasm most of the time, and 3.2% occasionally faked orgasm (Olivier, 1987).

Hite (1976) made an interesting observation that some women are uncertain as to whether they experienced a sexual orgasm or not. Therefore prior to rating their orgasmic capabilities any study on female sexuality needs to enquire whether or not women know what an orgasm is.

Women’s experience of multiple orgasms was also reported in research by Kinsey et al. (1953), Masters & Johnson (1966) and earlier Terman (1951).

It was widely debated whether or not female sexual orgasm is a prerequisite for female sexual satisfaction. Even though researchers, such as Kinsey et al. (1953) and Wallin (1960), stated that it is necessary for female sexual satisfaction and physical release, many researchers pointed out that women can
experience emotional and sexual satisfaction in the absence of an orgasm (de Beauvoir, 1953; Ford & Beach, 1951; Sherfey, 1972; Terman, 1938). According to Renshaw (1976) society is achievement orientated, applies sexual pressures on females and views sexual orgasm as a measure of successful lovemaking.

In conclusion, the present researcher agrees with Sherman (1972) that any study on female sexuality should recognise the individual nature of each woman’s sexuality. No set standards can be applied to female sexuality, as it changes continually and depends on a variety of factors.

Additionally, a comment made by some researchers and an issue specifically addressed in this study, is the importance of a woman’s body image and her experience of her body in relation to her sexuality. Uken (1980) commented that female body image is central to a woman’s sexuality and she related a woman’s body awareness to her ability to achieve orgasms. Lake (1981) agreed that if a woman rejects her body, she also rejects her sexuality. Earlier Fisher and Osofsky (1967) noted that impaired body knowledge and body image difficulties interfere with a woman’s sexual self-acceptance. They suggested that a woman should recognise the sexual aspects of her body in order to enjoy her sexuality to the full (Fisher & Osofsky, 1967).

It is noted that a woman’s sexual anatomy and hormones may influence female sexuality. However, this facet was not discussed in the overview as it is not wholly relevant to the
present psychological study of female sexuality during pregnancy. This specific topic is covered in the writings of Bancroft (1978, 1983) and Seaman and Seaman (1977).

A review of the physiological changes which accompany pregnancy is a prerequisite to the understanding of female sexuality, as well as female body image during pregnancy. The next section discusses the stages of pregnancy and concomitant physiological changes.

Pregnancy and the Postnatal Period

The pregnancy experience is shaped by a multitude of psychological and physiological factors (Reading, 1983). The stages of pregnancy and some physiological changes are briefly outlined. An in-depth psychological evaluation of the pregnancy period follows in later chapters.

Stages of Pregnancy

From a physiological point of view the pregnancy is divided into three trimesters or 3-month periods:

- First Trimester (0-12 weeks after conception);
- Second Trimester (12 - 26 weeks);
- Third Trimester (27 - 40 weeks).

These trimesters correspond with physiological changes accompanying the pregnancy process (Colman & Colman, 1971).

Pregnancy lasts approximately 266 days from the time of conception to labour and delivery when the foetus is expelled from the body. The mother then enters the postpartum,
postnatal or puerperal period which is defined as the weeks following childbirth (Breen, 1975; Golanty & Harris, 1982; Goldenson & Anderson, 1987).

From a psychological perspective, Notman and Nadelsohn (1975) pointed out that the pregnancy period also includes a pre-pregnancy and a postpartum phase, each with a multitude of psychological variables. As the present section deals only with the physiology of pregnancy, attention is given to the psychological experience of pregnancy when discussing female sexuality during pregnancy.

**Physiological Changes**

Pregnancy can be defined as a temporary state of physiological adaptation for the mother to meet the needs of the foetus. These needs include oxygen and food supply, elimination of waste products and accommodation of the foetus itself. As the embryo develops into the foetus, extraordinary anatomical, hormonal and other physiological changes occur in the pregnant female.

*Genital Organs.* The vagina becomes increasingly vascular due to blood congestion. The vagina and cervix take on a bluish discolouration (Chadwick's sign). The uterus increases in mass from approximately 60 to 1000 grams to accommodate the foetus and placenta. Ovulation ceases and the ovaries enlarge in response to progesterone produced by the corpus luteum and the placenta (Jeffcoate, 1967; Llewellyn-Jones, 1978).
Breasts. Several changes are apparent, including increased vascularity, engorgement of superficial veins, generalised enlargement, brown pigmentation of the areola, secretion of colostrum, increased erectibility of the nipples, and nodularity of the breasts. These changes are brought about by the hormones oestrogen, progesterone and prolactin and are often accompanied by breast tenderness and pain (Llewellyn-Jones, 1978).

Alimentary Tract. Nausea and vomiting often presenting as morning sickness are common in the first trimester and thought to be hormonal in origin. Heartburn and constipation are caused by uterine bulk and the alimentary tract smooth muscle relaxation effect of progesterone (Tyler & Woodall, 1982). Weight gain of between 6,5kg to 15,5kg occurs in pregnancy and this is due to the foetus, placenta, uterus, fat deposition and water retention (Berkow, 1982).

Cutaneous Structures. There is an increased incidence of varicose veins in the legs during pregnancy. Striae-gravidorum or stretchmarks commonly occur on the abdomen. Pigmentation increases causing melasma (mask of pregnancy), a blotchy brown pigment on the forehead, cheeks and face. The vulva discolours and a dark line (linea nigra), extending from the umbilicus to the pubis can develop (Delliquadri & Breckenride, 1980; Llewellyn Jones, 1978).
Cardiovascular System. Cardiac output increases by 30% to 50%, pulse rate increases by 10 to 20 beats per minute and blood pressure decreases. The blood volume increases by 40% to 50% and the red blood cell mass increases approximately 25%, leading to a physiological anaemia where the haemoglobin may also drop by dilution from 13.3 gm to 12.1 gm (Berkow, 1982).

Locomotor System, Muscoskeletal System. Low backache, difficulty in walking and susceptibility to ligamentary strain, is due to the weight of the uterus and the laxity of the spinal ligaments (Llewellyn-Jones, 1978).

Respiratory System. Changes in lung function during pregnancy are due to the hormonal stimulus of progesterone and the effect of the enlarged uterus on the lungs. Respiratory volumes and ventilation rates increase. Oxygen consumption is increased and less carbon dioxide is carried by the blood to meet the needs of the foetus. Respiratory difficulties may occur in late pregnancy (Berkow, 1982; Tyler & Woodall, 1982).

Urinary System. Frequency of urination is common during pregnancy and is due partly to increased kidney function required to remove the foetal waste products. Urinary tract infections are not uncommon during pregnancy (Berkow, 1982).

Endocrine System. Hormones play a vital role in the maintenance of pregnancy. Human chorionic gonadotrophin produced by the placenta and oestrogen and progesterone
maintain the pregnant state. The levels of these hormones rise markedly in pregnancy and play an active role in mediating emotions. The function of most endocrine glands alter in pregnancy (Berkow, 1982; Delliquadri & Breckenride, 1980; Sherman, 1972; Sherman & Denmark, 1978).

Besides the physiological changes mentioned, the mother's body undergoes a series of physiological changes after the delivery of her baby. According to Delliquadri and Breckenride (1980) the reversal of the changes in the mother's body, postnatally, usually takes three months. They stated that although her body returns to a non-pregnant state, a nulliparous (childless) bodily state will never be fully regained. In addition, several variables, such as the type of delivery, whether or not the mother breastfeeds her baby and emotional factors, influence the physiological state of a mother's body (Brown, 1979; Delliquadri & Breckenride, 1980; Gansberg & Mostel, 1985; Gunn, 1984; Kerins, 1985; MacFarlane, 1977).

Summary

It appears that the experience of pregnancy, as well as how a woman feels about her sexuality, depends on the interaction of physiological, psychological, environmental and cultural factors. Pregnancy and female sexuality must be seen as a total experience of the mind and the body.
CHAPTER 4
FEMALE SEXUALITY DURING PREGNANCY AND THE POSTNATAL PERIOD

Isolated investigations on female sexuality during pregnancy, with varying research methodology and procedures, are reported in the literature.

It is necessary to review briefly the most relevant studies in this regard. Most of the research originated outside South Africa, and therefore can only be used selectively as a basis for comparison with the present study.

This chapter is divided into six sections for the sake of clarity. The first section deals with female sexuality during pregnancy. The second section outlines potential factors which may influence female sexuality during pregnancy. The third section discusses female sexuality during the postnatal period and is followed by section four which deals with factors with the potential to influence female sexual adjustment. It was also noted that research on female sexuality during pregnancy intermittently referred to the 'expectant father'. As this is also relevant to the present study, section five elaborates on the issue of the expectant father and variables which may influence his experience of pregnancy. The chapter concludes with a general overview, criticism, and recommendations for future research.
Female Sexuality and Pregnancy

The operational definition of female sexuality described in Chapter three refers to three core components, namely, female sexual desire and interest, female sexual activity and intercourse and, lastly, female sexual orgasm, multiple orgasms and alternative sexual activity. Each of these components and related research on pregnancy, will be discussed separately.

Sexual Desire and Interest

One of the earliest studies on sexual adjustment during pregnancy was reported by Landis et al. (1950). They utilized a retrospective research design. Using an anonymous questionnaire, they interviewed 212 couples on sexuality during pregnancy and the postnatal period. The results are questionable, especially as some couples had to recall up to two-and-a-half years prior to the evaluation. In addition, they were also interviewed on one occasion only, which raises the issue as to whether or not such sensitive information as sexual data can be truthfully assessed with a single interview. However, the results showed that for the majority of couples, sexual desire decreased as pregnancy progressed. During the first trimester, 27% of the couples reported decreased sexual desire; during the second trimester 47%. A dramatic decline was reported by 79% of the couples in the third trimester.
An interesting finding was that some expectant fathers exhibited the couvade syndrome, that is, symptoms similar to their pregnant wives. This resulted in decreased sexual desire for some expectant fathers. In turn, other husbands expressed a culturally orientated reason and stated that it was inappropriate to have sexual relations with a pregnant woman. Related to this, de Beauvoir (1953) mentioned that a conflict existed between the "pure" vision of motherhood and the sinful connotations of sex.

Researchers Pleshette et al. (1956) verified the above-mentioned findings, and found that only 16% of pregnant women in their study, exhibited increased sexual desire during the course of pregnancy. Later research of Holtzman (1976) also reported that only a small percentage of women exhibited increased sexual desire during pregnancy.

Perhaps Masters and Johnson (1966) did the most in-depth evaluation of female sexuality during pregnancy. A longitudinal design was used and 101 pregnant women were interviewed by a research team comprising both sexes, on three occasions during pregnancy, and three months postpartum. The sample consisted of 43 primigravidas (a woman having her first child) and 68 multigravidas (a woman having her second child or subsequent children), with an average age of 27 years and 5 months.

The research findings indicated that pregnant women during the first trimester of pregnancy, generally reported diminished sexual interest and desire. This decline appeared
to be most prominent for 33 of the 43 primigravidas, and was associated with early symptoms, such as vomiting and fatigue. This parity was detected in later research on pregnancy and sexuality by Almgren, Nilsson and Uddenberg (1972), but not by Holtzman (1976); Solberg et al. (1973) or Wagner and Solberg (1974).

During the second trimester most women experienced increased sexual desire beyond their reported pre-pregnancy levels of desire. In conjunction with the increased desire, 82 of the 101 women reported increased sexual fantasies and sexual content of dreams. Masters and Johnson (1966) suggested that this was because of the increased vascularity surrounding the pelvic area. In the third trimester, sexual desire decreased for the majority (74) of pregnant women.

In addition, 79 husbands were interviewed. A gradual dwindling of sexual demands toward the end of the second trimester and the beginning of the third trimester was reported by 31 expectant fathers. Fear of harming the foetus or the wife resulted in sexual withdrawal. During their wives' third trimester of pregnancy and during the postpartum period, 18 husbands sought sexual relief outside of marriage.

Although this study can be criticized for vague research methodology, lack of detail in interview contents, a possible interviewer bias, lack of refined statistical analysis, use of repetitive interviews and lack of a control group, it is still the principal work which sparked an interest in female sexuality research. Masters and Johnson (1966) supplied the
groundwork for many later investigators in this field (Baxter, 1973; Calhoun, Selby, James & King, 1981).

Researcher Falicov (1973) failed to verify the findings of Masters and Johnson (1966). She also used a longitudinal design, interviewing a homogeneous small sample (19) of white primigravidas, aged between 20 and 30 years, with planned pregnancies. Interviews consisted of an evaluation of female sexual interest, frequency of coitus, feelings of eroticism and sexual satisfaction. All the subjects reported a progressive decline in female sexual desire and interest. Heartburn, tiredness, sleepiness, changes in female sexual organs and fear of harming the foetus, were cited as causes for decreased sexual desire during pregnancy. Contrary to the findings of Masters and Johnson (1966) 12 of the 19 pregnant women during the second trimester reported declined sexual desire. Of these, nine women described their sexual desire as dead or totally lacking. Husbands who were interviewed reported declined sexual desire and interest, mostly because of an awareness of the presence of the foetus. When interpreting the above research findings, the small sample size, retrospective nature, and lack of control of possible side effects apparent in multiple interviews, must be noted.

Contrary to both the findings of Masters and Johnson (1966) and Falicov (1973), Kenny (1973) found that most pregnant women experienced the same level of sexual desire during the first and second trimesters as those prior to falling pregnant. During the third trimester, only 14 of the
33 pregnant women indicated a decrease in sexual desire, whereas 16 women experienced less sexual enjoyment. Despite this, 82% of the expectant couples continued with sexual relations throughout the entire pregnancy. The generalization of these findings is limited by the lack of data on the scale assessing sexuality, the small sample size, and the use of a single interview.

A larger sample (260) of postnatal women were interviewed by Wagner & Solberg (1974) to avoid some of the criticisms levelled at the earlier studies on female sexuality. The subjects were of mixed gravidity with an average age of 26.2 years. The results, once again questionable because of the retrospective nature of the study, showed that compared with pre-pregnancy levels, an equal percentage (28%) of women during their first trimester experienced an increase and a decrease of sexual interest. Reports of decreased sexual desire for women during the second and third trimester correspond with all the previously mentioned studies, excepting those reported by Masters and Johnson (1966) and Kenny (1973). Even though this study included a large sample, it was speculated that the experience of labour and delivery may have influenced the subjects' recall of their feelings experienced during and prior to pregnancy.

Later researchers, Tolor and Di Grazia (1976) argued that repetitive interviews and continued retesting of subjects on a sensitive topic such as sexuality, could become an imposition. In addition, they pointed out that boredom or practice due to
repetitive testing could result in unreliable test responses. Furthermore, they suggested that subjects could be too scared to alter their responses from one testing to the next. This, however, depends on a subject's perception of the desirable course of action within the research. The researchers opted for a cross-sectional study of 216 women pregnant in different trimesters. Research procedure involved a Demographic Questionnaire, a 10-Item Questionnaire on present and previous Sexual Behaviour; and a 15-Item Scale on Attitude Toward Sex (Tolor, Rice & Lanctot, 1975). Sexual attitudes were rated on a 4-point Scale from Conservative to Liberal. The results showed a linear decline of sexual desire for most women as pregnancy progressed. Additionally, an overall moderate sexual attitude was indicated by the women tested.

These results were consistent with the findings of Solberg et al. (1973); Falicov (1973); and Holtzman (1976), and seem to suggest that, irrespective of the research design, pregnant women exhibit a general decline in their sexual desire.

More recently, Selby, Calhoun, Vogel and King (1980) assessed "pregnant couples" using an adapted scale from the Sexual Experience Scale of Zuckerman (1971). Both husbands and wives reported decreased sexual desire throughout the pregnancy experience.

Sixty-three percent of women tested by Entwisle and Doering (1981) indicated that their husbands' sexual desire remained unchanged during their pregnancies. This opposes the
general findings that husbands experienced decreased levels of sexual desire during their wives' pregnancies. Along with this, 36% of the pregnant women exhibited similar levels of sexual desire during pregnancy and prior to falling pregnant. This retrospective study was done on women six to seven months postnatally which raises the question of reliability.

One of the most recent studies on pregnancy and female sexuality was done by Reamy et al. (1982). They utilized the responses of 52 married women in their first trimester of pregnancy, living with their husbands at the time of the interview. The prospective research design included a Marital Life and Pregnancy Questionnaire measuring sexual feelings and behaviour, which was developed from a review of available information on pregnancy and sexuality (Reamy et al. 1982). This questionnaire was first administered to a pilot group. Criticism that participants in prospective longitudinal studies may alter or bias the feelings and behaviours being measured over time, led to the questionnaire for early third trimester being administered to an additional group of pregnant women. The latter group had no further involvement with the study. Multiple Regression and Chi-square statistical procedures were employed in the analysis of the changes in sexual variables over time, as well as between the sample group and the comparison group.

The results indicated that sexual desire for most women during the first trimester was similar to their pre-pregnancy levels of sexual desire, increasing during the second
trimester. The levels, however, neither equalled nor exceeded their pre-pregnancy levels of sexual desire, as was found in the study of Masters and Johnson (1966). During the third trimester the levels then decreased well below their pre-pregnant sexual levels. Multigravidas were significantly less interested in sex than primigravidas. However, no differences were found between parity and sexuality during the first trimester.

Moreover, no differences were found between the research sample versus the comparison sample. Reamy et al. (1982) concluded that the multiple exposure of subjects to the sexuality questionnaire did not influence their sexual feelings, behaviour or attitudes beyond those levels reported by pregnant women having no previous knowledge of the questionnaire content. Minimal enquiries were made about possible reasons for this occurrence.

Similar to the earlier research findings of Quirk (1972) factors such as physical distress, nausea, vomiting, mastalgia (tiredness), and fear of precipitating abortion, influenced sexual desire during the first trimester of pregnancy. Reasons given for decreased sexual desire during the third trimester of pregnancy, were bulkiness of the female body and a fear of harming the foetus, or self. Sexual satisfaction was correlated with a woman's feelings of happiness concerning her pregnancy, her feeling more attractive in late pregnancy than prior to pregnancy, and to the experience of sexual orgasm during pregnancy (Reamy et al., 1982).
In conclusion, it seems that most researchers agree that female sexual desire declines during the pregnancy period. The most substantial decline appears to be in the third trimester of pregnancy.

**Sexual Activity and Intercourse**

Much the same pattern of results as reported for female sexual desire and interest during pregnancy, was evident for sexual behaviour and activity during the pregnancy experience.

The earlier study of Landis et al. (1950) proposed that a broad decline is apparent in all aspects of female sexual behaviour throughout the duration of pregnancy.

Masters and Johnson (1966) found that the frequency of coitus, for 33 of the 43 primigravidas, dropped most notably during the first trimester of pregnancy. Coital frequency and sexual desire during the second trimester increased to above their reported pre-pregnancy levels. This resulted from increased vascular congestion of the pelvic region. With the advent of the third trimester, most women reported decreased sexual activity because of; fear of harming the foetus, lack of sexual interest, loss of physical attractiveness, or owing to physicians' recommendations of sexual abstinence. Medical advice contra-indicated sexual intercourse for 31 of the 43 primigravidas and 46 of the 68 multigravidas. These findings agreed with the results reported by Holtzman (1976). However, the research of Solberg et al. (1973) and Wagner and Solberg (1974) found no significant correlation between female sexual
activity during pregnancy and loss of physical attractiveness or physician's interference.

Falicov (1973) in her longitudinal study, found that all but one woman in the first trimester of pregnancy indicated decreased coitus. Although increased levels of coitus were reported during the second trimester, it was still below the pre-pregnancy level of coitus. During the last trimester of pregnancy all women showed a drastic decline in their frequency of sexual intercourse and 15 of the women reported complete sexual abstinence.

Furthermore, this study also rated the level of sexuality for each participant on the first interview as well as thereafter. Women who rated sex higher during the first interview, felt less ambivalent or conflicted about sexual activity during pregnancy, and experienced fewer and milder changes in sexuality. These women experienced more sexual enjoyment and continued with sexual intercourse and erotic play much longer than women with poorer sexual ratings. It was apparent that women who rated sex as low, made more excuses concerning the discomforts and fears of pregnancy in order to avoid a tense sexual relationship. They also started sexual abstinence sooner than the women with higher initial sexual ratings.

This finding corresponds with that of Fordney (1978) who found that women who exhibited a negative pre-pregnant attitude toward sex showed a marked decline in their sexual activities during pregnancy. They also abstained from sexual
activity for a lengthy postnatal period. This was also confirmed by later researchers Kumar et al. (1981).

Expectant fathers, interviewed by Falicov (1973), initially anticipated no changes in their sexual relations. By the second trimester, however, most husbands accepted temporary changes in the frequency of coitus with their wives. Both husbands and wives expressed resentment and frustration regarding sexual abstinence during the third trimester. Despite the tapering off of sexuality nearer the delivery date, nine women expressed guilt about their husbands' forced sexual abstinence.

Both the studies of Kenny (1973) and of Baxter (1973) disclosed that an equal amount of increased and decreased frequencies of coital activities was reported by pregnant women. Furthermore, many pregnant women experienced no changes in intercourse frequency, except during the third trimester. Morris (1975) similarly found no differences in sexual activity between pregnant and non-pregnant women except with third trimester women.

In contrast, the majority of expectant couples in the study of Solberg et al. (1973) reported that the frequency of sexual activity declined significantly. Furthermore, it appeared that intercourse frequency decreased with the duration of the marriage and depended on a woman's age. Solberg et al. (1973), however, found that parity, socio-economic status, and demographic influences, were not predictive of sexual activity during pregnancy. These
researchers also gathered information on possible causative factors, for declined sexual activity. Physical discomfort 
was reported by the majority of women (46%) as being 
responsible for their altered sexual state during pregnancy. 
An equal percentage (29%) of pregnant women blamed loss of 
sexual interest and activity or medical recommendations, 
whereas 4% felt that a loss of attractiveness caused their 
decreased sexual activity.

In the retrospective studies of Wagner and Solberg 
(1974), Holtzman (1976) and later Tolor and Di Grazia (1976), 
pregnant women generally reported a decline in coitus and all 
other forms of sexual activity. Wagner and Solberg (1974) 
found that irrespective of gravidity, 78% of the women during 
the first trimester had sexual intercourse two to three times 
per week. This percentage declined minimally, to 77% in the 
second trimester, and dramatically, to 23%, in the third 
trimester. No association was found between declined coitus 
and liberal attitude towards sex, religious preference, 
negative feelings about pregnancy and whether a baby was 
planned or not. Nevertheless, older women and those married 
for longer, showed a more significant decrease in coital 
activities during pregnancy - this finding supporting that of 
Solberg et al. (1973).

Entwisle and Doering (1981) confirmed the research 
findings of Wagner and Solberg (1974) of expectant couples 
frequency of sexual intercourse. It is interesting to note 
that 20% of the husbands reported that their pregnant wives
wanted more sexual activity than what they wanted. However, 45% of the husbands indicated that their wives wanted less sexual activity than they wanted. In addition, 31.7% of the husbands were tempted to be sexually unfaithful during the pregnancy period. It is questioned whether these findings can be generalized and whether the husbands who agreed to be interviewed were more open and willing to discuss their sexual preferences than expectant fathers in general. This, however, ought to be acknowledged when researching sexuality of any volunteer group.

Despite the greater statistical sophistication found in the more recent cross-sectional and longitudinal work of Kumar et al. (1981) their findings agreed with several, less well controlled studies on female sexuality during pregnancy. Of interest, is the fact that pregnant women in the study of Kumar et al. (1981) also initiated sexual intercourse less frequently and experienced less sexual enjoyment. Overall sexual satisfaction appears to hinge on whether or not women achieve sexual orgasms during sexual activity. Women who felt more attractive during the third trimester of pregnancy rated their overall sexuality as positive. No significant relationship was found between biographical details such as age, education, ethnicity, religion and sexual satisfaction. Similarly to the report of Quirk (1972), Kumar et al. (1981) found that women who viewed their husbands as being supportive and who were not repulsed by their pregnant bodies, participated in regular sexual activity.
Perkins (1982) tried to synthesize several issues such as race, religion, and a woman's sexual history in his research on female sexuality during pregnancy. The anonymous questionnaires of 155 puerperal volunteers from different population groups were evaluated on personal and sexual history prior to and during pregnancy. A retarded decline of coital activity during pregnancy was indicated by women who were sexually more experienced and satisfied. These women also reported better social circumstances, while 58% of women felt that pregnancy made them feel sexually unattractive. A similar percentage stated that sexual problems arose during the pregnancy period because of their changed anatomy and negative attitude toward sex.

Perkins (1982) concluded that pregnancy influenced female sexuality irrespective of women's conditioning, history or race. This verified several researchers' findings that race did not influence a pregnant woman's experience of her sexuality (Holtzman, 1976; Lubin, Gardener & Roth, 1975; Morris, 1975). Steege and Jelovsek (1982), in a recent statistically refined study also found that marital status was more important to black pregnant women regarding their coital frequency, than socio-demographic variables.

It appears that the study of Perkins (1982) included a more diverse data basis and the study was of greater depth and breadth of inquiry than many of those previously mentioned. Furthermore, by obtaining data anonymously and without confrontation, an attempt was made to gain truthful answers
from volunteers. None the less, the study depended on volunteers and was retrospective in nature. The extensive length of the questionnaire (23 pages) could have enhanced participation fatigue and thus influenced participant responses.

The results of two Czechoslovakian studies are worth mentioning in contrast to the general impression formed by most researchers that female sexual activity declines progressively during pregnancy. These studies found a limited decrease of sexual activity for pregnant women. Women continued sexual activity throughout the pregnancy period irrespective of their own feelings. They feared their husbands' sexual unfaithfulness if they withdrew or showed decreased levels of sexual activity (Bartova, Kolrova & Uzez, 1969; Prochazka & Cernoch, 1970). This appears to indicate the importance of enquiring about a male's sexual feelings regarding his partner's pregnant state, as this could influence whether or not she continues with sexual activity throughout the duration of pregnancy.

Offit (1981) again reported an intriguing situation where women become sexually unfaithful only when pregnant. According to her, this could be viewed as a defence against depression or an unfaithful husband who seeks outside support during his wife's pregnancy. Another speculation may be that pregnancy creates an ideal, fear-free opportunity for women to be unfaithful. Fear of an unwanted pregnancy is no longer applicable and is not a deterrent to extramarital affairs.
Limited attention has been given to research of this nature in a South African context. Uken (1976) in her study of pregnancy and motherliness, included some questions regarding female sexuality but found no consistent trends. Her study consisted of a small sample of 30 women and did not explicitly address the issue of female sexuality during pregnancy. Concerning issues central to female sexuality only limited inquiry was made into the frequency of female sexual activity and the experience of orgasm. Uken (1976) recommended future research in this area and when studying female sexuality suggested an in-depth evaluation of the developmental history of women. She also commented that women in her study might have answered the questions regarding their sexuality in terms of cultural or social expectations.

To conclude, corroborative evidence suggests that sexual activity and the frequency of sexual intercourse decline during the process of pregnancy.

Sexual Orgasms, Multiple Orgasms and Alternative Sexual Activity

Concurrent with the previously mentioned findings, the orgasmic ability of women also appears to decline as pregnancy progresses.

Masters and Johnson (1966), in a small initial laboratory study of six pregnant women, related several physical measures to female sexual arousal and orgasm during pregnancy.
Pregnant women showed greater vascular congestion in their pelvic regions which was not relieved through the experience of orgasms. Increased vaginal lubrication was also noted during the sexual excitement phase for pregnant women. Moreover, the sexual resolution phase differed from that of non-pregnant women. This phase took longer to subside and pregnant women reported less sexual satisfaction after an orgasm. Later writers, Sarrel and Sarrel (1980), agreed with Masters and Johnson (1966) that the resolution phase of the female sexual response cycle is slow due to vasocongestion of the entire pelvic region and genitals. This suggests that pregnant women can experience a chronic level of sexual tension, not necessarily relieved by coitus. A couple may feel that they have little control over their sexual relationship. Masters and Johnson (1966) in their laboratory study of pregnant women, noted that prior to, and during pregnancy, four subjects experienced continued multiple orgasms. However, they failed to explore this issue in their study which included a bigger sample of pregnant women (Masters & Johnson, 1966). The majority of studies following the work of Masters and Johnson (1966) revealed that female sexual orgasms declined in frequency and intensity as pregnancy progresses (Baxter, 1973; Kane, Daly, Ewing & Keeler, 1967; Kumar et al., 1981; Perkins, 1982; Reamy et al., 1982; Solberg et al., 1973; Tolor & Di Grazia, 1976, 1977; Wagner & Solberg, 1974).
Worth noting in the study of Reamy et al. (1982) is that orgasmic pregnant women generally rated their sexual life and level of sexual satisfaction higher than non-orgasmic pregnant women. Although parity was not related to the sexuality variables that they measured, nulliparous women experienced more multiple orgasms during the third trimester of pregnancy than parous women (Reamy et al., 1982).

In their recent studies both Kumar et al. (1981) and Perkins (1982) reported surprising results that a small group of women never experienced orgasms, whether pregnant or not. Some women were unable to say whether they were orgasmic or not.

In conclusion, it is indicated that the majority of pregnant women experience less sexual orgasms and of a lower intensity during pregnancy. It also seems that despite the existing publications on female sexuality and the limited availability of sexual counselling, many women may benefit from more information on sexuality.

Coital Methods and Positions

Some researchers examining female sexuality during pregnancy evaluated alternative forms of sexual methods such as masturbation. They also assessed the preferences of pregnant women for the use of certain sexual methods and positions.
The early study of Landis et al. (1950) reported that during pregnancy all aspects of sexual as well as non-coital erotic activities, such as masturbation, sexual stimulation by hand and mutual oral-genital stimulation, decreased sharply. These findings were verified more recently by Solberg et al. (1973) and Kumar et al. (1981). However, they were opposed by Reamy et al. (1982) who indicated that as pregnancy progresses, manual and oral sexual stimulation between the expectant couple increases.

Early theorists Lerner, Raskin and Davis (1967) reported a displacement of sexual interest from the vagina in the first trimester, to clitoral and breast areas during later stages of pregnancy. They suggested that these findings partially relate to psychodynamic issues often accompanying pregnancy, such as major psychological reorganization by pregnant women. It appears that this comment may be linked to the theoretical viewpoints of the psychoanalysts and developmental theorists discussed in Chapter Two.

In research on female sexuality and pregnancy it was debated whether or not sexual positions changed. Generally it was found that expectant couples used the male superior position (man on top) less and as pregnancy progressed, favoured side-by-side and rear entry. Additionally, more sexual stimulation by hand took place (Gebhard, Raboch & Giese, 1970; Holtzman, 1976; Reamy et al., 1982; Solberg et al., 1973). This mainly appeared to be as a result of the enlarged abdomen of pregnant women. However, Reamy et al.
(1982) found that most women, irrespective of being pregnant or not, preferred the male superior position as a primary position during intercourse.

The issue of masturbation elicited and produced much debate and opposing results. Contrary to the reports by Landis et al. (1950), Holtzman (1976) and Solberg et al. (1973), the more recent studies of Kumar et al. (1981) and Perkins (1982) found that during pregnancy women generally persisted with masturbation. An interesting finding by Perkins (1982), indicated that black women associated increased, or improved sexual orgasm and multiple orgasms, with the use of sexually provocative techniques, as well as a variety of sexual practices. Furthermore, it was apparent that, especially close to delivery, older pregnant women used less of a variety of sexual techniques, than their younger counterparts. Compared to women who rejected their menstruation, pregnant women who felt positive about menstruation also indicated a more positive attitude toward using different sexual techniques.

By far the most common desire of many pregnant women, was the need to be held. A need for body contact as an alternative to sexual intercourse was of paramount importance (Hollender & McGhee, 1974; Tolor & Di Grazia, 1976). Hollender and McGhee (1974) administered a Body Contact Questionnaire to 25 white and 25 black women during their first prenatal visit. Over 50% of the pregnant women noted changes to their bodies, and 75% of them showed an increased
desire to be held. No correlation was found between parity and the need to be held. According to the pregnant women, close body contact relieved feelings of depression and anxiety, gratifying their dependency needs and affording them a sense of closeness and sensitivity.

To conclude this section it seems that considerable controversy surrounds female sexuality during pregnancy. Relatively few studies carefully assessed the emotional and behavioural variables linked to female sexuality, and many studies lacked clarity regarding methodology and statistical analysis.

A lack of "in-depth" evaluation of either one or more factors which may contribute to the multi-faceted issue of female sexuality during pregnancy underlines the necessity for further research in this area. Meagre comments were made about reasons which influence female sexuality during pregnancy. These will be discussed in the following section.

Potential Influential Variables on Female Sexuality During Pregnancy

A limited number of studies speculated on a variety of factors which may influence female sexuality during pregnancy. Opinions about these variables are highlighted.
Physiological Variables and Symptoms

Many investigations implied that early pregnancy symptoms (for example fatigue, nausea, vomiting, drowsiness, breast discomfort, breast engorgement, painful nipples, the physical state of the vagina, bladder discomfort, stress incontinence and vasocongestion of the pelvic region), resulted in declined sexual interest, desire and activity during pregnancy (Falicov, 1973; Grazioli, 1983; Holtzman 1976; La Rossa, 1979; Masters & Johnson, 1966; Perkins, 1982; Reamy et al., 1982; Sarrel & Sarrel, 1980; Wagner & Solberg, 1974).

In contrast, increased sexual activity, and the incidence of sexual orgasm and multiple orgasms were associated with vasocongestion of the pelvic region of pregnant women (Masters & Johnson, 1966; Reamy et al., 1982; Sarrel & Sarrel, 1980).

Body awkwardness and physical discomfort caused by the enlargement of the foetal head and pressure on the mother's bladder, legs and rectum was most evident during the third trimester. This was related to decreased female sexual activity and interest (Kumar et al., 1981; Steege & Jelovsek, 1982). Worthy of mention too, is that loss of physical closeness and contact, due to extreme body size, causes psychosexual realignment for the expectant couple. This is often more complex than the impact of physiological variables (Levinsohn, 1984; Offit, 1981).

Referring specifically to nausea and vomiting during pregnancy, theorists speculated whether it was purely a
physiological phenomenon or occurred as a result of psychosexual conflicts. Early researchers associated these symptoms with a definite endocrinological basis, namely, chorionic gonadotrophin, a disturbed carbohydrate metabolism, and an increased androgenic and vitamin deficiency (Coppen, 1959, Eastman, 1957; Fairweather, 1968).

Considerable evidence opposing this suggested that nausea and vomiting results from a problematic sexual relationship between the expectant couple, as well as sexual dilemmas experienced by some pregnant women (Fairweather, 1968; Harvey & Sherfey, 1954; Horsley, 1972; Robertson, 1946; Semmens, 1957).

In the early research by Harvey and Sherfey (1954), 50% of pregnant women who experienced nausea and vomiting also exhibited a strong aversion to coitus. They feared pain during intercourse. Half of the research group also reported that sexual intercourse or the anticipation thereof provoked these symptoms. In a later study, Horsley (1972) stated that nausea and vomiting during pregnancy served as a natural protective device to limit sexual activity - thus decreasing the probability of miscarriage.

The rejection of the female biological role and motherhood, as set out by cultural standards, were also associated with nausea and vomiting as well as decreased sexual activity during pregnancy (Deutsch, 1944, 1945; Kroger, 1962; Newton, 1955, 1963).
Several other theorists (Mead, 1974; Offerman-Zuckerberg, 1980; Wolkind & Zajicek, 1978) proposed another viewpoint on these physiological conditions. They suggested that some cultures actually stylized nausea and vomiting during pregnancy as an appropriate response - a cultural expectation. Earlier, Rosengren (1961), and later Semmens (1971), proposed that if pregnancy is viewed as a sickness, nausea and vomiting are acceptable and serve as confirmation of a female's biological and sexual role.

From the above one can see that little clarity exists as to whether nausea and vomiting have any bearing and influence on female sexuality during pregnancy.

Mentioned, but not assessed in the present study on female sexuality during pregnancy, is the influence of hormones. Masters and Johnson (1966), as well as Falicov (1973), uncovered a varied pattern of sexual responsivity partially related to high levels of progesterone in pregnant women. McCauley and Ehrhardt (1976) pointed out that these high levels of progesterone present during pregnancy, were also present during the female sexual cycle, four to six days after ovulation. According to them, decreased sexuality of pregnant women is partially related to increased oestrogen but especially to progesterone secretion. These researchers emphasized that to accurately ascertain the effect of specific hormonal levels on female sexuality, the repeated measurement of endocrine levels, simultaneously with the time of behaviour...
assessment, was required. Such an investigation would be very costly as it obviously necessitates an entire research team.

Recently Levinsohn (1984) speculated that the sex of the foetus could possibly influence a pregnant woman's sexual activity. He suggested that if the foetus is male, the male hormone testosterone can be released into the mother's circulatory system and so increase her sexual interest and level of sexual activity. If, however, the foetus is female, no changes in the mother's hormonal level are suggested, and her sexual drive remains the same. This speculation appears to correspond with the proposal of early theorists, Kinsey et al., (1953) who stated that levels of androgen correlated positively with increased genital activity for both men and women.

_Fear of harming_ the foetus or the pregnant woman was often reported as a deterrent to sexual practice during pregnancy (Baxter, 1973; Falicov, 1973; Holtzman, 1976; Masters & Johnson, 1966). Grazioli (1983), however, pointed out that from early days popular and medical literature have debated whether intercourse could harm the foetus or the pregnant woman and possibly provoke abortion. Holtzman (1976), earlier referred to the cultural belief that the penis embodied connotations of a weapon or instrument of aggression, which added to associated fears.

Another debate and controversy surrounds _sexual abstinence_ of expectant couples based on obstetrical grounds.
Neubardt (1973) identified three potential hazards which call for sexual abstinence by an expectant couple. These include:

- **Physical disruption** through intercourse which may result in amnionitis, foetal distress or placental bleeding. Several researchers, however, found no evidence that the penis during intercourse physically ruptures the membranes (Kitzinger, 1967, 1973, 1978, 1979; Munjack & Oziel, 1979a, 1979b; Naeye, 1981; Wagner, Butler & Sanders, 1976).

- **Infection** caused by the intrusion of the penis may encourage migration of bacteria to the woman's upper genital organs. An increased risk is evident if a woman in late pregnancy has a ruptured membrane, incompetent cervical os, or a dilated or effaced cervix (Holtzman, 1976). Antibiotic treatment, is recommended in such cases (Holtzman, 1976).

- **Premature labour and/or abortion** in relation to sexual intercourse and sexual orgasm. This issue was highly debated with opposing results by many authors (Goodlin, 1969; Goodlin, Keller & Raffin, 1971; Goodlin, Schmidt & Greedy, 1972; Limner, 1969; Mills, Harlap & Harley, 1981; Pugh, 1952; Pugh & Fernandez, 1953; Savage, 1875).

Another major area of research was the similarity between the contractions of sexual orgasm and those of labour and the possible negative influence of such contractions on the foetal
environment. Whereas researchers such as Goodlin et al., (1971); Kinsey et al., (1953); Limner, (1969) and Masters and Johnson, (1966) proposed that uterine contractions which accompany female sexual orgasms could be stressful to the foetal environment, many other researchers opposed this (Fox, 1978; Fox, Wolff, & Baker, 1970). According to them, contractions which accompany a female sexual orgasm are lengthy as opposed to the rhythmic contractions evident at the onset of labour. Thus the foetal environment is not influenced by an orgasm and therefore sexual abstinence is not necessary.

The influence of the hormone prostaglandin, produced in the prostate gland and concentrated in semen, was also linked to premature labour (Embrey, 1969; Karim, Trussell, Hillier, & Patel, 1969; Taylor & Langer, 1977). The above researchers ascribed this prematurity to female sexual orgasms and the absorption of prostaglandin during sexual intercourse. Recent research, however, opposed these findings (Kitzinger, 1979; Lamont, 1973; Perkins, 1979).

In overview, certain contra-indications for continued sexual activity during pregnancy are noted and call for the recommendation of sexual abstinence by the expectant couple. These include history of abortion, prematurity or miscarriage, labour and high risk pregnancies such as twins and diabetics (Sapire, 1985; Zlatnik & Burmeister, 1982). In addition, most researchers emphasized that sexual practices which must be avoided between expectant couples, include cunnilingus and
blowing air into the vagina. These could result in foetal air embolism (Grazioli, 1983; Holtzman, 1976; Javert, 1960; Lamont, 1973; Mann & Cunningham, 1972; Munjack & Oziel, 1979a).

Over and above this it is evident that the imposition of sexual restrictions on expectant couples could result in marital tension and stress. Several theorists advised that recommending sexual abstinence should be based on an individual evaluation of each couple with the inclusion of appropriate counselling (Beazley, Dewhurst & Gillespie, 1970; Grazioli, 1983; Holtzman, 1976; Mann & Cunningham, 1972; Masters & Johnson, 1966; Neubardt, 1973; Offerman-Zuckerberg, 1980; Slate, 1970). Sapire (1985) concluded that there is no evidence that sexual activity is harmful to the uncomplicated pregnancy.

**Psychological Variables**

It is not relevant here to discuss the extensive research on the emotional states of pregnant women. Suffice to state that some theorists suggested that the social context and environmental support system may influence a woman’s emotional and psychological experience of pregnancy (Cohen, 1966; Gordon & Gordon, 1959; Nuckolls, Cassel & Kaplan, 1972; Sherefsky & Yarrow, 1973; Turrini, 1980). Others associated the hormonal state of pregnant women with their psychological state (Chalmers, 1982; Dalton, 1971; Treadway, Kane, Jarreh-Zadeh & Lipton, 1969). More relevant to the present study is the
proposal by some theorists that a woman's experience of her body, her sexuality, as well as her marital relationship, could have a bearing on whether or not she experienced depression, anxiety and related emotional states during pregnancy (Beck, Siegel & Davidson, 1980).

Referring specifically to female sexuality during pregnancy, different researchers proposed that feelings of depression and anxiety generally contribute to diminished sexual desire in pregnant women (Calhoun et al., 1981; Erickson, 1965; Hall & Mohr, 1933; Hanford, 1968; Kane et al., 1967; Kaplan, 1974).

Following in this vein some researchers suggested that pregnant women may withdraw emotionally and physically from the external world, which could be manifested in increased introversion and passivity. This leads to decreased sexual contact with the expectant father (Caplan, 1960a, 1960b; Heiman, 1965; Leifer, 1980; Sherman & Denmark, 1978). Heiman (1965) and Caplan (1960a) suggested that a pregnant woman could project ambivalence to the foetus and to her sexual partner. This could have sexual implications for the expectant couple.

Although it is apparent that the psychological state of a pregnant woman may contribute to her feelings of sexuality, the impression is gained that psychological symptoms such as anxiety and depression are not necessarily negative and constitute a positive developmental stage (Gray, 1977; Leifer, 1977).
Femininity and the Female Role

The association of femininity with the acceptance of the female biological role also appears to influence women's sexuality during pregnancy and during the postnatal period.

In the early writings of Menninger (1943) psychological and physiological difficulties during pregnancy were associated with a woman's conflicts concerning her feminine biological role.

Landis et al. (1950) found that many women reported decreased feelings of femininity, social interest, contact and activity when pregnant. Simultaneously they exhibited more bodily concern.

Falicov (1973) opposed these findings and found that for many women motherhood represented a supreme test and proof of womanhood. This consequently brought a fuller and more mature acceptance of femininity to them. Some women felt that pregnancy aided them to shed traces of timidity in bodily functions and added intimacy to their marital relationship. This prompted them to abandon their girlishness and promoted less inhibited sexual relations. These findings disagreed with the early research of Klein, Potter and Dyk (1950), who found no proof that frigid women, during pregnancy compared to prior to pregnancy, were more sexually responsive.

Shainess (1966) emphasized that a female's acceptance of her femininity may aid her in adjusting to her pregnancy and

Later researchers pointed out that a woman's sex role according to social standards may during pregnancy influence her sexuality. Traditionally, female sex roles related sexual activity to biological reproduction, motherhood and femininity. Modern female sexual stereotypes do not necessarily relate biological reproduction to the social aspects on femininity. Moreover, modern society lacks clarity on feminine and masculine roles (Doering & Entwisle, 1975; Entwisle & Doering, 1981; Grazioli, 1983; Kitzinger, 1978). Many pregnant women, however, seem to consider pregnancy as unique affirmation of their femininity and consequently feel sexually fulfilled (Bing & Colman, 1977; Grazioli, 1983).

**Sexual Attitudes and Beliefs**

The issue was raised that a woman's general attitude about her sexuality has a bearing on her experience of her sexuality during pregnancy.

In their research, Masters and Johnson (1966) reported that pregnant women who valued their physical relations prior to pregnancy, exhibited a more positive sexual attitude during pregnancy and resumed sexual relations early in the postnatal period. In contrast, pregnant women with negative pre-pregnant sexual attitudes, showed decreased levels of coitus and used pregnancy as an excuse for a poor sexual relationship, and less coitus during pregnancy.
Similar results were reported by Falicov (1973). She found that women who scored high on a sexuality index, were less ambivalent about sexual relations and pregnancy. These women also expected fewer or milder changes in their sexuality. In contrast, women who scored low on the sexuality index reported less sexual enjoyment when pregnant.

Perkins (1982) found that most pregnant women showed decreased levels of sexual activity. However, women who were more positively sexually fulfilled, reported better and more rewarding sexual experiences while pregnant. Women who were negative about sex, and less experienced, showed the greatest decrease in sexual activity during pregnancy.

A woman's attitude and beliefs on sexuality also appear to influence her treatment of her sexuality during pregnancy. La Rossa (1979), by means of a qualitative analysis, explored the reasons given by expectant couples for decreased levels of sexual activity. He identified four types of explanations and found that 40% of couples gave biographical or sociocultural excuses such as 'sex is for procreation', or 'motherhood and sex conflict'. Twenty-two per cent gave physiological or anatomical reasons, while 28% stated that certain priorities such as 'fear of hurting the foetus', caused their decreased levels of sexual activity. Self-fulfillment, such as 'couples feel close, sex is unnecessary' was offered by 10% of the subjects as a reason for their decreased interest and participation in sexual activity (La Rossa, 1979, p. 123).
Later, Selby et al. (1980) proposed that the light in which sex is viewed, that is, as a means of procreation and/or enjoyment, influences female sexuality during pregnancy. They furthermore suggested that sexual changes during pregnancy have less of an impact on couples who view sex as part of their personalities and as a means of enjoyment.

To conclude, La Rossa (1979) underlined the necessity to investigate and explore possible reasons associated with female sexual behaviour during pregnancy. He commented that only then can progress be made in understanding as well as in developing some theory of female sexuality during pregnancy.

Cultural Beliefs and Attitudes

Since early days cultural attitudes and beliefs have influenced female sexuality during pregnancy. Several primitive cultures believe that women ought to refrain from sexual intercourse during pregnancy (Mead & Newton, 1967; Newton, 1963). Some such cultures also prohibit sexual intercourse and hunting and battles during a woman's pregnancy, in order to avoid evil befalling the mother-to-be. Often the expectant father is viewed as powerful and responsible and sexual ejaculation or sexual intercourse is viewed as a waste of power (Mead & Newton, 1967).

Ford and Beach (1951) collected data on 60 primitive tribes and found that of these societies, 21 almost entirely prohibited sexual relationships throughout a woman's pregnancy. Most of these groups practised polygamy and
expectant fathers turned to other sexual partners during the pregnancy process. Some societies perceive pregnancy as being similar to menstruation - unclean and sacred; and pregnant women are removed from their ordinary environment (Ford & Beach, 1951).

Furthermore, *magic-religious beliefs* often ban sexual relations with pregnant women. Limmer (1969) pointed out that sexuality during pregnancy is viewed as a forbidden act by some religious teachings. It appears that a belief prevails in some European countries, the East, and in primitive societies, that a man needs two women, one for pure sexual enjoyment and one for begetting children (Limmer, 1969).

More recently, Kitzinger (1978) referred to the belief in many primitive societies that pregnant women are like dying people. They are placed in a state of transition, hovering between life and death, during which time supernatural forces are at work. One of the most important rituals implemented during this transition phase is *sexual abstinence* (Kitzinger, 1978).

Taboos and old wives tales rooted in superstition also result in sexual abstinence during pregnancy (Offit, 1981; Wagner, 1977). It is often believed, that an erect penis can penetrate the membranes of the uterus and result in miscarriage, prematurity or stillbirth. Furthermore, semen is viewed as a contaminating factor which can result in deformity of the baby. In addition, some people fear that sexual intercourse will "flatten" or damage the foetus (Offit, 1981;
Wagner, 1977). Even in recent research, many pregnant women reported participating in less sexual activity for fear of harming the foetus (Holtzman, 1976).

In complete contrast to the above-mentioned beliefs, other cultures, such as New Guinea, advocate increased sexual activity between the expectant couple. Frequent sexual intercourse is believed to breed a healthy child. It is viewed as a period both exhausting and enjoyable for the couple. This serves a psychological function as both partners are included in the pregnancy experience (Colman, 1969; Colman & Colman, 1972).

Although many of the views are linked to primitive cultures, researchers found that up to the present time cultural beliefs, attitudes and values have exercised a major influence on sexual behaviour during pregnancy (Annon, 1974; Byrne & Byrne, 1977; Kaplan, 1974; Masters & Johnson, 1966; McCary, 1973).

Mention ought to be made of the ongoing debate, on viewing pregnancy as a sickness. Several theorists referred to the ambiguity which exists concerning a pregnant woman. On the one hand she is seen as strong, fertile, powerful, fulfilled, and her status is enhanced. On the other hand, she is depicted as vulnerable, frail and controlled by foreign forces such as hormones, and therefore should abstain from certain activities (Fabe & Winkler, 1979; Graham, 1976; Leifer, 1977; Moore, 1978; Weinberg, 1978). Much earlier
writings by Rosengren (1961) suggested that pregnant women often adopt a sick role in order to resolve this ambiguity.

Many researchers thought that specific subcultures may pressurise women into a sick role or semi-invalid stance (Goschen-Gottstein, 1966; Le Masters, 1957; McKinley, 1968; McKinley & McKinley, 1973; Munroe & Munroe, 1981; Trethowan & Conlon, 1965).

Delivery usually takes place in a hospital and pregnant women are referred to as patients and surrounded by medical and obstetrical care. This seems to contribute to their sickness status. It contradicts the popular cultural portrayal of a pregnant woman as being radiant, sensual, fulfilled, beautiful, and spiritual (Chalmers, 1984a; Wertz & Wertz, 1978).

Opposing the above-mentioned views, feminist theorists advocate natural childbirth, home deliveries and maternity care centres (Ahmed, 1981; Rich, 1973). Additionally recent guidelines have been reported emphasising that pregnancy is a normal life event (Oakley, 1979, 1980; Odent, 1985).

Motivation for Pregnancy: Planned or Unplanned

The motivation to fall pregnant, and whether the baby is planned or not, also appears to influence female sexuality during pregnancy.

Freud (1949) proposed that women fall pregnant to overcome a physical inadequacy, whereas Deutsch (1944, 1945), and Greenberg (1973) wrote that a woman's desire to express
tenderness, altruism and dependency may make her decide to have children. Some theorists stated that hormonal rhythms and a female's biological and sexual timetable can stimulate her to fall pregnant (Benedek, 1970; Kestenberg, 1956; Neugarten, 1968). The cultural influences and a woman's marital relationship appear to have great importance in her decision to fall pregnant (Buxbaum, 1979; Leifer, 1977).

With reference to the latter, Benedek (1970) proposed that women accept pregnancy better if it enhances their sexual and other relations with their partners. Much earlier, Conquest (1963) suggested that pregnancy is often used to solidify a marriage on the verge of divorce. Leifer (1977) again suggested that the motivation for pregnancy hinges on security issues. Dissatisfaction with a current lifestyle could motivate women to fall pregnant in an attempt to provide a new meaning to a marital relationship (Leifer, 1977). This implies subsequent changes to the marital relationship and female sexuality. Similarly, Gerdes, Ochse, Stander and Van Ede (1981) proposed that pregnancy is a measure of adult maturity and responsibility and often resolves the question of endurance of love in a marital relationship. It was also stated that women often want a child for natural gratification, continued personal development and a chance to enrich an already happy marital relationship (Leifer, 1977; Wenner, Cohen, Weingert, Kvarnes, Ohaneson & Fearing, 1969).

Planned pregnancies generally evoke more positive feelings towards the whole pregnancy experience (Grimm, 1967;
Grimm & Venet, 1966; Sherman, 1972). Reamy et al. (1982) associated sexual satisfaction during pregnancy with both partners being content about the woman’s pregnancy. Sapire (1985), stated that, whether pregnancy is viewed as being trapped, or as a financial burden and a responsibility, influences the sexual relationship of an expectant couple. Unplanned pregnancies often result in ambivalent feelings concerning the self, others and the baby (Breen, 1975; Caplan, 1961; Hall & Mohr, 1933; Nash, 1965). In addition, urgency to conceive, or the structuring of the conception process seems to greatly disrupt a couple’s sexual relationship (Scharff, 1983). In an early study of Bibring et al. (1961) some women desired to fall pregnant in order to try and externalize an existing sexual problem in their marital relationship.

From this discussion, it is clear that opposing perspectives exist which may influence a woman’s decision to fall pregnant and her subsequent experience of her pregnancy and sexuality.

Marital Relationship

Throughout the discussion on female sexuality and pregnancy, intermittent references have been made about the marital relationship.

Broderick (1975) and Lief (1976) proposed that sexual relations may form a core component of a marital bond. Any change in sexual activity in a marriage could be viewed as a violation or deviance of the marital game. This implies that
sexual changes which may accompany pregnancy could theoretically threaten a marriage, unless the expectant couple have acceptable reasons for such behaviour. Falicov (1973) suggested earlier, that physical causes for changed sexuality during pregnancy may be less stressful to the marital relationship, than situational causative factors.

Rothchild (1973) was of the opinion that sexual relations function as a protective rite against personal insecurities in a marital relationship. Theorist Udry (1974) in turn, emphasized that in Western cultures men are more likely to evaluate the quality of their marriage in terms of their sex lives. Consequently, sexual relations form a key feature of the marital situation. Gecas and Libby (1976) added that men in particular tend to view sexual activity as part of the symbolic interaction of a marriage. Therefore, the attitude towards, and the experience of, sexuality in a marital relationship seem to influence a couple's experience of pregnancy.

The study by Landis et al. (1950) found that those couples who exhibited a poor pre-pregnant marital relationship with poor sexual adjustment, reported improved sexual adjustment and marital relations during pregnancy. They also felt happier than those couples who experienced no changes in their sexuality during pregnancy.

In contrast, Hamilton (1955) and later Kumar et al. (1981) associated good pre-pregnant sexual interaction and marital adjustment with a more successful pregnancy.
experience. Scharff (1983) again indicated that despite a healthy marriage, pregnancy still tends to have an unconscious impact on the sexual life of expectant couples. Harriman (1983) verified that the marital sexual relationship may suffer most during pregnancy and that changes to female sexuality may be negatively perceived by an expectant couple.

Pregnancy preceded or quickly followed by marriage, could possibly influence the sexuality of the couple (Harriman, 1983). Caplan (1960a) noted that young expectant couples have no time to adjust fully sexually and therefore pregnancy and approaching parenthood often result in sexual conflicts and fears. Caplan (1960a) also noted that young pregnant women often tend to withdraw, focusing on the foetus and thus excluding the husband.

Frank et al. (1978) proposed an interesting theory, that women are the sexual gatekeepers in a marriage. This suggests that women control the sexual activity within their marriage and consequently during pregnancy as well. La Rossa (1979) verified this assumption. In his study, comparing men and women's reactions to pregnancy, women generally offered more reasons for their decreased sexuality. This suggests that they view themselves as the focal point of the sexual relationship in marriage. Similarly, the findings of Selby et al. (1980) proposed that the libido of women is the controlling influence on the sexual behaviour of pregnant couples.
Many researchers advocated realistic parenthood education and support in order to prepare future parents for both the negative and the positive changes in their marital relationship, and the transition from romantic love to maternal love during the pregnancy process (Grossman, 1980; Harriman, 1983; Jessner, 1974; Miller & Newman, 1980; Offit, 1981; Rossi, 1967; Sapire, 1985; Scharff, 1983). Moreover, Offit (1981) strongly advised adequate counselling for couples to support them in incorporating the baby, the symbol of their sexual union, into their marriage.

Parity and Age

There is little consensus of research findings about the influence of parity and a woman's age on her sexuality during pregnancy (Almgren et al. 1972; Baxter, 1974; Caplan, 1960a; Harriman, 1983; Kane et al. 1967; Sherefsky & Yarrow, 1973). Therefore, any future study of female sexuality and pregnancy should include information concerning the subjects age.

To conclude, it appears that a variety of factors could mar the sexual and marital union of an expectant couple. It is necessary to investigate possible causative factors for altered sexuality during pregnancy, in order to provide adequate counselling and support for the expectant couples. The researcher agrees with Israel and Rubin (1970), who emphasized that it is important not to weaken the sexual ties
of expectant couples so as to ensure that they 'still function as a unit after the birth of a child'.

Female Sexuality and the Postnatal Period

Few studies investigated female sexuality during the postnatal period. This seems surprising, as many women were interviewed after the delivery of the baby, yet were only questioned on their experiences during pregnancy. The early study of Landis et al. (1950), however, reported that 58% of the couples indicated that pregnancy had little effect on their postnatal sexuality. Approximately 20% felt it had a favourable influence. These couples showed good pre-pregnant sexual adjustment. In contrast, an equal number of husbands and wives (23%) felt that regardless of good pre-pregnant sexual relations, their sexual lives suffered and were affected in the postnatal period. Later, researchers Almgren et al. (1972), found a higher percentage (37.8%) of mothers with poor adjustment in the postnatal period.

In the postnatal period, several researchers offered divergent viewpoints when referring specifically to female sexual desire and interest. Masters and Johnson (1966) stated that female sexual desire and interest return sooner postnatally than actual sexual activity. Baxter (1974) found that the number of postnatal women who showed increased sexual interest in contrast to their pre-pregnant levels of sexual desire equalled those who showed less desire. The findings of
Tolor and Di Grazia (1976) and Kenny (1973) indicated that mothers experienced increased postnatal sexual interest.

There appears to be consensus among researchers on when postnatal sexual activity and intercourse are resumed. Several studies stated that the majority of couples reported a delay of between three and six months after the birth before starting sexual activity and intercourse again (Entwisle & Doering, 1981; Falicov, 1973; Kumar et al. 1981; La Rossa, 1979; Masters & Johnson, 1966; Scott & Thomson, 1956).

Interestingly Kumar et al. (1981) found that women with a history of sub-fertility (difficulty in conceiving) were less sexually active during the postnatal period than prior to pregnancy. This seems understandable, as they may have participated in increased sexual activity in an effort to conceive. Another interesting finding is the fact that some mothers reported decreased sexual enjoyment for up to one year after delivery of the baby.

Opposing these studies, Kenny (1973) found that the majority of mothers (75%) reported increased postnatal sexual activity and resumed sexual intercourse once the vaginal discharge had stopped, even before the six-week check-up (puerperium). Multiparous women, married longer who enjoyed breast-feeding, showed a greater increase in postnatal sexual activity than nulliparous women, married for a shorter period who did not breast-feed. In addition, women who felt positive
about breast-feeding viewed it as a perfectly effective contraceptive measure. This, however, is not supported by medical reports (Gerdes et al. 1981). Further, 18% of the women tested by Kenny (1973) felt that breast-feeding was a deterrent to sexual activity in the postnatal period. These findings were later verified by Tolor and Di Grazia (1976), but they speculated whether increased postnatal sexual interest and activity is due to a genuine recovery of the libidinal drive of women, or results from a need to please their husbands. Despite the increased level of oral sexual intercourse during pregnancy, the majority of couples continued using sexual techniques preferred prior to pregnancy. Thus, according to the researchers, the pivotal role which learned patterns of behaviour play in human sexuality is emphasized (Tolor & Di Grazia, 1976).

In the postnatal period, the experience of orgasms during sexual relations for women, appeared to be more difficult than prior to pregnancy. Two studies reported decreased intensity and duration of orgasms experienced by mothers in the postnatal period (Falicov, 1973; Masters & Johnson, 1966).

In conclusion, much has been written about whether postnatal women resume sexual intercourse soon after the birth of the baby, and if it equals their pre-pregnant sexual level.
Potential Influential Variables on
Postnatal Female Sexuality

The re-establishment of a couple's sexual relations is affected by a variety of factors. Many of these factors discussed earlier as potential influences on female sexuality during pregnancy, are relevant to postnatal female sexuality. To avoid repetition, however, only a few variables which may have an impact on female sexuality are discussed.

Physiological Variables and Symptoms

A variety of physiological concerns hampers a couple's postnatal sexual adjustment. These include pain often caused by an infected or painful episiotomy site, cuts and stitches, breast discomfort, bleeding, moniliasis and a hypoestrogenic state (Falicov, 1973; Gansberg & Mostel, 1985; Gruis, 1977; Hames, 1980; Kitzinger, 1970; Kumar et al. 1981; Reading, 1983).

Furthermore, many mothers associated poor sexual relations with the altered state of the vagina. Decreased or impaired vaginal lubrication, inefficient vasocongestion, varicose veins in the labia, tears in the blood vessel system of the vagina, bruised pelvic floor tissues, atrophy of the vaginal muscles, thinner vaginal walls and vaginal discharge, are some of the causative factors cited for loss of sexual spontaneity (Baxter, 1974; Falicov, 1973; Gansberg & Mostel, 1985; Kitzinger, 1970, 1980; Kumar et al. 1981; Masters & Johnson, 1966).
Fear of damaging the internal organs of the body also became an issue for some mothers interviewed by Masters and Johnson (1966), and this resulted in them experiencing decreased postnatal sexual activity.

Another common physiological state, fatigue seemed to limit postnatal sexual activity for many mothers (Falicov, 1973; Kumar et al. 1981; Landis et al. 1950; Masters & Johnson, 1966).

Kitzinger (1980) pointed out that a 'new' mother often denies or rejects her erotic sensations because of reduced energy. Barbach (1976) found that although some postnatal women reported more intense sexual orgasms, they often felt too tired to respond physically towards their husbands. She also associated the decline of oestrogen with decreased vaginal lubrication and fatigue, and stated that sexual arousal often takes longer for postnatal mothers. Additionally, women felt that their changed bodies were unattractive and affected their postnatal sexual relationships.

**Psychological Variables**

Postnatal depression appears to be the most common emotional disturbance which affects female sexuality (Hinton, 1985; Welburn, 1980; Yalom, Lunde, Moos & Hamburg, 1968).

The reported incidence of postnatal depression in studies of this nature ranged widely from as much as 80% to as little as 5% (Hamilton, 1955; Pitt, 1968, 1973). Furthermore it was
described as a minor state of confusion or a major trauma involving impaired thinking and diminished mental activity (Kane, Lipton & Ewing, 1969; Robin, 1962).

There seems to be little agreement in the literature for such depression and several explanations are given. Different investigators associated a dramatic reduction in oestrogen and progesterone post delivery, with postnatal depression (Bardwick, 1971; Breen, 1975; Treadway et al. 1969; Yalom et al. 1968). Bardwick (1971) confirmed the early findings of Treadway et al. (1969) that gonadal hormonal levels and decreased levels of norepinephrine (NE) (a chemical substance manufactured in the brain) may lead to postnatal disturbances of mood and increased depression. More recently, sodium loss in the urine of a 'new' mother, together with increased weight loss, have been associated with mood disturbances (Dennis & Blytheway, 1965; Stein, 1980; Stein, Milton & Bebbington, 1978).

Several researchers associated postnatal depression with the female role changes brought about during the pregnant and postnatal periods (Melges, 1968; Ostwald & Regan, 1970; Parlee, 1976; Rubin, 1965). Klatskin and Eron (1970) reported that primiparae who adjusted well in the postnatal period often exhibited little depression and showed acceptance of their maternal role when evaluated on the Thematic Apperception Test (TAT). In contrast, those who were depressed and rejected the female role adjusted poorly to their motherhood. Role changes often resulted in a period of
grieving manifested as postnatal depression (Parlee, 1976; Rubin, 1965), such as from being a career woman to becoming a mother and the feeling of being trapped in the foreign mothering role (Melges, 1968).

Societal and cultural expectations appear to be tied to the issue of mothering and the mother's emotional state. The prevalent social expectation that a mother must always be available to her newborn, seems to contribute to postnatal depression (Bibring, 1959; Deutsch, 1944, 1945; Kendall, Wainwright, Hailey & Shannon, 1976).

The lack of psychosocial assets and friends, shrinkage of kinship family, isolation, and absence of a husband through career commitments, appear to provoke further postnatal depression (Colman & Colman, 1972; Cruickshank, 1940; Foundeur, Fixen, Triebel & White, 1957; Melges, 1968; Paffenberger, Steinmetz, Pooler & Hyde, 1961). More recently, Chalmers (1984a) warned that a romanticised view of motherhood by Western women could stimulate inaccurate expectations in pregnant women. Moreover, inappropriate preparation and advance exploration of the mothering role could instigate postnatal psychological problems such as depression.

Another issue closely tied to the postnatal psychological state of a mother is the labour and delivery experience (Chalmers, 1984b; Colman & Colman, 1972). A woman's mental state may be influenced by whether labour is experienced as good or bad, as an assault on her body and sexuality. The physiological aftermath of enormous excitement during labour,
side effects of drugs taken during labour, lack of sleep, psychological stress and demands from the baby were related by Colman and Colman (1971, 1972) to emotional problems experienced by mothers. Asch and Rubin (1974) found that when a mother experienced delivery as an unrealistic sense of loss and separation, depression emerged. They also found that women who were delivered by Caesarean section exhibited postnatal depression. Chalmers (1984b) added that the type of delivery and whether medical intervention was seen as frightening or not, could influence the experience of labour and delivery.

Several other issues such as feeding problems, new responsibilities, unsupportive husband, lack of enjoyment of the newborn with guilt feelings associated with not enjoying the baby are linked to postnatal depression (Chalmers, 1982; Gordon & Gordon, 1967; Melges, 1968). The vast amount of related literature is not relevant to the parameters of this study.

In conclusion, some research reported that the presence of psychiatric symptoms are related to decreased postnatal sexual activity in 'new' mothers (Baxter, 1974; Jacobsen, Kaij & Nilsson, 1965, 1967; Nilsson & Almgren, 1970; Zilboorg, 1929). In contrast, recent research vaguely associated postnatal depression with reduced postnatal sexual activity (Kumar et al. 1981). Few researchers, however, clearly outlined a specific association between female sexuality, the postnatal period and psychological variables. In-depth future
research, is necessary to investigate these relationships further.

Marital Relationship

Issues on marital relationships and pregnancy discussed earlier, are also applicable to a woman's experience of her postnatal sexuality.

With the arrival of a child, a new dimension has to be incorporated into a marriage which could result not only in sexual changes for couples, but could also introduce financial and personal worries (Colman, 1969; Colman & Colman, 1972; Gurwitsch, 1964). Campbell wrote that "the arrival of a child is a happy event, but one that puts unanticipated strains on the marriage, both economic and psychological" (1975, p. 41).

Several researchers found that marital incompatibility and tension were often experienced by couples after the birth of the first child (Feldman, 1977; Le Masters, 1957, Olson & McCubbin 1983). Ryder (1973) suggested that poor communication, inadequate co-parenting and the added responsibility, could result in such a state. Tolor and Di Grazia (1976) pointed out that 'new' mothers may be so immersed in their babies that they tend to partially reject their partners and make them feel redundant.

In contrast, less tension may often be evident in couples where the 'new' mother still views her husband as an important part of her life and shares the baby with him. Earlier, Landis et al. (1950) found that couples who reported improved
postnatal sexual relations were more tolerant of one other. For such couples pregnancy had enhanced their understanding of their sexuality. In addition, they had been married for a reasonable period prior to the woman falling pregnant. According to Landis et al. (1950), these couples had established a sexual relationship prior to pregnancy and therefore coped better than couples who had a child soon after getting married.

**Labour and Delivery**

Another issue associated with postnatal female sexuality and female body image, was labour and delivery. The literature showed that different societies may react differently to labour and delivery which, in turn, could influence a pregnant woman's attitude toward herself. Several societies view birth as unclean, and labour and childbirth are not considered an integral part of society (Conquest, 1963; Mead & Newton, 1967). Other societies view birth as an achievement for the mother (Richardson & Guttmacher, 1967).

It was also suggested that sexually allied emotions may be aroused, for both men and women, at the time of delivery, as sexuality and childbirth share many similarities (Hilgard, 1949).

The earlier writings of Kinsey et al. (1953) revealed a number of physiological similarities between childbirth and the female sexual excitement phase, and orgasm. These were later categorised, and expounded on, by Masters and Johnson
(1966) and Newton (1973). According to them, the following similarities exist:

- breathing sounds;
- facial expressions;
- rhythmic contractions of the upper segment of the uterus;
- periodic contractions of the abdominal muscles;
- unusual muscular strength;
- slackening of sexual inhibitions;
- increased insensitivity to pain;
- restricted sensory perception;
- sudden return of sensory awareness upon completion of the sexual act or labour;
- forceful emotional reaction of satisfaction after completing labour.

Therefore, labour implies sexuality and the experience thereof can influence a couple's postnatal sexual relationship. Several researchers adhered to this association between female sexuality, labour and delivery and found that childbirth is often experienced as a peak sexual response, both physically and psychologically (Lamaze, 1970; Newton, 1973; Read, 1933, 1944; Sarrel & Sarrel, 1980). Many researchers stated that female sexual orgasm and delivery shared common physiological and psychological mechanisms (Baxter, 1974; Cramond, 1954; McCary & Donna, 1976; Scott & Thomson, 1956; Winget & Kapp, 1972). Baxter (1974) stated that physical mechanisms of uterine contractions are the
explanatory link between delivery and orgasm. McCary and Donna (1976) related the hormone oxytocin and consequent uterine contractions to female sexual orgasm and childbirth.

Birth complications and the length of labour are also linked to a woman's personality, her psychological make-up, and to the experience of sexual relations (Caldwell, 1958; Davids & De Vault, 1960; Eysenck, 1961; Watson, 1959; Winokur & Werboff, 1956). A short labour was found to correlate highly with active sexual behaviour of women prior to delivery and no sexual tension (Baxter, 1974; Kann, 1950; Lerner et al. 1967). Several studies reported corroborative evidence that birth difficulties, as well as a lengthy labour, correlated with experiencing orgasms shortly before delivery (Baxter, 1974; Brown, 1979; Cooper, 1969; McDonald, 1968).

Many researchers agreed that women who undergo a difficult labour often reject their femininity, feel inadequate as females and exhibit conflicts surrounding reproduction and motherhood (Almgren et al. 1972; Brown, 1979; Cooper, 1969; Davids, De Vault & Talmadge, 1961a; McDonald, 1968). All these researchers stated that psychogenically caused frigidity can result from birth difficulties.

The suggested interrelatedness of childbirth and female sexuality led several theorists to propose that childbirth and delivery should be treated with the utmost care and concern. It was pointed out that during a traditional delivery, the lithomy position is often preferred and the genital area is therefore usually blocked from a woman's self-view, while
being exposed to others such as physicians and nursing staff. In a woman's sexual development and sexual life, however, the genital area usually appears to be last to be uncovered and exposed. Insensitive handling of the delivery, especially if experienced by the mother as an emotional assault, can produce a negative impact on her self-image and her body image, with concomittant sexual problems (Barry, 1970; Kitzinger, 1970; Wertz & Wertz, 1978).

Colman and Colman commented that delivery may reflect a critical turning point in a woman's life, "an introspective state, a personal solution not conducive to share intimate details with co-operative strangers" (1971, p. 77).

Similar warnings were sounded by later theorist Chalmers (1982, 1984a, 1984b), who stressed that it is of paramount importance to handle a mother with the utmost care and sensitivity during childbirth. This will prevent psychological trauma and any possible damage to her dignity and her self-esteem.

Leboyer (1975) and Odent (1985) likewise felt that the physiology of birth should not be disrupted unnecessarily, and pointed out the importance of minimal disturbance between parents and their babies during the first minutes after delivery. Odent stressed that birth is also an inseparable part of a woman's emotional and sexual life, and "to disturb the part is to disturb the whole" (1985, p. 80).
Breast-feeding

A number of researchers agreed that breast-feeding forms an integral part of the reproductive cycle and female sexuality (Heiman, 1965; Masters & Johnson, 1966; Scharff, 1983; Uken, 1976). Both the reproductive cycle and sexuality share certain physiological and psychological reactions such as uterine contractions, nipple erection, and milk ejection. Furthermore, the hormone oxytocin is associated with the milk ejection reflex and with genital sensations and sexual intercourse (Heiman, 1965; Masters & Johnson, 1966; Uken, 1976).

An issue widely debated is a woman's choice between breast-feeding or bottle-feeding. Several theorists stated that this choice reflects a woman's psychosexual make-up and her female role acceptance (Adams, 1959; Deutsch, 1944, 1945; Kroger, 1962; Kroger & Freed, 1962). According to the early study of Adams (1959) women who choose to bottle-feed exhibit more psychosexual disturbances than those who breast-feed their babies.

Other issues, however, also seem to influence a mother's choice. According to Jessner (1974), many fathers object to their wives' breast-feeding as they feel the breasts are reserved for them alone. According to the researcher, this attitude often gives a mother the confidence that despite being a mother she is still attractive to her husband. In turn, 16% of the mothers in Kenny's (1973) study stated that they chose to bottle-feed, as breast-feeding excluded their
husbands. Some added that it interfered with their sexual relations. Breen (1975) also linked body image to breast-feeding and female sexuality. She stated that female body image is not limited to the internal female sexual organs, and added that in recent society, breasts, more than the womb or vagina, symbolize femininity in its erotic aspects. According to her, this belief often leads mothers to refuse to breast-feed their babies as the breasts are only reserved for erotic stimulation and not for the maternal function. It appears that this attitude may influence postnatal female sexual activity. Newton & Newton (1972) stated that women with a distaste for sexuality and nudity often preferred artificial methods of feeding their babies.

It is also widely debated whether, or not, breast-feeding prevents a mother's body from returning to a pre-pregnant state sooner. In the study of Kenny (1973) 1% of the mothers chose breast-feeding as they thought it improved their figures, yet the majority (60%) chose it because it made them feel closer to the baby. Many theorists indicated that breast-feeding is psychologically and physiologically advantageous for a mother's wellbeing and consequently her sexuality (Golanty & Harris, 1982; Kitzinger, 1980; Masters & Johnson, 1966). Many researchers, however, viewed it as detrimental to a woman's sexual satisfaction in the postnatal period, and proposed that a woman's pre-pregnant body and sexuality only returns once the baby is weaned (Almgren et al.
Another issue considered in the literature concerns whether a lactating mother experiences changes in her sexuality during breast-feeding, and whether, she experiences sexual satisfaction during lactation. Several researchers associated decreased vaginal lubrication with poor postnatal sexual relations as well as difficulty achieving sexual orgasms during breast-feeding (Brown, 1979; Gansberg & Mostel, 1985). According to Brown (1979), lactating mothers exhibit low levels of oestrogen which may contribute to low physiological sexual responses in the puerperium. He stated that oestrogen and not necessarily oxytocin, is essential for the vitality of tissue in sexual encounters. Later researchers, Gansberg and Mostel (1985) found that elevated levels of prolactin present in lactating mothers result in decreased vaginal lubrication, which causes sexual discomfort. Additionally, fatigue, engorged and leaking breasts, infections, and abscesses made them disinterested in sexual relations.

Referring to sexual satisfaction and breast-feeding a positive correlation is indicated between the milk ejection reflex, a woman's degree of sexual arousal and her experience of orgasms (Masters & Johnson, 1966; Rubin, 1970). In the study of Masters and Johnson (1966), three women experienced orgasms during breast-feeding, and the theorists stated that the hormone oxytocin, which releases milk during breast-
feeding, also regulates female sexual orgasms. Rubin (1970) agreed, but added that lactating mothers may experience orgasms through the suckling of the baby. While some feel guilty and embarrassed about this, others find it difficult to switch to their husbands sexually.

Later researchers verified that breast-feeding is often linked to sexual arousal and satisfaction of mothers (Gansberg & Mostel, 1985; Scharff, 1983). Gansberg & Mostel (1985) suggested that this could result in overall avoidance of sexual intercourse.

This issue was described psychoanalytically as the "substitution of a love object" by the mother to the exclusion of the father (Freud, 1949). According to Kitzinger (1980) some women feel that their bodies belong to their babies in the puerperium and reject sexual body contact with their husbands. Moreover, some women may resent the inability of their husbands to share in breast-feeding and therefore reject the husbands even more.

Successful breast-feeding is dependent on several factors. Sears, Maccoby and Levin (1957) noted that successful breast-feeding is often linked to women who are more tolerant and liberated in sexual matters such as masturbation, and accept their mothering role. Such women also relate positively towards their babies and husbands in the puerperium (Klein et al. 1950; Newton & Newton, 1972). Earlier, Hamilton (1955) established that mothers who successfully breast-feed their babies exhibit positive sexual
encounters prior to labour. They especially show a need for their husbands during labour and childbirth.

Opinions differed on whether women who breast-feed resumed postnatal sexual activity sooner than those who never breast-fed. Masters and Johnson (1966), and much later Kolodny, Masters and Johnson (1979) confirmed that nursing mothers reported increased levels of sexual tension and participated earlier in sexual activities in the puerperium than non-lactating mothers. These findings were also noted by Falicov (1973) who added that some mothers experience sexual arousal to the point of orgasm whilst breast-feeding. Several researchers, however, failed to establish a link between breast-feeding and earlier return of sexuality for postnatal women (Jacobsen et al. 1965; Kenny, 1973; Kumar et al. 1981; Nilsson & Almgren, 1970).

In recent research, Hames (1980) found that breast changes in conjunction with breast-feeding inhibited normal sexual activity for 23.8% of postnatal mothers. In support of the findings of Kitzinger (1980), breast tenderness and milk leakage were pinpointed as causative factors for decreased sexual activity. Hames (1980) also interviewed the 'new' fathers and 25.4% indicated that breast leakage inhibited their sexual relationship with their wives. The majority (59.9%) felt that nursing did not influence their sexual relationships at all.

An interesting observation of Newton (1971) was that many American lactating mothers experience conflicts about resuming
sexual activity six weeks postnatally. According to some, the ejection of milk during sexual intercourse may rob the infant of nutrition. Sapire (1985) suggested that all couples should be reassured that milk ejection is natural during postnatal sexual intercourse. Fear of conception whilst breast-feeding also hampers sexual relations for lactating mothers, as breast-feeding is not a reliable method of contraception (Kitzinger, 1980).

To conclude, breast-feeding is inextricably linked to a woman's body image and her sexuality. It is still not clear whether a lactating mother experiences increased postnatal sexual activities, and if breast-feeding retards the commencement of sexual activities.

**Expectant Fatherhood**

In the literature it emerged that the expectant father, or partner, forms an intricate and undeniable part of the interacting system of the expectant couple.

Several theorists commented that although the ability to conceive belongs to women, it also affects the partner and he has to make several marital and psychological adjustments (Barnhill, Rubenstein & Rocklin, 1979; Benedek, 1970; Colman & Colman, 1971, 1972; Holtzman, 1976; Hott, 1976; Sherman, 1972).

The present study also included some expectant fathers, and it seems relevant to review some of the issues which may
influence a man’s experience of pregnancy and, more specifically, male sexuality.

Culture and Society

Colman and Colman (1971) pointed out that limited cultural guidelines are laid down for expectant fathers, except in more primitive cultures, and from a traditional point of view, parenthood is largely synonymous with mothering. In accordance with the theory of Mahler et al., (1975), the father is often viewed as important only in the conception process and then again during the separation-individuation phase between the mother and the child. Colman & Colman (1971) made similar comments a few years earlier.

A number of theorists discovered that an expectant father could exhibit envy, jealousy, and even resentment towards his partner, especially if he is not integrally involved in the pregnancy. This is referred to as Zeus jealousy, named after the Greek god who swallowed his wife in order to bear a child (Bachofen, 1948; Friedman, 1952; Horney, 1967; Mead, 1935, 1974).

The role of the expectant father is ritualised in some countries and the father-to-be acts out part of the parturient role. This is referred to as the ‘coulade syndrome’ (French word meaning ‘to brood’ or ‘to hatch’) (Colman & Colman, 1971). According to some theorists this helps the father-to-be in a psychological manner to adjust to his partner’s pregnancy. It acknowledges his status and includes him in the
process of pregnancy. It also establishes a symbolic bond between the father and the future child (Colman & Colman, 1971, 1972; Suttie, 1935).

It was suggested that the couvade syndrome may relieve feelings of resentment and redundancy. In present times, however, less cultural rituals are evident and therefore, more specified and practical involvement of the father-to-be appears to be necessary.

**Male Symptomatology**

Researchers agree that future fathers may exhibit psychological and physiological symptoms during their partner's pregnancy (Asch & Rubin, 1974; Colman & Colman, 1971). These symptoms can be manifested physically as nausea and vomiting, or be symbolic in the form of a distended stomach, psychological depression, anxiety and jealousy. Recently, Herzog (1982) agreed that many fathers in his study showed increased symptomatology during their wives' pregnancy. These symptoms included anxiety, feelings of restlessness and jealousy and led to decreased levels of sexual activity.

According to several researchers these symptoms tend to reduce the intrapsychic tension of imminent fatherhood (Freeman, 1951; Gerzi & Berman, 1981; Jarvis, 1962; Towne & Afterman, 1955). Much earlier, Zilboorg (1931) associated depression and jealousy of expectant fathers with revival of childhood experiences such as sibling rivalry and guilt.
Psychotic behaviour and psychopathic tendencies were also found to be related to imminent fatherhood (Curtis, 1955; Ginath, 1974; Wainwright, 1966).


Therefore, it is evident that whatever symptomatology the father-to-be experiences during his wife's pregnancy, will have a bearing on their sexual relationship.

Role Changes

According to several theorists, impending paternity may provoke an identity crisis. It could involve role changes and revival of childhood memories, conflicts between femininity and masculinity, and reassessment of relationships (Colman, 1969; Colman & Colman, 1971, 1972; Soule, Stanley & Copans, 1979).

As a result of the pregnant woman's increased need for support, the father-to-be may be called upon to fulfill duties related to the mothering role (Ballou, 1978a; Greenberg & Brenner, 1977; Scharff, 1983; Trethowan & Conlon, 1965; Zilboorg, 1929). This precipitates the evaluation of the feminine side of a man, with subsequent changes to the sexual and marital relationship (Ballou, 1978a; Colman & Colman,
Masters and Johnson (1966) found that, as a result of role changes and the stresses involved in the pregnancy process 18 out of 71 husbands engaged in extra-marital affairs during their wives' pregnancy. Colman and Colman (1971) confirmed this tendency. Sherefsky (1973), however, related expectant fathers' extra-marital affairs to poor marital adjustment. Another cause for infidelity may be an unplanned pregnancy while a couple is still trying to establish themselves as a unit emotionally, financially, socially and sexually. Holtzman (1976) added that fear of harming the foetus during sexual intercourse may also result in expectant fathers seeking other sexual outlets.

Reports of sexually deviant behaviour on the part of expectant fathers have been linked to the fact that they have to adjust to the motherly figure of their pregnant wives, as well as to increased economic demands and responsibilities (Hartman & Nicolay, 1966). Ross and Chedrak (1968) stated that sexual deviancy exhibited by fathers-to-be may be a regressive immature adjustment reaction or a type of masculine facade resulting from the stresses faced during pregnancy.

More recently, Gray (1977) expressed the view that as women enter the career world, bringing money into the family, men may be more pressurized to partake in childrearing causing
an added burden. This concern was also expressed by Gerdes et al. (1981).

All these changes suggest a reassessment of a man’s own sexual identity and sexual activity within the marital relationship.

**Female Pregnant Body**

Another issue associated with altered male sexuality is the physiological changes apparent during pregnancy.

In a study by Masters and Johnson (1966), some men found the pregnant body objectionable with subsequent diminished sexual desire towards their wives. Colman and Colman (1971) pointed out that a pregnant woman’s ever-changing shape may result in sexual deprivation for a man. In the study of Holtzman (1976), 12% of the husbands reported decreased levels of sexual desire and activity, and felt restricted in sexual activity by the ungainly size of their pregnant wives.

In a more recent study, husbands exhibited mixed feelings about the pregnant body (Osofsky, 1982). They exhibited warmth and tenderness toward their pregnant partners, yet at times they tended to view the body as misshapen and ugly and also indulged in sexual fantasies concerning affairs with other women. Some men reported losing an erection and a degree of impotence for the first time in their lives, and others experienced increased arousal.

Theorists Colman and Colman (1971) commented that American men tend to like their sex idols to have huge
breasts, however they expect their wives to portray less conspicuous sexual characteristics. Therefore, husbands may feel less sexually interested in their wives during pregnancy because they are so different physically from the ones they married. Furthermore, practical physical problems arise, which necessitate experimentation with new sexual positions and other ways of sexual contact such as hand and oral caresses. Inventiveness may be resisted for fear of hurting the baby, or because of an unfamiliarity of the wife's body. Colman and Colman (1972) suggested that if a future father becomes involved in the pregnancy in a physical manner such as by touching his wife's stomach and experiencing the living foetus, he will recognise that his wife's changing body is vital and not just ungainly fat. Through such involvement, a father can be acknowledged as being an integral part of the pregnancy (Colman & Colman, 1971,1972).

Sexual Attitudes and Beliefs

An interesting aspect called the "madonna complex" appears to influence male sexuality during pregnancy and the postnatal period. Sarrel and Sarrel (1980) described the "madonna complex" as a belief that it is necessary to keep sexuality and motherhood in two separate categories. A man who suffers from this complex exhibits a strong internal disapproval of the thought of sexual relations with his own mother. Therefore, once his partner falls pregnant he sees her as a mother and not as a sexual partner or wife. Thus the
maternal role of a mother comes into conflict with sexual gratification. Additionally, such men fear that sexual relations will taint the 'madonna image' or be an imposition on the delicate condition of their pregnant wives. Consequently, sexual avoidance results (Falicov, 1973; Gansberg & Mostel, 1985; Levine & Barbach, 1983; Offit, 1981, Osofsky, 1982; Sapire, 1985).

Osofsky (1982) found that incest taboos evoke images of maternal figures as being sacred, and this detracts from eroticism for many men. Yet, few men reported feelings of attraction towards the obvious maternal qualities of their wives' pregnant bodies. Offit (1981) stated that some expectant fathers feared castration if sexual intercourse is attempted. On the basis of this discussion it appears that the sexual attitudes and beliefs which men may hold about the maternal image could have a serious effect on their sexual interaction with their wives.

Sexual Abstinence

Masters and Johnson (1966) reported that sexual abstinence on medical recommendation obviously results in decreased sexual activities for expectant couples. Although some pregnant women in their study were advised to relieve their husbands sexually through mutual masturbation, a great majority of these men questioned the validity of sexual abstinence during pregnancy.
More recently, Offit (1981) said that sexual abstinence may be used as a convenient way to bypass practical and emotional obstacles created by the wives' pregnancy. This may result in increased sexual desire for fathers during the postnatal period.

Sexually deviant behaviour of expectant fathers is linked to sexual abstinence during pregnancy. Hartman and Nicolay (1966) examined data on 91 married men arrested during the period of their wives' first pregnancy. The reasons for the arrests were mostly sexual offences, namely, exhibitionism, pedophilia, rape, homosexual acts, transvestism and obscene telephone calls. Sexual deprivation seems to be the cause of this kind of behaviour.

Later, Osofsky (1982) found that homosexual activity by expectant fathers resulted from feelings of sexual inadequacy experienced during their wives' pregnancy. Husbands sometimes reported loss of erection during sexual relations with their wives, or an inability to handle increased sexual demands made on them by their pregnant wives.

Sapire (1985) postulated that prolonged sexual abstinence by expectant fathers could result in premature ejaculation or erectile impairment. Additionally, this can be compounded by anxiety about sexual performance and result in a sexual dysfunction.

**Presence of the Foetus**

A most interesting assumption by Congdon (1970) and later confirmed by Falicov (1973), is the awareness of a third party
in the love relationship of a couple after 'quickening'. This may result in decreased sexual activity. According to Levine and Barbach (1983) expectant fathers could feel restricted and less spontaneous in their sexuality once the baby moves. The presence of the foetus may lead to a sexual relationship becoming more formalized and protective than sexual (Levine & Barbach, 1983).

**Labour, Delivery and Breast-feeding**

All the issues discussed above may influence the sexual relationship of couples during the postnatal period.

Several theorists commented that if men participate in delivery and labour as active supporters and comforters, they exhibit increased understanding, both sexually and spiritually during the postnatal period (Colman & Colman, 1971, 1972; Fein, 1974). Ballou (1978a) wrote that labour causes a husband to feel anxious about possible damage to his wife's body, with subsequent repercussions on the couple's sexual relationship. Some women, studied by Abse, Nash and Louden (1974) preferred to exclude their husbands from the child's birth because they felt embarrassed and unattractive during labour.

Breast-feeding is also viewed as a possible cause of sexual problems between a husband and wife. According to Munjack and Oziel (1979a) a new father could be resentful as he cannot share in the feeding of the baby. Furthermore, lactation with concurrent breast tenderness and retention of
body fat could reduce the sexual desires husband's feel toward their wives.

Falicov (1973) found that a father's attitude toward postnatal sexual activity greatly influenced the timing and commencement of the sexual relationship. Other studies found that fathers often felt partially excluded as a result of the arrival of a baby and suggested that this could have a bearing on the re-establishment of the sexual relationship soon after delivery (Levine & Barbach, 1983; Munjack & Oziel, 1979a).

Bardwick and Behrman (1967), and earlier Winnicott (1965), hypothesized that the presence of a baby tends to influence the parent's sexual relationship and alters their life style dramatically. It is difficult for the mother to think of herself as being sexual and sensual, while she is preoccupied with the baby (Barbach, 1976). Furthermore, according to Barbach (1976) many mothers' erotic dreams may be the only reminder that sexuality still exists, and they could have difficulty adjusting their erotic needs to being a mother. Winnicott spoke of "the primary maternal preoccupation; namely that a mother wanted to respond to her baby's needs immediately whether or not it influenced her sexual relationship with her husband" (Winnicott, 1965; p. 12).

It was also found that expectant couples who communicated freely, experienced growth during pregnancy and the postnatal period (Colman & Colman, 1971). Moreover, fathers who accommodated their pregnant wives' changing physiology and
emotions, stated that their sexual relationships were enhanced through the pregnancy.

Sufficient evidence is thus available to conclude that the pregnancy experience has an impact on male sexuality and consequently also influences female sexuality. It was also proposed by Falicov (1973) that it is highly unlikely that hormonal factors play a part in the make-up of the expectant father. This suggests that other psychological factors are involved in the interaction of the expectant couple which may result in changes to their sexual relationship.

Overview, Criticism and Recommendations

It is apparent from the previous discussion that a division exists between the followers of the hormonal, intrapsychic, cultural and social etiologies on female sexuality during pregnancy and the postnatal period.

Despite various theoretical approaches, research findings generally agreed that some sort of relationship is evident between a couple's experience of pregnancy and their sexual and marital relationship. Many of these studies are limited in generalizability and comparability due to several flaws:

Various Research Methods such as interviews, conventional inventories, psychological tests and ad hoc questionnaires, used in these studies limit comparability of findings (Coppen, 1959; Cramond, 1954; Davids et al. 1961b; Hetzel, Bruer, Poidevin, 1961). Owing to the sparsity of suitable questionnaires or interview
schedules on female sexuality and pregnancy, many investigators developed their own instrumentation. A similar limitation in the South African context led to the present study relying on an American questionnaire specifically designed for assessment of female sexuality during pregnancy (Reamy et al., 1982). This allows for the comparison of research findings. In addition, the structure of the research interview was drawn from a variety of sources in the literature. This, however, will be discussed at a later stage.

Retrospective Nature of Research A great deal of retrospective data was used in the research examining pregnancy and female sexuality (Falicov, 1973; Holtzman, 1976; Kumar et al., 1981; Masters & Johnson, 1966). Although in research of this nature the reliability of the research findings can be questioned, it seems virtually impossible, if not impractical to obtain a pre-pregnant baseline. A certain amount of retrospection is therefore necessary. Some researchers suggested that the period of recall must be limited in order to lessen the possible bias introduced by a retrospective approach. In addition, the subject's emotional state, physical disposition and forgetfulness must be assessed (Williams et al., 1975). In order to make comparisons with the present day research findings, it was also necessary to ascertain whether or not the period of recall reflected a typical period in the person's life (McCauley & Ehrhardt,
1976). Entwisle and Doering (1981) suggested that accuracy of memory was questionable if the period of recall involves a traumatic event such as labour, or if subjects had to recall a long time back. Opposing this viewpoint is the opinion that retrospection need not necessarily be negative, as many people may fully understand and appreciate events in retrospect. In the light of the nature of the present study, the researcher used retrospective data to ascertain a pre-pregnant sexuality baseline of subjects. Efforts were made to restrict the time lapse between the recall of events and the testing of subjects.

**Longitudinal vs Cross-Sectional Studies** Controversy exists as to which research design is the most suitable for sexuality and pregnancy research. In favour of a longitudinal approach, Calhoun et al. (1981) proposed that this design allows for intra-subject comparison and the evolution of individual patterns of behaviour over a period of time. According to them, the transference effect due to retesting can be avoided through the use of different test forms. However, in practice this is difficult as few tests are available on sexuality. Additionally, a longitudinal approach in a study of this nature may be too time-consuming, expensive and may be viewed as an invasion of privacy. Continual questioning on sensitive and private issues such as sexuality could also cause subjects to withdraw from the study. As the
research continues the possibility of an increased dropout rate has to be taken into account.

In favour of cross-sectional studies on female sexuality, Ballou (1978a, 1978b), as well as Holtzman (1976), pointed out that this research design prevents the possibility of the transference effect. Furthermore, the privacy of subjects is then only invaded on one testing occasion. Some researchers recommended the composition of different groups, which requires the careful controlling of variables such as age, parity, stage of pregnancy, marital status, medical history, intellectual abilities and social status (Morris, 1975; Tolor & Di Grazia, 1976). Holtzman (1976) added that cross-sectional studies need not be problematic if researchers acknowledge that their findings are restricted and are not representative of an entire population.

Bearing in mind the evaluation of various research designs, the present study included both cross-sectional and longitudinal research groups as well as a control group. It was pointed out, however, in research by La Rossa (1979), that whether tested on a longitudinal basis or on a cross-sectional basis, pregnant women do not differ. Research on sexuality is usually seen as private and confidential. It is debatable whether more reliable information will be found if subjects are interviewed longitudinally. Over a period of time a researcher may
be able to establish rapport. On the other hand, subjects may be willing to give reliable data on their sexuality on one occasion only and prefer no further involvement.

Sample Size Many studies on female sexuality and pregnancy were limited in their generalizability because of small sample sizes and inappropriate selection methods (Grimm, 1961, 1967; McDonald, 1968). Owing to the nature of such studies, it seems unavoidable that researchers rely on volunteers, which often limits sample sizes. It is also questionable whether or not people who volunteer for sexuality research form a truly representative group. Limited sample size is a problem, especially with a longitudinal design. According to some researchers in this area, subjects volunteer initially as a novelty, but with increased involvement over time withdraw. Consequently the sample size diminishes (Grimm, 1967; McDonald, 1968). Interestingly, Holtzman (1976), pointed out that in a study of pregnant women it is practical to limit a sample using a longitudinal approach, in order to obtain a thorough and reliable picture of the entire pregnancy process.

Descriptive vs. Experimental Research Some research on female sexuality and pregnancy tended to be descriptive and analytical. A need for experimental and statistically refined data was evident. Despite this, it was found that it is difficult to restrict sexual matters purely to
scaleable and statistical measures (Brady & Levitt, 1965). Some form of qualitative analysis therefore seems warranted. The present research evaluated female sexuality and partially, female body image during pregnancy by means of rating scales. Attention, was also given to a projective assessment of female body image as well as to informal comments made by subjects during the interview. It is believed that this may shed additional light on the issue of female sexuality.

It is also true that few studies focused on female sexuality and body image during the pregnancy period. Few included a structured or an in-depth evaluation of possible factors relating to female sexual desire during pregnancy. Even though some researchers referred to clusters of physiological, psychological and social factors such as which may influence female sexuality during pregnancy, no particular variable was emphasized and thoroughly investigated (Wolkind & Zajicek, 1978; Zajicek, 1976). Studies appeared to be wide ranging, covering broad spectrums of topics and variables.

The present study isolated female body image as a possible influential factor on female sexuality during pregnancy. As seen from the discussion in Chapter Two, these two variables were interrelated. Therefore an evaluation of body image may shed some light on a woman's experience of pregnancy. Brief attention was also given to other factors
which may influence the highly individualistic and variable experience of pregnancy.

In conclusion, little congruity exists between researchers on female sexuality during pregnancy. In addition, several limitations restrict the generalizability of research findings. Rather than the researcher being overwhelmed by the problems in studying sexuality, future in-depth hypothesis evoking and experimental research is justified. Progress in this field of study may become evident if possible explanations are sought for female sexual behaviour during pregnancy. This could add to the social psychology of sexuality, and consequently be useful in counselling of future parents.
CHAPTER 5

FEMALE BODY IMAGE DURING PREGNANCY AND THE POSTNATAL PERIOD

The writings on female body image generally characterise the intricate nature of a woman's perception of her body and as pointed out earlier, major bodily changes accompany the pregnancy process (Chapter 3). Up to the present day, however, only isolated investigations have dealt with a woman's psychological experience of her body during pregnancy and concomitant variables.

For easy reference this chapter will be divided into six sections. The first section deals with the development of the concept body image and a variety of definitions. Thereafter limited attention is given to some general features associated with female body image. How women feel about their bodies prior to conception may have some bearing on how they approach and experience the pregnancy process. This is followed by the third section, which discusses isolated studies of female body image and related issues during pregnancy and the postnatal period. Most relevant to the present study, section four evaluates studies on female body image in association with female sexuality during pregnancy and the postnatal period. The fifth section outlines some suggested variables which may influence a woman's experience of her body during pregnancy. As discussed earlier, many of the factors that could potentially influence female sexuality correspond with
suggested factors which may influence female body image during pregnancy. This section, therefore, only reviews a few of these factors. Finally, the general conclusion critically appraises research on female body image during pregnancy.

Defining Body Image

Fisher and Cleveland (1958a) thoroughly reviewed the early viewpoints and the development of the concept body image. Therefore only limited referral is made to the work of the early theorists which influenced the development and the definition of the concept.

Many of the early writers proposed that the body serves as a spatial reference point and develops both internally and externally through kinetic cues. Around these cues individuals organise their perception, behaviour and relations to the external world (Bonnier, 1905; Head, 1920; Werner, 1948). Further evidence concerning this viewpoint was published by several researchers (Benton, 1955; Benton, Hutcheon & Seymour, 1951; Critchley, 1953; Gerstmann, 1924; Stanton, 1954; Strauss, 1939; Tausk, 1933; Teitelbaum, 1941).

Schilder (1935) said that body image develops through an integration of internal and environmental cues. This suggests a constant interaction between the self (body) and the world. In his definition of body image he proposed that it represents a mental picture of the appearance of the body and forms a key factor in the way in which a person reacts to the environment. Within this interaction it is difficult to separate the perceiver and the object being perceived. Later theorists
suggested that other issues, such as the ego and self concept, may influence body image development and the definition thereof (Fisher & Cleveland, 1958a; Gray, 1977; Zion, 1965).

Several theorists further proposed that although body image appears flexible and can be altered constantly by new environmental feedback, people strive to maintain a constant body image (Merleau-Ponty, 1945; Schilder, 1935; Shontz, 1969). In this regard they pointed out that body image changes could result in feelings of vulnerability. Rogers (1947) postulated that body image is basic to a person's knowledge of reality and major changes in body image may result in increased tension levels. Hilgard (1949) added that the strangeness and uncertainty of the new state changes the perception of the body. This may result in anxiety. Furthermore, an individual would rather distort reality than deny a loss i.e. amputation of a body part, or a change of body image (Critchley, 1953; Haber, 1954; Lhermite, 1935; Traub & Orback, 1964). Referring to the present research on body image during pregnancy, it seemed interesting to consider whether or not the physical changes accompanying pregnancy are perceived by women as threatening to their existing body image.

Fisher and Cleveland (1958a), and later Cleveland (1960), pointed out that many of the early theorists generally interwove the sensory visualization of the body with body image. According to them no clear definition of body image was evident. This makes the assessment of body image
difficult. They proposed that peoples' perception of their bodies influences their perception of themselves, as well as their attitudes toward the external world. They defined body image as the experience of the body as a physical entity in space, as well as a reflection of an inner personality structure. After extensive research on body perception, they proposed that the view of an own body boundary is a fundamental aspect of a person's body image. According to them the assessment of this perception results in gaining information concerning peoples' inner feelings and attitudes towards their bodies. Therefore the body boundary functions as a representation of the internal body image which people associate with themselves (Fisher & Cleveland, 1958a). Within this framework Fisher and Cleveland (1958a) developed a system to assess body boundaries with subsequent information on the body image of an individual. The present study assessed body image within the parameters of the suggested viewpoint of Fisher & Cleveland (1958a). This, however, will be discussed in more depth at a later stage.

Following on the work of Fisher and Cleveland (1958a) which considered body image as determined by inner forces rather than actual bodily characteristics and physique, several other theorists viewed body image as the integration of physical attributes together with feedback from the environment (Burns, 1979; Iffrig, 1972; Kolb, 1959). Kolb (1959) proposed that body image includes the surface emotions and personality reactions of people in relation to their
bodies in the external world. Later Iffrig (1972) stated that body image portrayed the total reflection of peoples' feelings about themselves. This involves an assessment of physical attributes, needs, and feedback from the environment. Similarly, Askevold (1975) viewed body image as part of a person's relationship with the environment as well as the inner somatic self. Like Schilder (1935), Askevold (1975) referred to body image as a 'Gestalt' concept, but added that great confusion surrounds its real meaning in that many factors may influence body image development.

Closely linked to the definition of Iffrig (1972), researcher Burns defined body image as the "image a person has of himself as a physical being [it involves] estimations and evaluations of the physical apparatus in terms of societal norms and feedback from others [and portrays] the evaluative picture of the self" (1979, p. 150). More recently, Lake also referred to physical attributes in his definition of body image, namely, "the way in which a person evaluates his overall physical resources can be called the body image" (1981, p. 45).

Over and above the perceptual dimension of body image, some theorists emphasized the attitudinal dimension of body image (Blaesing & Blockhaus, 1972; Traub & Orback, 1964). They stated that self-conception could influence body image.

Somewhat later, Gray (1977) emphasized that body image becomes part of the self-concept - who and what you are. The body therefore serves as a screen through which external
information is received, as well as a vehicle with which to relate to the external world.

To conclude, many definitions are presented in the literature, each representing a specific facet of body image. Additionally, it seems that body image can be determined by body attributes, reactions to the environment, attitudes and many more factors. However, the aim of the present study was to concentrate on the perceptual aspects of body image and to assess body image through the physiological changes which accompany pregnancy. Consideration was also given to the subjective significance of the body for pregnant women. To try and achieve this, body image was viewed as being part of the inner personality structure of a person, as reflected in the perception of the body and body boundaries within space (Fisher & Cleveland, 1958a). The present study also adhered to the definition of Gray outlined in her research, namely, that body image is "the unconsciously held picture of the body; where it begins and ends, and how it moves" (1977, p. 12). Both the physiological and psychological dimensions of body image are acknowledged with this definition. The above definition of body image seemed appropriate as the present study also included the assessment of female sexuality, which partially implies a physical dimension.
Female Body Image: General

Prior to a more in-depth discussion of research dealing specifically with female body image during pregnancy, it seems relevant to note some findings regarding female body image in general. This may shed some light on whether women enter into pregnancy with certain inherent characteristics about their bodies. Harmon emphasized the individualistic nature of female body image by stating that "how women feel about their bodies and about others' reactions to their bodies is one of the most confusing aspects of current feminist thought" (1973, p. 88).

Several researchers closely associated a woman's experience of her body with her biological role and capacity of bearing a child (Fisher, 1964a, 1964b; Swenson & Newton, 1955; Wieder & Noller, 1953a, 1953b). Fisher (1964b) studied 564 college students of whom 290 were females having an average age of 21 years. The subjects were tested with the Rorschach, and their responses were scored according to the method of Fisher and Cleveland (1958a). As they suggested, the number of responses on the Rorschach were limited to 25. The findings showed that the women exhibited many Barrier responses on the Rorschach Inkblot Test. According to Fisher (1964b), this reflects that women generally experience their bodies as a definite object in space and feel more integrated body wise than their male counterparts. This implies that women exhibit a clearer and more articulate body concept than
men. Fisher (1964b) further related these findings to a woman's biological role as well as to her socialization process. According to her, a woman's prime goal eventually involves the conversion of her body into a protective container, with definite body boundaries in which to shelter her child (the foetus). Furthermore, through the process of socialization women are taught to be more concerned about their bodies both internally and externally. They therefore exhibit a more accurate definition of their bodies. These findings verified the earlier reports of Fisher (1958a) and Johnson (1956) who suggested that a woman exhibits a more stable body concept due to her anatomical structure, biological function, lifestyle and cultural roles.

Renik and Fisher (1968) associated a woman's biological role with the comfort she experiences in her interior body region. According to them women feel more comfortable with their interior body region than men do. This may be the result of repeated menstrual experiences as well as preparation for future childbirth. They speculated that women partially equate the interior of their bodies with a womb, which in turn signifies a container with the function of housing a foetus. Later, Fisher and Greenberg (1977) also expressed the view that in general women are more comfortable with their bodies than men.

The above-mentioned raises several issues relevant to the present research. It is questioned whether or not women generally view their bodies as being ultimately linked to
conceiving a child, thus exhibiting a specific body image irrespective of being pregnant. Furthermore, the idea that they feel comfortable with their interior body suggests that only minor body image adjustment takes place during pregnancy, with limited self-body ramifications.

In the literature on female body image it was apparent that several variables such as culture, upbringing, attitude, societal values, sexuality, pregnancy and motherhood are significantly related to female body image (Cook & McHenry, 1978; Darden, 1972; Fisher & Cleveland, 1958a). The following section reviews some research more relevant to female body image during pregnancy and the postnatal period.

Female Body Image: Pregnancy and the Postnatal Period

As discussed in Chapter Two, many theorists commented on female body image during pregnancy. It appeared to be widely accepted that pregnancy involves body image changes and adjustments for women (Bibring et al., 1961; Colman, 1969; Deutsch, 1944, 1945; Freud, 1949; Leifer, 1980). The extent to which such changes are experienced as traumatic or as a growth process, however, seem to be associated with a variety of factors (Bibring et al., 1961; Chertok, 1973; Jessner, 1974). To a greater or lesser degree, all researchers of female body image singled out a specific factor and evaluated this in association with female body image. Attention is given to some of these factors.
Body Perception

Using a variety of measuring instruments, several researchers evaluated the body perception of pregnant women in general. Machover (1949, 1951) utilized the Draw-a-Person Test in the assessment of female body image during pregnancy, and found that pregnant women drew distorted figures. According to her, this is indicative of a disturbed body image, low self esteem and low energy levels. Later researchers, Heinrich and Triebe (1972) commented that this test should be interpreted with caution. Researchers verified that somatic and physiological changes experienced by pregnant women are reflected in their drawings. This is especially evident in distorted and smaller figures (Davids & De Vault, 1962; McConnell & Daston, 1961).

Uddenberg and Hakanson (1972) assessed the distortion of a specific body part/anatomy during pregnancy. They used distorting Aniseikonic lenses in their study which included 45 randomly selected primigravidas. The researchers hypothesised that when compared to pregnant women who were in harmony with their reproductive function, women who exhibit conflicting thoughts about reproduction would perceive less distortions in their pelvic region during testing. The results confirmed the hypothesis. In addition, they found that women, aged between 21 and 25 years showed the most distortion on the Aniseikonic Body Perception Test, but indicated less anxiety and conflict than women in the 18 to 20 years and 26 to 33 years age
groups. Although younger women appeared most anxious about pregnancy, older women also experienced anxiety, especially if they had delayed becoming pregnant for a long time (Uddenberg & Hakanson, 1972). These results agree with earlier findings which suggested that psychological factors influence the amount of distortion experienced by an individual (Fisher & Fisher, 1974; Fisher & Richter, 1970; Wittreich, 1953; Wittreich & Grace, 1955; Wittreich & Radcliffe, 1955). Fisher (1970) found that anxiety associated with a specific part of the body led to a distortion of that part of the body when viewing that part through Aniseikonic lenses. She speculated that if the change is seen as threatening and anxiety producing a person was less likely to acknowledge change in a body part. Relevant to the present study, it is interesting to speculate on whether pregnant women would acknowledge the obvious bodily changes which accompany pregnancy and if some measure of denial or rationalization takes place.

Karmel (1974) chose to research body image during pregnancy in association with the assessment of the distortion of a specific body part such as the stomach. The Rorschach Inkblot Test scored for Barrier and Penetration responses, and the Test on General Awareness Measures scored for Stomach responses (Fisher, 1970) were used to test 32 pregnant women of mixed gravidity during late pregnancy and post-delivery. Subjects also completed a Body Distortion Questionnaire, in which they rated their most prevalent body experiences on seven dimensions. These dimensions included experiencing their
bodies as being larger, smaller, bound, blocked and dirty. The other dimensions included were feelings of depersonalization as well as greater awareness of skin sensations. The study can be criticized for its small sample size as well as for limiting testing to late pregnancy and post-delivery. However, the findings are interesting.

When evaluated by the Body Distortion Questionnaire, pregnant women scored significantly higher (p < .01) on experiencing their bodies as large, bound and blocked. In addition, pregnant women focused significantly more (p < .01) on their stomachs during pregnancy than during the post-delivery period. In contrast, no significant differences were found with the Rorschach scores. According to Karmel (1974), the questionnaire is a direct measure of body image, and elicits definite responses related to female body image during pregnancy. On the other hand, the unstructured nature of the Rorschach could not be connected with the biopsychological state of pregnant women.

Later Gray (1977), also questioned the viability of using a projective technique such as the Rorschach in the assessment of body image during pregnancy. Fisher and Cleveland (1958a), however, stated earlier that Barrier responses are reflective of the inner unconsciously held attitudes towards the body, and do not correlate with actual physical attributes of the body. Furthermore, Penetration scores, although influenced by situational stress, do not clearly represent the opposite of Barrier responses. "Theoretically, if one assumes that the
Barrier score measures definiteness and firmness of boundaries and the Penetration scores measure penetrability of boundaries, one would expect the two scores to be negatively correlated. The fact that such is not the case, and the further fact that the Penetration score did not appear to have predictive significance in a normal group, led us to conclude that the Penetration score does not neatly represent the opposite equivalent of the Barrier score. It apparently did not have the scope of the Barrier score and we were less sure of its significance. We felt, in reviewing our data, that it gave valid results only in abnormal and extreme groups, and that it was not differentiating within the normal adult range." (Fisher & Cleveland, 1958a, p. 92).

Karmel’s (1974) findings can therefore be interpreted as the true reflection of women's body image experience during pregnancy. It can, however, also be speculated whether or not the state of pregnancy reflects the characteristics of "the normal adult range". Furthermore, subsequent research by several researchers on a variety of subjects including pregnant women, reported significant findings on both Barrier and Penetration responses of the various groups tested (Cleveland, 1960; Fisher, 1963; Gray, 1977; McConnell & Daston, 1961; Miner & De Vos, 1960; Reitmann & Cleveland, 1964).

Slade (1977) chose a cross-sectional research design to investigate female body image perception during pregnancy, after finding in an earlier investigation that anorexia
nervosa patients exhibited disorders of body perception (Slade & Russell, 1973a, 1973b). Slade (1977) reasoned that pregnant women exhibit fairly marked and rapid changes in their physical size, as do anorexic women. Therefore, body image disturbances may be part of the pregnancy experience. Forty women, 18 in the first trimester, and 22 in the second trimester, were tested. Testing included measurement of the real size of the various body parts with an Anthropometer, as well as measurement of the perceived body size by means of an estimated visual size. The results verified Machover's (1949, 1951) earlier findings that pregnant women, in particular overestimated their waist width and stomach size.

Interestingly, Slade (1977) found that primigravidas as well as women in late pregnancy tended not to overestimate their body size. Women who exhibited a relatively stable weight gain throughout pregnancy also appeared to have a realistic idea of their body size. Slade (1977) related this to the adaptational effect of pregnancy.

Harris (1979), in a longitudinal study which included 55 black and 30 white primigravidas also found that as their pregnancies progressed, black women became increasingly aware of their stomachs and experienced body image distortions. White women became less aware of their stomachs during late pregnancy. Both groups showed less body image disturbances after parturition. Harris (1979) concluded that cultural, physiological and psychological factors influence the way in
which women perceive and experience their bodies during the pregnancy process.

Social Stimulus Value of the Pregnant Body

Langer, Taylor, Fiske and Chanowitz (1976) as well as Taylor and Langer (1977) evaluated the social stimulus value of pregnancy. They found that the unusual appearance of pregnant women often prompted others to stare at them or avoid them. In addition, it was found that pregnant women often felt vulnerable as strangers offered unwanted advice, made sexual overtures, or unashamedly stared at their stomachs. They concluded that pregnant women are socially stigmatised by being visibly pregnant, and that reactions to pregnant women often correspond with those expressed towards physically disabled people (Langer et al., 1976; Taylor & Langer, 1977).

Taylor and Langer (1977) commented that many men have little knowledge of pregnancy, therefore failing to respond to pregnant women on the basis of their individuality. Men may tend to respond to pregnant women in terms of changes in their anatomy. They concluded that in general a pregnant woman's body has a detrimental effect on her interpersonal relationships.

Increased Body Size, Bust Size and Weight Gain

Some researchers evaluated female body image during pregnancy in relation to a woman's conscious experience of her
increased body and bust size, as well as her weight gain 
(Colman, 1969; Leifer, 1980; Moore, 1978; Semmens, 1971).

Corroborative evidence suggested that increased weight 
gain is experienced as negative by pregnant women with 
concomitant body image implications (Leifer, 1980; Moore, 
1978; Semmens, 1971). Associated with the social stimulus 
value of the pregnant body mentioned earlier, Moore (1978) 
found that pregnant women viewed themselves as being 
overweight and constantly considered their increased weight 
gain as unacceptable. Leifer (1980) agreed, and added that 
pregnant women are often preoccupied with their weight and 
concerned as to whether or not they would regain their pre- 
pregnant weight after the delivery of the baby. In contrast, 
Colman (1969) and Oakley (1979) found that with the advent of 
'quickening', some pregnant women became more positive about 
their weight gain in that they acknowledged that their body 
changes were due to something real happening inside their 
 bodies. Several researchers suggested that culture pressurises 
women into believing that slimness is attractive and feminine 
(Darden, 1972; Katcher & Levine, 1955; Leifer, 1980; Moore, 
1978; Murray, 1972b).

In conjunction with increased weight gain and increased 
body size it was also found that pregnant women often 
experience a loss of control over simple things. "This lack 
of control scares me" (Our Body, Ourselves, 1973, p. 170). 
Colman (1969) and Leifer (1980) found that during the third 
trimester of pregnancy, women exhibited strong negative
feelings toward their heavily pregnant bodies and felt that they were physically out of control. It was also suggested that during late pregnancy some women exhibit a distorted body image and experience their bodies as separate from themselves (Colman, 1969; Kitzinger, 1972, 1977; Leifer, 1980).

Several researchers debated the influence of a pregnant woman's increased bust size on her body image (Holtzman, 1976; Leifer, 1980; Machover, 1949). Jourard and Secord in an earlier publication on female body image, commented that for women in general "it is good to be smaller than you are in all dimensions except the bust" (1955, p. 246). Holtzman, (1976) and also Leifer, (1980) found that pregnant women enjoyed their big breasts during early pregnancy and during the postnatal period. Leifer (1980) suggested that big breasts portray womanliness and that culture also attaches value to big breasts. Consequently, pregnant women feel happy about their increased breast size.

In the literature, some mention was also made of the impact of maternity clothes on a pregnant woman's body image (Iffrig, 1972; Leifer, 1980; Rubin, 1968). Schilder (1935) highlighted the close relationship between clothing, body decorations, psychological variables and physiological variables. According to him, pregnant women have to integrate maternity clothes with their body image. This can take some time. Later theorists Colman and Colman (1971) suggested that some pregnant women find their shape unacceptable, and hide their bodies behind baggy clothes. Others reject wearing
maternity clothes in the hope of denying their changed bodies. Munjack and Oziel (1979a) also suggested that baggy clothing worn during pregnancy reflects a woman's ambivalent feelings and attitudes toward her body while pregnant.

In conclusion it appears that pregnancy is accompanied by rather ambivalent feelings about the conscious experience of body size, breast size and weight gain.

Attitudes of Pregnant Women

Attention was also given to body image during pregnancy and how it relates to the attitudes of pregnant women (Fisher, 1963; McConnell & Daston, 1961; Venezia, 1972). One of the earliest exploratory studies was done by McConnell and Daston (1961). They tested a small group of 28 multiparous women with an average age of 22 years. Testing included an interview concerning attitudes toward the pregnant body, 17 adjectives from the Osgood Semantic Differential, and the Rorschach Inkblot Test scored for Barrier and Penetration responses (Fisher & Cleveland, 1958a). The participants were tested during the third trimester of pregnancy and again three days after the delivery of the baby. Furthermore, each subject served as her own control.

The research findings generally indicated that pregnancy for many women was an unnatural condition. They viewed the body as ugly and misshapen. Women in the study who exhibited negative body attitudes during pregnancy and viewed the foetus as an unwelcome intruder, tended to feel positive about their
bodies after childbirth. These women felt proud and expressed feelings of fulfillment, potency and energy (McConnell & Daston, 1961). This interpretation could support the viewpoints of Bibring et al., (1961) who associated female body image during pregnancy with a physiological and psychological disequilibrium.

In contrast, in the study of McConnell and Daston (1961), women with positive body attitudes during pregnancy felt increasingly negative about their bodies during the postnatal period. According to McConnell and Daston (1961) and agreeing with Deutsch (1945), these women may have experienced decreased attention in the puerperium which possibly increased their negative attitude. The findings of the Rorschach scores obtained from subjects showed that the Barrier responses of pregnant women remained stable from the pre- to the post-delivery period. They agreed with several researchers and said that the Barrier scores tend to reflect a person’s stable personality characteristics which are linked to a basic body image concept and overall adjustment. These stable personality characteristics appear to be independent of the actual physiological changes pregnant women may experience (Bibring et al., 1961; Fisher, 1963; Fisher & Cleveland 1956; Karmel, 1974).

On the other hand, pregnant women seemed to report high Penetration scores during pregnancy, with a significant decrease (p < .05) in these scores during the postnatal period (McConnell & Daston, 1961). According to Fisher and Cleveland
(1958a), who developed this scoring system, Penetration scores reflect a person's reaction to stress and situational aspects which threaten the ego. McConnell and Daston (1961) therefore interpreted the high Penetration responses of pregnant women as being due to feelings of anxiety, body vulnerability and disruption of their bodies.

The study of McConnell and Daston (1961) could be criticized for being limited to a small sample and for restricting testing to women in late pregnancy and the postnatal period. Limited information was obtained from the women's body image experiences in the early period of pregnancy. Furthermore, their sample was restricted to multigravidas and little is known of these women's pre-pregnant consciously held body attitudes.

McConnell and Daston (1961) also associated increased Penetration responses of pregnant women with anxiety concerning their body image. Women post-delivery showed less Penetration responses. This period therefore seems to be less stress ridden. These findings opposed those of Fisher and Fisher (1964) who found that Penetration scores did not differ significantly when women were exposed to stressful body conditions such as a gynaecological examination. They pointed out that despite the literal breakdown of the body boundary in a gynaecological examination, the subjects showed no significant increase or decrease in their Penetration responses. Fisher (1958, 1964b) concluded that Penetration responses do not merely reflect transient bodily discomfort,
relieved by certain circumstances, but rather reflect a personality variable incorporated into a woman's orientation to her body. McConnell and Daston's (1961) findings, indicated that despite a literal breakdown of the body walls during delivery, 'new' mothers felt less vulnerable about their bodies than they did during pregnancy.

By means of the Rorschach scored for Barrier and Penetration responses, as well as the Osgood Semantic Differential, Fisher (1963) elaborated on the findings of McConnell & Daston (1961) and tested women pre- and post-delivery. According to her, women with a positive attitude toward pregnancy generally score high on Barrier responses. She agreed with other researchers and suggested that Barrier responses reflect feelings about a person's perception of the body boundary, which serve as a direct contact between the individual and the environment (Bibring, 1959; Fisher & Cleveland, 1958a). Fisher (1963) referred to this and suggested that pregnant women perceive their bodies as real and visible and feel more in control of their exterior than their interior bodies. Barrier scores therefore tend to remain stable or appear more often from the pregnant to post-delivery period.

Fisher (1963) associated the increased Penetration scores of pregnant and postnatal women with female body image changes related to interior body growth. According to her, as the pregnancy progressed, women tended to become more withdrawn and relied more on the interior of their bodies. They had
less control over the expansion of their bodies, and simultaneously felt that their interior bodies were becoming more exposed. Hence, Fisher (1963) agreed with Bibring et al. (1961) and concluded that pregnancy reflects an inward turning experience with increased awareness of the interior body. Fisher (1963) found no correlation between the results on the Osgood Semantic Differential and those reported on the Rorschach. An earlier study by Croman (1959), however, which used the Osgood Semantic Differential, found that while the activity factor remained the same shifts occurred in pregnant women's evaluative and potency factors. Furthermore, concerning their body concept after parturition, multiparous women changed more rapidly than did primiparous women.

Later Venezia (1972) investigated a possible relationship between a woman's personality dynamics, body attitude and her experience of pregnancy. The findings suggested that extroverted women tend to view their bodies negatively during pregnancy. No link was indicated between a woman's attitude toward pregnancy and her pregnant body. Venezia (1972) concluded that pregnant women change their body attitude because of changes in their outer appearance. This, however, also depends on their personalities. Gray (1977) pointed out that by using the Maternal Attitude to Pregnancy Instrument (Blau, Welkowitz & Cohn, 1964), this study only assessed the consciously held attitudes and feelings of pregnant women. This could suggest that conscious attitudes could be adapted or camouflaged to suit an appropriate social system, therefore
not necessarily reflecting the true feelings of pregnant women (Gray, 1977). Venezia (1972) contributed to research on pregnancy and female body image by pointing out that apparent physiological changes during pregnancy are linked to attitudinal changes of pregnant women. During pregnancy pre-existing personality dynamics could influence a woman's attitude.

Offerman-Zuckerberg (1980), more recently, researched the unconsciously held attitudes of pregnant women and the acceptance of being pregnant in association with body image and body symptoms. She tested 33 primigravidas with an adapted form of the Pregnancy Thematic Apperception Test (PTAT) (Knobel, 1967; Zuckerberg, 1972). The results showed that body image problems and role conflicts experienced during pregnancy are associated with the physiological changes which accompany pregnancy. This verified the findings of earlier studies which found that pregnant women experienced increased feelings of bodily concern, vulnerability, self-preservations and anxiety about possible damage to their bodies (Fisher, 1970; McConnell & Daston, 1961; Treadway et al., 1969).

In summary it appears that when assessed by means of a projective technique such as the Rorschach, little corroborative evidence exists on whether female body image changes from pregnancy to during the postnatal period. Such a technique implies the assessment of the unconsciously held attitudes toward the body, minimising the possible influence
of subject responses being biased. More agreement, however, was reached by researchers evaluating the consciously held attitudes and feelings of pregnant and postnatal women concerning their body image.

Expressed Bodily Feelings

It appears that pregnant women differ in the ways in which they express themselves about their changing bodies. In the study of Colman and Colman (1972) positive feelings such as increased sensuality, sexual spontaneity, heightened perceptions, increased energy and an awareness of potency feelings and creativity were reported by some pregnant women. Excitement and impatience were characteristic of some women during the first trimester. Others felt more "womanly", or "voluptuous". Others reported feelings of shock, loss of their individuality together with an increased sense of responsibility. Some women regretted being placed in the category of pregnant, while others again did not want to be, or act as "vessels" or "carriers" for their unborn babies (Colman & Colman, 1971).

Feelings about physical attractiveness seem to be another source of concern and anxiety during pregnancy. Bloss (1950) suggested that fantasies of fear caused by bodily changes of pregnancy, lead women to believe they are unattractive. Several researchers supported this postulation and added that pregnant women often compare themselves to what society suggests as being physically attractive. Therefore they are
concerned with their lack of body beauty (Chalmers, 1982; Grimm, 1961, 1967; Pleshette et al. 1956).

Recently, Leifer (1980) reported similar findings in her study of pregnant women using the modified Body Cathexis Scale. According to her, as pregnancy progressed, the majority of women became increasingly negative about their bodies. This dissatisfaction persisted two months after the delivery. Some women felt alienated from their bodies, sexually unattractive and even tried to camouflage their pregnancies. Others, felt proud, womanly/and excited. Although Leifer's (1980) study concentrated on the consciously held attitudes of only a limited sample of pregnant women, her study underlines the importance of cultural influences on female body perception.

Anxiety and Body Image during Pregnancy

Few researchers evaluated whether female body image during pregnancy is related to anxiety. The early studies of Fisher (1963) and McConnell and Daston (1961), suggested that during pregnancy, anxiety correlates with negative female body perception. In the postnatal period, however, they found that women showed less anxiety and fear of body damage.

In a more recent cross-sectional study, Gray (1977) evaluated 96 primiparous women as well as a group of postnatal women on anxiety and creativity in relation to body image changes during pregnancy. The pregnant women were divided into the three trimesters and were tested on the Rorschach,
scored for Barrier and Penetration responses (Fisher & Cleveland, 1958a), the Taylor Manifest Anxiety Scale (Spielberger, 1972), and the Novelty Experience Scale (Pearson, 1971). No control group was tested. Therefore, prior to an evaluation of her research findings, she compared the overall results of women in the various trimesters with the 'norms' reported for women in the general population (Fisher & Cleveland, 1958a; Ramer, 1963).

In comparison with the Penetration response norm set up by Fisher and Cleveland (1958a) for women in the general population, Gray's (1977) subjects scored significantly higher (p < .001) Penetration scores. Therefore, when compared to the group of non-pregnant women studied by Fisher and Cleveland (1958a), they experienced their bodies as more fragile, open and disintegrated during pregnancy and during the postnatal period. According to Gray (1977) this is a natural consequence of the pregnant state and not necessarily indicative of stress, anxiety and bodily disintegration as was partially suggested in the work of Fisher and Cleveland (1958a).

Of additional interest to the present study is Gray's (1977) comment that pregnant women are commonly preoccupied with their reproductive functions. In her study women often responded with sexual or anatomical responses on the Rorschach and therefore scored high Penetration responses. She briefly speculated, but did not explore the postulation, that this
could possibly reflect the sexual adjustment of pregnant women.

Interestingly, Fisher and Cleveland (1958a) found that women who exhibited increased Barrier responses were more active sexually. Gray (1977) disagreed with Fisher and Cleveland (1958a), who proposed that increased Penetration responses are indicative of body vulnerability, stress and even psychosis. She suggested that increased Penetration responses reflect the natural changes and adjustment women make during pregnancy (Gray, 1977). She questioned whether Penetration responses are sensitive enough to distinguish between pathological Penetration responses, (sometimes indicative of a psychotic state) and the non-pathological Penetration responses found in her study.

Besides the increased Penetration responses reported by pregnant and postnatal women in Gray's (1977) study, the subjects also reported significantly lower ($p < .001$) Barrier responses than a sample of non-pregnant women tested by Ramer (1963). It is debatable whether the suggested 'norms' as set up by Fisher and Cleveland (1958a) and Ramer (1963) are still valid these days. The comparison of non-pregnant and pregnant women tested under different circumstances and, in the case of Gray's (1977) research many years apart, also make the research findings questionable. None the less, the findings of Gray (1977) are worth noting, as they opposed those of McConnell and Daston (1961) and Karmel (1974), who found no differences in pregnant or postnatal women's Barrier responses.
on the Rorschach. Gray (1977) suggested that the lower Barrier scores reflect a natural process of awareness of bodily changes by women in early pregnancy. She disagreed with Fisher and Cleveland (1958a) who said that these responses are indicative of an identity crisis. Furthermore, lower Barrier scores reported by postnatal women portray a natural consequence of delivery and of the physical separation between mother and child. Gray (1977) associated the pregnancy process with a developmental perspective as well as a 'Gestalt' perspective and stated that the 'Gestalt' which develops during pregnancy to accommodate the foetus, resolves once the need is fulfilled. Therefore, lower Barrier responses of postnatal mothers could reflect the natural resolution of the 'Gestalt'.

Interestingly Gray (1977) found that women who delivered by Caesarean section rated a higher percentage of Barrier responses than those women who delivered naturally. Although Gray (1977) did not expand on this finding, it seems worthwhile establishing the type of delivery when dealing with female body image during the puerperium.

Referring more specifically to the assessment of anxiety in relation to female body image, Gray (1977) concluded that although pregnant women who scored a high ratio of Penetration responses appeared more anxious, they were no more anxious than non-pregnant women. Therefore, as suggested by several theorists discussed in Chapter Two, pregnancy is not
necessarily a stressful period, with major body image adjustments taking place.

**Overview**

It seems that limited attention has been given to the study of female body image during pregnancy and during the postnatal period. A possible reason for this appears to be confusion surrounding the actual definition of body image and the assessment thereof. Whereas some researchers concentrated on the consciously held body attitudes of pregnant women, others tried to assess those held subconsciously. The research findings therefore show little congruity. Furthermore, studies seemed to disregard the possible impact of several issues, such as cultural norms, societal values, female sexuality, and the marital relationship, on a pregnant woman's experience of her body. Similar to the criticism of research on female sexuality (Chapter 4), the use of small sample sizes, or the assessment of women only in late pregnancy and during the postnatal period, limits the generalizability of these findings.

Relevant to the present study is that despite the suggested interrelatedness as pointed out in Chapter Two, few researchers focused on female sexuality and female body image as an interacting unit during pregnancy. This facet was central to the present research. The following section discusses studies which associated female sexuality with a woman's bodily experiences during pregnancy.
Female Sexuality, Body Image and the Pregnancy Process

Intermittently, throughout the literature on female sexuality during pregnancy, (Chapter 4), referrals were made to female body image and female sexuality. Few researchers, however, explicitly evaluated whether a woman's experience of her sexuality influenced her body image during pregnancy or vice versa.

Machover (1949, 1951) merely suggested that pregnant women are sexually more preoccupied with their bodies. This proposal was deduced from the findings that pregnant women drew many nude figures on the Draw-a-Person Test. Even though these findings are questionable because of the specific assessment technique, Tolor and Di Grazia (1977) reported similar findings in later research.

Rather than sexual contact per se a number of researchers evaluated a pregnant woman's need for body contact and to be held (Hollender & McGhee, 1974; Leifer, 1980). Hollender and McGhee (1974) found that pregnant women, irrespective of race, gravidity, and increased feelings of being sexually unattractive, exhibited an enhanced need to be held as their sexual desire waned. Similarly, Leifer (1980) found that pregnant women generally manifested an increased need to be held. Earlier research, however, reported that female sexual desire and the need to be held did not correlate (Hollender, 1971; Hollender, Luborsky & Scaramella, 1969).
Several studies on female sexuality during pregnancy found that women commented on their bodies being sexually unattractive. Earlier, Hollender and McGhee (1974) found that women with unplanned pregnancies felt more sexually unattractive. Later, Offerman-Zuckerberg (1980) verified this finding and added that women with planned pregnancies were often proud of the visible signs of their pregnant state. However, in general pregnant women thought that their partners found their bodies more attractive than they themselves did. Fisher (personal communication with Hollender, 1971) suggested that pregnant women may believe that they deceive men concerning the attractiveness of their bodies. He also suggested that women fantasise that if their partners were to know what is taking place inside their bodies, they may not find them so attractive. More recently, Gansberg and Mostel (1985) found that one quarter of the pregnant women they tested assumed that their husbands viewed them as unattractive and non-sexual.

The early study of Masters and Johnson (1966) indicated that 20 of the 101 women associated the loss of attractiveness to changes in their sexuality. Twenty four percent of the pregnant women tested by Holtzman (1976) also associated decreased sexual activity with a poor body image. In contrast, 12% of the pregnant women indicated that pregnancy enhanced their physical attractiveness. Half of the pregnant group tested by La Rossa (1979) indicated that lack of attractiveness resulted in declined sexual activity and
interest. In addition, three husbands found their wives’ pregnant bodies unattractive and objectionable. Only two women exhibited a positive body image with feelings of being more sensual and sexually attractive. Opposing such findings, Solberg et al., (1973) and Wagner and Solberg (1974), earlier, found no relationship between a pregnant woman’s feelings of attractiveness and her sexuality.

In a cross-sectional study, Moore (1978) emphasized that cultural and societal norms influence a woman’s feelings of being attractive during pregnancy. She evaluated the body image of 222 pregnant women and 38 non-pregnant women by means of the Osgood Semantic Differential. In addition, she questioned the partners of the pregnant women on how they viewed their wives’ bodies. Information was also collected on the impact of the media on female body perception. In contrast to the criticism raised against many other studies, Moore (1978) used adequate statistical data analyses and found that generally women attributed higher scores to the image of the Ideal American Woman than to themselves. Pregnant subjects described their bodies as progressively ugly, unattractive and overweight. Moore (1978) greatly attributed this to the media’s insensitive and limited attention to pregnancy in general.

Olivier (1987) in her study of female sexuality of South African women, commented that only 8.5% of all the women tested, thought of themselves as being attractive. In contrast, 42.2% stated that they were moderately attractive
and 41.1% felt unattractive. Although her study did not test female body image during pregnancy, and did not differentiate between nulliparous and multiparous women, she suggested that mothers become so involved with the mothering role that they neglected their bodies. Married women are the most negative about their bodies. This study seems to underline the need for research on the body image of South African women, clearly differentiating between pregnant and non-pregnant women. Noteworthy as pregnancy may not necessarily have a negative influence on a woman's body image it is vital to ascertain a woman's pre-pregnant bodily feelings prior to any assessment of her body image during pregnancy. Referring to this some studies indicated that pregnant women reported ambivalent feelings toward their bodies (Bibring & Valenstein, 1976; Brady & Levitt, 1965; Clark & Hale, 1974; Davids et al., 1961b; Hooke & Marks, 1962). The following mother's statement highlights this: "my stomach looked like a relief map after the baby was born, but in fact, my body image actually improved as a result of the pregnancy. After all, my body had done this terrific thing - it had made a baby" (Kerins 1985, p. 65).

Bibring et al. (1961), and more recently Bibring and Valenstein (1976) as well as Leifer (1980), observed that many pregnant women spoke of being embarrassed and shy about their bodies. According to them pregnancy overtly demonstrates participation in sexual activity, resulting in feelings of embarrassment. As pregnancy progresses, however, many women become more accepting of their changed bodies as a display of
fertility (Bibring & Valenstein, 1976). According to these theorists, female sexuality forms part of female body image. They therefore agreed with the developmental theoretical formulations (Chapter Two), which state that pregnancy reflects a natural qualitative shift in female sexuality.

After assessing 50 married primigravidas on the degree of satisfaction with their pregnant bodies Belson (1978) concluded that female sexuality forms a key component of female body image. Furthermore many pregnant women stated that being visibly pregnant tarnished the privacy of their sexuality in that their sexuality was exposed by body changes which accompanied pregnancy (Belson, 1978). Additionally some women reported that their bodies were on show, making shortcomings, imperfections or deficiencies more visible (Belson, 1978; Leifer, 1980). Noteworthy is the fact that younger, less educated pregnant women who rejected their pregnancies, showed increased shame about their bodies and exhibited great difficulties in dealing with the negative body image changes which accompany pregnancy (Belson, 1978). Pines (1972) earlier observed that despite the fact that pregnancy serves as a physical confirmation of a woman's ability to bear a child therefore showing sexual maturity, some women experience difficulties in assimilating the sexual connotations attached to their pregnant bodies - participating in sexual activities. Many other theorists also agreed that pregnant women favour comfort, reassurance and bodily contact
to the exclusion of sexual activity (Colman, 1969; Colman & Colman, 1971; Kitzinger, 1980; Leifer, 1980).

To conclude, researchers hypothesized and speculated that the pregnant body may have an impact on female sexuality. However, it appears that no studies scientifically evaluated female body image and the indices of female sexuality during pregnancy. Apart from female sexuality, references are made in the literature to other variables which may influence a pregnant woman's experience of her body. These additional variables are discussed next.

Potential Influential Variables on Female Body Image during Pregnancy and the Postnatal Period

It appears that many of the suggested variables outlined in Chapter Four influencing female sexuality during pregnancy also play a role in a pregnant woman's experience of her body. In an attempt to avoid repetition, only some of these issues are discussed in this section.

Cultural and Societal Norms, Values and Standards

Many researchers of body image described cultural variables as important determinants of female body perception during pregnancy (Delliquadri & Breckenridge, 1980; Douglas 1970; Goschen-Gottstein, 1966; Hammer, 1977; Harris, 1979; Kitzinger, 1972; Moore, 1978; Shanan 1974). Even though Mead and Newton (1967) did not specifically research female body
image during pregnancy, they proposed that the impact of cultural information is most obvious in the area of reproduction. More emphasis is placed on body experiences which are related to the reproductive process.

Earlier, Newton (1955) pointed out that since the Industrial Revolution, women started joining the labour market. This caused their childbearing and childcaring role to be lessened by approximately 50%. Newton and Newton (1972), also found that changes in society could result in a woman feeling inferior, dependent, and inadequate with concomittant negative implications on female body image. Taylor and Langer, (1977) pointed out that some form of social rejection of pregnant women may be as relevant today as in traditional times and suggested that this social rejection ought to be changed legally and morally.

Referring to society and the media, Moore (1978) as well as Gansberg and Mostel (1985), stated that the modern media often create an unrealistic, false picture of pregnancy and the body appearance of pregnant women. Often these pictures reflect the pregnant state as a radiant epitomy of femininity. They do not necessarily reflect the true feelings of body awkwardness pregnant women may experience (Gansberg & Mostel, 1985). Chaimers (1984a) also expressed the view that motherhood is often 'romanticized'. She said that the publication of pictures of non-pregnant women with unrealistic body dimensions make it even more difficult for a pregnant woman to see herself in a positive light. This further
confuses a pregnant woman's body image and self-image. Along similar lines, several researchers stated that the pregnant body opposes the standards set for the ideal female figure, as well as society's preference for the slim, sylphlike figure (Darden, 1972; Murray, 1972a; Zajicek, 1976). The media and popular press can be partially blamed for the difficulty with which women experience body changes accompanying the pregnancy process (Delliquadri & Breckenridge, 1980).

To conclude, some researchers stated that although pregnant women do not fit the media's image of femininity, they portray another kind of womanly beauty (Iffrig, 1972; Rubin, 1968).

**Bodily Attitudes and the Female Role**

A number of researchers stated that a woman's opinion of her body, irrespective of being pregnant or not, is influenced by her attitudes (Brady & Levitt, 1965; Davids & Holden, 1970; Leifer, 1980). These feelings, in turn, are often formed by the norms of society and cultures.

In addition, feminine role conflicts and sexually related attitudes appear to influence a pregnant woman's experience of her body (Fisher & Cleveland, 1958b). Bloss (1950) postulated that a pregnant woman fears a changed body image and sexuality. This fear represents a basic struggle between her conscious and subconscious mind, that is, between her vanity and her feminine instincts of reproduction. Wenner et al. (1969) found that women with biological role
conflicts exhibited greater body image adjustment problems than women who accepted their procreative function.

Some researchers correlated a woman's bodily feelings during pregnancy with similar feelings which girls experience during adolescence (Moore, 1978; Murray, 1972a, 1972b). Moore (1978) pointed out that during adolescence the body is often viewed as useful, but also as disruptive. Similarly, the pregnant body can be seen as disruptive or as useful in bearing a child. Barry (1970) and Scharff (1983) agreed and proposed that the body changes which accompany pregnancy, such as weight gain, are often similar to those of adolescents. Despite desiring changes which accompany adolescence, many girls also fear them. This process is repeated during pregnancy (Scharff, 1983). According to Perkins (1982), pregnancy could also rekindle adolescent fantasies and disgust of body changes, such as puppy fat, or breast enlargement. Scharff (1983) added that the role changes which accompany both adolescence and pregnancy can easily become problematic. These proposals appear to agree with the views of developmental theorists who link the crisis of pregnancy to the other sexual developmental stages of women, namely, menstruation and the menopause (Bibring, 1959; Bibring et al., 1961). They also underline the feasibility of viewing pregnancy as part of female sexuality, as suggested in the present study.
Age and Planned or Unplanned Pregnancy

Bloss (1950) suggested that an adolescent pregnancy involves both adolescent body changes as well as the physiological changes which accompany pregnancy. This could be overwhelming for a young pregnant woman and result in body image disturbances. In contrast, older pregnant women are often afraid that their bodies will not cope adequately with the pregnancy process and will not be able to handle the physical stresses (Barry, 1970; Bloss, 1950). In research of this nature, when testing, attention should therefore be given to the woman's age to ascertain its influence on her bodily experiences during pregnancy.

Furthermore, body image is influenced by a planned or unplanned pregnancy. In the early study of Bloss (1950) women with unplanned pregnancies tried to slim and were anxious to retain a non-pregnant image. In contrast, women with planned pregnancies who exhibited a poor pre-pregnant body image, manifested less anxiety during pregnancy. They wore maternity clothes soon after conception in order to indicate changes in their bodies. More recently, Barry (1970) verified these findings. Kitzinger (1978), however, suggested that an unwelcome pregnancy sweeps away feelings of physical attractiveness. She later added that a poor pre-pregnant body image results in a negative body image during the pregnancy process (Kitzinger, 1980).
Apart from the above-mentioned issues, few researchers compared primigravidas and women with subsequent pregnancies on their body image. (Karmel, 1974; McConnell & Daston, 1961). Morck (1976), however, who studied obesity, pointed out that many women trace the onset of their weight problem to their first pregnancy experience. Therefore, when researching body image during pregnancy it seems relevant to ascertain whether it is a woman’s first or subsequent pregnancy.

**Marital Relationship and the Expectant Father**

Not many researchers included partners in their studies of female body image during pregnancy. The impression is gained that a woman’s body image is influenced by the manner in which the expectant father views her body.

According to some studies, men react ambivalently toward a pregnant woman’s body. Jessner (1974) found that some husbands wanted to prevent themselves from becoming physically involved with their wives’ at this time. Others, again felt drawn to the overt, maternal qualities of their wives’ bodies and admired their everchanging shape. Jessner (1974) pointed out that the best works of art from the Middle Ages and the Renaissance depicted the pregnant Madonna as a woman of beauty. Earlier, Colman (1969) found that some expectant fathers viewed their wives’ pregnant bodies as proof of their masculinity, whereas others were repelled by their swollen breasts. The following quotation illustrates this: “sometimes I thought you were very beautiful and your belly was
beautiful, and sometimes you looked like a ridiculous pregnant insect. Your navel bulging out looked strange" (Our Bodies, Ourselves, 1973, p. 172). More recently, Scharff (1983) also referred to the ambivalent feelings expectant fathers exhibit about their wives' pregnant shape. Scharff (1983), however, added that feelings of disgust on the part of the future-father are often linked to the revival of earlier developmental crises, or to a pregnant wife's aggressive reaction to her new image.

In general, all researchers agreed that in order to reduce insecurities and fears about her body, a pregnant woman needs increased love, attention and support (Caplan, 1961; Riddle, 1972). Furthermore, the failure of a partner to recognise his wife's body changes during pregnancy could result in feelings of loss of love and detachment (Iffrig, 1972; Rubin, 1968).

In conclusion, Gansberg and Mostel (1985), emphasised that a pregnant woman, regardless of a partner's support or reactions toward her body, questions her sexual attractiveness. Earlier uncertain feelings about her appearance may surface due to her body no longer matching her internalised image of herself. Therefore, the reappraisal of body image seems part of the experience of the pregnant woman as well as that of her partner.
Labour and Delivery

Not much research has been done on the possible impact of labour and delivery on female body image, but several suggestions have been made in this regard (Chalmers, 1984b; Davids & De Vault, 1962; McConnell & Daston, 1961). According to Rubin (1968), a societal value is placed on the adequacy with which a woman performs during labour. Women who experience their bodies as active and feel that their bodies meet the physical demands expected of them during childbirth, experience a positive postnatal body image. In contrast, Gray (1977) suggested that some women experience a Caesarean section as an outside intrusion and find it difficult to accept their lack of active participation in the birth process. This could result in women experiencing their bodies negatively in the postpartum period.

Blum (1980) suggested that hospitalization as well as the introduction of drugs during labour, negatively influence a mother’s body image. According to her, such interferences suggest that a woman’s body can not function adequately and normally during labour and delivery. Irrespective of the type of delivery, several researchers stated that many women express feelings of lack of control over their bodies during labour (Davids & De Vault, 1962; Uddenberg, Fageström, Hakanson-Zaunders, 1976).

Besides labour, other postnatal changes such as weight loss and loss of life from a mother’s body during delivery,
could have a significant impact on her postnatal identity and relationships (Delliquadri & Breckenride, 1980; Fisher, 1958; Uddenberg et al., 1976). Gansberg and Mostel (1985), however, indicated that labour need not disrupt a woman's body image thereby being advantageous to a couple. It forces a greater awareness of a female's body and bodily function, resulting in greater sexual spontaneity between the husband and wife.

Conclusion

In the literature on pregnancy several theorists recognised the importance of female body image. Most agreed that pregnancy alters a woman's feelings about her body (Bibring, 1959; Chertok, 1973; Deutsch, 1944, 1945; Pines, 1972).

Many suggestions are made to assist pregnant women in becoming more sensually aware of their bodies. These include exercises, counselling, hormonal therapy, visual aids and relaxation techniques (Blum, 1980; Caplan, 1961; Gates & MacFarland Meckel, 1980; Kitzinger, 1980; Lamaze, 1970; Riddle, 1972; Van Zyl, 1985; Weinberg, 1978).

However, in the literature there was scarcity of scientific research relating to this issue. There is also little congruity between research findings (McConnell & Daston, 1961; Tolor & Di Grazia, 1977; Venezia, 1972). This seems partially as a result of a variety of research methods utilised by the researchers of body image during pregnancy.
These include questionnaires, perceptual tests, projective tests, interviews, rating scales and physiological techniques (Croman, 1959; Fisher, 1963; Gray, 1977; Machover, 1949; McConnell & Daston, 1961; Moore, 1978; Offerman-Zuckerberg, 1980; Uddenberg & Hakanson, 1972).

Studies were generally characterised by problems of definition. While some researchers define female body image as the consciously held experience of the body, others focus on female body image as an unconsciously held attitude toward the body. Consequently, little corroborative evidence on female body image during pregnancy exists. Different definitions can be seen as problematic, but underline the recognition of the multi-faceted and intricate nature of female body image. They also indicate the necessity to assess variables which may influence a woman's experience of her body during pregnancy. The present study of female sexuality, in conjunction with female body image during pregnancy and during the postnatal period seems warranted.
CHAPTER 6

METHODOLOGY

The study set out to explore female sexuality and female body image during pregnancy and the postnatal period. Rather than testing a specific hypothesis, the present approach was one of exploration and hence hypothesis-provoking. Research on female sexuality in general appears to be a neglected area of study, especially in South Africa. Although this may be related to several factors, such as concern about the invasion of privacy, as well as being costly the need for such research is obvious (Chapter Four).

The assessment included scales on female sexuality, a projective technique to assess female body image, and a biographical questionnaire. These measuring devices are discussed at a later stage.

This chapter is divided into three sections. The first section describes the motivation and objectives of the present study. Attention is also given to secondary areas of interests explored in this study. The second section outlines the sample and the procedures followed in obtaining the subjects. The measuring devices used in this study are discussed in the third section. Lastly, follow a general summary and conclusion.
**Motivation and Objectives**

Although informative scientific writings on female sexuality and pregnancy are now more freely available and several articles in lay magazines discuss these issues, limited in-depth psychological research has been reported. (see Chapters Three and Four). This seems to prevail in South Africa (Olivier, 1984, 1986a, 1986b, 1987). Furthermore, despite an apparent relaxation of social norms surrounding sexuality, sex-related problems are increasing with concomittant indications that research in this area is needed (Chapter Four).

Initially the *aim of the study* was the evaluation of female sexuality. Upon reviewing the theoretical formulations on the development of female sexuality, it became clear that the development of female body image coincides with a woman's development of her sexuality (Chapter Two). Several theorists proposed that there is an interaction between society, culture, female sexuality and female body image (Chapter Two). It appears that a thorough investigation of female sexuality necessitates the evaluation of female body image. Therefore, the initial *aim of the study* was expanded to include the investigation of female body image in relation to female sexuality. It was noted, however, by several researchers of human sexuality, that no conclusive statements can be made in this regard (Ballou, 1978a, 1978b; Hawton, 1985; Kitzinger, 1983). In view of scant in-depth research of this nature, it
seemed necessary to investigate a relationship between female sexuality and body image (Chapter Four).

Throughout the literature authors have frequently commented that pregnancy represents the ultimate in female sexual development and body image development (Chapter Two). Many theorists explicitly tied a woman's childbearing capacity and her maternal role to her sexuality and proposed that, similar to menstruation and the menopause, it is central to female sexuality. Consequently, it was relevant to investigate the relationship between female sexuality and female body image within the pregnancy period.

It was widely debated whether a woman's experience of her body and sexuality is a product of her anatomy, her maternal role and/or her social environment (Chapter Two & Four). It seemed possible to investigate these assumptions within the experience of pregnancy. In addition, pregnancy is characterised by many natural physiological and bodily changes taking place within a limited timespan. Therefore, it provides an opportunity to assess the suggested interrelatedness of female sexuality and female body image without excessive experimental interference.

Thus the primary objective of this study was the evaluation of female sexuality and female body image during pregnancy and during the postnatal period. Although this study was restricted by the magnitude, costs and the time demands of such research, it was deemed necessary to attempt to sift through the myriad of variables covered by studies in
this area. A number of secondary objectives were thus included too. These include:

**Biographical Information and Familial History.**

Age appears to influence a woman's experience of pregnancy, sexuality and body image (Almgren et al., 1972; Barry, 1970; Baxter, 1973; Belson, 1978; Bloss, 1950; Caplan, 1960a; Harriman, 1983; Kane et al., 1967; Sherfey, 1972). In her study, Gray (1977) proposed that older pregnant women experience less anxiety. She also suggested that age is related to female body image, which warrants further investigation. With reference to female sexuality, Perkins (1982) found that older pregnant women used less variety of sexual techniques than their younger counterparts. On the other hand, Entwisle and Doering (1981) found no correlation between age and a woman's experience of pregnancy or her sexuality.

**Years Married.** It was frequently debated whether or not the length of a marriage correlated with women's acceptance of their bodily changes and sexuality during pregnancy. Caplan (1960a, 1960b), Entwisle and Doering (1981) and Wagner and Solberg (1974) found that couples married for a lengthy period participated less in sexual activity. Harriman (1983) and Caplan (1960a) showed that pregnancy, following soon after a wedding had a negative influence on female sexuality. Uken (1980), found no
relationship between a woman's orgasmic function and the number of years she had been married.

*Education.* According to Belson (1978), women with less education tend to reject their pregnancies and have difficulty in accepting the body image changes which accompany pregnancy.

*Religious Preference.* It is widely accepted that religion plays an important role in the sexual upbringing of women and that premarital sexual relationships and illegitimacy are generally frowned upon. Some churches also restrict certain methods of birth control. Although earlier studies, found no relationship between religious preferences and female sexuality during pregnancy (Entwisle & Doering, 1981; Wagner & Solberg, 1974), Olivier's (1987) study was criticized for omitting this issue. It still seems necessary to note the subjects' religious status when assessing their sexuality.

*Only Child.* A question could be raised whether a girl growing up with brothers and sisters will have more knowledge about sexuality, and as a consequence may better adjust to pregnancy and related issues of female sexuality and body image.
Financial Security. Pregnancy could place financial and economic strains on a couple (Gray, 1977). According to Perkins (1982) better social circumstances retard the decline of sexual activity for pregnant women. Therefore, it was necessary to establish the subjects' social security level and economic status.

Relations with Own Mother. Several theorists implied that the nature of a mother-daughter relationship influences the daughter's sexual functioning in the adult years (Deutsch, 1944, 1945; Freud, 1949; Friday, 1977; Uken, 1976; Wenner et al., 1969).

Developmental History and Female Sexuality.

Sexual Development and Upbringing. It has commonly been suggested that a woman's sexual development during childhood and adolescence, as well as her upbringing influence her acceptance of her sexual function and her biological role of childbearing (Calderone, 1958; Deutsch, 1944, 1945; Horney, 1926; Janeway, 1974; Kinsey et al., 1953; Wolman & Money, 1980).

Menstrual and Premarital Sexual History. These factors appear to be important in female body image development (Erikson, 1968a; Kinsey et al., 1953; Wolman & Money, 1980). Relevant questions relating to these issues were included in the present study.
Gynaecological Information and Female Sexuality prior to Pregnancy.

Gynaecological Problems. Some researchers have found that serious gynaecological problems such as a history of infertility or abortion, could result in problems concerning both sexual and body image (Gray, 1977; Masters & Johnson, 1966). According to Gray (1977), a history of abortion could result in increased anxiety during pregnancy. Thus, a woman’s gynaecological background is relevant in a study of this nature.

Orgasmic Ability. Several past researchers proposed that a female’s sexual orgasmic ability could either be enhanced or smothered by her pregnant state (Baxter, 1974; Graber & Graber, 1975; Kinsey et al., 1953; Kumar et al., 1981; Perkins, 1982; Reamy et al., 1982; Tolor & Di Grazia, 1976). Much controversy surrounds this issue and some researchers indicated that a number of women infrequently or never experience orgasms (Kitzinger, 1983; Olivier, 1987; Uken, 1980). It seems necessary to establish the influence of pregnancy on women’s orgasmic ability, by questioning them on their experience of sexual orgasms prior to conception.

Sexual Methods and Positions. Information about the use of various sexual methods and positions prior to the
women conceiving, seem relevant if one were to understand the use of sexual methods and positions during pregnancy. For instance, Masters and Johnson (1966) suggested that pregnant couples frequently use mutual masturbation.

Sexual Relationships. Subjects were questioned on their feelings about their sexual relationship, with their partner. It has been suggested that this influences a woman's sexual adjustment during the course of pregnancy (Solberg et al., 1973; Tolor & Di Grazia, 1976).

General Information: Pregnant and Postnatal Period.
Parity. Researchers failed to agree that women exhibit a more marked decrease in sexual desire and sexual activity during a first pregnancy than during subsequent pregnancies (Almgren et al., 1972; Karmel, 1974; Masters & Johnson, 1966; McConnell & Daston, 1961). Uken (1980) indicated that parity is not related to a woman's orgasmic ability.

Planned or Unplanned Pregnancy. In her early writings Deutsch (1944, 1945) stated that when a woman decides to have children, she undergoes several changes. Menninger (1943) was of the opinion that a planned pregnancy results in fewer adjustments for a woman than an unplanned pregnancy. Many researchers proposed that a
planned or unplanned pregnancy influences the way a pregnant woman experiences her body image (Barry, 1970; Bloss, 1950; Kitzinger, 1970). Recently, Offerman-Zuckerberg (1980) reported that women with planned pregnancies felt proud of their bodies. It may be that women with planned pregnancies anticipate the changes occurring in their bodies and sexuality, and therefore are able to adjust better to these changes than do women who have unplanned pregnancies.

Symptoms. A number of researchers referred to physiological symptoms, which influence a woman’s sexuality during pregnancy (Falicov, 1973; Grazioli, 1983; Holtzman, 1976; La Rossa, 1979; Masters & Johnson, 1966; Perkins, 1982; Reamy, et al., 1982; Sarrel & Sarrel, 1980; Wagner & Solberg, 1974). Likewise, early researchers, Robertson (1946, 1955) and Harvey and Sherfey (1954) linked vomiting during pregnancy to a woman’s dislike of sexual activity and a negative attitude toward sexual relations and her sexuality.

Acceptance of Pregnancy and Attitude Toward Confinement. Uncertainty exists about the possible influence of these issues on a woman’s pregnancy (Breen, 1975; Newton, 1963).
Sexual Counselling and Prenatal (Antenatal) Classes. Many researchers advocated the counselling of expectant couples concerning sexual activity during pregnancy and the postnatal period. However, they failed to reach consensus on whether this counselling is received and what the benefits of such counselling are (Brecher & Brecher, 1966, 1969; Chalmers, 1984a; Deutscher, 1970; Masters & Johnson, 1966; Offerman-Zuckerberg, 1980; Perkins, 1982). Deutscher (1970) and more recently Chalmers (1984b), expressed the view that the participation of women in prenatal (antenatal) classes with concomittant counselling, positively influences an expectant couple’s experience. These issues were addressed in the present research.

Type of Delivery. Consensus was reached by researchers who found that the type of delivery and the manner in which women experience labour and childbirth influenced their postnatal body image (Barry, 1970; Chalmers, 1982; Colman & Colman, 1971, 1972; Davids & de Vault, 1962; Gray, 1977; McConnell & Daston, 1981; Wertz & Wertz, 1978). Some writers suggested that the presence of the expectant father at the birth results in a better mutual understanding of a couple’s post-delivery sexual relationship (Colman & Colman, 1972; Deutscher, 1970; Fein, 1974). Questions concerning these issues were
directed at the subjects in this study in order to investigate these suggestions.

*Breast-feeding.* Questions about breast-feeding were also included in this investigation. Many researchers speculated on the possible influence of breast-feeding on female sexuality, and female body image (Adams, 1959; Deutsch, 1944, 1945; Kroger, 1962). Some were of the opinion that breast-feeding evokes feelings of sensuality and womanliness in mothers (Gansberg & Mostel, 1985; Masters & Johnson, 1966; Rubin, 1970; Scharff, 1983). Furthermore, biophysiological similarities were outlined between the milk ejection reflex of a mother during breast-feeding and female sexual orgasm (Heiman, 1965; Masters & Johnson, 1966; Rubin, 1970). Therefore, participants in this study were questioned on their experience of breast-feeding so as to determine whether it is detrimental to female sexual behaviour in the postnatal period, or whether it delays a 'new' mother resuming sexual relations.

The Body during Pregnancy and the Postnatal Period. **Bodily Feelings.** Although the present study evaluated female body image by means of a projective measuring device, research participants were also asked to describe their consciously held feelings about their bodies, prior to and during pregnancy. Colman and Colman (1971)
suggested that the way a woman feels about her body prior to conception, influences her adjustment during pregnancy and postnatally. It was interesting for the purpose of this study to compare this qualitative data with the findings on the Rorschach Inkblot Test.

Physical Attractiveness. A woman’s feelings of attractiveness are often associated with her experience of her sexuality in general (Deutsch, 1944, 1945; Kohlberg, 1966). According to Simon and Gagnon (1969), female sexuality is built on physical cues. To gain additional insight into women’s feelings of attractiveness during pregnancy and postnatally, women in this study were asked about such feelings during this period. They were also asked to give the reasons why they felt more attractive or less attractive. Words and phrases were included in the questionnaire because of their association with heightened feelings of attractiveness during pregnancy or the postnatal period. These were feminine, sexual, sensual, womanly, increased breast size and being thin during the postnatal period (Bibring & Valenstein, 1976; Brady & Levitt, 1965; Clark & Hale, 1974; Davids et al., 1961b; Masters & Johnson, 1966, Sherfey, 1972). Words associated with feelings of unattractiveness were also included in the questionnaire. These included bodily variables such as the body being ugly, misshapen, clumsy, fat, foreign, or unattractive,
and detrimental to a pregnant or postnatal woman's feelings of attractiveness (Belson, 1978; Bibring & Valenstein, 1976; Hollender & McGhee, 1974; Holtzman, 1976; Leifer, 1980; Masters & Johnson, 1966; Moore, 1978; Solberg et al., 1973; Wagner & Solberg, 1974).

**Female Sexual Desire during Pregnancy and the Postnatal Period.**

A secondary objective of this study was the exploration of potential causes, other than the in-depth assessment of female body image, for the decline of female sexuality during pregnancy and the postnatal period. Although the questionnaire used in the study of Reamy et al., (1982) included many such possible causes, additional 'reasons' were extracted by the present researcher from the literature on female sexuality, body image and pregnancy. These included:

- **Painful intercourse** (Masters & Johnson, 1966).

- **Feeling sexually fulfilled after impregnation - no need for sexual contact with husband** (Deutsch 1944, 1945; Freud, 1931; La Rossa, 1979; Perkins, 1982).

- **Feeling motherly rather than erotic** (Deutsch, 1944, 1945; Janeway, 1974; La Rossa, 1979; Sherfey, 1972).
Depression (Calhoun et al., 1981; Delliquadri & Breckenridge, 1980; Erickson, 1965; Kane et al., 1967; Kaplan, 1974).

Anxiety (Delliquadri & Breckenridge, 1980; Gray, 1977).

Loss of sexual interest (La Rossa, 1979; Masters & Johnson, 1966; Solberg et al., 1973).

Awkward body size (Holtzman, 1976; Kumar et al., 1981; Levinsohn, 1984; Offit, 1981; Solberg et al., 1973; Steege & Jelovsek, 1982).

Body is a sexual embarrassment due to physiological changes such as the vaginal state and milk ejection from the breasts during intercourse (Baxter 1973; Falicov, 1976; Gansberg & Mostel, 1985; Hames, 1980; Kitzinger, 1980; Kumar et al., 1981; Masters & Johnson, 1966; Read, 1933).

Strange feelings in having intercourse due to an awareness of the foetus (Falicov, 1976; Landis et al., 1950; La Rossa, 1979).

Not feeling good (fatigue) (Falicov, 1976; Kitzinger, 1980; Kumar et al., 1981; Landis et al., 1950; Masters & Johnson, 1966).
Too occupied with the baby (Bardwick & Behrman, 1967; Tolor & Di Grazia, 1976; Winnicott, 1965).

Gain sensual satisfaction from the baby (Gansberg & Mostel, 1985; Masters & Johnson, 1966; Rubin, 1970; Scharff, 1983).

Body is ugly (stretchmarks, varicose veins) (Barbach, 1976).

Afraid of hurting herself (Masters & Johnson, 1966).

Other reasons such as Episiotomy or Caesarean delivery (Gray, 1977; Masters & Johnson, 1966; Reading, 1983).

Expectant Fathers: Sexual Desire.
A number of reasons for an increase or a decrease in male sexual desire during pregnancy and the postnatal period were investigated in order to explore male sexuality during the pregnancy. These included:

Wife physically unattractive (Colman & Colman, 1972; Masters & Johnson, 1966; Osofsky, 1982).

Wife not interested (sexually) (Masters & Johnson, 1966).
Fear of hurting the foetus or mother (Herzog, 1982; Holtzman, 1976; Levine & Barbach, 1983; Masters & Johnson, 1966).

Upset about pregnancy (Gerzi & Berman, 1981).


Wife more maternal - less erotic (Colman & Colman, 1972; Sarrel & Sarrel, 1980).

Added responsibility of parenthood (Masters & Johnson, 1966).

Wife is too occupied with the baby (Ballou, 1978a, 1978b; Bardwick & Behrman, 1967; Greenberg & Brenner, 1979; Winnicott, 1965).

Expectant Fathers: Wife’s Attractiveness.
Attractiveness of their wives’ pregnant bodies. As suggested by some researchers, the way in which a husband perceives his wife’s pregnant body influences their sexual relationship. Furthermore, it also influences a pregnant woman’s feelings about her own sexuality (La Rossa, 1979; Solberg et al., 1973).
In summary, the main aim of this research is the exploration of female sexuality and body image during pregnancy. Several other variables as outlined above, were also included in the investigation.

The Sample

The design and nature of the study allowed for research of samples of convenience only. In order to obtain volunteers, several gynaecologists, midwives, general practitioners and antenatal teachers were approached personally and informed of the nature of the study. A gymnasium catering for pregnant and postnatal women, and a branch of the National Childbirth Education Association (NCEA), were informed of the study and the criteria for participation in the study. Those who were willing to recruit volunteers received Information Sheets outlining the research (Appendix A). Suitable candidates were approached by telephone to set up an interview.

All the interviews were conducted at the homes of the volunteers. Only the researcher - a registered clinical psychologist - and the participant were present during testing, lasting approximately one-and-a-half to two hours. Prior to testing, each subject was briefed on the nature of the research and assured of the utmost confidentiality. All but one of the volunteers signed the Informed Consent Form (Appendix B) confirming their willingness to participate in
this study. Thereafter testing took place. The research participants completed the Questionnaire on their Biographical and Sexual Background, the Sexuality Scales, and the Rorschach Inkblot Test was administered by the researcher.

After completing the testing sequence, each subject was asked if her husband could be approached to participate in the research. Those who agreed received a sealed envelope for their husbands, containing the Sexuality Scales (Appendix I - K) and an Informed Consent Form (Appendix H) for his voluntary participation. The completed form and Questionnaires were returned to the researcher by means of a stamped self-addressed envelope.

In order to minimize the criticism which was directed at previous studies of this nature (Chapter Four & Five), a multivariate research design was chosen. The research, was sub-divided into three independent samples.

Cross-Sectional Samples

The sample consisted of 121 white married pregnant women of mixed gravidity, that is, primigravidas (pregnant for the first time) and multigravidas (subsequent pregnancies). Of these women, 31 were in the first trimester of pregnancy, 44 in the second trimester, and 46 in the third trimester. In addition, 36 mothers of mixed gravidity in the postnatal period were also assessed.

Due to the nature of the study, only married women were included. Single, divorced, or widowed women were excluded as
it cannot be assumed that they have reasonable and stable access to sexual relations and activity. Furthermore, other issues such as illegitimacy and stresses of being alone during pregnancy could influence how they experience their pregnancy.

In an attempt to evaluate pregnant women during the most commonly recognized childbearing age only, women younger than 20 years, and older than 39 years, were excluded from this study. It is believed that additional stresses may be prevalent with younger and older pregnant women.

Controversy seems to surround the issue of cultural and racial influences on a woman's experience of her sexuality (Chapter Four). Therefore, the study, was restricted to the white population. To allow for the comparison of this study with similar studies, mostly done abroad, the majority of the women assessed were English speaking. It was noted that a recent South African study on female sexuality suggested that English and Afrikaans speaking women have differing sexual experiences, based on their cultural backgrounds (Olivier, 1987). However, the present study was not planned to assess language or cultural differences.

Referring to the medical status of the subjects, women with minor symptoms characteristic of pregnancy, such as vomiting and nausea were included in the study. Women with a history of repetitive abortions, infertility and related gynaecological problems were excluded.

Although this study depended solely on volunteers, most women came from the middle and upper social economic level and
were in possession of a matric certificate and/or tertiary education. It is speculated that women having a higher level of education and comfortable living circumstances are possibly more open to participate in research of this nature. However, results obtained from this study can only apply to South African pregnant women with characteristics similar to those mentioned above.

Women in the postnatal period who volunteered their participation had the same restrictions imposed on them than the samples above.

Concerning sizes of the different groups, an equal number of volunteers was envisaged for each trimester of pregnancy, and the postnatal period. This proved difficult as it appeared that many women confirmed their pregnancies only upon entering the second trimester. Therefore, the majority of volunteers are between four months and nine months pregnant. Following labour and childbirth, 'new' mothers were occupied with their mothering role and this resulted in fewer volunteers in the postnatal group.

In addition a sample of 52 expectant fathers also participated in the study. They were equally distributed into the trimesters which corresponded with their partners' pregnant state. Ten fathers volunteered their participation in the postnatal period. Although the researcher wished to include all the partners of the women tested, circumstances prevented this, such as partners being too busy, or the
preference of a wife not to include her husband in research of this nature.

Longitudinal Sample

A small group of 12 women of mixed gravidity in the first trimester of pregnancy was also included in this study. They were assessed during each trimester and once in the postnatal period. Similar criteria to those used in drawing the cross-sectional research group, such as age and marital status, were also applicable to the longitudinal sample. The intention of researching this group was to ascertain whether their test results were influenced by repeated exposure to the Sexuality Scales, in comparison with the groups tested on one occasion only (Chapter Four).

Six expectant fathers were questioned on a longitudinal basis, about their pregnant partners' sexuality and body image, as well as their own sexuality. They were not involved in the postnatal assessment as they failed to return their scales within the required time.

Control Group

Research of this nature does not allow for the use of a comparison group, as it is difficult to control all the pertinent variables when comparing pregnant women with non-pregnant women. For this reason, the subjects were asked to report retrospectively on their pre-pregnant sexual state. However, 39 non-pregnant married women were included in this
study, with or without previous pregnancies. As before, they were aged between 20 and 39 years, spoke English and did not suffer from serious gynaecological problems. They were tested on their sexuality and body image. These findings were then compared with the pre-pregnant sexuality scores obtained retrospectively from the experimental groups. This was done to establish the validity of the retrospective data.

Measuring Instruments

Every effort was made to include cognitive and projective measuring instruments. A review of research methods showed that limited methods were available for the study of sexuality objectively. The case study method and personal interviews used extensively by researchers such as Freud (1931) and Humphrey (1975) proved unsuitable for the present research. Observations made using these methods may be questionable because of the risk of an interview bias, as well as having to rely on subjects to discuss sexual issues openly and honestly (Hawton, 1985; Marmor, 1965). Although suitable for a study on a large number of people, the survey method used by Kinsey et al., (1953) and Olivier (1987), could be limiting in gleaning in-depth knowledge of female sexuality (Hawton, 1985). Hawton (1985) questioned whether the survey methods were representative of all people, as people who volunteered for studies of a sexual nature could be totally different from those who wished not to be included in such research.
The laboratory method used by Masters and Johnson (1966) proved to be advantageous, as many variables can be controlled. The reliance on volunteers who may not be representative still seem problematic. In addition, this approach often calls for the involvement of a research team and can be very costly. Irrespective of the research method chosen, Hawton (1985) pointed out that sexuality studies could not be faultless.

The measuring devices used in the present study, the testing sequence and the comparability of the scales are presented in Table 1. Due to the sensitive nature of information requested from the volunteers it seemed advisable to start the testing procedure with a Biographical Questionnaire dealing with less personal information. The Rorschach Inkblot Test was administered between the scales dealing with the Retrospective Sexuality information and the scale applicable to a woman's Present Sexuality. Although these scales contain corresponding items to allow for comparison, the Sexuality Scale applicable to a woman's present sexuality contains several added items. It was decided to use the above-mentioned testing sequence, to create a time lapse and possibly prevent a test-retest bias.

**The Biographical Questionnaire**

This questionnaire was compiled from the questionnaires used by Gray (1977), Reamy et al., (1982) and Uken (1976, 1980, 1983) in their studies dealing with either
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<td><strong>Non-Pregnant (1)</strong></td>
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<td>Biographical Questionnaire (Sections 1-3)</td>
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<td>Non-Pregnant Sexuality Scale (NP)a</td>
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<td>Rorschach Inkblot Test</td>
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a Abbreviated codes of scales in brackets. Scales attached as Appendix C-K.
pregnancy, female sexuality or body image. Many of the secondary areas of interest in the present study, were included as items in the Biographical Questionnaire. Table 2 outlines the various areas covered in the Biographical Questionnaire. A copy of the Questionnaire is attached in Appendix C.

**Sexuality Scales**

The Sexuality Scales were extracted from the Marital Life and Pregnancy Questionnaire (no copyright) developed by Reamy et al. (1982) who evaluated female sexuality prior to and during pregnancy and was adapted for use in this study. After an extensive review of the literature on female sexuality and pregnancy, Reamy et al. (1982) developed three separate questionnaires, applicable to the various trimesters of pregnancy, rated on a 3- or 5-point scale. The items in the questionnaires are as follows:

_ Questionnaire A._ It consists of demographic details and questions concerning a woman’s feelings and attitudes during her first trimester of pregnancy. Several questions concerning her sexual behaviour prior to pregnancy as well as during pregnancy are also included in this questionnaire.

_ Questionnaire B and C._ In these questionnaires, Reamy et al. (1982) omitted demographic and retrospective pre-pregnant sexuality items. The items on female sexuality during pregnancy, as presented in Questionnaire A remain
**TABLE 2: Biographical Questionnaire**

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<th>Section</th>
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<td>1</td>
<td>Biographical and Familial Information</td>
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<td>2</td>
<td>Sexual Development History</td>
<td>17-23</td>
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<td>3</td>
<td>Gynaecological History</td>
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<td>4</td>
<td>Pregnancy Information</td>
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the same. Questionnaire B is applicable to women pregnant in the second trimester, while Questionnaire C is applicable to women during their third trimester of pregnancy.

The reliability and validity of their questionnaires were discussed by Reamy et al. (1982) who indicated that the traditional means of assessing reliability such as test-retest or split-half reliability were not suitable. They relied therefore on pre-testing the questionnaire in a pilot study and interviewed pregnant women and experts in this specialised field of study in order to validate their questionnaire (Reamy et al. 1982).

The above-mentioned questionnaires were found to be most suitable for the present research inasmuch as

1. No questionnaires of this nature appear to be available in South Africa. Although Uken (1976) included some self-constructed questions on female sexuality in her study of pregnancy, the questions did not fulfill the needs of the present investigation.

2. The questionnaires consist of a variety of items on the indices of female sexuality which are relevant to the present research (Chapter Four).

3. The contents, scales, format and administration procedure are appropriate to the nature of the present study. The questionnaires consist of items rated on 3-point or 5-point scales and could be completed by the research participants. This administration procedure was found to
be suitable, limiting the possibility of an interviewer bias. The researcher is also of the opinion that such a procedure creates an environment which is less threatening or embarrassing for the subjects.

Additional items on female body image and the expectant father, relevant to the present research, are included in the questionnaires of Reamy et al., (1982).

To suit the research design of this study, the Marital Life and Pregnancy Questionnaires A, B and C (Reamy et al., 1982) were adapted slightly and reconstructed into several comparable scales of sexuality by the present researcher. These were entitled:

Pre-Pregnant Sexuality Scale

This scale consists of all the retrospective items of female sexuality included in Questionnaire A of the Marital Life and Pregnancy Questionnaire (Reamy et al., 1982). Questions of a demographic nature were omitted, as more in-depth biographical details were obtained by means of the Biographical Questionnaire discussed earlier. In addition, the scale was adapted slightly to include some questions relevant to the secondary areas of interest of the present research. Using this independent scale, a pre-pregnant baseline of female sexual behaviour and activity prior to pregnancy was obtained. A copy of the scale is attached in Appendix D.
Pregnant Sexuality Scale

This single scale (Appendix E) was constructed from all the items measuring female sexuality and feelings about pregnancy included in Questionnaires A, B and C of the Marital Life and Pregnancy Questionnaire (Reamy et al., 1982). It was applied to women in any trimester of pregnancy.

All the items on the Pre-Pregnant Sexuality Scale correspond to items on the Pregnant Sexuality Scale, and partially to the Postnatal Sexuality Scale, allowing for comparisons between the different scales.

Postnatal Sexuality Scale

The Marital Life and Pregnancy Questionnaire (Reamy et al., 1982) did not include a scale applicable to women post-delivery. Such a scale was constructed on the basis of the previously mentioned scales. Items were rephrased to refer to the post-delivery period. Self-constructed items referring to issues relevant during the postnatal period, such as breastfeeding and type of delivery, were added to this scale. A copy of the scale can be found in Appendix F.

Non-Pregnant Sexuality Scale

This scale consists of the same items found in the Pre-Pregnant Sexuality Scale. Items were rephrased slightly to be applicable to non-pregnant women (Appendix G).
Sexuality Scales for Husbands.

In order to include expectant fathers in this study, scales were constructed measuring their sexuality prior to and during their wives' pregnancy experience, and after their becoming a father. The items are similar and comparable to the Female Sexuality Scales. However, items were rephrased to refer to male sexuality during the pregnancy experience. Some items were added to the scales to accommodate certain variables, which according to past researchers may have a bearing on expectant fathers and their sexuality. The scales are as follows:

- Husband - Pre-Pregnant Sexuality Scale (Appendix I)
- Husband - Pregnant Sexuality Scale (Appendix J)
- Husband - Postnatal Sexuality Scale (Appendix K)

In summary, seven separate scales evaluating sexuality of the various sub-samples were constructed from the Marital Life and Pregnancy Questionnaire developed by Reamy et al., (1982). All the scales were written in a format which allowed for a comparison of the research findings of the sub-samples. The items of the scales remained relatively similar for all the test groups. Additional items were included in some scales in order to investigate certain responses suggested by other researchers as being characteristic of a specific sample. Minor alterations were made to the scales measuring the various groups.
Table 3 shows the sources and items included in the Biographical Questionnaire, Pre-Pregnant Sexuality Scale and Pregnant Sexuality Scale. The Postnatal Sexuality Scale and Husbands' Sexuality Scales were self-constructed.

The Rorschach Inkblot Test

The Rorschach Inkblot Test was used in the present evaluation of female body image during pregnancy and the postnatal period. This was scored for Barrier and Penetration responses, according to the method of Fisher and Cleveland (1958a). These researchers, after extensive research on body perception, developed a scoring system for responses to the Rorschach which reflects people's bodily experience (Fisher & Cleveland, 1955, 1956, 1958a, 1958b).

The scoring system consists of two distinct categories, namely:

- **Barrier Scores**: According to Fisher and Cleveland (1958a) Rorschach responses could include containers, enclosed spaces, objects which conceal other objects, or possess unusual covering materials (see Appendix L). These are scored as Barrier and refer to the clarity, 'definiteness', strength and protectiveness of an individual's body boundary (Fisher & Cleveland, 1958a). Furthermore, it reflects the stable component of the personality and attitude of a person and is influenced less by stress (Fisher, 1958, 1959a, 1963;
### TABLE 3: Sources and Items included in the Measuring Instruments

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<td>B, C</td>
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<td></td>
<td>B, C</td>
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</table>
Penetration Scores: Responses on the Rorschach cards reflecting penetration of, wearing away, or the disruption of a surface, are scored as Penetration responses (Fisher & Cleveland, 1958a; see Appendix M). These scores describe a person's body boundary as being open, destroyed, disrupted or easily penetratable (Fisher & Cleveland, 1958a). As discussed in Chapter Four, researchers were in disagreement as to what the Penetration responses actually measure. The authors, nevertheless, warned that the responses may only reflect significant results when assessing "abnormal" groups. Later researchers indicated that Penetration responses measure the effect of short term variation in body image and are sensitive to immediate situational stress and temporary stress such as emotional states (Fisher, 1958, 1959a; Herron, 1962). Penetration scores reflect a personality variable incorporated into persons' orientation toward their bodies (Fisher, 1958; McConnell & Daston, 1961).

In scoring a Rorschach protocol according to the method of Fisher and Cleveland (1958a) each Barrier response, and each Penetration response, is given a value of one. A total is then calculated for the number of Barrier scores and the number of Penetration scores (Fisher & Cleveland, 1958a).
This method was utilized in the present research. Furthermore, Fisher and Cleveland (1958a) suggested that an overall index of the boundary 'definiteness' could be calculated which reflects a person's body image as being definite and structured, or fragile. The index is calculated by counting the number of Barrier scores minus the Penetration score. Subsequent research by Conquist (1963), and Cassell and Fisher (1963), found this index useful in determining body image.

The number of responses given by subjects on the Rorschach were limited to a total of 25 responses. Three responses were requested on Cards 1, 2, 3, 7 and 10, and two responses on cards 4, 5, 6, 8 and 9 (Fisher, 1961, 1964a, 1964b; Fisher & Fisher, 1964). In controlling the response total, Fisher and Cleveland stated that "conclusions concerning differences between groups in body image scores were contingent upon demonstrating that the groups did not differ significantly in total response" (1958a, p. 66). They also indicated that the number of responses given by groups unequal in size did not influence research findings. According to them the actual number of responses given to a card reflect the actual difference in body image between unequal groups. It was also indicated that 12 or more responses to the Rorschach are sufficient to reflect the body image differences between subjects. Several researchers using different sample sizes agreed with the postulations of Fisher & Cleveland (1958a) (Fisher, 1961; Fisher & Fisher, 1964;
Grayson, 1956; McConnell & Daston, 1961; Ramer, 1963). In the present study all sub-samples differed in size.

In discussing reliability of this projective technique, Fisher and Cleveland (1958a) noted that the method of test-retest reliability is not suitable. However, extensive use of this method, reflected an interscorer-reliability varying between 0.87 and 0.93 (Fisher, 1959a, 1963; Fisher & Cleveland, 1958a; Karmel, 1974; McConnell & Daston, 1961). A variety of samples have also been tested using this method, which suggests that the measuring instrument is reliable in the assessment of body image (Fisher, 1950, 1960, 1964a, 1964b; Fisher & Cleveland, 1958a; 1969; Klatskin & Eron, 1970). The present researcher relied on the blind rating of research protocols by two independent raters trained in scoring the Rorschach Inkblot Test. In addition, one of the co-raters also scored some Rorschach protocols reported by Fisher and Cleveland (1958a). The reliability of this was calculated.

After a thorough investigation of measuring instruments the projective test was found to be most suitable for use in the present research because:

Several researchers of body image pointed out that few tests successfully separate the perceiver (i.e. person) from the object to be perceived (the self) (Gray, 1977; Merleau-Ponty, 1945; Shontz, 1969). Using the Rorschach Test subjects are not aware that their body image is being evaluated, and that the manner in which
they respond to the blots are suggestive of their body perception. It seems that a degree of "separation" can be achieved when using this projective technique.

Gray (1977) speculated that when persons are questioned about their body image, they may make attempts to describe their bodies in accordance with social norms and values, which may not necessarily reflect their true feelings. The present study may limit the possible subjective denial of the subjects' true feelings towards their bodies by using the Rorschach. Using some questions included in the Sexuality Rating Scales, subjects were also questioned on their body image.

The vague unstructured nature of the Rorschach may minimize the possibility of interviewer bias (Davis, 1960; Fisher, 1950, 1959a, 1964a, 1964b; Landau, 1960). In addition, it imposes no restrictions on the subjects, as is often the case with rating scales where subjects must make a choice between alternative options.

Considering the other measuring instruments, namely, the Biographical Questionnaire, and the Scales of Sexuality, the researcher wished to include a projective technique in order to explore psychological determinants related to female body image. Studies in the past indicated that this assessment technique is predictive of physiological, social and psychological behaviour.
Fisher and Cleveland (1958b) suggested that a possible link exists between a person's body perception, as measured by the Rorschach and willingness to participate in intimate sexual relationships. According to them, persons with definite body boundaries, and therefore a high level of Barrier responses may feel more open to relate sexually to others. Later researcher, Gray (1977) reported that pregnant women in her study often responded with sexual responses on the Rorschach, but did not elaborate on this. Thus the use of this measuring device appears to be suitable for gaining information on female body image as well as on female sexuality.

Considering the other measuring instruments and demands made on subjects and the necessity of restricting testing to a reasonable time limit, a concise yet reliable method of body image assessment was needed. The Rorschach scored for Barrier and Penetration responses appeared to offer such an instrument.

The scoring method also allows for easier quantification of psychological information to suit statistical analysis of the data, compared to the weighted approach of Klopfer, Ainsworth, Klopfer and Holt (1954).

Much speculation surrounds the use of this projective technique in the assessment of body image and sexuality.
Using this measuring instrument, a contribution may possibly be made to establishing its value in the assessment of female sexuality and female body image during pregnancy, and the postnatal period.

Summary

This chapter outlined the methodology of the present study on female sexuality and body image during pregnancy and the postnatal period. The research approach included a cross-sectional and a longitudinal design, and several sub-samples were evaluated. The cross-sectional study, which formed the central part of this research, consisted of a group of non-pregnant women, three groups of women in the different trimesters of pregnancy, and a group of mothers in the postnatal period. In addition, three smaller groups of expectant fathers, and one group of 'new' fathers, were evaluated. Female subjects were evaluated by means of a Biographical Questionnaire, Scales measuring Sexuality, and the Rorschach, a projective technique to investigate body image. Their male counterparts completed Scales about their Sexuality. Similar measuring instruments were used with the longitudinal research groups.

Female sexuality was not viewed in isolation, but evaluated in relation to female body image. The evaluation of female body image used a projective technique. This formed part of the exploratory nature of this study and was in contrast to the assessment thereof by rating scales, being
characteristic of many studies. Expectant fathers were included in this study of pregnancy, female sexuality and body image.
CHAPTER 7

RESULTS AND DISCUSSION

An exploratory approach was used in the analysis of data, comprising a multitude of variables related to female sexuality and female body image during pregnancy and during the postnatal period. Although female sexuality and body image formed the main focus of this study, it was necessary to briefly investigate and integrate the secondary areas of interest referred to in this study. It was hoped that through the explorative approach and a combination of both descriptive and inferential techniques of data analysis, certain trends could be found about female sexuality and female body image during the gestation period. Furthermore, such an approach seemed to be most appropriate to integrate, compare and verify the loose facts reported in a number of small studies described earlier.

For the sake of clarity, this chapter is divided into four sections. Section one investigates the statistical characteristics and reliability of the various measuring instruments. Section two analyses, presents and discusses the data reported by the cross-sectional research samples. This is followed by section three, which investigates the results of sexuality and body image of the small sample of women who participated in this study on a longitudinal basis. In the fourth section a general conclusion is drawn.
It must be highlighted, that a variety of non-parametric and parametric statistical techniques were employed to gain as much clarity and understanding of the countless factors included in the present study as possible. Where applicable the analyses were done by means of the BMDP Statistical Software (Dixon, 1981).

Statistical Characteristics of the Measuring Instruments

The different measuring instruments used in this study were not standardized for a South African sample. Therefore, raw scores were used in the statistical analyses.

Means and Standard Deviations

Table 4 presents the means and standard deviations for items included in the various measures used in the female cross-sectional samples.

The total cross-sectional sample included a group, of non-pregnant (n = 39) women who served as a control group and four experimental groups. The latter consisted of women who were pregnant in the first (n = 31), second (n = 44) and third (n = 46) trimester, and a group of women in the postnatal period (n = 36).

Reliability of the Measuring Instruments

Various statistical methods were utilized to determine the internal consistency of the scales measuring female body image and sexuality for this sample.
### TABLE 4: Means and Standard Deviations (Female Cross-Sectional Samples)

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<th>Variable</th>
<th>Non</th>
<th>First</th>
<th>Second</th>
<th>Third</th>
<th>Post-Natal</th>
<th>Total</th>
<th>Non</th>
<th>First</th>
<th>Second</th>
<th>Third</th>
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<td>1.00</td>
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<td>.94</td>
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</table>
**Rorschach Inkblot Test**

The Rorschach Inkblot Test, scored for Barrier and Penetration responses, did not lend itself to traditional methods of assessing reliability. Therefore, inter-rater agreement was determined between two independent raters on 40 randomly selected Rorschach protocols. The Pearson product-moment correlation between the two sets of ratings was 0.99 for both the Barrier responses and the Penetration scores, indicating an exceptionally high level of agreement. To further determine rater reliability, the co-rater scored seven Rorschach protocols reported by Fisher and Cleveland (1958a), who developed the scoring method. A Spearman correlation coefficient for ranked data (rho), showed a correlation of 0.93 between the Barrier scores of the co-rater and those scored by Fisher and Cleveland (1958a). A lower correlation of 0.75 was established for Penetration responses. Inter-rater reliability of the Rorschach was high, and therefore considered acceptable for inclusion in subsequent analyses.

**Sexuality Scales**

Sexuality scales were used mostly as interval scales, which made calculation of reliability by the usual means inappropriate. However, in a further analysis 12 sexuality items were combined to form an ordinal Sexuality Scale. Consequently, in an attempt to gain some idea of the reliability of the 12 items combined to form the Sexuality
Scale, Cronbach alpha coefficients were calculated for each experimental group. The motivation for selecting these items is given at a later stage.

The Cronbach alpha reliabilities for the sub-samples were the following. A Cronbach alpha coefficient of 0.80 was found on the Sexuality Scale for Non-Pregnant Women \( (n = 39) \). The Pre-pregnant Sexuality Scale produced a moderate, yet acceptable Cronbach reliability of 0.69 \( (n = 157) \). The Cronbach alpha coefficient of the Pregnant Sexuality Scale was 0.76 \( (n = 121) \) and the Postnatal Sexuality Scale 0.80 \( (n = 36) \). In view of these reliabilities the internal consistency of the Female Sexuality Scales was considered acceptable.

Cross-Sectional Samples

To gain some impression of the background of the specific groups who participated in the study the characteristics of the cross-sectional sample are presented below. The data of the various indices utilized in the assessment of female sexuality for the non-pregnant, and the experimental groups, are then analysed. Several methods of data analysis were employed to become familiar with such data, as well as to allow for the comparison of the present findings with earlier studies of this nature. These findings will be discussed in full where applicable.

The research findings about female body image during pregnancy and the postnatal period are then examined. This analysis includes the qualitative data obtained from subjects
about their feelings toward their bodies, and their level of attractiveness. Attention is also given to the research findings on the Rorschach Inkblot Test.

This is followed by a comparative analysis of the results on female sexuality during pregnancy and the postnatal period and female body image during pregnancy and during the postnatal period.

Attention is then given to the small sample of expectant fathers who were recruited for the present study. As a result of the small sample size, descriptive analysis of data was relied upon. A similar procedure of data analysis was utilized in exploring the opinions of expectant couples about their sexuality.

A general summary dealing with the cross-sectional samples concludes this section.

Sample Characteristics

It seemed relevant to assess the backgrounds of the participants in the cross-sectional sample even though the main thrust of this study was to assess body image and sexuality of women during pregnancy. Apart from gaining a description of the sample, it also provided an opportunity to compare the present sample with those of previous studies. Most researchers limited themselves to studies of an almost descriptive nature (Falicov, 1973; Holtzman, 1976; Kenny, 1973; Masters & Johnson, 1966; Reamy et al., 1982; Tolor & Di Grazia, 1976). The analysis of the characteristics of the
samples served not only to reassess previous findings, but also to condense and integrate the bulk of small studies related to pregnancy (Chapter Six).

Frequency counts were done on all the items included in the biographical questionnaire and, except for the age of the participants and the length of their marriage, percentages were calculated. A summary of the biographical background of the female cross-sectional sample is attached in Appendix N. Chi-square tests were carried out for all nominal and ordinal data to determine differences between the sub-samples concerning their biographical background, sexual developmental history and gynaecological background. The statistical programme Epistat, (Gustafson, 1984) used for the Chi-square tests, automatically selected Yates' correction when applicable. Certain categories of responses were also combined allowing for acceptable cell frequencies (Siegel, 1956). Some of the categorical data appeared to be highly skewed and in some cases the data exhibited low expected cell frequencies. For such items the discussion used percentages, thus the data were numerically analysed. Therefore, interpretation is limited in that no significance could be ascribed to such findings. The descriptive analysis, however, gives some idea of the trends underlying the study. As a general rule, results are only reported where significant differences could be established. The text, however, reverted to the descriptive analysis in cases where previous studies placed much emphasis on the topic. A restriction of the
discussion was necessary as this part of the data is secondary to the main analysis.

Biographical and Familial Information

In-depth biographical information was elicited from the subjects. Results relevant to the discussion are presented in Table 5.

**Age and Years Married**  The mean age of the total sample was 29.00 years. No significant age differences were indicated between the control group (non-pregnant) and the experimental groups. Women in the present study were older, compared to samples of other studies on female sexuality (Perkins, 1982; Reamy et al., 1982; Tolor & Di Grazia, 1976). The reasons for this discrepancy could merely be speculated upon but Newman (1957) earlier pointed out that the ages of subjects who volunteered for research, depended on the specific nature of the experiment.

For women in the various stages of pregnancy the mean lengths of years married were 4.19 (first trimester), 4.32 (second trimester) and 3.59 (third trimester). A higher mean of 6.67 years was reported by non-pregnant women and 5.42 years by women following childbirth (Table 5). A one-way analysis of variance between these means showed a significant difference (p<.05) between the experimental groups and the non-pregnant group on the length of their marriages. The findings are set out in Table 6. Earlier researchers failed to agree about whether the length of marriage correlated with
TABLE 5: Biographical and Familial Information of the Female Cross-Sectional Samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>Non Pregnant (n=39)</th>
<th>First Trimester (n=31)</th>
<th>Second Trimester (n=44)</th>
<th>Third Trimester (n=46)</th>
<th>Post-Natal (n=36)</th>
<th>Total (N=196)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age (yrs)</td>
<td>29.15</td>
<td>28.48</td>
<td>28.64</td>
<td>28.52</td>
<td>30.33</td>
<td>29.00</td>
</tr>
<tr>
<td>Years Married (Mean)</td>
<td>6.67</td>
<td>4.19</td>
<td>4.32</td>
<td>3.59</td>
<td>5.42</td>
<td>4.80</td>
</tr>
<tr>
<td>Education</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>33 (13)</td>
<td>23 (7)</td>
<td>55 (24)</td>
<td>30 (14)</td>
<td>47 (17)</td>
<td>38.2 (75)</td>
</tr>
<tr>
<td>1-3 years college</td>
<td>46 (18)</td>
<td>68 (21)</td>
<td>25 (11)</td>
<td>39 (18)</td>
<td>36 (13)</td>
<td>41.3 (81)</td>
</tr>
<tr>
<td>High School grade</td>
<td>05 (2)</td>
<td>06 (2)</td>
<td>09 (4)</td>
<td>4.0 (8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-12 years school</td>
<td>13 (5)</td>
<td>03 (1)</td>
<td>16 (7)</td>
<td>22 (10)</td>
<td>17 (6)</td>
<td>14.7 (29)</td>
</tr>
<tr>
<td>7-9 years school</td>
<td>02 (1)</td>
<td>04 (2)</td>
<td></td>
<td></td>
<td></td>
<td>1.5 (3)</td>
</tr>
<tr>
<td>Own House</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>59 (23)</td>
<td>77 (24)</td>
<td>89 (39)</td>
<td>76 (35)</td>
<td>83 (30)</td>
<td>77.0 (151)</td>
</tr>
<tr>
<td>No</td>
<td>41 (16)</td>
<td>23 (7)</td>
<td>11 (5)</td>
<td>24 (11)</td>
<td>17 (6)</td>
<td>22.9 (45)</td>
</tr>
<tr>
<td>Financially Secure</td>
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<tr>
<td>Yes</td>
<td>72 (28)</td>
<td>45 (14)</td>
<td>64 (28)</td>
<td>74 (34)</td>
<td>58 (21)</td>
<td>63.7 (125)</td>
</tr>
<tr>
<td>No</td>
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<td>36 (16)</td>
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<tr>
<td>Religious Preference</td>
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<td>10.7 (21)</td>
</tr>
<tr>
<td>Protestant</td>
<td>53 (21)</td>
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<td>43 (19)</td>
<td>33 (15)</td>
<td>50 (18)</td>
<td>45.4 (89)</td>
</tr>
<tr>
<td>Other</td>
<td>31 (12)</td>
<td>16 (5)</td>
<td>32 (14)</td>
<td>43 (20)</td>
<td>28 (10)</td>
<td>31.1 (61)</td>
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<td>Catholic</td>
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<td>07 (3)</td>
<td>15 (7)</td>
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<tr>
<td>Only Child</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td>05 (2)</td>
<td>19 (6)</td>
<td>09 (4)</td>
<td>25 (9)</td>
<td></td>
<td>10.7 (21)</td>
</tr>
<tr>
<td>No</td>
<td>95 (37)</td>
<td>81 (25)</td>
<td>100 (44)</td>
<td>91 (42)</td>
<td>75 (27)</td>
<td>89.2 (175)</td>
</tr>
</tbody>
</table>

a Frequencies in brackets.

Percentages are reported in all cases except where indicated differently.
Percentages rounded to integers.
<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
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<tr>
<td>Between Groups</td>
<td>4</td>
<td>89.52</td>
<td>22.38</td>
<td>5.74*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>191</td>
<td>2884.48</td>
<td>15.10</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>195</td>
<td>2974.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p<.05
a woman's experience of her sexuality during pregnancy or her body image during a similar period (Caplan, 1960b; Entwisle & Doering, 1981; Wagner & Solberg, 1974). No significant difference was noted between the various experimental groups (excluding the non-pregnant group) on the length of marriage. Consequently it can be assumed that findings about the experimental groups' sexuality and body image cannot be related to length of marriage.

**Education, Occupation and Financial Status** Although the majority (80.6%; n = 158) of the cross-sectional samples had tertiary education, a Chi-square test on specific frequency counts showed that the groups differed significantly on educational levels ($\chi^2 (8) = 19.62, p = .011$). An investigation of the data revealed that the non-pregnant group, and women in the first and third trimester of pregnancy predominantly, attended college. Subjects who were pregnant in the third trimester and the group of women researched during the postnatal period had attended university and were in possession of one or more degrees (Table 5). A further Chi-square test was carried out on the data, excluding the responses of the control group (non-pregnant). The groups still differed significantly in their education levels ($\chi^2 (6) = 19.09, p = .011$). According to Offit (1981) in general, educated women experienced more problems with their sexuality, than less educated women.
A descriptive analysis of the financial status of subjects indicated that many were living in their own homes rather than in rented accommodation. A Chi-square test on the data of home ownership showed a significant difference between the control group and the experimental groups ($\chi^2 (4) = 11.37, p = .022$). A further Chi-square test, excluding the data of the control group, showed no significant differences between the experimental groups. Therefore, the control group appeared to be somewhat more socially mobile. The final investigation, however, concentrated on a comparison of the experimental groups, which made the significant difference between the control group and the experimental groups seem irrelevant.

In general, the entire cross-sectional sample was characterized by positive social circumstances. Earlier, Perkins (1982) commented that better social circumstances retard the decline of female sexual activity for women. Whether this could be applied to the present study or not can only be decided upon once the data on the sexuality of pregnant and postnatal women are analysed.

**Religious Affiliations** Fewer Catholic women volunteered for this study than the percentages reported by earlier researchers in this field of study (Perkins, 1982; Reamy et al., 1982; Tolor & Di Grazia, 1976). The religious preferences of this sample were distributed amongst Protestant (45.4%; n = 89), Catholic (12.7%; n = 25), Jewish (10.7%; n =
21) and other religious denominations (31.1%; n = 61) (Table 5). The constitution of the population of the country in which this study was done could have resulted in this finding. It could be speculated that the Catholic beliefs concerning sexuality may have prevented some women from volunteering for this study. No effort was made to have religious values matched in this sample of convenience, therefore once again the data only serves to describe the sample. It is noteworthy that earlier studies of this nature showed no relationship between religious affiliations and female sexuality during pregnancy (Entwisle & Doering, 1981; Wagner & Solberg, 1974).

**Familial Background** Only 10.7% (n = 21) of women in all the samples reported being an *only child* (Table 5). The remainder showed approximately an equal number of *brothers and sisters*. It was speculated that women growing up in a family with brothers and sisters may be more exposed to issues of sexuality focusing on both sexes. Consequently, the interaction with peers may result in them feeling more comfortable with their own adult sexuality than women who grew up as single children. As the majority of the present sample had brothers and sisters, no clarity could be gained on this issue.
Sexual Developmental History

Women were asked about several issues concerning their sexual development. Results relevant to this discussion are presented in Table 7.

Facts of Life Fifty three percent (n = 104) of the entire sample, stated that they were relatively aware of the facts of life, such as menstruation and conception of a child, from between the ages 11 to 13 years. With the exception of non-pregnant women, the majority (48,4%; n = 76) of the experimental groups indicated that their mothers had informed them about these facts. Many (35,7%; n = 70) had felt indifferent about their sexual education (Table 7). These findings differ from the general notion that sexuality is seldom discussed between a mother and daughter (Friday, 1977; Olivier, 1987). Furthermore, women either felt "fairly close" (33,1%; n = 65) or "close" (36,6%; n = 72) to their mothers. These percentages were higher than those reported in the cross-cultural study of Perkins (1982).

Onset of Menstruation Most women (57,6%; n = 113) reported the onset of menstruation between 13 and 15 years of age and stated that they had felt "indifferent" (31,1%; n = 61) or "quite happy" (28,0%; n = 55) about this. Menstruation appeared to begin at an earlier age for women in the present sample, than for women who participated in previous South
TABLE 7: Sexual Developmental History of the Female Cross-Sectional-Samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>Non-Pregnant (n=39)</th>
<th>First Trimester (n=31)</th>
<th>Second Trimester (n=44)</th>
<th>Third Trimester (n=46)</th>
<th>Post-Natal (n=36)</th>
<th>% of Total (N=196)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship own Mother</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very distant</td>
<td>05(2)</td>
<td>02(1)</td>
<td>07(3)</td>
<td>11(4)</td>
<td>5.1(10)</td>
<td></td>
</tr>
<tr>
<td>Fairly distant</td>
<td>02(1)</td>
<td>02(1)</td>
<td>02(1)</td>
<td>05(2)</td>
<td>3.0(6)</td>
<td></td>
</tr>
<tr>
<td>Mixed</td>
<td>13(5)</td>
<td>16(5)</td>
<td>25(11)</td>
<td>26(12)</td>
<td>28(10)</td>
<td>21.9(43)</td>
</tr>
<tr>
<td>Fairly close</td>
<td>38(15)</td>
<td>35(11)</td>
<td>41(18)</td>
<td>26(12)</td>
<td>25(9)</td>
<td>33.1(65)</td>
</tr>
<tr>
<td>Close</td>
<td>41(16)</td>
<td>45(14)</td>
<td>30(13)</td>
<td>39(18)</td>
<td>31(11)</td>
<td>36.7(72)</td>
</tr>
<tr>
<td>Age : Facts of Life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 - 10</td>
<td>38(15)</td>
<td>19(6)</td>
<td>30(13)</td>
<td>41(19)</td>
<td>42(15)</td>
<td>34.6(68)</td>
</tr>
<tr>
<td>11 - 13</td>
<td>49(19)</td>
<td>71(22)</td>
<td>57(25)</td>
<td>46(21)</td>
<td>47(17)</td>
<td>33.0(64)</td>
</tr>
<tr>
<td>14 - 16</td>
<td>13(5)</td>
<td>10(3)</td>
<td>14(6)</td>
<td>13(6)</td>
<td>11(4)</td>
<td>12.2(24)</td>
</tr>
<tr>
<td>Feeling about Facts</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very shocked</td>
<td>05(2)</td>
<td>06(2)</td>
<td>16(7)</td>
<td>04(2)</td>
<td>06(2)</td>
<td>7.6(15)</td>
</tr>
<tr>
<td>Mildly shocked</td>
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<td>32(14)</td>
<td>24(11)</td>
<td>19(7)</td>
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<td>Indifferent</td>
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<td>30(13)</td>
<td>46(21)</td>
<td>17(6)</td>
<td>35.7(70)</td>
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<td>Excited</td>
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<tr>
<td>Very excited</td>
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<td>17(6)</td>
<td></td>
<td></td>
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<td>4.5(9)</td>
</tr>
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<td>Who told Facts</td>
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<td>52(23)</td>
<td>46(21)</td>
<td>41(15)</td>
<td>39.2(77)</td>
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<td>02(1)</td>
<td>02(1)</td>
<td>11(4)</td>
<td>4.5(9)</td>
</tr>
<tr>
<td>Self</td>
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<td>09(4)</td>
<td>03(1)</td>
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<td>Brother/Sister</td>
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<td>7.1(14)</td>
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<td>27(12)</td>
<td>17(8)</td>
<td>28(10)</td>
<td>19.3(38)</td>
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<td>Boyfriend</td>
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<td>05(2)</td>
<td>4.0(8)</td>
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<td>Books</td>
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<td>09(4)</td>
<td>07(3)</td>
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<td>Age : First Menstruation</td>
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<td>28(13)</td>
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<td>38.7(76)</td>
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<td>57(25)</td>
<td>67(31)</td>
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<td>Reaction to First Menstruation</td>
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<td>09(4)</td>
<td>13(6)</td>
<td>06(2)</td>
<td>9.6(19)</td>
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<tr>
<td>Quite upset</td>
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<td>20(9)</td>
<td>28(13)</td>
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<td>24(11)</td>
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<td>Quite happy</td>
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<td>25(11)</td>
<td>28(13)</td>
<td>44(16)</td>
<td>28.0(55)</td>
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<td>Very happy</td>
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<td>20(9)</td>
<td>07(3)</td>
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### TABLE 7: Continued

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<thead>
<tr>
<th>Variable</th>
<th>Non-Pregnant (n=39)</th>
<th>First Trimester (n=31)</th>
<th>Second Trimester (n=44)</th>
<th>Third Trimester (n=46)</th>
<th>Post-Natal (n=36)</th>
<th>% of Total (N=196)</th>
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</thead>
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<tr>
<td>Age : Sexual Intercourse</td>
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<td>06(2)</td>
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<td>09(4)</td>
<td>05(2)</td>
<td>6.6(13)</td>
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<tr>
<td>13 - 15 years</td>
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<td>32(14)</td>
<td>35(16)</td>
<td>28(10)</td>
<td>25.5(50)</td>
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<td>16 - 18 years</td>
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<td>48(15)</td>
<td>39(17)</td>
<td>48(22)</td>
<td>47(17)</td>
<td>43.8(86)</td>
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<td>19 - 21 years</td>
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<td>16(7)</td>
<td>09(4)</td>
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<td>22 - 26 years</td>
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<td>11(5)</td>
<td>11(5)</td>
<td>14(5)</td>
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</tr>
<tr>
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<td>89(39)</td>
<td>89(41)</td>
<td>86(31)</td>
<td>89.7(176)</td>
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<td>Experienced Sexual Orgasm Ever</td>
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<td>91(40)</td>
<td>87(40)</td>
<td>92(33)</td>
<td>90.3(177)</td>
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<td>09(4)</td>
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</tr>
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<td>03(1)</td>
<td>07(3)</td>
<td>04(2)</td>
<td>05(2)</td>
<td>4.5(9)</td>
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<tr>
<td>Experienced Multiple Orgasms Ever</td>
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</tr>
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<td>46(18)</td>
<td>37(11)</td>
<td>41(18)</td>
<td>25(12)</td>
<td>42(15)</td>
<td>37.7(74)</td>
</tr>
<tr>
<td>No</td>
<td>54(21)</td>
<td>61(19)</td>
<td>52(23)</td>
<td>72(32)</td>
<td>53(19)</td>
<td>58.1(114)</td>
</tr>
<tr>
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<td>07(3)</td>
<td>03(2)</td>
<td>05(2)</td>
<td></td>
<td>4.0(8)</td>
</tr>
</tbody>
</table>

*Note: Frequencies in brackets.*

Percentages are reported in all cases except where indicated differently.

Percentages rounded to integers.

Some questions more than one answer was given, therefore totals exceed 100.
African studies on female sexuality (Olivier, 1987; Uken, 1976). By the age of 18 years the majority (76.0%; n = 149) had participated in sexual intercourse and a minority (10.2%; n = 20) were married at the time (Table 7). These findings are similar to those reported by Perkins (1982) and Olivier (1987).

**Orgasmic Ability**  A relatively limited number of women in this study experienced the total non-occurrence of orgasms (5.1%; n = 10). Furthermore, only 4.5% (n = 9) did not know whether they had ever experienced an orgasm or not (Table 7). These findings correspond with the early reports of Kinsey et al. (1953) but are lower than the percentages reported by later researchers (Fisher, 1973; Hite, 1977; Olivier, 1987; Uken, 1983). Multiple orgasms were infrequently experienced and 58.1% (n = 114) of the entire sample reported never having experienced these (Table 7).

In view of the above-mentioned description, the sexual developmental history of the subjects who volunteered for this study seem to be relatively positive, and also similar to one another. However, earlier researchers suggested that subjects who volunteered for research of this nature, often exhibit unconventional sexual backgrounds, and are not necessarily representative of all people (Maslow, 1942; Maslow & Sakoda, 1952). As this was a sample of convenience the researcher had little control over the recruitment of specific subjects. It can only be speculated that women who volunteer for a study on
female sexuality during pregnancy may tend to be relatively outgoing and comfortable with their sexual relationships.

**Gynaecological History**

The questions related to birth control and issues associated with the termination of pregnancy as well as to the number of pregnancies previously experienced. Relevant results are reported in Table 8.

*Birth Control* was practised by 94.8% (n = 186) of the entire sample at some stage in their lives. Most women preferred the intra uterine device as a *method of birth control* (58.6%; n = 115) prior to conception (Table 8). The preference for this method of birth control seems higher than reported by South African women in earlier studies (Botha, 1979; Olivier, 1987; Uken, 1976, 1980, 1983).

*Abortion and Gynaecological Problems* A small minority reported the incidence of *abortion* (10.7%; n = 21) and *gynaecological problems* (3.5%; n = 7). Miscarriage was experienced by 17.8% (n = 35) of women at some stage (Table 8). The study intended excluding subjects with a history of any such problems. The low incidence of the latter, as well as the fact that the comparisons of the various groups by means of Chi-square tests yielded no significant differences, altered the initial decision. The dependence on volunteers, and a concern about not decreasing the sample
<table>
<thead>
<tr>
<th>Variable</th>
<th>Non-Pregnant (n=39)</th>
<th>First Trimester (n=31)</th>
<th>Second Trimester (n=44)</th>
<th>Third Trimester (n=46)</th>
<th>Post-Natal (n=36)</th>
<th>% of Total (N=196)</th>
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</thead>
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<td>08(3)</td>
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<td>5.1(10)</td>
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<td>IUD</td>
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<td>09(4)</td>
<td>08(3)</td>
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<td>03(1)</td>
<td>03(1)</td>
<td>2.0(4)</td>
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<td>91(40)</td>
<td>93(43)</td>
<td>97(35)</td>
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<td>28(11)</td>
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<td>20(9)</td>
<td>11(5)</td>
<td>11(4)</td>
<td>17.8(35)</td>
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<td>No</td>
<td>72(28)</td>
<td>81(25)</td>
<td>80(35)</td>
<td>89(41)</td>
<td>89(32)</td>
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<td><strong>Gynaecological Problems</strong></td>
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</tr>
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<td>Yes</td>
<td>03(1)</td>
<td>09(4)</td>
<td>02(1)</td>
<td>03(1)</td>
<td></td>
<td>3.5(7)</td>
</tr>
<tr>
<td>No</td>
<td>100(39)</td>
<td>97(30)</td>
<td>91(40)</td>
<td>98(45)</td>
<td>97(35)</td>
<td>96.4(189)</td>
</tr>
<tr>
<td><strong>Number of Children</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>23(9)</td>
<td>35(11)</td>
<td>59(26)</td>
<td>65(30)</td>
<td>03(1)</td>
<td>39.2(77)</td>
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<td>33(13)</td>
<td>48(15)</td>
<td>25(11)</td>
<td>26(12)</td>
<td>64(23)</td>
<td>37.7(74)</td>
</tr>
<tr>
<td>2</td>
<td>28(11)</td>
<td>13(4)</td>
<td>16(7)</td>
<td>09(4)</td>
<td>31(11)</td>
<td>18.8(37)</td>
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<td>13(5)</td>
<td>03(1)</td>
<td>03(1)</td>
<td>03(1)</td>
<td>3.5(7)</td>
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</tr>
<tr>
<td>4</td>
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<td>03(1)</td>
<td>03(1)</td>
<td>03(1)</td>
<td>0.5(1)</td>
<td></td>
</tr>
</tbody>
</table>

Note: * Frequencies in brackets.

Percentages are reported in all cases except where indicated differently.

Percentages rounded to integers.

Some questions more than one answer was given, therefore totals exceed 100.
sizes, also added to this decision. These women were therefore included in subsequent analyses.

**Number of Children** Thirty nine percent (n = 77) of the entire sample had no children yet and 61% (n = 119) had either one, or more than one child (Table 8). A one-way analysis of variance showed a significant difference (p<0.05) between the means of the different samples, concerning the number of children. These findings are presented in Table 9. Women in the third trimester of pregnancy were predominantly primigravidas, while many mothers in the postnatal period reported previous pregnancies. A further one-way analysis of variance between primigravidas (first pregnancy) and multigravidas (subsequent pregnancies) was done on the data of the experimental groups only, which also reflected a significant difference (p<0.05). These results are displayed in Table 10.

It must be noted that no attempt was made in the present study to control the number of children that the volunteers had. This was done to avoid excluding willing research participants on anything but essential grounds. These being age, stage of pregnancy, race and marital status (Chapter 6).

**Pregnancy and Postnatal Information**

Questions were specifically directed at the experimental groups about their experience of pregnancy and related issues.
### TABLE 9: One-Way Analysis of Variance: Number of Children for Pregnant and Postnatal Women

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4</td>
<td>30.78</td>
<td>7.69</td>
<td>12.50*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>191</td>
<td>117.52</td>
<td>0.62</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>195</td>
<td>148.30</td>
<td>8.31</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

### TABLE 10: One-Way Analysis of Variance: Number of Children for Pregnant and Postnatal Women

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3</td>
<td>18.51</td>
<td>12.71</td>
<td>12.50*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>153</td>
<td>74.29</td>
<td>0.49</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td>92.80</td>
<td>6.66</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05
Both the questions and the findings are presented in Table 11. As before, where applicable, Chi-square tests or one-way analyses of variance were carried out on the data. As a result of low expected cell frequencies (Siegel, 1956) or the skewed nature of the frequency distribution between the experimental groups, some data are purely descriptive.

**Pregnancy: Planned or Unplanned** The results showed that the majority (84.0%; n = 132) had planned their current pregnancies and tended to feel either 'very excited' (51.5%; n = 81) or 'extremely happy' (43.3%; n = 68) about being pregnant (Table 11). This distribution between planned and unplanned pregnancies appears to oppose that of the samples tested by Uken (1980) and Reamy et al. (1982), who found that the majority of their participants failed to plan their pregnancies. Even though significance could not be established by statistical means, the emphasis of the present study, not necessarily by design, was on women who had some measure of control over their lives manifested through their planned pregnancies. This kind of attitude may have had some influence on a woman's willingness to participate in this study. Furthermore, many researchers commented that women with planned pregnancies often regard their bodies and, to a lesser degree their sexuality, positively during the period of gestation (Barry, 1980; Bloss, 1950; Kitzinger, 1970; Offerman-Zuckerberg, 1980).
### TABLE 11: Pregnancy and Postnatal Information of the Female Cross-Sectional Samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n=31)</th>
<th>Second Trimester (n=44)</th>
<th>Third Trimester (n=46)</th>
<th>Post-Natal (n=36)</th>
<th>% of Total (N=157)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planned</strong></td>
<td>74 (23)</td>
<td>91 (40)</td>
<td>87 (40)</td>
<td>81 (29)</td>
<td>84.0 (132)</td>
</tr>
<tr>
<td><strong>Unplanned</strong></td>
<td>26 (8)</td>
<td>09 (4)</td>
<td>13 (6)</td>
<td>19 (7)</td>
<td>15.9 (25)</td>
</tr>
<tr>
<td><strong>Symptoms</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nausea</td>
<td>26 (8)</td>
<td>43 (19)</td>
<td>57 (26)</td>
<td>53 (19)</td>
<td>45.8 (72)</td>
</tr>
<tr>
<td>Vomiting</td>
<td>81 (25)</td>
<td>52 (23)</td>
<td>43 (20)</td>
<td>72 (26)</td>
<td>59.8 (94)</td>
</tr>
<tr>
<td>Swelling</td>
<td>29 (9)</td>
<td>18 (8)</td>
<td>22 (10)</td>
<td>22 (8)</td>
<td>22.2 (35)</td>
</tr>
<tr>
<td>Indigestion</td>
<td>06 (2)</td>
<td>25 (11)</td>
<td>13 (6)</td>
<td>05 (2)</td>
<td>13.3 (21)</td>
</tr>
<tr>
<td>Specific Cravings</td>
<td>10 (3)</td>
<td>25 (11)</td>
<td>17 (8)</td>
<td>17 (6)</td>
<td>17.8 (28)</td>
</tr>
<tr>
<td>Sleeplessness</td>
<td>06 (2)</td>
<td>07 (3)</td>
<td>08 (3)</td>
<td>5.0 (8)</td>
<td></td>
</tr>
<tr>
<td>Other (headaches, tired)</td>
<td>39 (12)</td>
<td>36 (16)</td>
<td>39 (18)</td>
<td>22 (8)</td>
<td>34.3 (54)</td>
</tr>
<tr>
<td><strong>Physical State</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Better</td>
<td>13 (4)</td>
<td>11 (5)</td>
<td>41 (19)</td>
<td>58 (21)</td>
<td>31.2 (49)</td>
</tr>
<tr>
<td>Worse</td>
<td>65 (20)</td>
<td>73 (32)</td>
<td>43 (20)</td>
<td>28 (10)</td>
<td>52.2 (82)</td>
</tr>
<tr>
<td>The Same</td>
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<td>16 (7)</td>
<td>15 (7)</td>
<td>14 (5)</td>
<td>16.5 (26)</td>
</tr>
<tr>
<td><strong>Attitude to Confinement</strong></td>
<td></td>
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</tr>
<tr>
<td>Highly apprehensive</td>
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<td>27 (12)</td>
<td>26 (12)</td>
<td>31 (11)</td>
<td>24.8 (39)</td>
</tr>
<tr>
<td>Unconcerned</td>
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<td>11 (5)</td>
<td>07 (3)</td>
<td>19 (7)</td>
<td>14.6 (23)</td>
</tr>
<tr>
<td>Very excited</td>
<td>52 (16)</td>
<td>48 (21)</td>
<td>59 (27)</td>
<td>47 (17)</td>
<td>51.5 (81)</td>
</tr>
<tr>
<td>Other</td>
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<td>14 (6)</td>
<td>09 (4)</td>
<td>03 (1)</td>
<td>9.0 (14)</td>
</tr>
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<td><strong>Feelings about Pregnancy</strong></td>
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</tr>
<tr>
<td>Extremely happy</td>
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<td>41 (18)</td>
<td>52 (24)</td>
<td>47 (17)</td>
<td>43.3 (68)</td>
</tr>
<tr>
<td>Happy</td>
<td>32 (10)</td>
<td>29 (13)</td>
<td>35 (16)</td>
<td>39 (14)</td>
<td>33.7 (53)</td>
</tr>
<tr>
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<td>29 (13)</td>
<td>07 (3)</td>
<td>11 (4)</td>
<td>20.3 (32)</td>
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<tr>
<td>Upset</td>
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<td>1.2 (2)</td>
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<td>85 (39)</td>
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<tr>
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<td>43 (19)</td>
<td>54 (25)</td>
<td>39 (14)</td>
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<td>30 (14)</td>
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<td>02 (1)</td>
<td>02 (1)</td>
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<td>24 (11)</td>
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<td>33.7 (53)</td>
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<td>09 (5)</td>
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<td>5.7 (9)</td>
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TABLE 11: Continued

<table>
<thead>
<tr>
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<th>First Trimester (n=31)</th>
<th>Second Trimester (n=44)</th>
<th>Third Trimester (n=46)</th>
<th>Post-Natal (n=36)</th>
<th>% of Total (N=157)</th>
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<td>61 (27)</td>
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<td>54.7 (86)</td>
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<td>59 (27)</td>
<td>47 (17)</td>
<td>40.1 (63)</td>
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<td>04 (2)</td>
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<td>5.0 (8)</td>
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<td>11 (4)</td>
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</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>69 (25)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>31 (11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever Breast-fed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>94 (34)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>06 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feelings during Breast-feeding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Womanly</td>
<td>50 (18)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensual</td>
<td>22 (8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>28 (10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orgasms Breast-feeding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>14 (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>86 (31)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: a Frequencies in brackets.
Percentages are reported in all cases except where indicated differently.
Percentages rounded to integers.
Some questions more than 1 answer was given, therefore totals exceed 100.
Physiological Symptoms

A number of previous researchers commented that physiological symptoms of pregnancy are detrimental to female sexuality (Chapter Six). Therefore, women were questioned about their symptoms and physical state during pregnancy and in the postnatal period. The results showed that the majority (59.8%; n = 94) of the experimental groups experienced vomiting at some stage during their pregnancies. Furthermore, 59.5% (n = 72) felt physically worse when pregnant, while 58% (n = 21) of the postnatal group stated that they felt physically better (Table 11). A Chi-square test carried out on the frequencies of responses on their physical state revealed a significant difference between the four experimental groups ($\chi^2(6) = 28.99$, $p = .00006$). Later analysis explored the possibility that physical state could influence the subjects' level of sexual desire.

Attitude and Feelings about Pregnancy

The majority (51.5%; n = 81) of the sample appeared to be 'very excited' about the confinement. It could be speculated that their attendance of antenatal classes and hence knowledge of the pregnancy experience resulted in such a positive attitude. A minority (1.2%; n = 2) felt upset about being pregnant. The fact that the majority of the sample had planned their pregnancies could have resulted in few women being negative about their pregnant state. The 'expectant' fathers seem to be 'extremely happy' (46.4%; n = 73) about their partner's pregnancy (Table 11).
Fear of both the pregnancy period per se, and of labour

Significant differences were found between the experimental groups about these issues. The results showed a significant difference between the groups on being scared of "carrying the foetus" ($\chi^2 (3) = 19.16$, $p = .0002$), as well as being scared of delivery ($\chi^2 (3) = 11.46$, $p = .009$). An inspection of the specific responses of each group showed that women pregnant in the second trimester were least (55%; $n = 24$) afraid of being pregnant (Table 11). The possible realization of life inside the womb, caused by movement of the foetus during this stage, may have resulted in such responses.

In discussing labour and delivery, women in the third trimester of pregnancy surprisingly felt the least (59%; $n = 27$) afraid of impending childbirth. This, however, could be due to the fact that they felt physically uncomfortable and looked forward to the end of pregnancy. Many (60.5%; $n = 95$) of the subjects, attended prenatal classes and were coached on what to expect and how to react during labour and delivery (Table 11).

The majority (58%; $n = 21$) of the postnatal cross-sectional sample had a natural delivery and 89% ($n = 32$) of the expectant fathers were present. This choice of natural childbirth and the husbands' participation in the birth experience tended to underline the positive attitude of the women toward delivery and support of the husbands. At the time of testing 69% ($n = 25$) of the mothers were still breast-
feeding their babies, however, 94% (n = 34) of the sample had breast-fed their babies soon after the delivery. Half the sample felt womanly during breast-feeding and only two women experienced orgasms during this time (Table 11). It appeared that mothers in this study did not associate breast-feeding with sexual responsivity as suggested earlier by Masters and Johnson (1966).

In summary, the main differences between the control group and the four experimental groups were the number of children, years married, education, and home ownership status. Exploration of the background of the experimental groups, in turn, only revealed differences on number of children, education, physical state and feelings of fear. No further significant differences were detected concerning the multitude of other variables included in the biographical questionnaire. Therefore, the cross-sectional samples were reasonably homogeneous. In view of the various issues discussed previously, which could influence a woman's experience of pregnancy, sexuality and body image, the homogeneity of the samples was welcomed.

Furthermore, the present study made an effort to draw a sample from a variety of sources (Appendix N) as described in Chapter Six, and did not restrict the sample to women reporting for treatment with problems related to their sexuality or pregnancy. This was to prevent a bias or possible negative trend in the results often evident in samples tested in a "hospital" situation (Masters & Johnson,
Therefore, it can be concluded that the emphasis in this sample was on a health orientation where women were trying to make the best of the pregnancy experience. In view of the positive orientation of the subjects, as well as the homogeneity of the samples, it is believed that a truly objective assessment of female sexuality and body image during pregnancy was possible.

**Female Sexuality**

One of the core areas covered in the literature review, was female sexuality in relation to pregnancy. The initial analysis of the results in this area explored the wider range of single variables related to female sexuality, thus making an effort to integrate some of the findings of researchers to date (Falicov, 1973; Holtzman, 1976; Landis et al., 1950; Masters & Johnson, 1966; Reamy et al., 1982; Tolor & Di Grazia, 1976). The study not only tried to integrate, but also to replicate some of the work of Reamy et al. (1982) in this area, by using their questionnaire for measuring female sexuality. It was slightly amended by the present researcher. Apart from the attempt to integrate previous reports on female sexuality which were characterized by a fragmented approach, the researcher hoped to gain a more holistic view of the topic. Trends in female sexuality during pregnancy and the postnatal period were explored.

Both parametric and non-parametric statistical techniques were utilized in the analyses and exploration of data.
As a preliminary approach to the data the frequencies of responses to each item measuring female sexuality were calculated. Chi-square tests were then done. This also allowed for the comparison of the present findings with similar studies discussed in Chapter Four. Most of these studies restricted their statistical analyses to Chi-square tests, frequency counts or percentages. The categories of responses on each of the items included in the Sexuality Scales ranged from 1 to 5. Response frequencies for Categories 1, 2 and 3 were often combined. Categories 4 and 5 were combined too, to allow for acceptable cell frequencies (Siegel, 1956). The combination of such categories, however, was dependent upon the specific item being measured and the meaningfulness of such a combination. Overall Categories 1, 2 and 3 reflected low scores and included responses such as "none", "seldom" or "slight". Categories 4 and 5 reflected high scores with reference to a specific variable measuring female sexuality, and included responses such as "great", "strong" and "76% to 100% of the time". For a further understanding of the various response categories of each item, Appendices E, F and G can be consulted.

Additional non-parametric statistical methods were employed to determine the preferred sexual methods and positions used during intercourse of the experimental groups. These included Kendall's rank correlation coefficient (tau), and Friedman's two-way analysis of variance. Further analysis of variance was performed on the sexuality data to establish
the differences between and within the various groups. Therefore, the sexuality responses were entered into this statistical procedure as continuous variables, rated from 1 to 5, a change from the previous categorical approach used for Chi-square analysis. The data were also factor analyzed in order to search for main dimensions of female sexuality during pregnancy and the postnatal period. The results of the relevant analyses are reported below.

Comparison of Sexuality during Pregnancy with Pre-Pregnant State

Chi-square tests were carried out to establish possible differences in female sexuality for the groups in the various stages of pregnancy. For this purpose the reports on female sexuality for each group, namely, women pregnant in the first, second or third trimester or the postnatal period, were used. In order to establish whether changes in sexuality occurred, the retrospective data on pre-pregnancy experiences were used. The results are reported for those variables showing significant differences between the groups only (Table 12).

Frequency of Sexual Intercourse

The occurrence of sexual intercourse in a 2-week period, for women pregnant in the first trimester declined significantly \( (p = .035) \), as compared with the frequency of sexual intercourse prior to conception (Table 12). Women reported 9 to 14 sexual encounters in a 2-week period before
TABLE 12: Retrospective and Current Reports on Female Sexuality

<table>
<thead>
<tr>
<th>Group</th>
<th>Variable</th>
<th>Chi-Square</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Trimester</td>
<td>Sexual Enjoyment</td>
<td>5.34</td>
<td>1</td>
<td>.020</td>
</tr>
<tr>
<td></td>
<td>Frequency of Sexual</td>
<td>4.42</td>
<td>1</td>
<td>.035</td>
</tr>
<tr>
<td></td>
<td>Intercourse</td>
<td>8.52</td>
<td>1</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td>Intensity of Orgasms</td>
<td>12.86</td>
<td>1</td>
<td>.0003</td>
</tr>
<tr>
<td>Second Trimester</td>
<td>Orgasmic Experiences</td>
<td>4.00</td>
<td>1</td>
<td>.045</td>
</tr>
<tr>
<td></td>
<td>Intensity of Orgasms</td>
<td>4.91</td>
<td>1</td>
<td>.026</td>
</tr>
<tr>
<td></td>
<td>Sexual Satisfaction</td>
<td>9.76</td>
<td>1</td>
<td>.001</td>
</tr>
<tr>
<td>Third Trimester</td>
<td>Sexual Enjoyment</td>
<td>4.87</td>
<td>1</td>
<td>.027</td>
</tr>
<tr>
<td></td>
<td>Initiate Sexual Intercourse</td>
<td>5.27</td>
<td>1</td>
<td>.022</td>
</tr>
<tr>
<td></td>
<td>Orgasmic Experiences</td>
<td>16.32</td>
<td>1</td>
<td>.0005</td>
</tr>
<tr>
<td></td>
<td>Intensity of Orgasms</td>
<td>14.84</td>
<td>1</td>
<td>.0001</td>
</tr>
<tr>
<td></td>
<td>Sexual Satisfaction</td>
<td>8.36</td>
<td>1</td>
<td>.003</td>
</tr>
</tbody>
</table>
falling pregnant, but after falling pregnant this rate declined to between 0 and 4. The significant differences may be ascribed to the physical discomfort commonly associated with the initial stages of pregnancy and the possible fear of miscarriage. It may be that couples were initially hesitant to resume intercourse after hearing the news of the pregnancy.

Experimental groups in later trimesters did not differ significantly on their reported pre-pregnant frequency and current frequency of sexual intercourse. These findings were not consistent with those reported by earlier researchers (Holtzman, 1976; Reamy et al., 1982; Solberg et al., 1973; Steege & Jelovsek, 1982; Tolor & Di Grazia, 1976; Wagner & Solberg, 1974).

**Initiating Sexual Intercourse**

Only the reports of women in the third trimester revealed a significant decrease (p = .022) in the frequency with which they initiated sexual intercourse, when compared to their reports on the period prior to falling pregnant (Table 12). It may well be that women at this stage of their pregnancies feel least comfortable and sensual and are not keen to elicit sexual contact. Reamy et al. (1982) reported a similar finding in their longitudinal study, but did not expound their findings.
Sexual Orgasmic Experiences

During the middle and late periods of pregnancy women exhibited significantly less orgasmic experiences than their reported pre-pregnancy levels. During the second trimester a significant decrease \( (p = .045) \) in the number of subjects who reached a sexual orgasm, was noted. This decline appeared to be even higher for women in the third trimester of pregnancy. They indicated a significant difference \( (p = .00005) \) in the frequency with which they experienced orgasms prior to falling pregnant and during the late stages of pregnancy (Table 12). This trend corresponded with the reports of decreased orgasmic experiences noted by Reamy et al. (1982) and Tolar and Di Grazia (1976) in their respective studies of female sexuality and the pregnancy experience. Women in the present study were not asked to furnish reasons for their lower orgasmic ability. It could only be speculated that awareness of the foetus during the second trimester and discomfort during the third trimester caused a decline in orgasmic ability.

In conjunction with this decrease some pregnant women in this study reported changes in the intensity with which they experienced orgasms. For women who were pregnant in the first trimester, a significant difference \( (p = .004) \) was found as compared with their pre-pregnant reports (Table 12). They generally reported "weak" climaxes. The group in the second trimester of pregnancy also reported "weaker" climaxes and a significant difference \( (p = .026) \) relative to their reported pre-pregnant baseline was indicated. A highly significant
difference \((p = .0001)\) was found between the intensity ratings of orgasms for women in late pregnancy as compared with the intensity with which they experienced orgasms prior to conception (Table 12). However, it must be noted that the categories "weak" and "no climaxes at present" were combined to obtain a sufficiently high cell frequency for the Chi-square calculation. In line with the previous findings related to infrequency of orgasm at this stage several women in the third trimester reported no climaxes. Again, it can only be speculated that the fear of initiating labour might have prevented women from achieving orgasms during the late stages of pregnancy. Earlier, Solberg et al. (1973) also noted a general decline in the frequency and intensity of female sexual orgasms during the different stages of pregnancy.

**Sexual Enjoyment**

In the first and third trimester of pregnancy women reported significantly lower levels of sexual enjoyment than the levels which they recalled for the period prior to falling pregnant. During the first trimester significantly less \((p = .020)\) sexual enjoyment was experienced. A significant decline \((p = .027)\) was also noted for women close to childbirth (Table 12). This finding partially corresponds to the reports of Reamy et al. (1982) who found a significant difference for women over the duration of pregnancy, when their current experience of sexual enjoyment was compared with their retrospective accounts. Notably they found low levels
of sexual enjoyment for women from the onset of pregnancy, whereas subjects in the present study only exhibited significant changes in their sexual enjoyment from the second trimester.

**Overall Sexual Satisfaction**

On analysis of the data, significant differences were disclosed for all the pregnant women between their pre-pregnant levels of sexual satisfaction and their current levels of satisfaction.

During the first trimester of pregnancy only 9% (n=3) of the group felt sexually satisfied in comparison with their retrospective ratings \(p = .0003\) (Table 12). Further significant differences were found for groups in the second \(p = .001\) and third \(p = .003\) trimester of pregnancy respectively when compared with their recalled levels of sexual satisfaction (Table 12). Many women felt less satisfied sexually during their pregnancies. Previous researchers on this issue did not specifically address the aspect of female sexual satisfaction. Reamy et al. (1982), mentioned that with relation to orgasmic ability, women who achieve orgasms when pregnant, feel reasonably satisfied. Referring to the present finding it could be speculated that sexual satisfaction did not necessarily depend upon frequency of sexual activity or female orgasmic ability, but rather implied an overall perception of a woman's experience of her sexuality. Further
attention will be given to this assumption in later analyses of the data.

**Overview**

Some individual differences were noted between the various research groups in their sexuality, currently and retrospectively. Differences were especially evident concerning sexual satisfaction and the intensity with which women, irrespective of their stage of pregnancy, experienced orgasms. This finding opposed the reports of Reamy et al. (1982) in their prospective study. According to them, sexual activity and enjoyment are greatly affected in all three stages of pregnancy. Different research designs, however, may have accounted for discrepancies between their findings and the present results. Generally the group of women who were pregnant in the third trimester in the present study stated that their sexuality had changed for most of the indices measuring sexuality (Table 12). They were obviously more affected by their pregnant state, as compared with women pregnant in the first and second trimester, and their own reported pre-pregnant sexual state. Previous researchers, too, found that women close to delivery, exhibited changes in their sexuality (Reamy et al. 1982; Solberg et al. 1973; Tolor & Di Grazia, 1976).

Those aspects of female sexuality which were measured by level of sexual desire, multiple orgasmic ability and the need to be held, did not differ significantly for the cross-
sectional samples. The non-significant differences on a woman's need to be held, indicated in the present study, irrespective of her physiological state or level of sexuality, seem to confirm the earlier reports of Hollender and McGhee (1974).

Finally, no significant differences were detected between the retrospective reports of sexuality and the current ratings of the group of postnatal women. It may well be that women have similar sexuality experiences in the period after childbirth to that which existed before they fell pregnant. Such a conclusion, however, would contradict the reports of the few researchers who included postnatal women in their studies (Baxter, 1974; Masters & Johnson, 1966; Tolor & Di Grazia, 1976). According to them, women in the postnatal period experience changes in sexuality. The differences in the findings of both the present study and those of other researchers mentioned above could possibly be as a result of the specific timing of testing. The present researcher did not test 'new' mothers soon after delivery. Therefore, they may have had time to recover sufficiently from the experience of childbirth and have had some time to adjust to their new role as mothers. It is to be assumed that women tested during the puerperium (up to six weeks after delivery) may feel differently from those tested at a later stage.
Cross-Sectional Comparisons of Sexuality during Pregnancy and the Postnatal Period.

Differences in sexuality between the groups in the various stages of pregnancy and a group of postnatal women were assessed. Whereas the previous analysis compared the retrospective reports of these groups on their pre-pregnant sexual states, with their current sexuality, the following analysis excluded the retrospective data. The experimental groups, excluding the non-pregnant group, were compared with one another on their sexuality.

Chi-square tests were performed on all the items measuring the female sexuality of the experimental groups. Only those variables which differed significantly between these groups are reported. Attention was also given to possible reasons or potential causes associated with the levels of sexual desire exhibited by these groups. Furthermore, data, on the choice of coital methods and positions used by the women during the gestation period or following childbirth were also investigated. Additional observations about the orgasmic abilities of subjects included in the various experimental groups are also reported.

To avoid repetition and to prevent making premature assumptions about the findings at this stage, no conclusions will be drawn on the basis of the sexuality data as reported here. Final conclusions are reported once the data have been subjected to further statistical analyses such as the factor
analysis. Therefore interpretation of some findings will be restricted.

**Sexual Enjoyment and Sexual Desire**

The experimental groups in the various stages of pregnancy and the postnatal period, only differed significantly from one another on sexual enjoyment and sexual desire, when rating these variables on a 5-point scale (Table 13).

The results showed that sexual enjoyment differed significantly ($p = .039$) between women pregnant in the first, second and third trimester and those in the postnatal period. More specifically, women pregnant in the third trimester showed the least sexual enjoyment. The postnatal group, however, showed more sexual enjoyment than those who were still pregnant.

A significant difference in sexual desire ($p = .030$) was also found between the various groups, thus women in more progressed stages of pregnancy reported less sexual desire. The reverse, however, was true for those women who had already given birth (Table 13).

No further significant differences were indicated between the various groups in the other indices measuring their sexuality. It could be speculated that women, irrespective of their stage of pregnancy, do not differ considerably from one another on their sexuality. Thus changes in sexuality may not necessarily be associated with a specific trimester. Further
TABLE 13: Chi-square tests: Female Sexuality of Groups in Three Stages of Pregnancy and the Postnatal Period

<table>
<thead>
<tr>
<th>Variable</th>
<th>Chi-Square</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Enjoyment</td>
<td>8.36</td>
<td>3</td>
<td>.039</td>
</tr>
<tr>
<td>Sexual Desire</td>
<td>13.98</td>
<td>6</td>
<td>.030</td>
</tr>
</tbody>
</table>
analysis, however, will be done to investigate such a possibility.

**Causes for Change: Sexual Desire**

In addition to subjects rating their level of sexual desire on a scale from one to five, as discussed above, they were also asked to state categorically whether their sexual desire had "increased", "decreased" or remained "the same" on becoming pregnant. This was done to gain additional insight into female sexual desire. The findings are presented descriptively in Table 14. The majority of subjects in each group exhibited decreased levels of sexual desire. However, a Chi-square test revealed no significant differences between the experimental groups on this specific variable.

In conjunction with the above, subjects were requested to report any number of possible reasons for exhibiting either 'increased' or 'decreased' sexual desire. A list of possible reasons was presented at random in the scales measuring female sexuality (Items 10a, 10b) (Appendix E and F). The items were extracted from relevant literature discussed in Chapter Six.

Irrespective of the non-significant findings reported above, reasons associated with either 'increased' or 'decreased' sexual desire, were analysed qualitatively. The design of this item and the little congruity which existed between the number of reasons selected by subjects also prescribed a qualitative approach. However, it also seems relevant to report these findings here because it applies to
<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester</th>
<th>Second Trimester</th>
<th>Third Trimester</th>
<th>Postnatal</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 31)</td>
<td>(n = 44)</td>
<td>(n = 46)</td>
<td>(n = 36)</td>
<td>(N = 157)</td>
</tr>
<tr>
<td>Increased Sexual Desire</td>
<td>3 (1)(^a)</td>
<td>16 (7)</td>
<td>15 (7)</td>
<td>17 (6)</td>
<td>13 (21)</td>
</tr>
<tr>
<td>Decreased Sexual Desire</td>
<td>87 (27)</td>
<td>75 (33)</td>
<td>72 (33)</td>
<td>64 (23)</td>
<td>74 (116)</td>
</tr>
<tr>
<td>No Change</td>
<td>10 (3)</td>
<td>9 (4)</td>
<td>13 (6)</td>
<td>19 (7)</td>
<td>13 (20)</td>
</tr>
</tbody>
</table>

Note: \(^{a}\) frequencies in brackets.
Percentages rounded to integers.
the current discussion of the sexuality of women pregnant in the various trimesters and to women in the postnatal period. Furthermore, this area of research was often neglected, and few researchers sought possible reasons for the reported increase or decrease in levels of female sexual desire during the periods associated with pregnancy. At most, comments were made by various authors on causative factors for declined female sexual activity or orgasms during pregnancy and the postnatal period (Masters & Johnson, 1966; Reamy et al., 1982; Solberg et al., 1973).

The responses of the various experimental groups were investigated in two ways. Firstly, all the reasons mentioned by the subjects were counted. These are displayed as percentages in Tables 15 and 16 respectively. Interpretation of the percentages should be done with great caution as N is below 100 and this tends to inflate the value of a percentage.

Subjects were not restricted in the number of reasons they chose. Therefore the total number of responses reported by each group did not correspond with the total number of subjects in each group. The mean for the reasons selected was approximately the same for the respective groups. Table 15 presents the reasons tied to increased sexual desire and Table 16 presents the reasons associated with decreased sexual desire. Secondly, the rankings of such reasons, from most prominent to the least contributory, were investigated. Only the first, second and third choices of reasons were considered. The reasons in order of preference associated
TABLE 15: Reasons associated with Increased Sexual Desire

<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester</th>
<th>Second Trimester</th>
<th>Third Trimester</th>
<th>Post-Natal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n = 1 )</td>
<td>( n = 7 )</td>
<td>( n = 7 )</td>
<td>( n = 6 )</td>
<td>( N = 21 )</td>
</tr>
<tr>
<td>More attractive</td>
<td>100 (1)(^a)</td>
<td>29 (2)</td>
<td>29 (2)</td>
<td>100 (6)</td>
<td>52.3 (11)</td>
</tr>
<tr>
<td>No fear of pregnancy</td>
<td>100 (1)</td>
<td>57 (4)</td>
<td>71 (5)</td>
<td>50 (3)</td>
<td>47.6 (10)</td>
</tr>
<tr>
<td>Happy and relaxed</td>
<td>100 (1)</td>
<td>86 (6)</td>
<td>71 (5)</td>
<td>61.9 (13)</td>
<td></td>
</tr>
<tr>
<td>Greater genital sensation</td>
<td>100 (1)</td>
<td>71 (5)</td>
<td>71 (5)</td>
<td>33 (2)</td>
<td>61.9 (13)</td>
</tr>
<tr>
<td>Breast and body eroticism</td>
<td>100 (7)</td>
<td>29 (2)</td>
<td>33 (2)</td>
<td>52.3 (11)</td>
<td></td>
</tr>
<tr>
<td>Husband’s increased interest</td>
<td>14 (1)</td>
<td>14 (1)</td>
<td>67 (4)</td>
<td>28.5 (6)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>14 (1)</td>
<td></td>
<td></td>
<td>4.7 (1)</td>
<td></td>
</tr>
</tbody>
</table>

Note: \(^a\) Frequencies in brackets.
Percentages rounded to integers.
More than one reason was given, therefore totals exceed 100.
### TABLE 16: Reasons Associated with Decreased Sexual Desire

<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester</th>
<th>Second Trimester</th>
<th>Third Trimester</th>
<th>Post-Natal</th>
<th>Total (N=116)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not feeling good</td>
<td>67 (18)</td>
<td>79 (26)</td>
<td>45 (15)</td>
<td>100 (23)</td>
<td>70.6 (82)</td>
</tr>
<tr>
<td>Sexually unattractive</td>
<td>59 (15)</td>
<td>48 (16)</td>
<td>45 (15)</td>
<td>65 (15)</td>
<td>53.4 (61)</td>
</tr>
<tr>
<td>Upset about pregnancy</td>
<td>36 (12)</td>
<td>24 (8)</td>
<td>39 (9)</td>
<td>25.0 (29)</td>
<td></td>
</tr>
<tr>
<td>Afraid of hurting baby or self</td>
<td>33 (9)</td>
<td>48 (16)</td>
<td>51 (17)</td>
<td>100 (23)</td>
<td>56.0 (65)</td>
</tr>
<tr>
<td>Intercourse uncomfortable</td>
<td>19 (5)</td>
<td>79 (26)</td>
<td>82 (27)</td>
<td>65 (15)</td>
<td>62.9 (73)</td>
</tr>
<tr>
<td>Intercourse is painful</td>
<td>11 (3)</td>
<td>15 (5)</td>
<td>18 (6)</td>
<td>52 (12)</td>
<td>22.4 (26)</td>
</tr>
<tr>
<td>Doctor's recommendation</td>
<td>11 (3)</td>
<td>12 (4)</td>
<td>15 (5)</td>
<td>39 (9)</td>
<td>18.1 (21)</td>
</tr>
<tr>
<td>Sexually fulfilled</td>
<td>22 (6)</td>
<td>15 (5)</td>
<td>21 (7)</td>
<td></td>
<td>15.5 (8)</td>
</tr>
<tr>
<td>Feeling motherly not erotic</td>
<td>26 (7)</td>
<td>12 (4)</td>
<td>24 (8)</td>
<td>70 (16)</td>
<td>30.1 (35)</td>
</tr>
<tr>
<td>Depressed</td>
<td>33 (9)</td>
<td>21 (7)</td>
<td>21 (7)</td>
<td>35 (8)</td>
<td>24.7 (31)</td>
</tr>
<tr>
<td>Anxious</td>
<td>19 (5)</td>
<td>12 (4)</td>
<td>12 (4)</td>
<td>39 (9)</td>
<td>18.9 (22)</td>
</tr>
<tr>
<td>Lost interest (sexually)</td>
<td>52 (14)</td>
<td>45 (15)</td>
<td>48 (16)</td>
<td>26 (6)</td>
<td>43.9 (51)</td>
</tr>
<tr>
<td>Awkward body size</td>
<td>07 (2)</td>
<td>36 (12)</td>
<td>64 (21)</td>
<td>22 (5)</td>
<td>34.4 (40)</td>
</tr>
<tr>
<td>Body sexual embarrassment</td>
<td>04 (1)</td>
<td>15 (5)</td>
<td>24 (8)</td>
<td>61 (14)</td>
<td>24.1 (28)</td>
</tr>
<tr>
<td>Husband not interested</td>
<td>26 (7)</td>
<td>24 (8)</td>
<td>27 (9)</td>
<td></td>
<td>20.6 (40)</td>
</tr>
<tr>
<td>Presence of third party (foetus)</td>
<td>19 (5)</td>
<td>21 (7)</td>
<td>30 (10)</td>
<td></td>
<td>18.9 (22)</td>
</tr>
<tr>
<td>Other</td>
<td>30 (8)</td>
<td></td>
<td></td>
<td></td>
<td>0.6 (8)</td>
</tr>
</tbody>
</table>

Note: a Frequencies in brackets.
Percentages rounded to integers.
More than one reason was given, therefore totals exceed 100.
with increased sexual desire are reported in Table 17, and those associated with decreased sexual desire are in Table 18. Briefly the results with specific reference to the stages of pregnancy were as follows:

**First Trimester** A single candidate exhibited increased sexual desire during this stage of pregnancy. According to her feeling 'happy and relaxed' about her pregnancy and having 'no fear of being pregnant' enhanced her level of sexual desire. She also felt 'more attractive' and therefore exhibited more sexual desire (Table 15). Her first choice, however, for her current increased level of sexual desire was 'feeling happy and relaxed' about her pregnant state (Table 17).

Sixty-seven per cent (n = 18) of women in the first trimester of pregnancy associated 'not feeling good', 'tiredness', 'nausea' and 'vomiting' with exhibiting less sexual desire (Table 16). The first choice of a reason for most women who experienced decreased levels of sexual desire was 'not feeling good' (Table 18). This finding may serve to confirm the earlier speculation that decreased levels of sexual desire can be ascribed to physical symptoms associated with the onset of pregnancy (Masters & Johnson, 1966; Reamy et al., 1982).

**Second Trimester** All the women (n = 7) in the middle stages of pregnancy associated 'breast and body eroticism' with increased levels of sexual desire (Table 15). Similarly, when
TABLE 17: Reasons Reported with Increased Sexual Desire in Order of Preference

<table>
<thead>
<tr>
<th>Preferences</th>
<th>First Trimester</th>
<th>Second Trimester</th>
<th>Third Trimester</th>
<th>Postnatal</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Choice</td>
<td>Happy and relaxed about pregnancy</td>
<td>Greater sensations in genitals</td>
<td>Happy and relaxed about pregnancy; no fear of pregnancy; greater sensations in genitals</td>
<td>Feels more attractive</td>
</tr>
<tr>
<td>Second Choice</td>
<td>No fear of pregnancy</td>
<td>Feels more attractive; happy and relaxed about pregnancy; breasts and other body parts more erotic.</td>
<td>Greater sensations in genitals</td>
<td>Happy and relaxed being non-pregnant</td>
</tr>
<tr>
<td>Third Choice</td>
<td>Greater sensations in genitals</td>
<td>Husband shows increased interest</td>
<td>Breasts, other body parts more erotic</td>
<td>Husband shows increased interest</td>
</tr>
<tr>
<td>Preferences</td>
<td>First Trimester</td>
<td>Second Trimester</td>
<td>Third Trimester</td>
<td>Postnatal</td>
</tr>
<tr>
<td>------------</td>
<td>---------------</td>
<td>----------------</td>
<td>----------------</td>
<td>-----------</td>
</tr>
<tr>
<td>First Choice</td>
<td>Not feeling good (nausea, fatigue, vomiting)</td>
<td>Not feeling good (nausea, fatigue, vomiting)</td>
<td>Not feeling sexually attractive</td>
<td>Not feeling good (fatigue)</td>
</tr>
<tr>
<td>Second Choice</td>
<td>Feeling sexually fulfilled after impregnation; afraid of hurting self or the baby.</td>
<td>Lost interest sexually</td>
<td>Awkward body size</td>
<td>Too occupied with baby</td>
</tr>
<tr>
<td>Third Choice</td>
<td>Lost interest sexually</td>
<td>Intercourse is uncomfortable</td>
<td>Afraid of hurting self or the baby</td>
<td>Not feeling sexually attractive</td>
</tr>
</tbody>
</table>
these women ranked the reasons in order of preference, they most often indicated that 'greater sensation in their genitals' was their first choice and that this contributed to their higher levels of sexual desire (Table 17). Masters and Johnson (1966) commented that increased vascularity in the pelvic region had resulted in increased sexual desire and activity for women in their sample. This trend was also evident in the present study for women in this trimester of pregnancy. The finding tends to correspond with the assumption of Masters and Johnson (1966).

Decreased sexual desire for women in the second trimester of pregnancy was commonly (79%; n = 26) linked to 'not feeling good' or finding 'intercourse uncomfortable' (79%; n = 26) (Table 16). 'Not feeling good' physically, however, was the most prevalent choice for women who exhibited lower levels of sexual desire during the second stage of pregnancy (Table 18).

**Third Trimester** According to women in this trimester, several reasons contributed equally to increased levels of sexual desire. These included 'no fear of pregnancy' (71%; n = 5), 'feeling happy and relaxed' about their pregnant state (71%; n = 5) and the awareness of 'greater sensations in their genitals' (71%; n = 5) (Table 15). Each of these reasons was also rated as the first choice by the same number of women (Table 17). These findings appeared to support the assumptions that the absence of fear and a positive attitude about being pregnant result in an overall positive experience
of the pregnancy process (Grimm, 1967; Reamy et al., 1982; Sapire, 1985; Sherman, 1972).

The 'discomfort experienced during intercourse' (82%; n = 27) was predominantly viewed as a reason for decreased levels of sexual desire (Table 16). When the reasons were ranked in order of preference, the first choice of many women in late pregnancy was 'not feeling physically good' (Table 18). These findings partially corresponded with those reported by Solberg et al. (1973) and Reamy et al. (1982), who found that physical complaints generally resulted in lower levels of sexual desire for women close to term.

Postnatal Period

The six women who indicated that their sexual desire had increased after childbirth all attributed this state to 'feeling more attractive' (Table 15). This was also the first choice of 50% of these women, when the reasons were ranked in order of preference (Table 17).

'Not feeling good physically' was reported by all the women who felt less sexual desire post-delivery (Table 16). The same reason was favoured (Table 18) in order of preference.

To summarize, all the reasons associated with female sexual desire during pregnancy and the postnatal period presented a varied pattern. This was particularly obvious in women who exhibited increased levels of sexual desire. In contrast, women generally associated the physiological
experience of their bodies to decreased levels of sexuality, irrespective of the stage of pregnancy. Furthermore, sociocultural and psychological reasons were seldom cited as the most prevalent reasons for women experiencing either increased or decreased levels of sexuality while pregnant or after childbirth.

The above suggestions therefore failed to confirm the suggestions of La Rossa (1979) that biographical and sociocultural factors are the most popular causes reported by pregnant women for their level of sexual desire. The distribution of reasons found in the present study partially agreed with those listed by Solberg et al. (1973). They found that the majority of their sample (46%) cited physical discomfort as being detrimental to sexual desire.

It was further established that 53.4% (n = 61) of the total sample in this study reported that ‘being sexually unattractive’ tarnished their level of sexual desire. Previous studies reported rather lower percentages of women stating physical unattractiveness as a reason for their low level of sexual desire (Holtzman, 1976; Solberg et al. 1973). However, decreased sexual attractiveness was not the area most often related to a decrease in sexuality for participants in the present study. ‘Not feeling good’ and being ‘uncomfortable’ received considerably more attention from women as a reason for a decrease in sexual desire.

It should also be noted that contrary to the findings of Masters and Johnson (1966), but supporting the recent research
of Reamy et al. (1982), decreased sexual desire was seldom associated with medical recommendations of sexual abstinence. This may be indicative of the recent attitude that sexual abstinence is not necessarily associated with pregnancy or the postnatal period (Grazioli, 1983; Sapire, 1985).

It can be concluded that physiologically related reasons were commonly reported as potential causes for either increased or decreased sexual desire by the various cross-sectional samples. However, it would be risky to make confirmatory statements in this regard, as the nature of the data only allows for the description of broad trends.

Coital Methods and Positions

Inquiries were also made about the coital methods and sexual positions used by women who were pregnant in the various trimesters and the group of postnatal women. This was done to establish whether women adjusted their preferences to accommodate their pregnant and postnatal bodily states.

The differences between subjects' preferences for coital methods and positions were assessed using Kendall's rank correlation, \( \rho \), a non-parametric statistical technique. The preferences given to specific coital methods and positions were ranked for each subject in a specific group. The sum of ranks was then calculated and is reported in Table 19. This was followed by a Friedman's two-way analysis of variance, and
TABLE 19: Rank Sums of Coital Methods and Positions: Kendall's Rank Correlation Coefficient, (rho).

<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester</th>
<th>Second Trimester</th>
<th>Third Trimester</th>
<th>Post-Natal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coital Methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercourse</td>
<td>132.0</td>
<td>233.5</td>
<td>256.0</td>
<td>202.5</td>
</tr>
<tr>
<td>Hand/Oral Stimulation</td>
<td>137.5</td>
<td>268.0</td>
<td>276.0</td>
<td>225.0</td>
</tr>
<tr>
<td>Self-Stimulation</td>
<td>124.0</td>
<td>193.0</td>
<td>218.5</td>
<td>149.5</td>
</tr>
<tr>
<td>Combination</td>
<td>141.0</td>
<td>270.0</td>
<td>283.0</td>
<td>221.0</td>
</tr>
<tr>
<td>Mutual Masturbation</td>
<td>0.0</td>
<td>191.0</td>
<td>225.5</td>
<td>154.5</td>
</tr>
<tr>
<td>Coital Positions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male Superior</td>
<td>193.5</td>
<td>302.0</td>
<td>252.5</td>
<td>289.5</td>
</tr>
<tr>
<td>Female Superior</td>
<td>141.0</td>
<td>282.0</td>
<td>264.5</td>
<td>242.0</td>
</tr>
<tr>
<td>Side-by-Side</td>
<td>125.5</td>
<td>227.0</td>
<td>268.5</td>
<td>159.5</td>
</tr>
<tr>
<td>Rear Entry</td>
<td>121.5</td>
<td>231.5</td>
<td>261.5</td>
<td>194.5</td>
</tr>
<tr>
<td>Other Positions</td>
<td>0.0</td>
<td>166.5</td>
<td>224.5</td>
<td>142.0</td>
</tr>
</tbody>
</table>

Note: Most favoured sexual method or position in each group is underlined.
Kendall's coefficient of concordance to determine the difference between the rankings within a specific stage of pregnancy and the postnatal period (Table 20).

The results showed that pregnant women, irrespective of the stage of pregnancy, favoured a combination of intercourse and other stimulation as a coital method to achieve orgasm. After childbirth, however, women in this sample preferred hand and/or oral stimulation. Mutual masturbation was used least by women pregnant in the first and second trimester, and self-stimulation (masturbation) was used least by women close to delivery and post-delivery (Table 19). These findings agreed with those reported earlier by Reamy et al. (1982) and Tolor and Di Grazia (1976), who stated that manual and/or oral stimulation of wives by their husbands is commonly preferred by expectant couples. The present findings opposed the reports of Kumar et al. (1981) and Perkins (1982) who found that women tended to persist with masturbation during pregnancy. It was also suggested that pregnancy increases female masturbation (Masters & Johnson, 1966). The impression was gained that women in the present study viewed masturbation as a selfish activity and inappropriate in a heterosexual relationship. This was deduced from verbal comments made by women and can be stated merely as an observation rather than as a finding.
<table>
<thead>
<tr>
<th>Group</th>
<th>Friedman's Analysis of Variance</th>
<th>df</th>
<th>p</th>
<th>Kendall's Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Trimester</td>
<td>20.11</td>
<td>7</td>
<td>.0053</td>
<td>.0927</td>
</tr>
<tr>
<td>Second Trimester</td>
<td>44.28</td>
<td>9</td>
<td>.0000</td>
<td>.1144</td>
</tr>
<tr>
<td>Third Trimester</td>
<td>10.98</td>
<td>9</td>
<td>.2770</td>
<td>.0265</td>
</tr>
<tr>
<td>Postnatal</td>
<td>62.00</td>
<td>9</td>
<td>.0000</td>
<td>.1914</td>
</tr>
</tbody>
</table>
In discussing coital positions, all but the third trimester group used the 'male superior' sexual position (Table 19) with the third trimester group most frequently opting for a 'side-by-side' coital position. In the light of the enlarged abdomens of women in late pregnancy, these findings seemed to be expected. Similar findings were reported by Solberg et al. (1973) and Reamy et al. (1982), who found that the 'male superior' position was used most commonly by expectant couples throughout gestation and post-delivery. The limited use of sexual positions other than those described in the present scales, could possibly confirm the recent reports of Olivier (1987) who found that women generally are not inventive about expressing their sexuality. One may add that their partners are not inventive either. Earlier, Kitzinger (1980) suggested that pregnancy offers couples the opportunity to experiment with new sexual methods and positions adapted to their physical state.

This process was not evident in this sample, which is particularly interesting in view of the kind of 'healthy' and so-called 'normal' sample who participated in this study. Where people are concerned about exercise, as was evident in the present sample, and where they feel free to talk about their most intimate lives, one would expect greater freedom in experimenting with coital methods. On the other hand, people who are content with their sexuality may have no need to experiment with sex or to explore all the methods often portrayed in the popular media as being part of an exciting
and successful marriage. It was observed that many 'popular' articles tended to 'propagate' the mastering of specific sexual methods and positions, and often omitted the fact that sexuality is composed of strong psychological components. However, overall this area needs further exploration.

The results of Friedman's two-way analysis of variance by ranks, performed on the data of each sub-sample, are presented in Table 20. The findings showed that significant differences were noted between subjects on their rankings of coital methods and positions within a specific sample. More specifically, women pregnant in the first trimester differed significantly \((p = .0053)\) from one another in their rankings, although they all agreed that they used a combination of intercourse and other sexual stimulation (Table 19). Furthermore, women pregnant in the second trimester, and women in the postnatal group differed significantly \((p<.0001)\) from one another in the order of preference in their rankings of sexual methods and positions. Thus with the exception of women pregnant in the third trimester, subjects differed in their ranking of preferences. For instance, one subject would rank intercourse as her first choice, while another subject in the same sample would rate masturbation as her first choice. Consequently, it was acknowledged that individual differences were noted between subjects although they were categorised in the same sample because of their specific stage of pregnancy.
Orgasmic and Multiple Orgasmic Ability

Orgasmic rates of the experimental groups in the cross-sectional design, were established by asking women about the occurrence of orgasms in the 2-week period preceding testing. A Chi-square test applied to the frequency data showed that the groups did not differ significantly on the experience of orgasm.

Comparing earlier studies, such as those of Tolor and Di Grazia (1976) and Steege and Jelovsek (1982), who only reported results as percentages, the present results are presented as percentages in Table 21. Interpretation of percentages should be done with caution as N is below 100 which tends to inflate the values of the percentages. The non-significant findings established by Chi-Square tests, should also be taken into account with the interpretation of the results. No conclusions can be drawn. Fifty two percent (n = 16) of women pregnant in the first trimester did not achieve orgasms. During the second trimester, 66% (n = 29) failed to achieve orgasms in the 2-week period prior to being tested. With the advent of the third trimester, a lower percentage (48%; n = 22) of women did not achieve orgasms. However, after childbirth the majority (64%; n = 23) failed to experience orgasms, in the 2-week period prior to the investigation. These results partially reflected the reports of Tolor and Di Grazia (1976) and Steege and Jelovsek (1982), except for their finding that women close to delivery were least orgasmic.
<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n = 31)</th>
<th>Second Trimester (n = 44)</th>
<th>Third Trimester (n = 46)</th>
<th>Postnatal (n = 36)</th>
<th>% of Total (N = 157)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orgasms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>48 (15)§</td>
<td>34 (12)</td>
<td>52 (24)</td>
<td>36 (13)</td>
<td>42.6 (67)</td>
</tr>
<tr>
<td>No</td>
<td>52 (16)</td>
<td>66 (29)</td>
<td>48 (22)</td>
<td>64 (23)</td>
<td>57.3 (90)</td>
</tr>
<tr>
<td>Multiple Orgasms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>10 (3)</td>
<td>11 (5)</td>
<td>04 (2)</td>
<td>08 (3)</td>
<td>8.2 (13)</td>
</tr>
<tr>
<td>No</td>
<td>90 (28)</td>
<td>89 (39)</td>
<td>96 (44)</td>
<td>92 (33)</td>
<td>91.7 (144)</td>
</tr>
</tbody>
</table>

Note: § Frequencies in brackets. Percentages rounded to integers.
Few pregnant women, or postnatal women experienced multiple orgasms in the two weeks prior to being tested (Table 21). As a result of the skewed nature of this distribution a Chi-square test could not be done on the frequency data. However, the frequencies of responses in each category strongly implied that the majority of this experimental sample failed to experience multiple orgasms (Table 21). The trend suggested by Masters and Johnson (1966) that pregnancy increases the multiple orgasmic ability of women, thus seems not to be supported by the present findings, although, once again, no conclusions can be drawn.

**Sexual Abstinence**

Few of the pregnant and postnatal women, who participated in this study, were advised by their physicians to abstain from sexual activity while pregnant or after childbirth. These findings strongly oppose the reports of earlier researchers who closely associated a decline in female sexuality during pregnancy with recommendation of sexual abstinence by physicians (Masters & Johnson, 1966). Perhaps the advice that sexual abstinence should not be indiscriminately suggested to expectant couples (Chapter Four), has been heeded. The non-occurrence of serious gynaecological problems in the present sample may have contributed to this finding. Once again, one is reminded that the present sample was a fairly healthy one and did not
volunteer for this study on the grounds of experiencing sexual problems.

Irrespective of the above, several participants in the present total sample abstained from sexual intercourse. Unacceptably low expected cell frequencies, as well as the skewed nature of the distribution of responses, prevented the calculation of a Chi-square for this data. For interest sake, however, the data are reported as percentages. The interpretation of the percentages should be done with caution. Of the total sample 15.9% (n = 25) abstained from sexual intercourse (Appendix N). With reference to the specific cross-sectional experimental groups, sexual abstinence tended to be more prominent (30%; n = 14) during the third trimester, and rarely occurred (5%; n = 2) during the postnatal period. Sixteen percent (n = 5) of the sample abstained from sexual intercourse after conception. During the second trimester only 9% (n = 4) abstained (Appendix N). It can be speculated that bodily discomfort or fear of precipitating labour may have resulted in more women in the third trimester abstaining from sexual intercourse than any of the other experimental groups. These, however, are only trends for speculation and are not conclusive.

Overview

It is recognized that utilizing the various items as single variables measuring female sexuality may not be the best procedure. However, it served to compare the results of
the present study with previous work in this area. In addition the categorical analysis revealed some interesting trends, which calls for further exploration of the data. It appeared that female sexual desire, enjoyment and activity in conjunction with the intensity of the orgasmic experience, tended to decline for groups during the course of pregnancy. Women close to delivery reported the lowest experience of the above variables measuring female sexuality. The downward trend seemed reversed for women after childbirth, whose responses about their sexuality were similar to those of women pregnant in the first trimester. Referring to the remaining variables measuring female sexuality, namely initiating sexual activity, orgasmic ability and sexual satisfaction, no significant trends for the groups could be detected. It appeared that women pregnant in the second trimester gave more responses in the categories which reflected low levels of orgasms, sexual satisfaction and initiating sexual activity. As pregnancy progressed women reported a stronger need for body contact, i.e. a need to be held. Again, this trend was reversed after childbirth.

In view of the above, it seemed viable to further analyse the data using more powerful techniques to outline key components of female sexuality and to establish the significance of the trends noticed. It was hoped to achieve a more global and consolidated picture of female sexuality during pregnancy and the postnatal period. However, prior to such an analysis, it was necessary to gain clarity on the use
of the non-pregnant women included in this study as a control group. Therefore, attention is briefly given to the issue of a so-called baseline of female sexuality at this stage.

Baseline of Female Sexuality

A common concern of many researchers as discussed in Chapter Four is the reliability of retrospective data. Despite this, only a few researchers introduced some form of a control group into their studies on female sexuality and pregnancy (Morris, 1975; Reamy et al. 1982). A group of non-pregnant women were included in the present study as a control group. These subjects completed the Non-Pregnant Sexuality Scale which was similar to the Pre-Pregnant Sexuality Scale completed by the experimental groups.

Chi-square tests were done on the retrospective scores of the experimental groups and the responses of the control group. The results showed that the groups did not differ significantly on any of the variables measuring their sexuality.

Scales were also scored as continuous variables as discussed earlier. Thereafter the data was subjected to one-way analysis of variance, to establish the differences between the means obtained by the groups on the various items. The differences between the means were found to be non-significant.

In view of these findings, the non-pregnant group was used as a control group in further analysis of the sexuality data. Thus a true cross-sectional approach was achieved.
Key Components of Female Sexuality

In an effort to consolidate some of the data reported above in a meaningful way as well as to define the key components descriptive of female sexuality, a principal component varimax factor analysis was done. Twelve variables, selected on the basis of their measurement of the core concerns related to female sexuality, were identified. All in all 15 items measured sexuality - three of which were excluded from this analysis because they dealt with the reasons associated with either increased or decreased sexual desire and the methods and positions used during sexual intercourse. It should be noted that the same 12 single variables were used in the earlier reported Chi-square analysis of data, but were then scored categorically whereas this analysis utilized the items scored as continuous variables.

The correlation matrix is reported in Table 22. The communalities of the variables after one iteration are presented in Table 23. All but Variable 59 (need to be held or cuddled) with a low commonality of .328, showed acceptable communalities.

An analysis of the eigenvalues greater than unity, and cumulative proportion of variance, yielded four factors. These factors accounted for 60% of the common variance between the groups. It seems appropriate to assume that these factors represent the key components of female sexuality assessed in this study.
# TABLE 22: Intercorrelation Matrix of all Sexuality Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>59</th>
<th>60</th>
<th>61</th>
<th>62</th>
<th>63</th>
<th>64</th>
<th>65</th>
<th>66</th>
<th>67</th>
<th>68</th>
<th>69</th>
<th>80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need Held/Cuddled</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Desire</td>
<td>0.104</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Enjoyment</td>
<td>0.220</td>
<td>0.607</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Intercourse</td>
<td>0.165</td>
<td>0.371</td>
<td>0.316</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preference Intercourse</td>
<td>0.065</td>
<td>0.154</td>
<td>0.059</td>
<td>-0.118</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiate Lovemaking</td>
<td>0.273</td>
<td>0.214</td>
<td>0.233</td>
<td>0.075</td>
<td>0.247</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Orgasms</td>
<td>0.096</td>
<td>0.131</td>
<td>0.185</td>
<td>0.166</td>
<td>0.006</td>
<td>-0.143</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orgasmic Rate</td>
<td>0.021</td>
<td>0.241</td>
<td>0.410</td>
<td>0.238</td>
<td>-0.001</td>
<td>0.132</td>
<td>0.409</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity Orgasms</td>
<td>0.143</td>
<td>0.301</td>
<td>0.407</td>
<td>0.161</td>
<td>0.019</td>
<td>0.027</td>
<td>0.435</td>
<td>0.527</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple Orgasms</td>
<td>0.008</td>
<td>0.161</td>
<td>0.120</td>
<td>0.184</td>
<td>0.069</td>
<td>0.042</td>
<td>0.139</td>
<td>0.234</td>
<td>0.292</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiorgasmic Rate</td>
<td>0.038</td>
<td>0.152</td>
<td>0.106</td>
<td>0.090</td>
<td>0.055</td>
<td>0.113</td>
<td>0.090</td>
<td>0.195</td>
<td>0.189</td>
<td>0.519</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Sexual Satisfaction</td>
<td>0.192</td>
<td>0.321</td>
<td>0.388</td>
<td>0.345</td>
<td>-0.089</td>
<td>0.088</td>
<td>0.038</td>
<td>0.243</td>
<td>0.233</td>
<td>0.028</td>
<td>0.096</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: For df = 155, \( \hat{r} \approx .157 \) at \( p < .05 \)
\( \hat{r} \approx .208 \) at \( p < .01 \)
\( \hat{r} \approx .262 \) at \( p < .001 \)
### TABLE 23: Communalities Obtained from Variables after One Iteration

<table>
<thead>
<tr>
<th>Variable</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need Held/Cuddled</td>
<td>.328</td>
</tr>
<tr>
<td>Sexual Desire</td>
<td>.554</td>
</tr>
<tr>
<td>Sexual Enjoyment</td>
<td>.648</td>
</tr>
<tr>
<td>Sexual Intercourse</td>
<td>.540</td>
</tr>
<tr>
<td>Preference Intercourse</td>
<td>.605</td>
</tr>
<tr>
<td>Initiate Lovemaking</td>
<td>.633</td>
</tr>
<tr>
<td>Sexual Orgasmic Rate</td>
<td>.692</td>
</tr>
<tr>
<td>Orgasmic Rate</td>
<td>.615</td>
</tr>
<tr>
<td>Intensity Orgasm</td>
<td>.661</td>
</tr>
<tr>
<td>Multiple Orgasms</td>
<td>.756</td>
</tr>
<tr>
<td>Multiple Orgasmic Rate</td>
<td>.727</td>
</tr>
<tr>
<td>Sexual Satisfaction</td>
<td>.557</td>
</tr>
</tbody>
</table>
The sorted rotated factor loadings are set out, with the identification of the variables contained in each factor, in Table 24. The variance explained by each factor is also presented in this table.

Factor 1 which accounted for 2.214% of the total variance was named 'Female Sexual Responsivity'. In effect it contained the indices of female sexuality referred to by Masters and Johnson (1966) in their definition of female sexuality, with the exception of the orgasmic ability of women. Furthermore, it appeared to reflect components of female sexuality which embodied a strong psychological, emotional and interpersonal dimension, namely 'sexual desire', 'sexual enjoyment', 'sexual activity' and 'sexual satisfaction'.

Factor 2 was interpreted as 'Orgasmic Ability' and accounted for 2.013% of the total variance. It reflected the physiological responsivity of female sexuality. Original variables contained in this factor were the 'occurrence of orgasms', the 'frequency' with which an 'orgasm' was experienced and the 'intensity' of such an 'orgasm'.

Factor 3, named 'Multiple Orgasmic Ability', explained 1.564% of the total variance between the groups. It contained information related to the physical expression of female sexuality through the experience of multiple orgasms. It would appear that the orgasmic ability of women reflected a physiological dimension of female sexuality, which is easier
<table>
<thead>
<tr>
<th>Variable</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Factor 1</td>
</tr>
<tr>
<td>80 Sexual Satisfaction</td>
<td>0.743</td>
</tr>
<tr>
<td>62 Intercourse</td>
<td>0.707</td>
</tr>
<tr>
<td>61 Enjoyment</td>
<td>0.660</td>
</tr>
<tr>
<td>60 Desire</td>
<td>0.664</td>
</tr>
<tr>
<td>65 Orgasms</td>
<td></td>
</tr>
<tr>
<td>67 Orgasm Intensity</td>
<td></td>
</tr>
<tr>
<td>66 Orgasm Frequency</td>
<td></td>
</tr>
<tr>
<td>68 Multiple Orgasms</td>
<td></td>
</tr>
<tr>
<td>69 Multiple Orgasmic Frequency</td>
<td></td>
</tr>
<tr>
<td>64 Initiate Lovemaking</td>
<td></td>
</tr>
<tr>
<td>63 Need Intercourse</td>
<td></td>
</tr>
<tr>
<td>59 Held/Cuddled</td>
<td></td>
</tr>
<tr>
<td>VP</td>
<td>2.214</td>
</tr>
</tbody>
</table>

Note: VP = Variance explained by each factor.
to define and assess than the dimension of female responsivity.

Factor 4 accounted for 1.526% of the total variance between the groups and was labelled 'Sexual Motivation'. Variables included in this factor were 'initiation of lovemaking', 'need for sexual intercourse' and the 'need to be held or cuddled'. As noted earlier, the variable named 'need to be held or cuddled' also showed a low commonality of .442 with the other two variables included in this factor.

**Homogeneity of Variance**

A homogeneity of variance check was performed on the factor scores, to determine whether or not they could be used in further analysis of the data. It is generally assumed that the variance of observations ought to be similar and drawn from a normally distributed population when undertaking an analysis of variance (Siegel, 1956).

The results of the Levine's Test for Homogeneity of Variance between the groups on the various factors are presented in Table 25. It showed that with the exception of Multiple Orgasmic Ability (Factor 3) all five groups were homogeneous. The distribution of the groups on Multiple Orgasmic Ability (Factor 3) appeared to be reasonably close to a normal distribution. Therefore this factor (Multiple Orgasmic Ability) was included in further analysis despite this finding.
<table>
<thead>
<tr>
<th>Factor</th>
<th>df</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Sexual Responsivity</td>
<td>4,191</td>
<td>0.85</td>
<td>0.4978</td>
</tr>
<tr>
<td>2 Orgasmic Ability</td>
<td>4,191</td>
<td>1.12</td>
<td>0.3500</td>
</tr>
<tr>
<td>3 Multiple Orgasmic Ability</td>
<td>4,191</td>
<td>2.65</td>
<td>0.0345</td>
</tr>
<tr>
<td>4 Sexual Motivation</td>
<td>4,191</td>
<td>1.25</td>
<td>0.2924</td>
</tr>
</tbody>
</table>
Analysis of Variance

One-way analysis of variance was performed to establish differences in sexuality between the control group (Non-Pregnant) and the experimental groups utilizing the four factors identified earlier. No significant differences were found between the groups on any of the four factors measuring sexuality. All probabilities were in excess of the .05 level of significance. The Wilk's lambda likelihood ratio statistic with Rao's approximation was $F(16, 574.99) = 1.27, p > .05$.

The fact that there were no significant differences in the current analysis warrants some discussion in view of the previous analyses of the sexuality data by means of Chi-square tests. Earlier, the responses of the experimental groups on the sexuality items were compared with the retrospective reports of the women before they fell pregnant and significant differences were found. Further Chi-square tests showed no significant differences between the control groups' data in sexuality and the retrospective pre-pregnant sexuality data of the experimental groups. Hence, the retrospective data were excluded in further analyses. This could have resulted in speculating that the control group differed from the experimental groups on their sexuality.

Some theorists suggested that Chi-square tests are not necessarily sensitive enough or the most appropriate method to analyse data of this kind (Steege & Jelovsek, 1982). Siegel (1956), however, commented that the 'exact power' of the Chi-square test is difficult to determine, and stated that such
calculations are 'insensitive to the effects of order when \( df > 1 \)' (Siegel, 1956, p. 179). Chi-square tests in the present study relied on frequency scores for single items, while the analysis of variance used factor scores which are a combination of variables. In view of these discrepancies, the data were subjected to further multivariate analysis of variance.

In summary, the present findings apparently failed to confirm the reports of earlier researchers, who indicated significant differences in female sexuality in groups prior to pregnancy and in groups who are pregnant (Holtzman, 1976; Kenny, 1973; Landis et al. 1950; Masters & Johnson, 1966; Solberg et al. 1973). Notably, difficulties are attached to such comparisons, because different research designs, assessment techniques and statistical approaches to data analysis were used.

**Multivariate Analysis of Variance and Covariance**

Further analysis of the sexuality data was warranted for several reasons. Firstly, it was the opinion of many past researchers, as discussed in Chapter Four, that female sexuality does change during pregnancy (Falicov, 1973; Holtzman, 1976; Landis et al. 1950; Masters & Johnson, 1966; Wagner & Solberg, 1974). Secondly, the discrepancies of results when the present data were assessed by means of Chi-square tests and one-way analysis of variance warranted more exploration of the data. Thirdly, the use of analysis of variance presupposes a hypothesis testing approach which was
not appropriate in view of the exploratory design of the study. Finally, given the exploratory nature of this study, it was viable to analyse the data in several ways.

A multivariate analysis of variance was performed as an alternative procedure. It dealt simultaneously with the multiple dependent variables (four factors of female sexuality) and independent variables (groups). This procedure was used to determine whether or not the pattern of female sexuality changed for women during pregnancy and after childbirth.

In the execution of this statistical procedure, different designs such as non-linear, contrast and overall, as well as regression methods were employed in an endeavour to establish trends in female sexuality during pregnancy.

All but the regression analysis showed an overall significant (p<.05) linear downward trend of female sexuality over the course of pregnancy and in the postnatal period. ($TSQ = 11.327, F(4,198) = 2.79, p = .027$).

A further multivariate analysis of variance revealed that the linear downward trend was mainly due to Female Sexual Responsivity (Factor 1). This was also confirmed by the eigen vectors. An investigation of the probabilities of the various factors, showed that the linear trend could have been marginally influenced by the other factors, namely Orgasmic Ability (Factor 2), Multiple Orgasmic Ability (Factor 3) and Sexual Motivation (Factor 4). This, however, was highly unlikely. The findings are presented in Table 26.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Sum of Squares/ Mean Square</th>
<th>df</th>
<th>F</th>
<th>p</th>
<th>Eigen Vectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>6.0350688E +2</td>
<td>1,91</td>
<td>6.15</td>
<td>0.0140</td>
<td>-.74546009</td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.1447931E -2</td>
<td>1,91</td>
<td>0.00</td>
<td>0.9698</td>
<td>.31626920-002</td>
</tr>
<tr>
<td>Factor 3</td>
<td>2.9647794E +0</td>
<td>1,91</td>
<td>3.03</td>
<td>0.0833</td>
<td>.52646127</td>
</tr>
<tr>
<td>Factor 4</td>
<td>1.8231032E +0</td>
<td>1,91</td>
<td>1.81</td>
<td>0.1804</td>
<td>.40880041</td>
</tr>
</tbody>
</table>
The conclusion was drawn that Female Sexual Responsivity (Factor 1) declined progressively over the gestation period, and after childbirth, for the present sample. By contrast, the Orgasmic Ability (Factors 2 and 3) and Female Sexual Motivation (Factor 4) remained relatively unaffected. Thus, the psychological dimension of female sexuality, reflected by sexual responsivity, was affected by women's experience of pregnancy while the physiological dimension characterised by a woman's orgasmic ability remained stable over a similar period.

It was noticed that significant differences were found between the experimental groups on the single items measuring female 'sexual desire' and 'sexual enjoyment' as compared with the results of the Chi-square tests. It could be assumed that the significant linear downward trend of Female Sexual Responsivity (Factor 1) over the course of pregnancy, was mainly due to the single variables, Sexual Desire and Sexual Enjoyment. Both these items are part of the Female Sexual Responsivity factor. Furthermore, no significant differences were found on the orgasmic ability of the various experimental groups, using the Chi-square tests. The progressive decline of female sexuality for the experimental groups was not associated with their orgasmic ability when the data were analysed by means of the multivariate analysis of variance procedure. In addition, the suggested downward trend of 'female sexual desire', 'activity', 'enjoyment' and 'intensity of orgasm' on the strength of Chi-square tests was confirmed
partially by a similar linear downward trend of Female Sexual Responsivity noted in the regression analysis. Consequently there is reason to accept the present findings as an accurate account of how female sexuality was affected for this sample.

Conclusion

Comparing the present findings with the results of earlier studies on the same subject, as discussed in Chapter Four, proved more difficult than anticipated. Despite the obvious differences in samples and assessment techniques of female sexuality, most of these researchers restricted their investigations to measuring single variables related to female sexuality. The present study, in turn, initially used single variables but then proceeded to seek and formulate broader components related to female sexuality. This was based on the relevant theoretical assumptions discussed in Chapter Two. More specifically, female sexuality was viewed as a twofold issue, containing both erotic self-satisfaction and sexual motives attached to motherhood (Deutsch, 1944, 1945; Heiman, 1965). Consequently, both psychological and physiological dimensions compose female sexuality. Most theorists, as discussed earlier, referred to the complex nature of female sexuality. Therefore, it would be shortsighted to restrict analysis of the present data to a variety of independent indices of female sexuality such as desire, enjoyment and others, without recognizing their possible interrelatedness.

Suffice to state that the present findings of the linear decline of Female Sexual Responsivity over the course of
pregnancy, verified the trend observed by some researchers on the strength of Chi-square tests (Reamy et al. 1982; Tolor & Di Grazia, 1976). In contrast, the findings contradicted the results reported by Kenny (1973) and Masters and Johnson (1966), who found that the sexual desire of the women in their studies increased during the second trimester of pregnancy. The present findings also failed to verify the reports of many researchers who observed that the ability to reach orgasm declined for women during pregnancy (Baxter, 1973; Kane et al. 1967; Kumar et al. 1981; Perkins, 1982; Reamy et al. 1982; Solberg et al. 1973; Tolor & Di Grazia, 1976, 1977; Wagner & Solberg, 1974). Additionally, a progressive linear decline of Sexual Responsivity was noticed for the present sample, which could not be associated with a specific stage of pregnancy. Previous researchers frequently commented that a dramatic decline of female sexuality was noticeable during the third trimester of pregnancy (Entwisle & Doering, 1981; Kenny, 1973; Tolor & Di Grazia, 1976; Wagner & Solberg, 1974). It may be hypothesized that grouping women according to the trimester of pregnancy may impose unnecessary limitations on a study of this nature. However, it must be pointed out that the present cross-sectional research findings were compared to earlier studies which either used a longitudinal or a cross-sectional research design. Different research designs may have accounted for some discrepancies in the present findings and those reported by earlier researchers (Chapter Four).
It is also appropriate to assess the theoretical formulations which were relevant to this study. The psychoanalytical viewpoints (Deutsch, 1944, 1945; Freud, 1949; Heiman, 1965) and the developmental perspective (Bibring et al. 1961), described pregnancy as an intrapsychic task for women, with concomitant changes in their object libidinal and narcissistic positions. They recognised that female sexuality is altered during pregnancy but suggested that it occurs at an intrapsychic level.

The present findings were in agreement with these viewpoints. Female sexuality within the parameters of this study changed significantly when measuring Female Sexual Responsivity, but not noticeably when measuring Female Sexual Orgasmic Ability. Female Sexual Responsivity contained the underlying single variables, namely 'female sexual desire', 'enjoyment', 'activity' and 'satisfaction'. These variables all imply a complex system of psychological, emotional and interpersonal elements. In contrast, Female Sexual Orgasmic Ability, as measured in this study, represented a more physical dimension of female sexuality. Female sexuality to a large extent changes on the intrapsychic level for pregnant women and women in the post-delivery period.

The findings further supported Deutsch's (1944, 1945) view that pregnant women become withdrawn and invest less in sexual relations for erotic self-satisfaction. In this study, pregnant woman participated progressively less in sexual activity and found their sexual relations less enjoyable and
satisfying. This was reflected by the factor labelled Sexual Responsivity. There was no evidence, however, that this decline of Female Responsivity was dramatically influenced by a specific stage of pregnancy. Again, these findings supported the opinion of the psychoanalysts and developmental theorists, namely that pregnancy forms a part of a woman's sexual identity (Bibring et al., 1961; Deutsch, 1944, 1945; Erikson, 1950; Heiman, 1965; Kestenberg, 1975).

The opinions of the social learning theorists, such as Bandura (1965) and Mischel (1966, 1970) are reflected to a lesser extent in the results of this study. They referred to female sexuality as a complex system of feelings and thoughts, not governed purely by physiology. The reported decline of Female Responsivity but not Female Orgasmic Ability, seemed to support this assumption, although the present study did not measure physiological changes. It could be argued that if female sexuality is governed purely by physiology, then the physical expression of sexual tension through orgasmic experiences will also be affected. More specifically it will also have declined significantly during the various stages of pregnancy and postnatal period. Yet in this study it was the components of female sexuality not directly traceable to physiology, that decreased for pregnant women.

In the various experimental groups, their Orgasmic Ability remained relatively unaffected, while a linear downward trend was noticed on Female Sexual Responsivity. The general assumption that female sexuality and sexual
satisfaction, to a large extent, hinge on the occurrence of sexual orgasms (Kinsey et al. 1953, Masters & Johnson, 1966), was not indicated in this study. Therefore, an assessment of the orgasmic rates of women may not necessarily be reflective of their sexuality.

Further speculative interpretation of the findings was based on the comments of Steege & Jelovsek (1982). They suggested that women are able to control or voluntarily suppress orgasmic experiences. It can be argued that women who participated in the present study retained voluntary control over their 'orgasmic abilities'. However, Female Sexual Responsivity, which referred to 'sexual enjoyment', 'desire', 'activity' and 'satisfaction', declined. It may well be that because of the suggested complexity of this component of female sexuality, women were less likely to have much voluntary control over the expression thereof. Furthermore, it portrayed more than the physical expression of sexuality.

Another observation was made which could have accounted for changes in Female Responsivity for the experimental groups, but not their Orgasmic Ability. Recently more information on the female sexual orgasm has become available in both academic publications and lay magazines (Hinton, 1986; Kitzinger, 1983; Kline-Graber & Graber, 1975; Levinsohn, 1984; Mattheson, 1986; Uken, 1983). Less attention, however, is given to other dimensions of female sexuality such as desire. As a result of women having more knowledge about orgasms, it may be possible that they also experience these more often
irrespective of their physical state. By now women seem to know that having orgasms while pregnant, will not provoke an abortion and will not be detrimental to the foetus (Kitzinger, 1983). Women in this sample continued having orgasms throughout the period of pregnancy and the postnatal period.

Past researchers found that women who failed to achieve orgasms often felt sexually inadequate, depressed and frustrated (Bardwick & Behrman, 1967; Hite, 1976; Tavris & Sadd, 1977). Similarly, Renshaw (1976) suggested that in an achievement orientated society the occurrence of sexual orgasms is often viewed as a measure of successful lovemaking and consequently sexual adequacy. It could well be that women in the present study were of the opinion that orgasmic achievement reflected an acceptable level of sexual adequacy, which they wanted to retain over the course of pregnancy and the postnatal period. Again, this interpretation is speculative, as women were only requested to give reasons for declined sexual desire over the course of pregnancy and not for the occurrence or non-occurrence of sexual orgasms.

It was pointed out by Uken (1980, 1983) who reviewed the literature on the orgasmic ability of women, that many factors influence a woman’s orgasmic functioning. Nevertheless, no differences in female sexual orgasms were noted in her study on pregnant women. Her study, however, did not set out to assess female sexuality and this fact was only reported as an additional finding.
Female Sexual Motivation (Factor 4) also showed no significant changes for women in the various experimental groups. These findings supported earlier reports that women irrespective of their physical state seldom initiate lovemaking, but seek to be held, hugged and cuddled (Hollender & McGhee, 1974; Tolor & Di Grazia, 1976).

In conclusion, Female Responsivity declined in a linear fashion for women who were pregnant in the different trimesters and the period following childbirth. From a physiological perspective, discussed in Chapter Three, it seemed convenient to categorise women in the different stages of pregnancy, as specific physiological changes are apparent in each stage. The results, however, showed that changes in female sexuality are not restricted to the specific timetable (trimesters) of pregnancy. Therefore dividing pregnancy into trimesters ought to serve only as a broad guideline, and may need to be reviewed.

Female Body Image

This section is a continuation of the cross-sectional design and focuses on the findings of female body image during pregnancy and the postnatal period. Attention is first given to the qualitative responses of subjects about their feelings toward their bodies and feelings of attractiveness. Then the results of the Rorschach Inkblot Test, scored for Barrier and Penetration responses, according to the method of Fisher and Cleveland (1958a) are reported.
Qualitative Analysis: Reports on Body Image

All participants were requested to write a descriptive paragraph about their body feelings and attitudes to explore the relationship between female body image and a woman's experience of pregnancy. They also reported their feelings of attractiveness and gave their opinions on behalf of their husbands.

Personal Description of Body Image

The analysis of qualitative data and the value of such reports were pondered by many researchers (Cartwright, 1953; Goode & Hall, 1952; Jick, 1979; Van Maanen, 1979). For the purpose of this study, each paragraph describing how women felt about their bodies was read and themes were extracted, which related to specific areas such as physiological bodily states and emotional feelings about the body. Percentages were then calculated on how frequently these themes were mentioned by a particular sample. The various categories, response frequencies and percentages, are presented in Table 27. Comments of subjects during testing were also noted.

Although many comments were made on how women felt about their bodies, the following issues appeared to be most prevalent for women in the different stages of pregnancy and the postnatal period.

Overweight Weight gain was frequently described as unacceptable to women throughout gestation and the postnatal
### TABLE 27: Qualitative Analysis: Personal Description of Body Image

<table>
<thead>
<tr>
<th>Categories</th>
<th>Non-Pregnant (n=39)</th>
<th>First Trimester (n=31)</th>
<th>Second Trimester (n=44)</th>
<th>Third Trimester (n=46)</th>
<th>Post-Natal (n=36)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overweight</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Fat, flabby)</td>
<td>36 (14)^a</td>
<td>55 (17)</td>
<td>43 (19)</td>
<td>20 (9)</td>
<td>39 (14)</td>
</tr>
<tr>
<td><strong>Stomach Repels</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Ugly, enlarged/uncomfortable)</td>
<td>3 (1)</td>
<td>14 (6)</td>
<td>11 (5)</td>
<td>17 (6)</td>
<td></td>
</tr>
<tr>
<td><strong>Enjoy Big Breasts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Full breasts)</td>
<td>16 (5)</td>
<td>5 (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dissatisfied</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Frustrated, resentful, damaging/</td>
<td>10 (4)</td>
<td>52 (16)</td>
<td>36 (16)</td>
<td>28 (13)</td>
<td>47 (17)</td>
</tr>
<tr>
<td>vulnerable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sexual</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Sensual, desirable, feminine)</td>
<td>21 (8)</td>
<td>3 (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Temporary</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Normal, for a reason, acceptable)</td>
<td>26 (8)</td>
<td>50 (22)</td>
<td>52 (24)</td>
<td>3 (1)</td>
<td></td>
</tr>
<tr>
<td><strong>Happy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Satisfied, good, pleased, enjoyed)</td>
<td>59 (23)</td>
<td>13 (4)</td>
<td>2 (1)</td>
<td>7 (3)</td>
<td></td>
</tr>
<tr>
<td><strong>Confident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Proud)</td>
<td>13 (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Curious</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Excited, fascinated)</td>
<td>13 (4)</td>
<td>9 (4)</td>
<td>32 (15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bust Size too Big</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Sagged breasts)</td>
<td>8 (3)</td>
<td></td>
<td></td>
<td></td>
<td>39 (14)</td>
</tr>
<tr>
<td><strong>Depressed</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Sad, distressed, sorrow)</td>
<td>10 (4)</td>
<td>3 (1)</td>
<td>7 (3)</td>
<td>2 (1)</td>
<td>8 (3)</td>
</tr>
<tr>
<td><strong>Unattractive</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Ugly, repelled)</td>
<td>23 (7)</td>
<td>2 (1)</td>
<td>13 (6)</td>
<td>42 (15)</td>
<td></td>
</tr>
<tr>
<td><strong>Ambivalent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Unsure, mixed feelings)</td>
<td>6 (2)</td>
<td>5 (2)</td>
<td>7 (3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ^a Frequencies in brackets. Percentages rounded to integers. More than one reason was given, therefore percentages exceed 100.
period. This was evident especially for women who were pregnant in the first trimester. Many felt that they were not 'truly pregnant, just fat'. It seemed as if a number still wanted to view themselves as not being pregnant and therefore continued comparing themselves to women in the general population.

With the advent of the second trimester, many women reported feelings of ambivalence toward their bodies as a result of their weight gain. Comments such as 'I am happy about my breasts and abdomen, but I feel dissatisfied and unfeminine with the extra weight gain', were representative of women's feelings about their bodies during the second trimester. Additionally, some showed relief that their bodies changed noticeably during the middle part of pregnancy. The latter feeling was aptly outlined in the comment 'at least the excessive weight gain is due to a baby'. Women, therefore, were happy to attach a reason to their weight gain. This finding corresponded to the suggestions of earlier theorists such as Colman (1969) and Oakley (1979).

Women in the third trimester were the least concerned about their weight, as compared with any of the other groups tested. Many, however, felt that they had little control over their bodies, and expressions such as 'the body doesn't really belong to me' and 'I have lost control and it seems as if it [my body] has a will of its own', were characteristic of women close to delivery. Furthermore, they expressed concern as to whether or not they would 'ever' regain a 'non-pregnant' look.
Previous authors on this topic reported similar opinions (Leifer, 1980; Moore, 1978).

After childbirth, approximately a third of the sample felt unhappy about still being overweight. Some assumed that their bodies would regain a pre-pregnant appearance soon after the delivery of the baby, others were more realistic, and commented that this would take some time. Overall, the impression was gained that women in the puerperium compare themselves with the social norm applicable to non-pregnant women.

_Stomach Size_ The size of the abdomen appeared to be less of a problem to pregnant women in this sample than to subjects who participated in earlier studies of this nature (Holtzman, 1976; Karmel, 1974; Leifer, 1980; Machover, 1949; Mercer, 1986; Slade, 1977). The movement of the foetus (quickening), however, resulted in some women commenting that 'something is hiding in this stomach'. Others felt that proof of their fertility was associated with their huge abdomens. Subsequent to childbirth, terms such as 'fat, flabby or stretched' were used to describe their stomachs. Concern was expressed by some new mothers that their stomachs and body sizes decreased much slower than expected. These findings corresponded with the reports of Gruis (1977) who also found that 'new' mothers were often unrealistic about their expected bodily changes after childbirth.
**Bust Size**  A limited number of women throughout pregnancy, or in the postnatal period, attached value to their increased bust size. These findings were contradictory to reports which stated that pregnant women enjoy having big breasts as this portrays womanliness (Holtzman, 1976; Leifer, 1980).

**Dissatisfaction**  As a result of weight gain and the awkward size of the body, some women were dissatisfied, some were resentful and others feared permanent body change. Such comments were applicable to women in early pregnancy and after childbirth. Similar to the reports of Mercer (1981), women also described their pregnant bodies as vulnerable. With the exception of the postnatal group, few subjects thought that they were overtly tense or anxious about their bodies.

**Sensual and Sexual**  Excluding the non-pregnant group, many women referred to their bodies as 'healthy', 'energetic', 'functioning adequately' or 'firm'. Few described their bodies as sexual or sensual.

In **summary**, the majority of women expressed body image concerns related to their weight gain, but this was most noticeable for women in early pregnancy and the postnatal period. Previous authors proposed that during the above periods, women were influenced by prevailing social norms, expecting women to be slim (Leifer, 1980; Moore, 1978). During the third trimester the physiological changes of
pregnancy are generally more pronounced than during any other stage of pregnancy. It may well be that women in the third trimester of pregnancy felt more satisfied with their appearance as they related their physiological changes to a specific reason i.e. being pregnant. Women during the first and second trimester of pregnancy and the postnatal period had less physical evidence, such as a 'huge stomach', for their changed body image. Hence they felt more dissatisfied and in conflict with the non-pregnant appearance than women who were pregnant in the third trimester. Yet the majority of women commented that their body size and concomitant body image concerns were 'temporary'. Few subjects stated that they were either depressed or anxious about their body changes. This contradicted the findings of other researchers (Fisher, 1970; McConnell & Daston, 1961; Treadway et al. 1969).

The above-mentioned interpretation was based on the spontaneous replies of women in response to how they felt about their bodies. Understandably many women may not have expressed all the concerns about their body image. The qualitative findings should be viewed as mere impressions of female body image during pregnancy and the postnatal period.

**Feelings of Attractiveness**

Enquiries were made about the feelings of the experimental groups, concerning their attractiveness. They were requested to state whether they felt 'more attractive' or 'less attractive', since falling pregnant or subsequent to
childbirth. Furthermore, they gave their opinions on how their partners viewed them. Reasons were also elicited from women for experiencing themselves as either more attractive or as less attractive.

*Views of Women* During pregnancy significantly more women felt less attractive compared to those who felt more attractive ($\chi^2 (3) = 10.92, p = .012$). Percentages are reported in Table 28 for comparative purposes. It appeared that the majority (71.3%, $n = 112$) of the total sample felt less attractive than before the pregnancy experience. Most women in the third trimester (89%, $n = 41$) felt unattractive. During the first and second trimester, 68% and 66% respectively of the subjects felt unattractive. Similar views were expressed by 58% of women after childbirth. By comparison Holtzman (1976) indicated that only 24% of her sample of pregnant women felt less attractive, while a small minority (4%) of pregnant women in the study of Solberg et al. (1973) felt they were less attractive. The earlier study of Masters and Johnson (1966) also reported a low percentage (20%) of women who felt unattractive while pregnant. It was noted, however, that with the exception of Holtzman (1976), the other researchers restricted their enquiries about attractiveness to it being detrimental to the sexual behaviour of women during pregnancy. In contrast, the present study assessed women's feelings of attractiveness as an independent variable.
<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n=31)</th>
<th>Second Trimester (n=44)</th>
<th>Third Trimester (n=46)</th>
<th>Postnatal (n=36)</th>
<th>% of Total (N=157)</th>
</tr>
</thead>
<tbody>
<tr>
<td>More Attractive</td>
<td>23 (7)(^a)</td>
<td>25 (11)</td>
<td>4 (2)</td>
<td>36 (13)</td>
<td>21.0 (33)</td>
</tr>
<tr>
<td>Less Attractive</td>
<td>68 (21)</td>
<td>66 (29)</td>
<td>89 (41)</td>
<td>58 (21)</td>
<td>71.3 (112)</td>
</tr>
<tr>
<td>The Same</td>
<td>10 (3)</td>
<td>6 (4)</td>
<td>7 (3)</td>
<td>2 (2)</td>
<td>07.6 (12)</td>
</tr>
</tbody>
</table>

Note: \(^a\) Frequencies in brackets. Percentages rounded to integers.
Several possible *reasons* that could have contributed to women feeling either more or less attractive during the various stages of pregnancy or subsequent to childbirth were explored. The analysis of this data is merely descriptive and based on numerical findings as this part of the study was secondary to the main research on female sexuality and female body image. These descriptive findings are reported with a view to elicit possible questions for future research and should be treated with caution. Reasons associated with 'increased' feelings of attractiveness are displayed as percentages in Figure 1 and those reasons associated with 'decreased' feelings of attractiveness in Figure 2.

A minority (21,0%; n = 33) of women who participated in the cross-sectional samples exhibited *increased* feelings of attractiveness (Table 28). Of these, 59% in the first trimester, 82% in the second trimester and 54% in the postnatal period associated 'femininity' with increased feelings of attractiveness. Women close to delivery stated that feelings of 'femininity', 'womanliness' and 'sensuality' equally enhanced their feelings of attractiveness (Figure 1). As discussed earlier, the majority (71,3%) of women, however, felt *less attractive* (Table 28) while pregnant. Many (68%) indicated that their bodies were 'clumsy and fat', and that this state contributed to their current feelings of being less attractive (Figure 2). These findings agreed with the comments earlier reported by pregnant women, that weight gain was unacceptable to them.
FIGURE 1: Reasons Associated with Feeling More Attractive

Note: More than one reason could be marked, therefore % exceed 100%

Variables:  
a Feminine  
b Sensual  
c Sexual  
d Womanly  
e Increased Breast Size
FIGURE 2: Reasons Associated with Feeling Less Attractive

Note: More than one reason could be marked, therefore % exceed 100%

Variables:  
a Unfeminine  
b Sexually Unattractive  
c Body Clumsy and Fat  
d Body Size too Big  
e Ugly and Misshapen  
f Body looks Foreign  
g Increased Breast Size
Opinion of Wife on behalf of her Partner  No significant differences were found between the female experimental groups, on how they thought their partners viewed their bodies during pregnancy or the postnatal period i.e as more or less attractive. On the basis of this finding the conclusion is drawn that wives did not perceive their husbands opinions of them to change over the course of pregnancy. Previous studies (Holtzman, 1976; Tolor & Di Grazia, 1976) however, drew conclusions on the basis of differences in percentages. No significance can be ascribed to such data as it remains merely descriptive.

The present study also analysed the reasons women gave for their husbands view of their attractiveness. As the results were not significant the discussion is excluded.

In conclusion an interesting phenomenon is the fact that women felt that their attractiveness declined with the progress of pregnancy. This pattern did not persist in their perceptions of how their husbands viewed them. Thus women seem to be more critical about their own level of attractiveness during the pregnancy process than they perceive their husbands to be. It may further imply that they perceive their husbands as fairly consistent in their perception of their wives, irrespective of how far the pregnancy has proceeded.
Rorschach Inkblot Test Responses

In addition to the qualitative, almost descriptive assessment of the consciously held feelings of the experimental groups toward their bodies, body image of these women was further investigated by the use of the Rorschach Inkblot Test. The results of this test provided a more subtle assessment to establish whether or not female body image differed between the control group (Non-Pregnant) and the experimental groups.

Means and Standard Deviations

The means and standard deviations of the five variables measured by the Rorschach are presented in Table 29. These are the total number of Rorschach responses, the Barrier scores, Penetration scores, the Total number of Barrier and Penetration scores, and the Total number of physiologically related responses.

Established Means for the Rorschach

The mean on the Rorschach for the present study appeared to differ considerably from the established 'norms' for women in the United States of America. The 'norm' for Barrier responses according to Ramer (1963) was 6.31, whereas Fisher and Cleveland (1958a) tested a group (N = 200) of students, with a mean of 2.20 for Penetration responses.
TABLE 29: Means and Standard Deviations of Female Body Image Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Non-Pregnant (n=39)</th>
<th>First Trimester (n=31)</th>
<th>Second Trimester (n=44)</th>
<th>Third Trimester (n=46)</th>
<th>Post-Natal (n=36)</th>
<th>Total (N=196)</th>
<th>Non-Pregnant (n=39)</th>
<th>First Trimester (n=31)</th>
<th>Second Trimester (n=44)</th>
<th>Third Trimester (n=46)</th>
<th>Post-Natal (n=36)</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Total Response</td>
<td>22.79</td>
<td>22.26</td>
<td>21.86</td>
<td>21.41</td>
<td>20.16</td>
<td>21.69</td>
<td>2.26</td>
<td>2.62</td>
<td>2.41</td>
<td>2.38</td>
<td>2.51</td>
<td>4.60</td>
</tr>
<tr>
<td>B Barrier</td>
<td>3.58</td>
<td>3.81</td>
<td>3.59</td>
<td>3.15</td>
<td>3.25</td>
<td>3.47</td>
<td>1.79</td>
<td>2.14</td>
<td>2.38</td>
<td>2.51</td>
<td>1.79</td>
<td></td>
</tr>
<tr>
<td>C Penetration</td>
<td>6.46</td>
<td>6.19</td>
<td>6.07</td>
<td>5.76</td>
<td>5.81</td>
<td>6.05</td>
<td>3.26</td>
<td>3.08</td>
<td>3.97</td>
<td>3.64</td>
<td>2.97</td>
<td></td>
</tr>
<tr>
<td>D Total Barrier and Penetration Responses</td>
<td>10.05</td>
<td>10.00</td>
<td>9.66</td>
<td>9.13</td>
<td>8.83</td>
<td>9.53</td>
<td>3.44</td>
<td>3.78</td>
<td>3.58</td>
<td>4.46</td>
<td>3.46</td>
<td></td>
</tr>
<tr>
<td>E Total Physiological/ Sexual Responses</td>
<td>4.41</td>
<td>4.06</td>
<td>6.30</td>
<td>3.57</td>
<td>4.08</td>
<td>4.48</td>
<td>3.58</td>
<td>3.50</td>
<td>14.29</td>
<td>3.54</td>
<td>3.85</td>
<td></td>
</tr>
</tbody>
</table>
The mean score on the Rorschach for a control group (Non-Pregnant) in this study was 3.58 on Barrier responses and 6.46 on Penetration responses (Table 29).

The reasons for the discrepancies can only be speculated upon. Different samples, sampling procedures, and possibly the nature of the study could have resulted in the contrasting findings. Furthermore, the 'norms' were not standardized for a South African sample and were also established many years ago. It is debatable whether the norms could still be applied today. The current awareness of cultivating a healthy body image through diet and exercise, as was evident in the present sample, could also be an unobtrusive variable.

**Barrier and Penetration Responses**

It seems viable to reflect briefly on the specific meaning attached to Barrier and Penetration responses if one is to gain insight into the findings to be discussed hereafter. Fisher and Cleveland (1958a) commented that *Barrier* responses represented a persistent attitude in relation to body image and was determined by inner forces such as personality. Furthermore, Barrier responses supplied information about a person's body image 'in terms of the attributes ... assigned to it by the projection of interiorized expectancies' (Fisher & Cleveland, 1958a, p. 367). In addition, Barrier responses revealed the body image of a person reflected by inner feelings. It has little to do with the actual physical properties of the body such as one's
build and changeable bodily states (Fisher & Cleveland, 1958a). Therefore, although Barrier responses were calculated for the experiences of body boundaries they projected the inner subconscious body image and attitudes of the individual (Fisher 1959a, 1963; Fisher & Cleveland, 1958b).

Fisher and Cleveland (1958a) were less clear as to what Penetration responses projected. It seemed as if Penetration responses primarily correlated with temporary changes and situational stresses in a person's environment (Fisher, 1963; Herron, 1962). Penetration responses, however, did not clearly oppose Barrier responses (Fisher & Cleveland, 1958a).

Fisher and Cleveland (1958a) also speculated as to whether significant differences could be found within the 'normal adult range'. Fisher (1963) noted that women who were subjected to a gynaecological examination, which implied interference with the body boundary, increased attention to their sexual anatomy and possibly stress, showed no significant changes on Penetration responses.

Turning to the present research, a simple analysis of variance showed no significant differences between the Barrier scores of the control group and the experimental groups. \( F(4) = 0.59, p = .671 \). The assessment of Penetration responses did not differ significantly between the various groups. \( F(4) = 0.32, p = .864 \).

In view of the above findings, it appeared that women retained a stable body image throughout pregnancy. Barrier scores which reflected the core components of female body
image remained unchanged for the different groups. In addition, Penetration responses reflecting a short term invasion of the body boundary, situational stress and emotional disturbances, seemed unaffected in the pregnant and the postnatal women. These findings may reflect the psychoanalytical perspective that female body image development is closely tied to a woman's biological destiny i.e. that her body will eventually bear a child (Deutsch, 1944, 1945; Freud, 1949; Kestenberg, 1975). This was agreed upon by Fisher (1964) and Loesch and Greenberg (1962).

Several authors expressed the opinion that cultural influences and the socialization process contribute to women associating their bodies with conceiving a child and ‘housing' a foetus (Erikson, 1968; Jung, 1960; Kohlberg, 1966; Simon & Cagnon, 1969; Stoller, 1968). This may explain why women's body image did not change significantly during pregnancy or after the delivery of their babies, despite the obvious body changes that accompany such an experience.

The findings on Barrier and Penetration responses corresponded with those reported by Karmel (1974) for a group of pregnant women of mixed gravidity. The women were tested during the late stages of pregnancy and again in the postnatal period. No significant changes could be found.

The earlier study of McConnell and Daston (1961) was partially verified by the present result showing no differences on Barrier responses for pregnant women. According to these researchers, Penetration responses of
pregnant women decreased significantly during the postnatal period. No control group was included in the study and testing was restricted to women in the third trimester of pregnancy and postnatal period. Therefore, the conclusion that a woman's body image changes when pregnant, seems questionable.

The present findings also failed to confirm those reported by Gray (1977). She found that women who were pregnant in the different trimesters and the postnatal period, differed significantly on both Penetration and Barrier responses when compared with the established norm means (Fisher & Cleveland, 1958a; Ramer, 1963). However, a comparison of the experimental groups resulted in significant changes in Barrier responses, but not in Penetration responses (Gray, 1977). Interestingly, the sample of pregnant and postnatal women investigated by Gray (1977) exhibited high levels of Penetration responses, often of a sexual nature. She questioned whether this was associated with the sexual adjustment of women during gestation and the postnatal period. In the present study, all female cross-sectional samples responded with many Penetration responses and no significant differences could be established between the groups. The content of their responses often referred to physiological, anatomical or sexual issues. The fact that there were no significant differences therefore indicates that high scores cannot be ascribed to women making sexual adjustments during pregnancy. Gray's (1977) speculation was thus not confirmed.
Fisher and Cleveland (1958a) stated that sexual responses could be characteristic of the emotional disturbances and often of a psychotic state. Klopfer et al. (1954), earlier associated genital responses with disintegrative disorders. These suggestions could not be applied to the present test groups. The high sexual content of the subjects' responses may be a reflection of the demand characteristics of the study where the emphasis was on sexuality. Another reason might have been the sequence in which the measuring instruments were administered. Women were first asked to report on their pre­pregnant sexuality, after which the Rorschach Inkblot Test was administered. Furthermore, all subjects were open and willing to voice their opinions on their sexuality. The involvement of a large percentage of the sample in prenatal (antenatal) classes may have contributed to women being more open about body functions.

Summary

In comparison with the control group, the experimental groups appeared to exhibit body image changes when they were asked about their feelings toward their bodies. These findings, although descriptive, partially corresponded to the reports of body image changes for women during pregnancy when assessed by attitudinal scales, rating scales and interviews (Machover, 1949; Moore, 1978; Slade, 1977; Uddenberg & Hakanson, 1972; Venezia, 1972). In contrast, limited changes were noted for the total sample in this study when tested with
the projective technique, thus assessing the subconsciously held attitudes toward the body and body image.

It was concluded that on a conscious level pregnant women rejected their bodies as being socially undesirable and contrary to the popular notion dictating that women ought to be slim. Their body changes, however, were viewed as temporary, superficial, and socially induced responses. However, subconsciously no differences were evident in female body image during pregnancy. Women in this study experienced pregnancy as a natural process. These results confirmed the theoretical viewpoints which underlined that socialization, upbringing and cultural norms, as well as the psychological make-up of women, closely associate female body image with a woman's childbearing role (Bibring et al. 1961; Deutsch, 1944, 1945; Freud, 1949; Jung, 1960; Keiser, 1952). Pregnancy, therefore, seems to be a confirmation of the successful maturation of female sexual and body image development. It serves as an extension of a woman's inherent biological nature and thus no changes, at an unconscious level, in body image could be ascertained.

Multivariate Analysis of Variance

A multivariate analysis of variance was undertaken to gain further clarity on the differences between the control group and the experimental groups in their female body image. The analysis was based on the five variables utilized in the analysis of body image assessed by the Rorschach. The
variables were: number of Rorschach responses (A), Barrier responses (B), Penetration responses (C). Total number of Barrier and Penetration responses (D) and number of Physiological and Sexual responses (E).

The multivariate analysis of variance dealt simultaneously with these dependent variables and the independent variables, namely the groups. The data were subjected to a statistical analysis for several designs such as non-linear, contrast, overall and regression to seek possible trends in female body image during the stages of pregnancy and the postnatal period.

The results showed an overall significant (p = .020) linear downward trend of female body image over the period of gestation and the postnatal period. (TSQ = 14.059, F (5,187) = 2.75, p = .020).

A further multivariate analysis of variance with planned comparisons revealed that the linear downward trend was mainly a result of the total number of Rorschach responses (A). The eigen vectors confirmed this (Table 30). An investigation of the data showed that the groups differed significantly (p = .0004) on their total number of Rorschach responses (A). No further significant differences were noted for the other variables. Therefore, it is highly unlikely that female body image changes are related to Barrier and Penetration responses, or the physiological content of the responses.

In an effort to find an explanation for these results, the scoring system used had to be reassessed. Fisher and
<table>
<thead>
<tr>
<th>Variable</th>
<th>Sum of Squares/ Mean Square</th>
<th>df</th>
<th>F</th>
<th>p</th>
<th>Eigen Vector</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Total Number of Rorschach Responses</td>
<td>1.39</td>
<td>1,91</td>
<td>13.22</td>
<td>0.0004</td>
<td>.754</td>
</tr>
<tr>
<td>B. Barrier Responses</td>
<td>6.64</td>
<td>1,91</td>
<td>1.41</td>
<td>0.2358</td>
<td>-.329</td>
</tr>
<tr>
<td>C. Penetration Responses</td>
<td>1.13</td>
<td>1,91</td>
<td>1.10</td>
<td>0.2955</td>
<td>-.317</td>
</tr>
<tr>
<td>D. Total Barrier and Penetration Responses</td>
<td>4.08</td>
<td>1,91</td>
<td>2.84</td>
<td>0.0935</td>
<td>.471</td>
</tr>
<tr>
<td>E. Physiological Responses</td>
<td>4.96</td>
<td>1,91</td>
<td>0.09</td>
<td>0.7664</td>
<td>-.188</td>
</tr>
</tbody>
</table>
Cleveland (1958a) developed their scoring system on Barrier and Penetration responses and interpreted these scores in relation to body image. They commented that Barrier and Penetration responses are significantly correlated to the total number of responses given by a subject. On the basis of this suggestion, subjects in the present study were restricted to 25 responses on the Rorschach. It became increasingly evident, however, that subjects, especially those in the third trimester of pregnancy and the postnatal period, gave fewer responses. One explanation may have been a rejection of the test. Women close to delivery and after childbirth, are often preoccupied with either imminent labour or their babies, which could have accounted for the fewer responses on the Rorschach Test.

A further analysis was done on the data in order to establish whether the non-significant differences on Barrier and Penetration responses reported earlier for this study were related to the total number of Rorschach responses. McConnell and Daston (1961) suggested earlier in their research that the total number of Rorschach responses could be reduced to a number which closely resembles the mean, if subjects give an unequal number of responses. In the present study the response total was reduced to 20, which closely resembled the mean (21.69) for the entire sample. A one-way analysis of variance was then performed on the number of Barrier and Penetration responses between the various sub-samples which yielded no significant results.
Therefore, it can be assumed with reasonable certainty that body image did not differ significantly between the groups of women, irrespective of their being in a non-pregnant, pregnant or postnatal state. It can be reiterated that pregnancy and the bodily changes which accompany this process form an integrated part of female body image development from early childhood. Therefore, no significant changes could be established between the body image of women who were not pregnant and those who were pregnant or in the postnatal period.

**Body Image in Relation to Female Sexuality**

Comparisons were made between the data reported earlier on female sexuality for the experimental groups and the findings on body image. This was done to assess the relationship between female sexuality and female body image for pregnant women or women in the postnatal period. Attention is given to the findings based on the descriptive data analysis. Thereafter, to further explore these issues, a multivariate analysis of variance was carried out on the four Factors of female sexuality and the five Variables related to female body image.

**Descriptive Data**

A number of theorists associated female body image disturbances during pregnancy with a conflict between the maternal and erotic qualities of a woman's body (Bibring et
al. 1961; Deutsch, 1944, 1945; Sherfey, 1972). In the present study pregnant women were ambivalent about their bodies. However, it seemed as if such ambivalence was related to being overweight. They were dissatisfied with the size of their bodies indicating that this was in opposition to the social image of women which dictates that they should be slim. On the other hand they accepted the maternal qualities of their bodies, and seldom referred to their bodies as a sexual or erotic entity.

When pregnant women were questioned about their declined levels of sexual desire, they often reported physiological reasons such as 'tiredness', 'vomiting' and 'body size'. In contrast, they associated increased sexual desire with erotic qualities of the body such as 'greater sensations of the genitals'. Pregnant women tended to recognize the erotic aspects of their bodies less frequently than non-pregnant or postnatal women, focusing on the maternal aspects of their bodies.

In view of the insignificant differences found on body image changes during pregnancy it could be suggested that pregnancy formed a central part of female body image development. Consequently, when women become pregnant they naturally alter their body image to accommodate their maternal qualities, with the erotic qualities of their bodies becoming less important. Therefore, they seldom commented about their bodies as being sexual or erotic.
Barrier Responses and Female Sexuality

Fisher and Cleveland (1958a), in an early exploratory study, found that the willingness to participate in sexual relations, as tested by several indices measuring female sexuality, correlated with a high level of Barrier responses on the Rorschach. These findings were based on a comparison of sexuality data for a group of women, and their Rorschach responses, by means of a Chi-square test. Prior to the calculation, the sexuality data of their sample was divided into two groups, namely those women who reported scores above the median, and those who exhibited scores lower than the median. A similar procedure was followed for Barrier response (Fisher & Cleveland, 1958a).

In the present study, a Chi-square test was done on the total sexuality score of subjects and total number of Barrier responses to establish whether Barrier scores were related to female sexuality. The procedure of data analysis suggested by Fisher and Cleveland (1958a) was followed. First, the responses of women on Barrier scores were divided into two categories, namely those who reported Barrier scores above the median and those who scored Barrier responses below the median. Thereafter the frequencies of responses in each category of the 12 single variables utilized in the assessment of female sexuality, were calculated for each subject. A total score was then calculated for each subject, and groups were classified as either exhibiting a high (above median) or low (median or below median) sexuality score. A Chi-square
test was done on this data. The results showed no significant differences between the various groups and therefore failed to establish a link between female sexuality and female body image. However, this methodology is limiting in that it forces the data into categories, and the information available for scoring variables as continuous data is lost.

**Multivariate Analysis of Variance**

The possible relationship between female sexuality and female body image was further explored by means of a multivariate analysis of variance. The analysis included the four Factors described earlier measuring female sexuality and the five Variables utilized in the assessment of female body image, thus utilising the continuous variables.

When the data were analysed for various trends such as a non-linear relationship between the groups, the results showed no significant differences between the groups. The regression analysis, however, revealed an overall significant (p = .009) linear downward trend of female sexuality and body image during the course of pregnancy and the postnatal period. (TSQ = 23.79, F(9,183) = 2.53, p = .009).

A further multivariate analysis with planned comparisons indicated that this trend was mainly a result of Female Sexual Responsivity, and the Total Number of Rorschach responses reported by the different experimental groups (Table 31).

In the light of the above simultaneous analysis of female sexuality and female body image variables, it could be assumed
### TABLE 31: Multivariate Analysis of Variance: Female Sexuality and Female Body Image.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sum of Squares</th>
<th>$F$</th>
<th>df</th>
<th>$p$</th>
<th>Eigen Vectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Rorschach Responses</td>
<td>1.39</td>
<td>13.22</td>
<td>1,91</td>
<td>.0092</td>
<td>.284</td>
</tr>
<tr>
<td>Barrier Responses</td>
<td>6.64</td>
<td>1.41</td>
<td>1,91</td>
<td>.2358</td>
<td>.184</td>
</tr>
<tr>
<td>Penetration Responses</td>
<td>1.13</td>
<td>1.10</td>
<td>1,91</td>
<td>.2955</td>
<td>.215</td>
</tr>
<tr>
<td>Total Barrier and Penetration Responses</td>
<td>4.08</td>
<td>2.84</td>
<td>1,91</td>
<td>.0935</td>
<td>.227</td>
</tr>
<tr>
<td>Physiological Responses</td>
<td>4.96</td>
<td>0.09</td>
<td>1,91</td>
<td>.7664</td>
<td>.332</td>
</tr>
<tr>
<td>Sexual Responsivity</td>
<td>6.03</td>
<td>6.15</td>
<td>1,91</td>
<td>.0140</td>
<td>.644</td>
</tr>
<tr>
<td>Orgasmic Ability</td>
<td>0.14</td>
<td>0.00</td>
<td>1,91</td>
<td>.9698</td>
<td>.613</td>
</tr>
<tr>
<td>Multiple Orgasmic Ability</td>
<td>2.96</td>
<td>3.03</td>
<td>1,91</td>
<td>.0835</td>
<td>.512</td>
</tr>
<tr>
<td>Sexual Motivation</td>
<td>1.82</td>
<td>1.81</td>
<td>1,91</td>
<td>.1804</td>
<td>.327</td>
</tr>
</tbody>
</table>
that Female Sexual Responsivity declined over the course of pregnancy. The latter, however, was not associated with female body image as measured by the Rorschach. These findings tended to correspond with the opinion, based on the descriptive data, that changes to female sexuality are not closely tied to female body image during pregnancy.

Expectant Fathers

A small sample of 62 expectant and 'new' fathers was included in this study. As a result of the sample sizes, only non-parametric statistical techniques for data analysis were used.

Means and Standard Deviations

The means and standard deviations for the measures of male sexuality during their partner's pregnancy and for the postnatal period are reported in Table 32.

Male Sexuality

Chi-square tests were done on the single items measuring male sexuality for the period prior to their becoming an expectant father, during their wives' pregnancy and during the postnatal period. In other words, the retrospective data were compared with current reports of their sexuality. Further Chi-square tests, excluding the retrospective data, were done to establish differences in male sexuality between the
TABLE 32: Means and Standard Deviations of the Cross-Sectional Male Samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First Trimester (n=16)</td>
<td>Second Trimester (n=16)</td>
</tr>
<tr>
<td>Pre-Pregnant Sexuality Scale - Husband</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More/less Intercourse/</td>
<td>2.750</td>
<td>2.638</td>
</tr>
<tr>
<td>The same</td>
<td>4.125</td>
<td>4.000</td>
</tr>
<tr>
<td>Sexual Enjoyment</td>
<td>3.625</td>
<td>3.937</td>
</tr>
<tr>
<td>Pregnant and Postnatal Sexuality Scales - Husband</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Desire</td>
<td>3.875</td>
<td>3.937</td>
</tr>
<tr>
<td>More/less Intercourse/</td>
<td>2.188</td>
<td>2.125</td>
</tr>
<tr>
<td>The same</td>
<td>3.375</td>
<td>4.125</td>
</tr>
<tr>
<td>Sexual Enjoyment</td>
<td>2.875</td>
<td>3.500</td>
</tr>
<tr>
<td>Initiate Sexual Relations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Variables on Scales of Sexuality</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
experimental groups (male). Expectant fathers were also requested to report on their level of sexual desire and indicate reasons for their experiencing increased or decreased sexual desire.

**Sexuality Variables**

From the retrospective accounts of the cross-sectional male samples, few significant differences were found between their sexuality in the period prior to their partner's conception, and their sexuality during their wives' pregnancy. No significant differences were found between the expectant fathers' retrospective account of their sexuality and their current sexuality experienced during their wives' first trimester of pregnancy. Husbands 'initiated' significantly less 'lovemaking' or 'sexual intercourse' during the second trimester compared to the period prior to their wives falling pregnant. ($\chi^2(1) = 6.51, p = .038$). A significant difference ($p = .003$) was further reported on 'sexual satisfaction' for expectant fathers during their wives' third trimester of pregnancy, compared to their retrospective accounts of sexuality. ($\chi^2(1) = 8.90, p = .003$). Thus they exhibited less sexual satisfaction than prior to becoming expectant fathers.

After excluding the retrospective data, Chi-square tests were done to compare the sexuality of the various cross-sectional male samples. A significant difference ($p = .002$) was found between expectant fathers in the first, second and third trimester of their wives' pregnancy and the postnatal
period, on the variable 'frequency of sexual activity'. 
($\chi^2(3) = 14.71, p = .002$). An analysis of the frequency 
counts in each category showed that during the second 
trimester, expectant fathers reported participating more 
frequently in sexual activity than those subjects whose wives 
were either in the third trimester of pregnancy or the 
postnatal period.

**Sexual Desire**

Expectant fathers were also asked to indicate whether 
their sexual desire had increased, decreased or remained the 
same, once their wives had conceived. A Chi-square test showed 
a significant difference ($p = .004$) between the male 
experimental groups on their level of sexual desire ($\chi^2(6) = 21.16, p = .004$). The findings are displayed as percentages 
and frequencies in Table 33. Inspection of the data showed 
that the majority (44%; $n = 7$) of the expectant fathers 
experienced no changes in their sexual desire soon after their 
wives fell pregnant. Husbands whose wives were either in the 
second or third trimester, reported increasingly lower levels 
of sexual desire. The percentages were 56 ($n = 9$) and 75 ($n = 15$) respectively.

Husbands either experienced increased (50%; $n = 5$) sexual 
desire or stated that their sexual desire was unchanged (50%; 
$n = 5$) after their wives' labour and delivery (Table 33). 
This supports findings reported earlier on female sexual
### TABLE 33: Male Sexual Desire during their Partner's Pregnancy or Postnatal Period

<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n=16)</th>
<th>Second Trimester (n=16)</th>
<th>Third Trimester (n=20)</th>
<th>Post-Natal (n=10)</th>
<th>% of Total (N=62)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Sexual Desire</td>
<td>19 (3) a</td>
<td>25 (4)</td>
<td>5 (1)</td>
<td>50 (5)</td>
<td>21 (13)</td>
</tr>
<tr>
<td>Decreased Sexual Desire</td>
<td>36 (6)</td>
<td>56 (9)</td>
<td>75 (15)</td>
<td>48 (30)</td>
<td></td>
</tr>
<tr>
<td>No Change</td>
<td>44 (7)</td>
<td>19 (3)</td>
<td>20 (4)</td>
<td>50 (5)</td>
<td>31 (19)</td>
</tr>
</tbody>
</table>

Note: a Frequencies brackets. Percentages rounded to integers.
Expectant fathers also selected *reasons* which they ranked in order of preference, accounting for their specific level of sexual desire. Tables 34 and 35, respectively, report the total number of reasons associated with 'increased' sexual desire and the total number of reasons linked to 'decreased' sexual desire. Interpretation of the percentages should be done with caution as N is below 100 and this tends to inflate the value of a percentage. Subjects were not restricted in the number of reasons they chose. Therefore the total number of responses reported by each group did not correspond with the total number of subjects in each group. Table 36 presents reasons, in order of preference, for increased sexual desire, reported by males. Thereafter, Table 37 outlines the reasons in order of preference associated with decreased sexual desire.

The data should be treated with caution as it is based on a descriptive analysis of a small sample. The results of the qualitative analysis are reported, as these could contribute to the understanding of male sexuality during the experience of pregnancy. Overall, the results with specific reference to stages of pregnancy were as follows:

**First Trimester** Three expectant fathers in the first trimester of their wives' pregnancy exhibited increased sexual desire (Table 33). All commented that they viewed their
TABLE 34: Reasons Associated With Increased Sexual Desire: Male Cross-Sectional Samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n=3)</th>
<th>Second Trimester (n=4)</th>
<th>Third Trimester (n=1)</th>
<th>Post-Natal (n=5)</th>
<th>% of Total (N=13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physically attractive</td>
<td>100 (3)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>50 (2)</td>
<td>100 (1)</td>
<td>100 (5)</td>
<td>85 (11)</td>
</tr>
<tr>
<td>No fear of pregnancy</td>
<td></td>
<td></td>
<td>100 (1)</td>
<td></td>
<td>08 (1)</td>
</tr>
<tr>
<td>Happy and relaxed about pregnancy</td>
<td>100 (3)</td>
<td>75 (3)</td>
<td>100 (1)</td>
<td></td>
<td>54 (7)</td>
</tr>
<tr>
<td>Breast/body parts erotic</td>
<td>67 (2)</td>
<td>100 (4)</td>
<td>100 (1)</td>
<td></td>
<td>46 (7)</td>
</tr>
<tr>
<td>Wife increased interest</td>
<td>33 (1)</td>
<td>20 (1)</td>
<td></td>
<td></td>
<td>15 (2)</td>
</tr>
<tr>
<td>Happy and relaxed about the delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 (3)</td>
</tr>
</tbody>
</table>

Note: <sup>a</sup> Frequencies in brackets.

Percentages rounded to integers.

More than one reason was given, therefore totals exceed 100.
### TABLE 35: Reasons Associated with Decreased Sexual Desire: Male Cross-Sectional Samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n=6)</th>
<th>Second Trimester (n=9)</th>
<th>Third Trimester (n=15)</th>
<th>Post-Natal (n=0)</th>
<th>% of Total (N=30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife not feeling good</td>
<td>83 (5)(^a)</td>
<td>13 (2)</td>
<td>23 (7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wife physically unattractive (sexually)</td>
<td>17 (1)</td>
<td>44 (4)</td>
<td>40 (6)</td>
<td>37 (11)</td>
<td></td>
</tr>
<tr>
<td>Wife not interested</td>
<td>17 (1)</td>
<td>27 (4)</td>
<td>17 (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afraid hurt foetus/mother</td>
<td>50 (3)</td>
<td>78 (7)</td>
<td>67 (10)</td>
<td>67 (20)</td>
<td></td>
</tr>
<tr>
<td>Doctor's recommendation no sexual activity</td>
<td></td>
<td></td>
<td></td>
<td>06 (1)</td>
<td></td>
</tr>
<tr>
<td>Intercourse uncomfortable and painful</td>
<td></td>
<td></td>
<td></td>
<td>33 (5)</td>
<td>17 (5)</td>
</tr>
<tr>
<td>Upset pregnancy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lost interest (sexually)</td>
<td>17 (1)</td>
<td>33 (3)</td>
<td>47 (7)</td>
<td>37 (11)</td>
<td></td>
</tr>
<tr>
<td>Awkward body size</td>
<td>33 (2)</td>
<td>47 (7)</td>
<td></td>
<td>30 (9)</td>
<td></td>
</tr>
<tr>
<td>Feel presence third party (foetus)</td>
<td>67 (4)</td>
<td>33 (3)</td>
<td>47 (7)</td>
<td>47 (14)</td>
<td></td>
</tr>
<tr>
<td>Maternal wife - not erotic</td>
<td>33 (2)</td>
<td>22 (2)</td>
<td>06 (9)</td>
<td>43 (13)</td>
<td></td>
</tr>
<tr>
<td>Total fulfillment</td>
<td>33 (2)</td>
<td>20 (3)</td>
<td></td>
<td>17 (5)</td>
<td></td>
</tr>
<tr>
<td>Wife's body sexual embarrassment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>13 (2)</td>
<td></td>
<td></td>
<td>7 (2)</td>
<td></td>
</tr>
</tbody>
</table>

Note: \(^a\) Frequencies in brackets.
Percentages rounded to integers.
More than one reason was given, therefore totals exceed 100.
<table>
<thead>
<tr>
<th>Preferences</th>
<th>First Trimester</th>
<th>Second Trimester</th>
<th>Third Trimester</th>
<th>Postnatal</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Choice</td>
<td>Happy and relaxed about wife's pregnancy</td>
<td>Physically more attractive</td>
<td>Breasts and body parts erotic (wife)</td>
<td>Physically more attractive</td>
</tr>
<tr>
<td>Second Choice</td>
<td>Breasts/body parts erotic (wife) Physically more attractive</td>
<td>Breasts and body parts erotic (wife)</td>
<td>Other</td>
<td>No fear of harming the baby anymore</td>
</tr>
<tr>
<td>Third Choice</td>
<td>None</td>
<td>Wife shows increased interest</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

TABLE 36: Reasons Reported with Increased Sexual Desire in Order of Preference: Male Cross-Sectional Samples
TABLE 37: Reasons Reported with Decreased Sexual Desire in Order of Preference: Male Cross-Sectional Samples

<table>
<thead>
<tr>
<th>Preferences</th>
<th>First Trimester</th>
<th>Second Trimester</th>
<th>Third Trimester</th>
<th>Postnatal</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Choice</td>
<td>Presence of third party/foetus</td>
<td>Wife not feeling good (tired, nausea)</td>
<td>Wife not feeling good (tired, nausea)</td>
<td>Did not experience decreased sexual desire</td>
</tr>
<tr>
<td>Second Choice</td>
<td>Lost interest (sexual)</td>
<td>Afraid to hurt the foetus or mother Lost interest (sexual)</td>
<td>Afraid to hurt the foetus or mother</td>
<td>None</td>
</tr>
<tr>
<td>Third Choice</td>
<td>Afraid to hurt the foetus or mother</td>
<td>Physically unattractive (sexually)</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
partners as being 'more attractive' and they also felt 'happy and relaxed' about their wives being pregnant. These reasons were predominantly associated with their increased sexual desire (Table 34). Their first choice for their current level of sexual desire, however, was their 'positive feelings' towards their wives' current pregnancy (Table 36).

In contrast, six husbands reported decreased sexual desire during their wives' first trimester of pregnancy (Table 33). The majority (83%; n = 5) attributed their decreased sexual desire to their partners' 'not feeling good' (Table 35). The 'awareness of the foetus', however, was listed as the most important reason for their decreased levels of sexual desire (Table 37). The latter is unexpected because in theory both husband and wife only become fully aware of the foetus during the woman's second trimester of pregnancy when the foetus moves (Congdon, 1970; Falicov, 1973).

**Second Trimester** During this stage of their wives' pregnancy, four expectant fathers exhibited increased sexual desire and nine experienced decreased sexual desire (Table 33). Experiencing their wives' bodies as being more 'erotic' was viewed as the most common reason for husbands' increased sexual desire during this stage (Table 34). However, when they listed reasons in order of preference, their wives' bodily attractiveness was viewed as the most important reason for their own increased sexual desire (Table 36).
In contrast, the majority (78%; n = 7) of expectant fathers who experienced decreased sexual desire attributed their low level of sexual desire to 'fear of harming the foetus or mother' (Table 35). This finding corresponded with the reports of La Rossa (1979) who found that expectant fathers were commonly concerned about harming their wife or hurting the baby. However, in the present study, when husbands ranked their reasons for decreased sexual desire in order of preference, they most frequently attributed their diminished level of sexual desire to their wives' 'not feeling good physically' (Table 37).

Third Trimester A single subject exhibited increased sexual desire during his wife's third trimester of pregnancy (Table 33). This was attributed to the 'physical attractiveness of his partner', 'no fear of pregnancy', 'feeling happy and relaxed about his wife being pregnant' and experiencing her 'body as more erotic' (Table 34). The latter was listed as the most important reason (Table 36).

'Fear of hurting the foetus or mother' was predominantly (67%; n = 10) reported by expectant fathers as a cause of their lower level of sexual desire during their wives' late stages of pregnancy (Table 35). When the reasons were listed in order of preference, they indicated that their partners 'not feeling good' detracted from their own sexual desire (Table 37). These reasons were similar to those mentioned by husbands in the previous trimester and again agreed with the
observations made by La Rossa (1979). The early study of Landis et al. (1950) also found that the majority (64%) of the expectant fathers in their study reported less sexual desire during their partners' third trimester of pregnancy.

Postnatal Period  Five fathers exhibited increased sexual desire, after their wives' delivery (Table 33). Increased sexual desire was commonly associated with their partner's 'physical attractiveness' (Table 34). This was also mentioned as the most favoured reason for 'new' fathers exhibiting increased sexual desire in their wives' postnatal period (Table 36). The remainder of this sample exhibited no changes in their level of sexual desire.

As an overview, many expectant fathers attached a physiological explanation to their increased sexual desire during their partner's pregnancy or the postnatal period. They commonly referred to the erotic state of their wives' bodies, viewing them as sexually attractive. In contrast to earlier reports, husbands who participated in this study were not negatively affected by the more conspicuous sexual attributes of their wives, such as their big breasts, as was suggested earlier by Colman and Colman (1972). Furthermore, they seldomly exhibited the 'madonna complex', that is, viewing their wives as being sacred which contributes to them not being able to see her in sexual terms (Chapter 6).

Probably the most important finding on male sexual desire is that the significant decline in sexual desire during the
second and third trimester was mostly as a result of 'fear of harming the foetus' and 'wives not feeling good'. These findings partially corresponded to reports of La Rossa (1979) and Masters and Johnson (1966).

**Attractiveness of the Pregnant Partner**

Colman and Colman (1972) commented that a husband's view of his wife's pregnancy could influence her experience of her sexuality and her body. More recently, Osofsky (1982) reported that expectant fathers are ambivalent in their opinions of how they view the pregnant body. It was therefore necessary to ascertain whether the male experimental groups viewed their partner's bodies as 'more attractive' or 'less attractive'.

No significant differences were found between the male experimental groups on how they viewed their partner's body i.e. either as more attractive or as less attractive, during the pregnancy or postnatal period. The conclusion is therefore drawn that husbands did not change their perception of their wife's body during her pregnancy or after childbirth.

The present study also analysed the reasons the husbands attributed to finding their wives as more attractive or less attractive during pregnancy and during the postnatal period. As there were no significant results, a discussion of these reasons are excluded.
Overview

Few significant differences were found in the sexuality of husbands during their wives' pregnancy or postnatal period. However, the frequency of sexual activity and sexual desire declined significantly for the male cross-sectional samples. Fear of harming the foetus or the mother was predominantly associated with decreased levels of sexual desire during pregnancy. Fathers exhibited either increased sexual desire or showed no changes in sexual desire subsequent to their wives' delivery of the baby.

No significant differences were noted in the husbands' perceptions of their wives' body during pregnancy or during the postnatal period. It can be concluded that in general expectant fathers' sexuality was minimally affected.

Expectant Couples

In the entire cross-sectional sample, only 62 couples participated in this research. Sixteen couples were in the first and second trimester of pregnancy, 20 in the third trimester and 10 in the post-delivery period.

As a result of the small sample sizes and relatively few comparable variables of male and female sexuality, the findings should be treated with caution. Furthermore, the analysis was based on numerical differences, rather than the more sensitive statistical procedures. Data analyses include frequency counts, percentages and Chi-square tests.
Sexuality of Expectant Couples

The sexuality experiences of the husbands and wives were compared prior to their becoming an expectant couple, through the duration of the pregnancy and during the postnatal period.

Sexuality Variables

Chi-square tests were done comparing the retrospective reports of expectant couples on their sexuality. Thereafter, further Chi-square tests were done to compare the sexuality of expectant couples during pregnancy. Where applicable, categories of responses on the sexuality variables were combined to allow for the correct number of expected cell frequencies (Siegel, 1956). Only those variables which differed significantly between expectant couples are discussed.

Couples in the third trimester of pregnancy differed significantly \( (p = 0.026) \) in their retrospective account on 'frequency of sexual activity' \( (\chi^2(1) = 5.10, p = 0.026) \). Husbands recalled participating in less sexual activity prior to their wives falling pregnant than their wives reported. Significant differences were also noted in the retrospective accounts of couples on the variable 'initiating lovemaking'. During the first trimester, expectant fathers recalled that they initiated sexual activity more frequently than their wives \( (\chi^2(1) = 6.22, p = 0.13) \). Significantly more sexual activity was initiated by expectant fathers during the second \( (\chi^2(1) = 10.28, p = 0.001) \) and during the third \( (\chi^2(1) = \)
14.40, p = .0001) trimesters. The retrospective account of couples' sexuality prior to the delivery of the baby did not differ significantly from each other.

The cross-sectional comparison of couples' sexuality during the period of gestation, only differed significantly on the variable 'sexual satisfaction'. During the first trimester expectant fathers reported significantly less (p = .036) changes than their wives in sexual satisfaction ($\chi^2(2) = 6.64, p = .036$). During the second trimester women became increasingly dissatisfied with their sexual relationship while their partners appeared to be sexually satisfied ($\chi^2(2) = 9.49, p = .028$). This pattern persisted in the third trimester of pregnancy ($\chi^2(2) = 6.96, p = .31$). Couples in the third trimester also differed significantly (p = .034) from one another on the variable 'sexual desire' ($\chi^2(1) = 4.51, p = .034$). Although the couples rated their sexual desire as low, wives exhibited significantly less desire than their husbands.

The conclusion is drawn that couples during pregnancy generally had similar sexuality experiences. It was evident, however, that pregnant women felt less satisfied sexually, and showed lower levels of sexual desire than their partners.

**Sexual Desire**

Couples were further asked about their level of sexual desire since entering the pregnancy period. In this instance they were to indicate whether their sexual desire had
'increased' or 'decreased' or 'remained the same since becoming an 'expectant' couple. Chi-square tests were done.

Whereas significant differences were indicated between the couples when sexual desire was rated on a 5-point scale (discussed above), no significant differences were found on sexual desire rated on a 3-point scale. The discrepancy in the results could merely be speculated upon. However, in view of the few significant differences, these results will not be further analysed.

Attractiveness

The couple's perception of the female's body was compared during pregnancy and during the postnatal period. No significant differences were found between their views on attractiveness. The conclusion is drawn that during pregnancy and the postnatal period couples agreed on the level of attractiveness of the wife's body. The present study also explored reasons, offered by couples during pregnancy and the postnatal period, for their perception of the females body as being 'more' attractive or 'less' attractive. However, as no significant results were found the discussion of these reasons are excluded.

In summary, pregnant and postnatal women showed somewhat more marked changes in their sexuality than their counterparts. No significant differences were noted on the variable 'attractiveness', yet it appeared that pregnant women viewed their bodies as less appealing as compared with their husbands' views. Possible reasons for such discrepancies
between a husband and a wife's experience of pregnancy can only be speculated upon. The total physical involvement of a woman during the gestation period, as well as the daily reminder that her body is changing, could have accounted for the discrepancies.

Chi-square tests were done on all the single variables measuring female sexuality prior to, and during pregnancy, as well as during the postnatal period. Women in the first trimester of pregnancy showed a significant decline in sexual activity, enjoyment and satisfaction, as compared with their pre-pregnant sexuality. They also experienced weaker orgasms during pregnancy. The uncertainty of conception and the fear of provoking abortion may have caused this to happen. Compared to their pre-pregnant sexuality, women in the second trimester experienced fewer orgasms with a lower intensity. They were also less sexually satisfied. An awareness of the foetus may have resulted in these findings. Compared to their pre-pregnant sexuality, women close to delivery, exhibited a decline in sexual enjoyment, in initiating sexual activity, in orgasmic experiences and in sexual satisfaction. Physical discomfort and impending labour may have resulted in these findings. Women reported no significant differences in their sexuality after childbirth compared to their pre-pregnant sexuality. It appeared that mothers reverted to their pre-pregnant sexuality and were content with their new status as mothers.
A comparison of the experimental groups revealed significant differences in sexual enjoyment and sexual desire. As pregnancy progressed, women experienced less sexual enjoyment and desire. Subjects gave various reasons for 'less' sexual desire. Predominantly, however, physiological reasons, i.e. tiredness, were reported.

In order to consolidate the sexuality data a factor analysis was done. Four factors emerged, namely Female Sexual Responsivity, Orgasmic Ability, Multiple Orgasmic Ability and Sexual Motivation. The results showed that only Female Sexual Responsivity declined significantly in a linear fashion over the course of pregnancy. This factor included the single variables 'sexual satisfaction', 'enjoyment' and 'desire' as well as 'intercourse frequency'. The conclusion was drawn that the psychological dimension of sexuality characterised by the factor Female Sexual Responsivity was affected by the experience of pregnancy and childbirth. In contrast, the physiological dimensions of female sexuality (Female Orgasmic Ability, Multiple Orgasmic Ability, Sexual Motivation) were not affected. It could be concluded that pregnancy and female sexuality represents a psychological experience for women. The definition of pregnancy, consisting of time periods and related physiological changes, may fail to recognise the psychological dimension where stages are less marked.

No significant differences were indicated between the experimental groups in female body image. It was concluded that female body image was not affected by pregnancy.
Generally, women exhibited a healthy outlook and felt confident that body changes were temporary and their body image (unconsciously held opinion) was unaffected.

The findings corresponded with the theoretical formulations (Chapter 2) that female sexuality and female body image are interrelated with a woman's childbearing capacity. Pregnancy appeared to be an extension of their sexual and body image development.

Summary: Cross-Sectional Samples

This section outlined and discussed the research findings for the male and female cross-sectional samples. The female groups appeared to be homogeneous in their biographical background and their sexual developmental history. The women were generally well educated and financially secure. With reference to the experimental groups, the majority had planned their current pregnancies and felt reasonably happy and relaxed about their current physical states. Furthermore, their partners were content with their wives being pregnant and with becoming fathers. The conclusion was drawn that the sample represented a healthy group of women with a positive approach to pregnancy. They all participated in either prenatal (antenatal) or exercise classes in the hope of gaining information on pregnancy and to benefit in other ways. Non-parametric and parametric statistical techniques were employed to evaluate the multiple variables included in the
assessment of female body image and sexuality during pregnancy and during the postnatal period.

Longitudinal Sample

A sample of 12 women participated in this section of the investigation who were in the first trimester of pregnancy. These women were tested at three intervals during their pregnancy and once post-delivery. The subjects were tested on their pre-pregnant sexuality, their current sexuality throughout pregnancy and the postnatal period, as well as their feelings toward their bodies and body image.

As a result of the small sample size and relatedness of the sample, Chi-square tests were unsuitable for analysing the data (Howell, 1987; Siegel, 1956). However, Reamy et al. (1982) did report results based on Chi-square analysis. The arguments of Howell (1987) and Siegel (1956) were sufficiently convincing to avoid such analyses in this part of the study. Consequently, the data of the longitudinal sample were analysed qualitatively.

With such a small sample (n = 12), analysis of data was restricted, and reliability of the measuring instruments could not be calculated. The results presented qualitatively refer to trends in female sexuality and includes a comparison with the results of the cross-sectional sample and earlier studies. The comparison should be treated with caution in view of the sample size and the qualitative analysis.
Six of the women's partners during pregnancy and the postnatal period completed the Sexuality Scales applicable to them. The limited sample (n = 6) did not warrant an analysis of data. Furthermore, findings based on such a small sample are questionable. Hence, no reference will be made to this sample.

**Sample Characteristics (Female)**

Frequency counts were done on all the items listed in the Biographical Questionnaire (Appendix C), and percentages were calculated in all items except age of the participants and length of marriage. As before interpretation of the percentages in a small sample (n = 12) should be done with caution. Comparisons with the cross-sectional sample are problematic in view of the inflated value of the percentages. A summary of the biographical background of the female longitudinal sample are attached as Appendix O.

The biographical and familial information of this sample is presented in Table 38. In short, the mean age for women in this sample was 28 years. They appeared to be slightly younger than subjects who participated in the cross-sectional sample ($\bar{X} = 29$ years). Length of marriage ranged from one to nine years with an average of 3.25 years. On average, these women were married for a shorter period than reported by the cross-sectional sample ($\bar{X} = 4.83$ years). Similar to the previous sample the majority (83%; n = 10), reported a high level of education. Sixty-seven per cent of this sample were
### TABLE 38: Biographical and Familial Information of the Female Longitudinal Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>% of Total (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean Age (years)</strong></td>
<td>28</td>
</tr>
<tr>
<td><strong>Number of Years Married</strong></td>
<td>3.25</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>33 (4)(^a)</td>
</tr>
<tr>
<td>1-3 years College</td>
<td>50 (6)</td>
</tr>
<tr>
<td>High School Grade</td>
<td>17 (2)</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>08 (1)</td>
</tr>
<tr>
<td>Lesser Executive</td>
<td>17 (2)</td>
</tr>
<tr>
<td>Clerical</td>
<td>08 (1)</td>
</tr>
<tr>
<td>Housewives/Mother</td>
<td>67 (8)</td>
</tr>
<tr>
<td><strong>Own Home</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>58 (7)</td>
</tr>
<tr>
<td>No</td>
<td>42 (5)</td>
</tr>
<tr>
<td><strong>Financially Secure</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>50 (6)</td>
</tr>
<tr>
<td>No</td>
<td>50 (6)</td>
</tr>
<tr>
<td><strong>Religious Preference</strong></td>
<td></td>
</tr>
<tr>
<td>Protestant</td>
<td>08 (1)</td>
</tr>
<tr>
<td>Catholic</td>
<td>50 (6)</td>
</tr>
<tr>
<td>Jewish</td>
<td>17 (2)</td>
</tr>
<tr>
<td>Other</td>
<td>25 (3)</td>
</tr>
<tr>
<td><strong>Only Child</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>08 (1)</td>
</tr>
<tr>
<td>No</td>
<td>92 (11)</td>
</tr>
</tbody>
</table>

Note: \(^a\) Frequencies in brackets.
Percentages rounded to integers.
Some questions more than one answer was given, therefore totals exceed 100.
either housewives or mothers. As their pregnancies progressed the entire sample reported that they were unemployed. Fifty eight percent (n = 7) of the group were living in their own homes and not in rented accommodation. Women in this sample felt less secure financially than women in the cross-sectional sample.

The religious affiliations of the sample were 50% (n = 6) Catholic, 8% (n = 1) Protestant, 17% (n = 2) Jewish, and 25% (n = 3) did not belong to a specific church. In contrast, the cross-sectional samples were predominantly Protestant. Only one subject reported being an only child.

The sexual developmental history (Table 39) of this sample closely corresponded with that of the cross-sectional samples. However, the majority (92%; n = 11) of the longitudinal sample, reported the onset of menstruation at an earlier age - between 11 and 13 years. The earlier onset of menstruation in the longitudinal group agreed with recent reports of Olivier (1987). All the women, bar one (8%), had experienced orgasms. Two women (16%) had never experienced multiple orgasms. Birth control was used by the majority (92%; n = 11) of this sample at some stage prior to conception and the favoured method for half the sample was the pill (Table 40). The cross-sectional sample favoured an intrauterine device as method of birth control.

The longitudinal sample experienced no gynaecological problems, but one (8%) woman reported the incidence of abortion and miscarriage. Thirty-three percent (n = 4) were
### TABLE 39: Sexual Developmental History of the Female Longitudinal Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>% of Total (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age: First Menstruation</td>
<td></td>
</tr>
<tr>
<td>11 years</td>
<td>25 (3)</td>
</tr>
<tr>
<td>12 years</td>
<td>17 (2)</td>
</tr>
<tr>
<td>13 years</td>
<td>50 (6)</td>
</tr>
<tr>
<td>14 years</td>
<td>08 (1)</td>
</tr>
<tr>
<td>Ever Experienced Sexual Orgasms</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>92 (11)</td>
</tr>
<tr>
<td>No</td>
<td>08 (1)</td>
</tr>
<tr>
<td>Ever Experienced Multiple Orgasms</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>16 (2)</td>
</tr>
<tr>
<td>No</td>
<td>84 (10)</td>
</tr>
</tbody>
</table>

Note: a Frequencies in brackets.
Percentages rounded to integers.
Some questions more than one answer was given, therefore totals exceed 100.
TABLE 40: Gynaecological History of Female Longitudinal Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>% of Total (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Birth Control Ever</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>92 (11)</td>
</tr>
<tr>
<td>No</td>
<td>08 (1)</td>
</tr>
<tr>
<td><strong>Birth Control before Pregnancy</strong></td>
<td></td>
</tr>
<tr>
<td>Pills</td>
<td>42 (5)</td>
</tr>
<tr>
<td>IUD</td>
<td>33 (4)</td>
</tr>
<tr>
<td>Other</td>
<td>17 (2)</td>
</tr>
<tr>
<td><strong>Gynaecological Problems</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>100 (12)</td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
<tr>
<td>** Abortions**</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>08 (1)</td>
</tr>
<tr>
<td>No</td>
<td>92 (11)</td>
</tr>
<tr>
<td><strong>Miscarriages</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>08 (1)</td>
</tr>
<tr>
<td>No</td>
<td>92 (11)</td>
</tr>
<tr>
<td><strong>Number of Children</strong></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>33 (4)</td>
</tr>
<tr>
<td>One or More</td>
<td>67 (8)</td>
</tr>
</tbody>
</table>

Note: a Frequencies in brackets. Percentages rounded to integers. Some questions more than one answer was given, therefore totals exceed 100.
childless (primigravidas), and the remainder (67%; n = 8) had children (multigravidas) (Table 40).

Data on the pregnancy and the postnatal period (Table 41) tended to correspond with the characteristics outlined for the cross-sectional samples. With the exception of one woman, all (92%; n = 11) had planned their current pregnancies, and either felt very excited (42%; n = 5) or extremely happy (42%; n = 5) about imminent motherhood. However, the majority (83%; n = 10), felt poorer physical health, and some (58%; n = 7) were apprehensive about labour and childbirth. Compared with the cross-sectional sample, most of these women (75%; n = 9) reported a natural childbirth. All the subjects had husbands present at the delivery of the baby. Furthermore, all the women, but one were breast-feeding their babies. The entire group were participating either in prenatal classes or were involved in exercise classes (Table 41).

In summary, minor variations based on descriptive data analysis were noted between the characteristics of the longitudinal and cross-sectional samples. Overall, the impression was gained that similar to the cross-sectional samples, these subjects were educated women who had planned their current pregnancies and felt reasonably positive about pregnancy.

Female Sexuality

Female sexuality during pregnancy was compared with the period prior to gestation and during the postnatal period. The
### TABLE 41: Pregnancy and Postnatal Information of the Female Longitudinal Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>% of Total (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned</td>
<td>92 (11)a</td>
</tr>
<tr>
<td>Unplanned</td>
<td>08 (1)</td>
</tr>
</tbody>
</table>

**Attitude toward Confinement**

- Highly apprehensive: 17 (2)
- Unconcerned: 42 (5)
- Very excited: 42 (5)

**Feelings about Pregnancy**

- Extremely happy: 42 (5)
- Happy: 33 (4)
- Mixed feelings: 25 (3)
- Upset
- Extremely upset

**Pregnancy: Scared**

- Yes: 33 (4)
- No: 67 (8)

**Labour/Delivery Scared**

- Yes: 58 (7)
- No: 42 (5)

**Physical State**

- Better: 17 (2)
- Worse: 83 (10)

**Type of Delivery**

- Natural: 75 (9)
- Caesarean: 17 (2)
- Forceps: 08 (1)

**Husbands Present at Birth**

- Yes: 100 (12)
- No
<table>
<thead>
<tr>
<th>Variable</th>
<th>% of Total (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breast-feeding</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>92 (11)</td>
</tr>
<tr>
<td>No</td>
<td>08 (1)</td>
</tr>
<tr>
<td><strong>Pre/Antenatal Classes</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>100 (12)</td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

Note:  
- Frequencies in brackets.  
- Percentages rounded to integers.  
- Some questions more than one answer was given, therefore totals exceed 100.
responses to the various measures of female sexuality were rated on a 5-point scale. In many cases responses were combined into two categories indicating either a 'moderate to great' response to a specific variable measuring sexuality or 'slight response' to the question (Table 42). Consequently, the findings related to the sexuality of the longitudinal sample are based on the interpretation of numerical differences (percentages) and no significance can be ascribed to the findings. Suffice to state that caution should be exercised with such an interpretation. The sample size (n = 12) is well below 100 which tends to inflate the differences. Possible trends in female sexuality were noted. Reasons were elicited for the 'increase' or 'decrease' in female sexual desire. Again, the interpretation relied on numerical differences. Furthermore, the preferred coital methods and positions used by women throughout pregnancy and the postnatal period were investigated.

Indices of Female Sexuality

Female sexuality was explored throughout the gestation period and the postnatal period, comparing this to the retrospective accounts given by the women. These are presented as percentages and frequencies in Table 42.

Sexual Desire

Frequency of responses, showed that the majority (92%; n = 11) of these women reported a moderate level of sexual desire prior to falling pregnant. Soon after conception they
<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-Pregnant (n = 12)</th>
<th>First Trimester (n = 12)</th>
<th>Second Trimester (n = 12)</th>
<th>Third Trimester (n = 12)</th>
<th>Postnatal (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sexual Desire</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>92 (11)</td>
<td>42 (5)</td>
<td>50 (6)</td>
<td>33 (4)</td>
<td>50 (6)</td>
</tr>
<tr>
<td>Slight - No Desire</td>
<td>8 (1)</td>
<td>58 (7)</td>
<td>50 (6)</td>
<td>67 (8)</td>
<td>50 (6)</td>
</tr>
<tr>
<td><strong>Preference of Intercourse</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More Intercourse</td>
<td>33 (4)</td>
<td>42 (5)</td>
<td>25 (3)</td>
<td>33 (4)</td>
<td>33 (4)</td>
</tr>
<tr>
<td>Less Intercourse</td>
<td>08 (1)</td>
<td>08 (1)</td>
<td>33 (4)</td>
<td>42 (5)</td>
<td>67 (8)</td>
</tr>
<tr>
<td>The same</td>
<td>58 (7)</td>
<td>25 (3)</td>
<td>42 (5)</td>
<td>25 (3)</td>
<td></td>
</tr>
<tr>
<td><strong>Frequency of Intercourse</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 - 8 times in 2-weeks</td>
<td>17 (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 times in 2-weeks</td>
<td>100 (12)</td>
<td>83 (10)</td>
<td>100 (12)</td>
<td>67 (8)</td>
<td>67 (8)</td>
</tr>
<tr>
<td>None</td>
<td>17 (2)</td>
<td></td>
<td></td>
<td>33 (4)</td>
<td>17 (2)</td>
</tr>
<tr>
<td><strong>Initiate Lovemaking</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51 - 100% of the time</td>
<td>08 (1)</td>
<td>08 (1)</td>
<td>100 (12)</td>
<td>100 (12)</td>
<td>92 (11)</td>
</tr>
<tr>
<td>Never - 49% of the time</td>
<td>92 (11)</td>
<td>92 (11)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sexual Orgasms past 2-weeks</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>75 (9)</td>
<td>50 (6)</td>
<td>67 (8)</td>
<td>33 (4)</td>
<td>67 (8)</td>
</tr>
<tr>
<td>No</td>
<td>25 (3)</td>
<td>50 (6)</td>
<td>33 (4)</td>
<td>67 (8)</td>
<td>33 (4)</td>
</tr>
<tr>
<td><strong>Intensity of Climaxes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate - Strong</td>
<td>67 (8)</td>
<td>42 (5)</td>
<td>58 (7)</td>
<td>33 (4)</td>
<td>67 (8)</td>
</tr>
<tr>
<td>Weak</td>
<td>08 (1)</td>
<td>08 (1)</td>
<td>08 (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No climaxes</td>
<td>25 (3)</td>
<td>50 (6)</td>
<td>33 (4)</td>
<td>67 (8)</td>
<td>33 (4)</td>
</tr>
<tr>
<td><strong>Multiple Orgasms in 2-weeks</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>25 (3)</td>
<td>08 (1)</td>
<td>08 (1)</td>
<td>08 (1)</td>
<td>08 (1)</td>
</tr>
<tr>
<td>No</td>
<td>75 (9)</td>
<td>92 (11)</td>
<td>92 (11)</td>
<td>92 (11)</td>
<td>92 (11)</td>
</tr>
<tr>
<td><strong>Sexual Enjoyment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate - Great</td>
<td>83 (10)</td>
<td>67 (8)</td>
<td>75 (9)</td>
<td>50 (6)</td>
<td>33 (4)</td>
</tr>
<tr>
<td>Slight - No Enjoyment</td>
<td>17 (2)</td>
<td>13 (4)</td>
<td>25 (3)</td>
<td>50 (6)</td>
<td>67 (8)</td>
</tr>
<tr>
<td><strong>Sexual Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied-Extremely Satisfied</td>
<td>58 (7)</td>
<td>42 (5)</td>
<td>33 (4)</td>
<td>25 (3)</td>
<td>42 (5)</td>
</tr>
<tr>
<td>Mixed Feelings - Dissatisfied</td>
<td>42 (5)</td>
<td>58 (7)</td>
<td>67 (8)</td>
<td>75 (9)</td>
<td>58 (7)</td>
</tr>
<tr>
<td><strong>Need to be Held</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate to Great</td>
<td>92 (11)</td>
<td>92 (11)</td>
<td>100 (12)</td>
<td>92 (11)</td>
<td>92 (11)</td>
</tr>
<tr>
<td>Slight-No Desire</td>
<td>8 (1)</td>
<td>8 (1)</td>
<td>8 (1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: a Frequencies in brackets. Percentages rounded to integers.
exhibited a marked decline (58%; n = 7) in sexual desire. The latter remained at a diminished level during the second trimester and then declined dramatically (67%; n = 8) in the third trimester. Eight (75%) women still exhibited lower levels of sexual desire after childbirth, as compared with their pre-pregnancy levels. These findings, although descriptive, seem to indicate a trend of decreased female sexual desire throughout pregnancy, labour and delivery. The reports of Reamy et al. (1982) also found that female sexual desire was affected, notably for women close to delivery.

Preferred Rate of Sexual Intercourse

Women were reasonably happy with the number of sexual encounters prior to falling pregnant (58%; n = 7). After conception, some of the sample (42%; n = 5) would have liked more intercourse, while one woman would have preferred less sexual intercourse. In the postnatal period, none of the women were satisfied with the frequency of their sexual activity. Eight (67%) women would have preferred less sexual intercourse, with the remainder (33%; n = 4) preferred to have had more. It could be speculated that women expected sexual activity soon after the delivery of a child. Their discontent may have resulted from their unfulfilled expectations. This, however, was not investigated and is mere speculation.
Frequency of Sexual Intercourse

Few changes were noted on the frequency with which women participated in sexual activity during pregnancy compared to their pre-pregnancy levels. In retrospect all the women reported having sexual intercourse between one and three times in a 2-week period. This level of sexual activity was maintained throughout the period of pregnancy and also in the postnatal period. In addition, sexual abstinence was indicated by two (17%) women during the first trimester of pregnancy, and four (33%) women in the third trimester of pregnancy. Two women (17%) preferred to abstain from sexual intercourse after childbirth. In comparison with the cross-sectional sample, reports of this sample gave an impression of lower levels of sexual activity prior to falling pregnant, during pregnancy and during the postnatal period. As noted earlier, the majority (42%; n = 5) felt comfortable with their rate of sexual activity during the second trimester of pregnancy. In the postnatal period, however, eight (67%) stated that they would have preferred less intercourse, and four (33%) expressed a desire for more intercourse. Similar responses were observed in the earlier study of Tolor and Di Grazia (1976).

Initiate Lovemaking

Again, only one (8%) woman initiated lovemaking prior to falling pregnant, during pregnancy or the postnatal period.
These findings seem to be consistent with the popular belief that women take little initiative in encouraging sexual activity (Olivier, 1987).

**Orgasmic Ability**

Prior to pregnancy, nine (75%) women reported experiencing orgasms and three (25%) stated that they had not experienced a sexual climax recently. Apart from four (33%) women still experiencing orgasms in their third trimester, no dramatic changes were found. Women found minimal changes in the intensity with which they experienced orgasms, except during the late stages of pregnancy. No increase in the ability to reach orgasms was experienced after childbirth, as compared with pre-pregnancy levels of orgasms. These findings, although based on frequency scores, opposed earlier reports of Falicov (1973), and Masters and Johnson (1966) who found differences in the orgasmic ability of pregnant women. Few women (25%; n = 3) in the present study reported the experience of multiple orgasms prior to conception. Pregnancy does not seem to facilitate multiple orgasms in women and therefore the findings of Masters and Johnson (1966) could not be confirmed.

**Sexual Enjoyment**

As pregnancy progressed women tended to exhibit less sexual enjoyment. This lessened enjoyment was most noticeable for women after childbirth (67%; n = 8). Falicov (1973), in
her study, noted a similar downward trend of sexual enjoyment for pregnant women. Reamy et al. (1982) also reported the evidence of a linear downward trend as gestation advanced.

**Sexual Satisfaction**

This sample showed a consistent decrease of sexual satisfaction relative to their reported pre-pregnancy levels. However, subsequent to childbirth the trend seems to have been reversed. Yet, 'new' mothers (58%; n = 7) still seemed less sexually satisfied than prior to their falling pregnant.

**Need to be Held**

The majority (92%; n = 11) of the sample showed no changes in their need to be held compared to their pre-pregnancy levels. They sought bodily contact of a non-sexual nature throughout the gestation period and following childbirth. These findings seem to closely resemble the reports of women in this cross-sectional study as well as earlier reports (Hollender & McGhee, 1974; Tolor & Di Grazia, 1976).

In summary, female sexuality in general changed over the course of pregnancy for women in this sample. However, this conclusion, was based on descriptive data and should be treated with caution. The degree of change was especially evident in sexual desire, and preferred rate of sexual intercourse. A decrease of sexual enjoyment was noticed for pregnant women and after childbirth few women exhibited sexual enjoyment. These findings tended to correspond with results based on Chi-square tests for the cross-sectional sample. It
was evident in both the cross-sectional and longitudinal samples that women who were pregnant in the first trimester showed the most marked decline in sexual desire. In this sample, women's orgasmic ability appeared to be affected only during late pregnancy, and the majority then experienced no orgasms. Similar findings were indicated in the data analysis of the orgasmic ability of the cross-sectional samples. It could be assumed with reasonable certainty that female sexuality declined over the gestation period, but did not necessarily differ between the various trimesters. This was indicated by the results of both the cross-sectional and longitudinal investigations. However, as the findings of the longitudinal samples were based on descriptive data analysis, future research is warranted. Therefore, no conclusive statements could be made.

Additional Information on Female Sexual Desire

Apart from women rating their sexual desire on a 5-point scale discussed earlier, they were also asked to categorically state whether their sexual desire had 'increased' or 'decreased' after conception. Due to the nature of the data, no statistical analysis could be done and findings are displayed as percentages in Table 43. Furthermore, they selected reasons outlined in the Sexuality Scales, for their current level of sexual desire. The reasons associated with 'increased' sexual desire are presented in Table 44, and those associated with 'decreased' sexual desire are represented in
### TABLE 43: Sexual Desire during Pregnancy and the Postnatal Period (Longitudinal Sample)

<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n=12)</th>
<th>Second Trimester (n=12)</th>
<th>Third Trimester (n=12)</th>
<th>Post-Natal (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Sexual Desire</td>
<td>33 (4)</td>
<td>25 (3)</td>
<td>25 (3)</td>
<td></td>
</tr>
<tr>
<td>Decreased Sexual Desire</td>
<td>100 (12)(^a)</td>
<td>67 (8)</td>
<td>75 (9)</td>
<td>75 (9)</td>
</tr>
</tbody>
</table>

Note: \(^a\) Frequencies in brackets.
Percentages rounded to integers.
<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n=0)</th>
<th>Second Trimester (n=4)</th>
<th>Third Trimester (n=3)</th>
<th>Post-Natal (n=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No fear of pregnancy</td>
<td></td>
<td></td>
<td></td>
<td>33 (1)</td>
</tr>
<tr>
<td>Happy and relaxed</td>
<td>100 (4)a</td>
<td>100 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body eroticism</td>
<td></td>
<td></td>
<td>100 (3)</td>
<td></td>
</tr>
<tr>
<td>Husband increased interest</td>
<td></td>
<td></td>
<td></td>
<td>67 (2)</td>
</tr>
<tr>
<td>Greater genital sensations</td>
<td></td>
<td></td>
<td>75 (3)</td>
<td></td>
</tr>
</tbody>
</table>

Note: a Frequencies in brackets. Percentages rounded to integers. More than one reason was given therefore totals exceed 100.
in Table 45. Subjects were not restricted in the number of reasons they chose. Therefore the total number of responses does not correspond with the total number of subjects. It should be re-emphasized that the small sample size tends to inflate percentages. Therefore this report should be seen as merely indicating trends, nothing more.

First Trimester Shortly after falling pregnant the entire sample exhibited 'decreased' levels of sexual desire (Table 43). This state was predominantly associated with 'not feeling good' (67%; n = 8) and 'less sexual interest' (58%; n = 7) (Table 45). This seems understandable as many women experienced nausea and vomiting in early pregnancy.

Second Trimester During the middle stage of pregnancy, four women exhibited 'increased' sexual desire, and the remainder showed 'decreased' sexual desire (Table 43). Factors accounting for an increased sexual desire were, 'being happy and relaxed' about pregnancy (100%; n = 4) and 'greater genital sensations' (75%; n = 3) (Table 44). Masters and Johnson (1966) associated the latter condition with increased sexual activity for pregnancy women. In contrast, six (75%) of the women reported that somatic complaints such as being 'tired', as well as 'discomfort of intercourse' (63%; n = 5) were directly related to decreased sexual desire (Table 45). Movement of the foetus may have resulted in this discomfort.
<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n = 12)</th>
<th>Second Trimester (n = 8)</th>
<th>Third Trimester (n = 9)</th>
<th>Postnatal (n = 9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not feeling good</td>
<td>67 (8)</td>
<td>75 (6)</td>
<td>67 (6)</td>
<td>67 (6)</td>
</tr>
<tr>
<td>Sexually unattractive</td>
<td>42 (5)</td>
<td>88 (8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upset about pregnancy</td>
<td>25 (3)</td>
<td>50 (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afraid hurt baby/self</td>
<td>08 (1)</td>
<td></td>
<td>63 (5)</td>
<td>44 (4)</td>
</tr>
<tr>
<td>Intercourse uncomfortable</td>
<td>25 (3)</td>
<td></td>
<td>67 (6)</td>
<td></td>
</tr>
<tr>
<td>Intercourse painful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctors recommendation</td>
<td>17 (2)</td>
<td>13 (1)</td>
<td>33 (3)</td>
<td></td>
</tr>
<tr>
<td>Sexually fulfilled</td>
<td></td>
<td>13 (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motherly not erotic</td>
<td>17 (2)</td>
<td>13 (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressed</td>
<td>33 (4)</td>
<td>38 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxious</td>
<td>25 (3)</td>
<td>13 (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lost interest</td>
<td>58 (7)</td>
<td>13 (1)</td>
<td>56 (5)</td>
<td></td>
</tr>
<tr>
<td>Husband not interested</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Too occupied with baby</td>
<td></td>
<td></td>
<td></td>
<td>67 (6)</td>
</tr>
</tbody>
</table>

Note: Frequencies in brackets. Percentages rounded to integers. More than one reason was given, therefore totals exceed 100.
Third Trimester  Three women exhibited 'increased' sexual desire and nine 'decreased' sexual desire as they got closer to delivery (Table 43). Similar to the reports during their first trimester, these women (100%; n = 3) stated they 'felt happy and relaxed' about their pregnancies and therefore showed higher levels of sexual desire (Table 44). The majority (88%; n = 8) of women, however, felt diminished sexual desire was caused by being 'sexually unattractive'. 'Not feeling good' and 'discomfort of intercourse' were also reported by 67% (n = 6) of the women (Table 45). The ungainly body size of women close to delivery may have resulted in these reports.

The Postnatal Period  Nine women still maintained 'decreased' levels of sexual desire after childbirth, whereas three exhibited 'increased' levels of sexual desire (Table 43). The latter stated that 'body eroticism' (100%; n = 3) and their partners' continued 'sexual interest' (67%; n = 6) enhanced their postnatal level of sexual desire (Table 44). In contrast, decreased sexual desire was mainly associated with feeling 'sexually unattractive' (67%; n = 6), and being 'too occupied with the baby' (67%; n = 6) (Table 45).

To give an overview, increased sexual desire during the course of pregnancy was associated with women feeling happy and relaxed about being pregnant. Masters and Johnson (1966) noted that, during the second stage of pregnancy, women attributed increased sexual desire to 'greater sensations' in
their 'genitals' and to 'body eroticism'. In the present study, during the postnatal period women associated increased sexual desire mainly with 'breast' and 'body eroticism'. All these mothers breast-fed their babies. The findings, although descriptive, are contrary to the opinion that breast-feeding detracts from a woman's sexual desire (Gansberg & Mostel, 1985), and agree with Falicov's (1973) suggestion that breast-feeding elevates breast eroticism for many lactating mothers.

The longitudinal sample reported similar reasons as the cross-sectional sample, for decreased sexual desire. Physiological factors such as nausea, vomiting and tiredness, and discomfort during sexual intercourse, resulted in decreased sexual desire for most pregnant women in the longitudinal study. Immediately after childbirth, women's concerns about being sexually unattractive led to lower levels of sexual desire. Few women commented that 'fear of hurting themselves' or the 'foetus' adversely affected their sexual desire. This finding opposed the reports of many researchers discussed in Chapter Four. The discrepancy in findings may indicate that women in this study were better informed as they all attended prenatal (antenatal) or exercise classes. None of the women were informed by their doctor that sexual relations during pregnancy were harmful.

Coital Methods and Positions

Compared to their retrospective reports, coital methods and positions preferred by the majority of this sample during
each stage of pregnancy and the postnatal period were descriptively evaluated. The results set out in Figure 3 on coital methods, showed minor variations over the period of gestation and the postnatal period. Irrespective of the stage of their pregnancy, women favoured hand or oral stimulation by their partners. These findings tend to correspond with the reports of the cross-sectional samples. Nine women (75%) in the longitudinal sample practised masturbation after childbirth. According to Masters and Johnson (1966), pregnancy often resulted in women masturbating more frequently. Although none of the women in the present study reported this method while pregnant, it was most prevalent during the postnatal period. It was speculated that increased awareness of their sexuality, as well as their bodies, may have resulted in this finding. Interestingly, women in the postnatal cross-sectional sample did not masturbate more frequently than before conception or more frequently than the other experimental groups.

The descriptive data are presented in Figure 4 for preferred coital positions for women in the longitudinal sample. Most women favoured the 'male superior' sexual position prior to conception and shortly after conception. During the second trimester, half the sample chose the 'female superior' position and the other half the 'side-by-side' sexual position. Close to delivery and after childbirth, the 'side-by-side' position was most frequently used during sexual intercourse. In contrast to the reports of Reamy et al.
FIGURE 3: Coital Methods Used Most Often During Pregnancy and the Postnatal Period (Longitudinal Sample)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>80</td>
</tr>
<tr>
<td>First Trimester</td>
<td>60</td>
</tr>
<tr>
<td>Second Trimester</td>
<td>40</td>
</tr>
<tr>
<td>Third Trimester</td>
<td>20</td>
</tr>
<tr>
<td>Postnatal</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: a Intercourse only
b Hand/Oral Stimulation by Husband
c Masturbation
d Intercourse and other Stimulation
FIGURE 4: Coital Positions Used Most Often During Pregnancy and the Postnatal Period (Longitudinal Sample)

Note: a Male Superior Position  
  b Female Superior Position  
  c Side-by-Side Position
(1982) 'rear-entry' was seldom selected as a method for sexual relations by this sample. Furthermore, no other sexual practices were introduced by this sample during sexual intercourse as was found in the cross-sectional sample. This finding could suggest that the women were not informed about introducing other sexual methods and positions during pregnancy. The fact that the majority attended prenatal classes, should, however, negate this latter suggestion. It may well be that women generally were happy with the commonly known methods of coitus, and felt no need for sexual experimentation.

Overview

Female sexuality for women participating in the longitudinal design was markedly affected in their level of sexual desire and their preferred rate of sexual intercourse. Progressively throughout pregnancy women showed less sexual desire, wanted infrequent sexual intercourse and also felt less sexual enjoyment and satisfaction. As was found in the cross-sectional samples, the women's ability to reach orgasms and their need to be held were least affected.

In agreement with the reports of the cross-sectional samples, women who were tested on a longitudinal basis mainly associated physiological reasons to their low levels of sexual desire. Coital methods and positions altered minimally for women during the course of gestation and after childbirth. Women appeared to be contented with their sexual practices
and, like the other experimental groups, felt no need to introduce new sexual methods or positions.

Although it must be underlined that results for the longitudinal sample relied on descriptive data analysis, it was evident that these women did not experience dramatic changes in their sexuality. It would seem that women adjusted to accommodate the new dimension, namely pregnancy, in their sexual lives.

Body Image

The women's opinions in the present sample about their bodies closely resembled the reports of the cross-sectional samples. Therefore, an in-depth discussion of the qualitative responses is not warranted. However, attention is given to the samples' feelings of attractiveness and the findings on the Rorschach Inkblot Test are discussed.

Attractiveness

The personal descriptions of the majority of the women showed that their increasing weight gain throughout gestation was unacceptable to them. They felt dissatisfied with their appearance after childbirth and frequently stated that they were 'flabby' and 'sexually unattractive'. Women continued
comparing themselves to non-pregnant women throughout the gestation period and after delivery of their baby, as was found in the cross-sectional samples.

Women were also requested to indicate whether they felt 'more attractive' or 'less attractive' during each testing. The results presented as frequency counts and percentages, appear in Table 46. As a result of the small sample size (n = 12) and the relatedness of the sample, the data were analysed qualitatively. No significance can be attached to the findings.

An investigation of the particular frequencies indicated that, in general, most (67%; n = 8) women felt less attractive during gestation or after childbirth. None of the women reported feeling as attractive as they felt before falling pregnant. In contrast to the cross-sectional samples, shortly after conception, women felt the least attractive (83%; n = 10). However, the majority of women (58%; n = 7) in the longitudinal sample felt more attractive during the postnatal period than those in the cross-sectional postnatal (42%; n = 15) sample.

A descriptive exploration of the reasons associated with increased attractiveness (Table 47) revealed that some women felt more 'feminine' and 'womanly' during the first trimester of pregnancy. Women who felt more attractive during the second trimester of pregnancy also stated that they felt more 'feminine'. The obvious 'womanly' characteristics of their bodies enhanced the level of attractiveness for four women
<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n=12)</th>
<th>Second Trimester (n=12)</th>
<th>Third Trimester (n=12)</th>
<th>Postnatal (n=12)</th>
<th>% of Total (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>More Attractive</td>
<td>17 (2)*</td>
<td>25 (3)</td>
<td>22 (4)</td>
<td>58 (7)</td>
<td>33 (4)</td>
</tr>
<tr>
<td>Less Attractive</td>
<td>83 (10)</td>
<td>75 (9)</td>
<td>67 (8)</td>
<td>42 (3)</td>
<td>67 (8)</td>
</tr>
</tbody>
</table>

Note: * Frequencies in brackets. Percentages rounded to integers.
<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n=2)</th>
<th>Second Trimester (n=3)</th>
<th>Third Trimester (n=4)</th>
<th>Post-Natal (n=7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feminine</td>
<td>100 (2)</td>
<td>100 (3)</td>
<td>50 (2)</td>
<td>32 (4)</td>
</tr>
<tr>
<td>Sensual</td>
<td></td>
<td>33 (1)</td>
<td></td>
<td>14 (1)</td>
</tr>
<tr>
<td>Sexual</td>
<td></td>
<td></td>
<td></td>
<td>14 (1)</td>
</tr>
<tr>
<td>Womanly</td>
<td>100 (2)</td>
<td>100 (4)</td>
<td>42 (3)</td>
<td></td>
</tr>
<tr>
<td>Increased Breast</td>
<td></td>
<td></td>
<td></td>
<td>25 (1)</td>
</tr>
<tr>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td>14 (1)</td>
</tr>
</tbody>
</table>

Note: a Frequencies in brackets.
Percentages rounded to integers.
More than one reason was given therefore totals exceed 100.
close to delivery. In the postnatal period the majority who felt attractive once again referred to their bodies as 'feminine' (Table 47).

In contrast, the majority of women felt 'less attractive' while pregnant. During the first trimester of pregnancy this was mainly attributed to their body's 'foreign appearance' (40%; n = 4). Feeling 'clumsy' and 'fat' as well as the 'awkward body size' contributed to women feeling less attractive during the middle and late stages of their pregnancy. Concerns about their bodies being 'sexually unattractive' were expressed by women (80%, n = 4) and related to their feeling unattractive after the birth of their babies (Table 48). In general, it seemed as if pregnancy detracted from the women feeling positive about their bodily appearance. However, caution is exercised in drawing this conclusion, as the data were purely descriptive. As mentioned before, percentages tend to inflate the differences between groups of limited sizes.

Many discrepancies were revealed from the comments about how the women thought their husbands viewed their bodies and how they actually viewed themselves. As was found in the cross-sectional samples, women felt that their husbands perceived their bodies more favourably than they themselves did.
<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n = 10)</th>
<th>Second Trimester (n = 9)</th>
<th>Third Trimester (n = 8)</th>
<th>Post-Natal (n = 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unfeminine</td>
<td>30 (3) ^a</td>
<td>44 (4)</td>
<td>13 (1)</td>
<td></td>
</tr>
<tr>
<td>Sexually unattractive</td>
<td>10 (1)</td>
<td>44 (4)</td>
<td>25 (2)</td>
<td>80 (4)</td>
</tr>
<tr>
<td>Body clumsy and fat</td>
<td>10 (1)</td>
<td>77 (7)</td>
<td>63 (5)</td>
<td>40 (2)</td>
</tr>
<tr>
<td>Body size too big</td>
<td>10 (1)</td>
<td>66 (6)</td>
<td>75 (6)</td>
<td>40 (2)</td>
</tr>
<tr>
<td>Body looks foreign</td>
<td>40 (4)</td>
<td></td>
<td></td>
<td>25 (1)</td>
</tr>
</tbody>
</table>

Note: ^a Frequencies in brackets.
Percentages rounded to integers.
More than one reason was given therefore totals exceed 100.
Projective Account on Body Image

Using the Rorschach, the account of women in this sample about their body image corresponded with the results earlier reported by the cross-sectional sample. Means were calculated for the scores obtained on each of the five variables, during the stages of pregnancy and in the postnatal period. Thereafter, a Friedman’s two-way analysis of variance was performed to establish differences between the women’s body image scores over the course of pregnancy.

Means

The results of the five variables, namely Total Number of responses (A), Barrier responses (B), Penetration responses (C), Total Number of Barrier and Penetration responses (D), and Number of Physiological and Sexual responses (E), appear as means in Table 49.

An inspection of the means showed that as pregnancy progressed, women gave fewer responses on the Rorschach. This finding partially agreed with the cross-sectional Rorschach test results, and could suggest that the subjects did not reject the test, but possibly, as a result of greater involvement in their pregnancies, gave lower responses close to delivery. However, contrasting with the cross-sectional sample, the longitudinal test group gave a higher number of responses after childbirth (X̄ = 22.25).

A mean of 4.50 was calculated on Barrier responses and 4.91 on Penetration responses over the course of pregnancy and
<table>
<thead>
<tr>
<th>Variable</th>
<th>First Trimester (n = 12)</th>
<th>Second Trimester (n = 12)</th>
<th>Third Trimester (n = 12)</th>
<th>Post-Natal (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Responses</td>
<td>23.08</td>
<td>22.66</td>
<td>18.00</td>
<td>22.25</td>
</tr>
<tr>
<td>Barrier Responses</td>
<td>5.25</td>
<td>4.00</td>
<td>3.50</td>
<td>5.25</td>
</tr>
<tr>
<td>Penetration Responses</td>
<td>5.41</td>
<td>5.08</td>
<td>4.33</td>
<td>4.83</td>
</tr>
<tr>
<td>Total Barrier and Penetration</td>
<td>10.66</td>
<td>9.08</td>
<td>7.83</td>
<td>10.08</td>
</tr>
<tr>
<td>Physiological/Sexual Responses</td>
<td>3.5</td>
<td>2.5</td>
<td>2.16</td>
<td>2.5</td>
</tr>
</tbody>
</table>
the postnatal period. Although the discrepancy between these scores was less than the means calculated on body image for the cross-sectional samples, the Penetration responses still exceeded Barrier responses in total. A downward trend was noted in the number of Barrier and Penetration responses given by pregnant women in the longitudinal sample. This trend was reversed after the delivery of the baby. The content of the responses were often of a physiological and sexual nature. Consequently, it could be assumed that the longitudinal research sample, as well as the cross-sectional sample, revealed a similar pattern of results on body image. However, the data were subjected to a further analysis.

Two-Way Analysis of Variance

In order to determine whether body image differed for women over the gestation period, a Friedman's two-way analysis of variance was performed. The results are presented in Table 50. The total number of Rorschach responses differed significantly \((p = .001)\) over the four testing periods. No further differences were reported for the other variables measuring female body image during pregnancy and the postnatal period.

Conclusion

Both the longitudinal and cross-sectional samples were homogeneous. The majority of subjects had planned their pregnancies, attended prenatal/antenatal classes and were
<table>
<thead>
<tr>
<th>Variable</th>
<th>Friedman's Analysis of Variance</th>
<th>df</th>
<th>p</th>
<th>Kendall's Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Responses</td>
<td>15.97</td>
<td>3</td>
<td>.0011</td>
<td>.4437</td>
</tr>
<tr>
<td>Barrier</td>
<td>7.97</td>
<td>3</td>
<td>.0465</td>
<td>.2215</td>
</tr>
<tr>
<td>Penetration</td>
<td>3.30</td>
<td>3</td>
<td>.3476</td>
<td>.0917</td>
</tr>
<tr>
<td>Total Barrier and Penetration</td>
<td>5.17</td>
<td>3</td>
<td>.1594</td>
<td>.1437</td>
</tr>
<tr>
<td>Physiological/Sexual</td>
<td>2.07</td>
<td>3</td>
<td>.5570</td>
<td>.0576</td>
</tr>
</tbody>
</table>
reasonably informed on what pregnancy entailed. Furthermore many women viewed their husbands as supportive for example, all the partners of the subjects of the longitudinal sample were present at the delivery.

The major part of the data analyses of the longitudinal sample was descriptive, because the data were not suitable for Chi-square analysis. The findings showed that female sexual desire and a woman's preferred rate of intercourse declined significantly over the period of gestation and after the delivery. Women participating in the cross-sectional study similarly showed a significant decline in their sexual desire. The conclusion was drawn that female sexuality, when referring specifically to desire, was mostly affected during pregnancy and the postnatal period. Supporting the cross-sectional findings, women tested on a longitudinal basis attributed the physiological reasons to their declining level of desire. Women in the longitudinal sample felt more strongly than the other female experimental groups after childbirth, that being unattractive resulted in less sexual desire. Both groups were adversely affected by their weight gain during pregnancy.

The findings on female body image, assessed by the Rorschach, showed no significant differences for both the cross-sectional and longitudinal samples. The conclusion was drawn that female body image, defined as the unconsciously held view of the body, was not adversely affected during pregnancy. Although women exhibited a poorer body image during pregnancy by commenting on their ungainly body size,
these bodily feelings were not manifested when assessed by the Rorschach.

The conclusion that female sexuality and body image were only minimally affected during pregnancy, was supported by both the longitudinal and cross-sectional research findings. Women viewed pregnancy and the accompanying changes as part of their make-up and role and therefore adjusted accordingly.
CHAPTER 8

OVERVIEW AND CONCLUSION

Tukey wrote that "conclusions should be made cautiously, firmly, not too soon and not too late" (1977, p.209). Due to the magnitude of this project as well as the foregoing in-depth discussions and the comparison of the present research findings with other past research reports, it was decided to restrict this concluding chapter. The most relevant cross-sectional samples' research findings, and the current perspective, as well as contributions, shortcomings, and recommendations for possible future research are highlighted.

Current Perspectives and Research Findings

The account of the pregnant and postnatal women of their sexuality prior to pregnancy and their current sexuality, showed that women were less satisfied sexually and experienced orgasms of a lower intensity during pregnancy than prior to conception. In addition, women close to delivery also experienced changes in initiating sexual intercourse, orgasmic experiences and sexual enjoyment. The conclusion was drawn that pregnant and postnatal women experienced changes in their sexuality from prior to falling pregnant to during pregnancy. Such changes were most apparent for women in late pregnancy. These findings verified reports of other researchers (Reamy et al., 1982; Solberg et al., 1973; Tolor & Di Grazia, 1976).
Excluding the retrospective account, significant differences on female sexual desire and sexual enjoyment between the various cross-sectional groups were indicated. Women in the third trimester of pregnancy showed the least sexual desire and enjoyment. It was concluded that these women were greatly affected in their sexuality. After conception and in the second trimester of pregnancy, women were less affected sexually by the experience. During the postnatal period women exhibited minimal changes in their sexuality when compared with pregnant women. The findings of Masters and Johnson (1966) that female sexual desire increased for women pregnant in the second trimester, could not be verified. However, the present findings partially supported those of earlier researchers (Reamy et al., 1982; Solberg et al., 1973).

The sexual responses of the control group (Non-Pregnant) and the accounts of the cross-sectional experimental groups on their pre-pregnant sexuality revealed no significant differences. The conclusion was drawn that the retrospective sexuality accounts of the experimental groups’ were reliable. Retrospection did not adversely affect their recall. Further analysis of the data used the responses of the non-pregnant control group.

To consolidate the many single variables used in the analysis of female sexuality, and to obtain key components indicative of female sexuality, a principle component varimax factor analysis was performed. This resulted in four factors,
namely, Female Sexual Responsivity (Factor 1); Orgasmic Ability (Factor 2); Multiple Orgasmic Ability (Factor 3); and Sexual Motivation (Factor 4). No significant differences between the control group and the experimental groups on these factors were found. It was concluded that the sexuality of pregnant women did not differ significantly from non-pregnant women.

Further statistical analysis showed an overall linear downward trend of female sexuality during pregnancy and during the postnatal period. It was concluded that female sexuality declined during the course of pregnancy and in the postnatal period, but did not differ significantly between the different trimesters of pregnancy and the postnatal period. Therefore, trimesters indicative of recognisable bodily changes were not related to the decline of female sexuality in a specific manner. These findings opposed the reports of some researchers, who associated changes in female sexuality with a specific trimester (La Rossa, 1979; Masters & Johnson, 1966). It underlined that female sexuality, in all its nuances, could not be restricted to grouping into trimesters, on the basis of physiological changes accompanying pregnancy.

In order to establish which components of female sexuality, measured by the four factors, accounted for the decline in female sexuality during pregnancy, further statistical analyses were conducted. The findings showed that the decline was mainly as a result of Sexual Responsivity (Factor 1), which comprised the single indices of female
'sexual desire', 'enjoyment', 'activity' and 'satisfaction'. These indices, and consequently Sexual Responsivity, denoted the psychological, emotional and interpersonal dimensions of female sexuality. It was concluded that female sexuality changed at an intrapsychic level for pregnant and postnatal women, but not in the physiological expression thereof. More specifically, the Orgasmic Ability (Factor 2), Multiple Orgasmic Ability (Factor 3), and Sexual Motivation (Factor 4), of pregnant and postnatal women did not decline. These findings are supported by Deutsch (1944, 1945) and the developmental theorists (Bibring et al., 1961), in as much as they stated that changes during pregnancy occur at an intrapsychic level. This is also true for female sexuality. Furthermore, they referred to the changes in the object libidinal position of a pregnant woman. Whereas before conception a woman directs her sexuality to the external world, during pregnancy she tends to become more sexually withdrawn. Women in this study showed declined Sexual Responsivity during pregnancy and in the postnatal period.

No significant differences were found in the Orgasmic Ability of the various experimental groups. It is speculated that although pregnant women withdraw sexually from the external world (i.e. their husbands) and show less Sexual Responsivity, the experience of an orgasm, representing sexual self-satisfaction, is not forfeited. Deutsch (1944, 1945) postulated that female sexuality represents a dichotomy, namely, erotic female sexuality for self-satisfaction and
maternal sexuality focused on motherhood. She went on to state that these two dimensions of female sexuality appeared to be "at war" during a woman's experience of pregnancy. In the light of the present study's findings this was not verified. The eroticism of female sexual satisfaction (seen in the continued experience of orgasms), and more maternal sexuality (seen as less sexual responsivity), were intertwined and integrated. It is believed that pregnant women accommodated both these dimensions of their sexuality as outlined by Deutsch (1944, 1945). Many past theorists indicated that female sexuality was closely tied to motherhood (Bibring et al., 1961; Freud, 1949; Heiman, 1965).

The present findings of a minimal linear decline in female sexuality during pregnancy, as opposed to major changes, underlined that pregnancy and resultant changes to female Sexual Responsivity was a natural occurrence.

Turning to the analyses of the results on female body image during pregnancy and the postnatal period, Tukey's (1977) opinion of "statistical conclusions" and "experimenter's conclusions" were borne in mind. Female body image was assessed both qualitatively and quantitatively in this study. On the strength of the descriptive analysis of how pregnant women felt about their bodies, the experimenter concluded that pregnant women felt overweight, unattractive and at odds with the social standards of beauty. However, they felt that this was a transient phase. Therefore, the conclusion was drawn that female body image was not affected
by the pregnancy experience. The statistical analysis of the Rorschach responses supported this conclusion and no significant differences were indicated on female body image during pregnancy or the postnatal period. The present findings opposed the earlier reports of Gray (1977) and McConnell and Daston (1961).

Support for the relatively few differences between groups were found in the work of the psychoanalysts (Deutsch, 1944, 1945; Freud, 1949; Heiman, 1965) and the developmental theorists (Bibring, et al., 1971). They pointed out that female sexual development reached maturation in motherhood. Consequently, pregnancy and perceivable bodily changes i.e. increased body size, formed part of a woman's identity and therefore did not influence or alter her subconscious perception of body image, irrespective of whether she was pregnant or not.

A comparison of female sexuality and female body image during pregnancy showed no relationship between the two. A decline in Female Sexual Responsivity took place, while body image remained unaffected. It was concluded that irrespective of the suggested interrelatedness of female sexuality and female body image, no cause-effect relationship could be deduced.

The research findings of women who participated in the small longitudinal study were similar to those of the cross-sectional samples. It is tempting to deduce that such agreement strengthened the conclusions drawn from the results
on female sexuality and body image of the cross-sectional samples. The sample size and qualitative analysis of the data prevented such assumptions. Only future research could possibly clarify the present speculative deductions.

Expectant fathers who participated in this research, irrespective of research design, showed minimal changes in their sexuality. Significant changes were only noted on the single indices of 'sexual satisfaction' and 'initiation of sexual activity'. Expectant fathers were less satisfied with their sexual relationship and indicated less sexual activity than their wives. It could be argued that expectant fathers manifested fewer changes in their sexuality than did their counterparts. The absence of the direct physical experience of bodily changes which accompany pregnancy, may have resulted in this finding. The present researcher concluded that pregnancy was not as traumatic sexually to expectant fathers as was debated in the past (Falicov, 1973; Hartman & Nicolay, 1966; Masters & Johnson, 1966; Offit, 1981). It may well be that husbands who participated in this study, like their wives', were well informed.

Contributions

The contribution of this thesis lies in the integration and interpretation of the diasporic writings on female sexuality, body image and pregnancy. This study further contributed by isolating body image, one of the many known variables, which could possibly influence female sexuality,
and researched it. However, in this emphasis on body image in relation to female sexuality, the researcher did not wish to imply that many other factors ought to be ignored. Female sexuality, female body image and the experience of pregnancy are not unidimensional events, but are highly variable and dependent on the interweaving of complex factors, i.e., age, social background, medical history.

Another contribution of this study is that it recognised and argued that the media's exposure of female sexuality, bodily health, fitness and exercise, is not necessarily detrimental to a woman's experience of her sexuality and her body. Judicial media exposure may, in fact, benefit women and create an awareness that they are in control of their bodies and their sexuality. This study also pointed out that pregnancy is not necessarily a crisis or traumatic event, but rather a natural process, the latter being part of a woman's sexual developmental and maturation.

**Shortcomings**

Some may view the samples assessed as a shortcoming of the present study because most participants were generally actively involved in either antenatal or exercise classes. They tended to exhibit sober expectations about pregnancy. Furthermore, the majority had planned their pregnancies and viewed their husbands as supportive. Such circumstances may have accounted for the conclusion that pregnancy was not detrimental to female body image and female sexuality. At the
same time, it should be noted that these women are representative of the general population who are gradually changing their orientations toward a healthy lifestyle.

**Recommendations**

It is the present researcher's opinion that female sexuality is such a multi-faceted sensitive issue, that to rely on a rating scale restricts the understanding thereof. Expansion and refinement of the present scale, as well as the inclusion of case studies in sexuality research could be a worthwhile research endeavour.

The past research divided female sexuality into the physiological dimension (orgasms, multiple orgasms), and psychological dimension (sexual enjoyment, desire, activity and satisfaction). Research in order to gain clarity on the interrelatedness of these dimensions may be meaningful.

The present descriptive research findings on female sexual desire could form the basis for future in-depth research. As many of the reasons given by pregnant women for decreased sexual desire were physiological causes, the inclusion of hormonal counts in conjunction with a psychological assessment, may be enlightening. This would imply teamwork.

It may be interesting for future researchers to again assess the possible relationship between female body image and female sexuality, but using a sample of women with bodily changes not related to the pregnancy experience. Much
emphasis is being placed today on cosmetic surgery. The assessment of such a sample could be fascinating and give greater insight into female sexuality and female body image.

Perhaps the most important recommendation for future research is to break away from viewing pregnancy as consisting of trimesters. This division is based on physiological grounds and is not supported psychologically. Pregnancy should rather be seen as an ongoing experience without clearly delineated transitions. In other words, what is required is a dynamic rather than structuralistic approach.

After all has been said and done, this completion of the "thousand mile journey" was worthwhile as it not only made several contributions but also vastly increased the writer's understanding of the female and opened many avenues for future research. Furthermore, it created a greater awareness of the complexity of female sexuality, which could be beneficial in the counselling of women and couples.
REFERENCES


Johannesburg: Fontana Open Books.


INFORMATION SHEET FOR VOLUNTEERS

I am a registered clinical psychologist presently doing research (Ph.D) at the University of Cape Town. This work entails the psychological aspects of pregnancy, female body image and female sexuality.

Vast bodily changes occur during pregnancy and the objective of this proposed study is to assess how women view their bodies and perceive their sexuality during pregnancy. In addition, I am also evaluating the body image and sexuality of married women who are not pregnant.

All data received will be treated with the utmost confidentiality and will only be used to further scientific knowledge about this vital aspect of female psychology.

However, once this study has been completed a summary of the major findings will be forwarded to you upon request. This information will hopefully benefit you with future pregnancies. I will also be most willing to answer any questions you may have.

Participation in this study is voluntary and will in no way influence your involvement with your doctor or with others.

If you are between 18 and 40 years of age and married you are eligible to participate in this study. You will be individually interviewed once, during which time you will be required to complete 2 questionnaires as well as to respond to picture cards. This will require approximately 1 hour of your time, arranged at your convenience.

Please feel free to discuss this with your husband and should you be interested, fill out the slip provided and leave it with your doctor/midwife/sister. I will then contact you to arrange an interview, time and venue.

I can be contacted at either (021) 699405 or (024) 22087.

Many thanks

ILZA BOTHA
(Clinical Psychologist)

NAME: __________________________ AGE: __________

HOW LONG HAVE YOU BEEN MARRIED? __________________________

1. Is this your first pregnancy? YES NO
2. Have you had previous pregnancies? YES NO
3. Are you pregnant at present? YES NO
4. Have you had a baby within the past six months? If so, please give delivery date.....

Telephone Number: __________________________ (Home) __________________________ (Business)

Convenient time to receive telephone calls: __________________________

Address: __________________________
INFORMED CONSENT FORM

I, the undersigned, agree to participate in this study with the full understanding that this is an investigation into the psychological aspects of pregnancy. I will be asked to fill out a self-evaluating questionnaire as well as to respond to cards (presented to me). I will be asked to respond to questions of a personal and intimate nature.

It is my understanding that the research is being done for pure, acceptable scientific purposes, and that all the information will be treated with the utmost confidentiality, and that confidentiality of all the participants will at all times be maintained.

My participation or non-participation will at no time and in no way affect my treatment by my doctor.

DATE: _______________          SIGNED: _______________

P.S. I agree to my husband being questioned on the nature of my pregnancy. I, however, do expect that the information I have given will be treated confidentially and will not be discussed with my partner.

YES __________

NO __________

HUSBAND: __________________________

TELEPHONE NUMBER (Work): _______________
BIOGRAPHICAL QUESTIONNAIRE

This is a questionnaire designed to give information about you and your family. Please answer all questions as completely as possible. All information will be treated with the utmost confidentiality.

SECTION I:

1. SURNAME: __________________ INITIALS: _______ AGE: ______

2. ADDRESS: _______________________________________________________

3. TELEPHONE NUMBER: (home) ______ (work) ____________

4. MARITAL STATUS:
   Married
   Single
   Divorced
   Separated
   Living with mate

5. NUMBER OF YEARS MARRIED:

6. EDUCATION: (Total Years)
   0 - 6
   7 - 9
   10 - 12
   High School Grade
   1-3 Years College
   Graduate
   Degree held (if any)

7. OCCUPATION: ____________________________________________________
   Please describe clearly if job title is not self-explanatory

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
8. QUALIFICATIONS:
   Technical  
   Academic  
   Professional  

9. HUSBAND'S EDUCATION:
   (Total years)
   0 - 6  
   7 - 9  
   10 - 12  
   High School Grade  
   1-3 years College  
   Graduate  
   Degree held (if any)  

10. HUSBAND'S OCCUPATION:__________________________________________

   Please describe clearly if job title is not self-explanatory.

   ________________________________________________________________

11. HUSBAND'S QUALIFICATIONS:
   Technical  
   Academic  
   Professional  

12. RELIGIOUS PREFERENCES (if any):
   Protestant  
   Catholic  
   Jewish  
   Other  
   Agnostic/Atheist  

13. ARE YOU AN ONLY CHILD?
   Yes  
   No  

   Number of sisters:__________Ages ________ ________ ________

   Number of brothers:__________Ages ________ ________ ________
14. DO YOU HAVE YOUR OWN HOME?

Yes □

No □

15. DO YOU FEEL FINANCIALLY SECURE?

Yes □

No □

16. RELATIONS WITH OWN MOTHER
(or substitute):

(a) Very distant □

(b) Fairly distant □

(c) Mixed □

(d) Fairly close □

(e) Very close □

SECTION II

17. AT WHAT AGE DID YOU LEARN THE FACTS OF LIFE?

18. HOW DID YOU FEEL WHEN YOU HEARD THE FACTS?

(a) Very shocked □

(b) Mildly shocked □

(c) Indifferent □

(d) Excited □

(e) Very excited □

19. WHO TOLD YOU THE FACTS?

(a) Mother □

(b) Father □

(c) Self □

(d) Brother/Sister □

(e) Girlfriend □

(f) Boyfriend □

(g) Books □

(h) Other □
20. TIME OF FIRST MENSTRUATION
(a) 10 years
(b) 11 years
(c) 12 years
(d) 13 years
(e) 14 years
(f) 15 years
(g) 16 years

21. REACTION TO FIRST MENSTRUATION?
(a) Very upset
(b) Quite upset
(c) Indifferent
(d) Quite happy
(e) Very happy

22. HOW OLD WERE YOU WHEN YOU HAD SEXUAL RELATIONS FOR THE FIRST TIME?
(a) 10-12 years
(b) 13-15 years
(c) 16-18 years
(d) 19-21 years
(e) 22-24 years
(f) 25-27 years
(g) 28-30 years
(h) 30+

23. WERE YOU MARRIED?
(a) Yes
(b) No
### SECTION III

24. HAVE YOU USED ANY METHOD OF BIRTH CONTROL?
   - (a) Yes
   - (b) No

25. WHAT METHOD OF BIRTH CONTROL ARE YOU USING AT PRESENT? (To be answered by women who are not pregnant at present).
   - (a) None
   - (b) Pills
   - (c) IUD
   - (d) Foam
   - (e) Withdrawal
   - (f) Rhythm
   - (g) Sheath/Condom
   - (h) Other

26. WHAT METHOD WERE YOU USING WHEN YOU BECAME PREGNANT OR PRIOR TO PREGNANCY? (To be answered by pregnant women.)
   - (a) None
   - (b) Pills
   - (c) IUD
   - (d) Foam
   - (e) Withdrawal
   - (f) Rhythm
   - (g) Sheath/Condom
   - (h) Other

27. NUMBER OF CHILDREN:
   - (a) 1
   - (b) 2
   - (c) 3
   - (d) 4
   - (e) 5 +
28. ABORTIONS: (Induced)
   (a) Yes
   (b) No

29. MISCARRIAGES:
   (a) Yes
   (b) No

30. DO YOU SUFFER FROM ANY GYNAECOLOGICAL PROBLEMS?
   (a) Yes
   (b) No

If you have answered "yes", please explain your problem briefly?

______________________________________________________________________

SECTION IV

ONLY TO BE ANSWERED BY PREGNANT WOMEN, OR WOMEN WHO HAVE JUST DELIVERED:

31. PREGNANCY?
    (a) Planned
    (b) Unplanned

32. DURATION OF PRESENT PREGNANCY?
    (a) 1st month
    (b) 2nd month
    (c) 3rd month
    (d) 4th month
    (e) 5th month
    (f) 6th month
    (g) 7th month
    (h) 8th month
    (i) 9th month
33. POST-PARTUM?  
(a) 1 month  
(b) 2 months  
(c) 3 months  
(d) 4 months  
(e) 5 months  
(f) 6 months  

34. SYMPTOMS OF PREGNANCY?  
(a) Nausea  
(b) Vomiting  
(c) Swelling  
(d) Indigestion  
(e) Specific Cravings  
(f) Sleeplessness  
(g) Other  

35. PREFERENCE OF BABY?  
(a) Male  
(b) Female  
(c) No specific preference  

36. ATTITUDE TO OWN CONFINEMENT?  
(a) Highly apprehensive  
(b) Unconcerned  
(c) Very excited  
(d) Other  

37. DUE DATE FOR DELIVERY?  

38. DATE DELIVERED?
39. WERE ANY RECOMMENDATIONS MADE TO YOU ABOUT SEXUAL ACTIVITY DURING PREGNANCY AND/OR THE POST-PARTUM PERIOD?

(a) Yes □
(b) No □

If the answer is "yes", by whom?

(a) Doctor □
(b) Midwife □
(c) Nurse □
(d) Friend □
(e) Other □

What were you told? __________________________________________________________

____________________________________________________________________________

40. PLEASE ADD ANY INFORMATION YOU FEEL IS IMPORTANT: ________________

____________________________________________________________________________

____________________________________________________________________________

41. DO YOU HAVE ANY COMMENTS ON THIS QUESTIONNAIRE?

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

THANK YOU SINCERELY FOR COMPLETING THIS QUESTIONNAIRE.  ALL INFORMATION WILL BE TREATED CONFIDENTIALLY.
APPENDIX D

PRE-PREGNANT SEXUALITY SCALE

DATE:  

HOW MANY WEEKS PREGNANT ARE YOU?  

Please answer all the questions as honestly and accurately as you can. All of your responses will be treated with the utmost confidentiality. Please ask if you need help with anything on this questionnaire.

INSTRUCTIONS: Choose your answer and place an "x" in the space provided. There are no right or wrong answers. If you do not understand, please feel free to ask.

1. How would you rate your desire to be held or cuddled in the 3 months before you became pregnant?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No desire
   (e) "Turned off" (repulsed)

2. How would you describe your level of sexual desire or interest before pregnancy?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No desire
   (e) "Turned off" (repulsed)

3. How would you describe your feelings of sexual enjoyment during lovemaking before you became pregnant?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No enjoyment
   (e) "Turned off" (repulsed)
4. On the average, how many times during a two-week period were you having sexual intercourse before you became pregnant?
   (a) None
   (b) 1 to 3 times
   (c) 4 to 8 times
   (d) 9 to 14 times
   (e) 15 or more times

5. During the same two weeks, before pregnancy, would you have preferred more intercourse, less intercourse, or the same amount as you indicated?
   (a) More intercourse
   (b) Less intercourse
   (c) Same amount

6. How often did you initiate lovemaking before you became pregnant?
   (a) Never
   (b) 1 to 25% of the time
   (c) 26 to 50% of the time
   (d) 51 to 75% of the time
   (e) 76 to 100% of the time

7. Have you ever had an orgasm or sexual climax?
   (a) Yes
   (b) No
   (c) Don't know

   Note: If your answer is "yes", go to the next question; if "no" or "don't know", skip and go to Question 13.

8. During a two-week period, prior to pregnancy, did you have orgasms or climax?
   (a) Yes
   (b) No
   (c) Don't know
9. **Before pregnancy, how would you describe the intensity (strength) of your climaxes?**

   (a) Strong
   (b) Moderate
   (c) Weak
   (d) No climaxes in the 3 months before pregnancy.
   (e) Don’t know

10. **Have you ever had multiple orgasms (one after another)?**

    (a) Yes
    (b) No
    (c) Don’t know

11. **During a two-week period prior to pregnancy, did you have multiple orgasms (one after another)?**

    (a) Yes
    (b) No
    (c) Don’t know

12. **Before you became pregnant, what ways did you use to achieve sexual climaxes?** Please rank the methods you used from the choices below. List the most frequently used method first.

    (a) Intercourse only
    (b) Hand and/or oral stimulation by husband
    (c) Self-stimulation (masturbation)
    (d) Combination of intercourse and other stimulation
    (e) Mutual masturbation
    (f) Other. (Please describe on these lines):

    List answers here
13. Before pregnancy, what was the order in which you and your husband used the following positions for intercourse? By using the corresponding letter, please list the most frequently used position first.

(a) Man on top (male superior)
(b) Woman on top (female superior)
(c) Side-by-side, facing
(d) Rear entry (vaginal intercourse from back)
(e) Other position. (Please describe on these lines):

List answers here

14. Prior to pregnancy, how did you feel about your overall sexual relationship with your husband? Make an "x" opposite the letter of the answer that is closest to your past sexual feelings.

(a) Extremely satisfied
(b) Satisfied
(c) Mixed feelings
(d) Unsatisfied
(e) Extremely unsatisfied (miserable)

15. What were your feelings about your body prior to pregnancy?


THANK YOU! Before handing in your completed questionnaire, please be sure that you have filled out all the pages completely and have not skipped any questions on the pages of the questionnaire. Your help is greatly appreciated and all information will be treated confidentially.
PREGNANT SEXUALITY SCALE

CODE

DATE:

HOW MANY WEEKS PREGNANT ARE YOU?

Please answer all questions as honestly and as accurately as you can. All of your responses will be treated with the utmost confidentiality. Please ask if you need help with anything in this questionnaire.

INSTRUCTIONS: Choose your answer and place an "x" in the space provided. There are no right or wrong answers. If you do not understand, please feel free to ask.

1. How do you feel right now about being pregnant?
   (a) Extremely happy
   (b) Happy
   (c) Not sure (mixed feelings)
   (d) Unhappy
   (e) Extremely upset

2. How do you think your husband would respond if he were asked how he feels right now about your being pregnant?
   (a) Extremely happy
   (b) Happy
   (c) Not sure (mixed feelings)
   (d) Unhappy
   (e) Extremely upset

3. Does being pregnant scare you?
   (a) Yes
   (b) No
   (c) Don’t know

4. Do labour and delivery scare you?
   (a) Yes
   (b) No
   (c) Don’t know
5. In general how do you feel physically compared to before pregnancy?
   (a) Better
   (b) Worse
   (c) The same

6. Do you feel more attractive or less attractive since you have become pregnant?
   (a) More attractive
   (b) Less attractive
   (c) The same

If you have answered "a", circle reasons:
   (a) Feminine
   (b) Sensual
   (c) Sexual
   (d) Womanly
   (e) Increased breast size
   (f) Other

If you have other reasons for feeling more attractive, please state them here:

_________________________________________________________________________

If you have answered "b", circle the reasons:
   (a) Unfeminine
   (b) Sexually unattractive
   (c) Body clumsy and fat
   (d) Body size too big
   (e) Ugly and misshapen
   (f) Body looks foreign
   (g) Increased breast size
   (h) Other

If you have any other reasons for feeling less attractive, please state them here:

_________________________________________________________________________
If you have answered "c", give reasons:

________________________________________________________

7. If your husband were asked whether he finds you more attractive or less attractive now that you are pregnant, how do you think he would answer?

(a) More attractive  [ ]
(b) Less attractive  [ ]
(c) The same [ ]

If you have answered "a", circle reasons:

(a) Feminine [ ]
(b) Sensual [ ]
(c) Sexual [ ]
(d) Womanly [ ]
(e) Increased breast size [ ]
(e) Other [ ]

If you feel your husband has other reasons for finding you more attractive, please state them here:

________________________________________________________

________________________________________________________

If you answered "b" circle reasons:

(a) Unfeminine [ ]
(b) Sexually unattractive [ ]
(c) Body clumsy and fat [ ]
(d) Body size too big [ ]
(e) Ugly and misshapen body [ ]
(f) Body looks foreign [ ]
(g) Increased breast size [ ]
(h) Other [ ]

If you feel your husband has other reasons for finding you less attractive, please state them here:

________________________________________________________
If you have answered "c" give reasons:

8. How would you rate your present need or desire to be held or cuddled (apart from sexual relations)?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No desire
   (e) "Turned off" (repulsed)

9. How would you describe your level of sexual desire or interest at the present time?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No desire
   (e) "Turned off" (repulsed)

10. Has your level of sexual desire increased, decreased or remained the same since you became pregnant?
    (a) Increased
    (b) Decreased
    (c) Same as before pregnancy

Note: If your answer is "a" go to the next question; if your answer is "b" go to Question 10(b); if your answer is "c" skip and go to Question 11.

10(a) What do you think are the reasons why you are experiencing an increase in sexual desire? Use all of the answers listed below and rank them in the order of importance to you. Using the corresponding letter, list the most important reason first.

List answers here

(a) Feel more attractive (sexually)
(b) No fear of pregnancy
(c) Happy and relaxed about being pregnant
(d) Feel greater sensation in genitals (clitoris and/or vagina)
If you are experiencing a decrease in sexual desire, what do you think are the reasons? Use all of the answers listed below and rank them in the order of importance to you. Using the corresponding letter, list the most important reason first:

(a) Not feeling good (fatigue, nausea, vomiting)
(b) Not feeling sexually attractive
(c) I am upset about being pregnant
(d) Afraid of hurting myself or the baby
(e) Intercourse is uncomfortable
(f) Intercourse is painful
(g) Doctor's recommendation - no sexual activity
(h) Feel sexually fulfilled after impregnation - no need for sexual contact with my husband
(i) Feel motherly, not erotic (sexual)
(j) Depressed
(k) Anxious
(l) Lost interest (sexually)
(m) Akward size of body
(n) Body is sexual embarrassment (vagina tight, breasts leaking)
(o) Husband not very interested
(p) Feels strange to have intercourse with a third party (foetus) involved

List answers here

11. How would you describe your present feelings of sexual enjoyment during lovemaking (sexual relations)?

(a) Great
(b) Moderate
(c) Slight
12. During the past two weeks how many times have you had sexual intercourse?

(a) None  
(b) 1 to 3 times  
(c) 4 to 8 times  
(d) 9 to 14 times  
(e) 15 or more times  

13. During the same two weeks would you have preferred more intercourse, less intercourse, or the same amount as you indicated?

(a) More intercourse  
(b) Less intercourse  
(c) Same amount  

14. How often do you presently initiate (start) lovemaking (sexual relations)?

(a) Never  
(b) 1 to 25% of the time  
(c) 26 to 50% of the time  
(d) 51 to 75% of the time  
(e) 76 to 100% of the time  

15. Have you ever had an orgasm or sexual climax?

(a) Yes  
(b) No  
(c) Don't know  

Note: If your answer is "yes", go to the next question; if "no" or "don't know", skip and go to Question 21.  

16. During the past two weeks have you had orgasms or climaxes?

(a) Yes  
(b) No  
(c) Don't know
17. In general, how would you estimate the intensity (strength) of your present climaxes?

(a) Strong □
(b) Moderate □
(c) Weak □
(d) No climaxes presently □
(e) Don't know □

18. Have you ever had multiple climaxes (one after another)?

(a) Yes □
(b) No □
(c) Don't know □

19. During the past two weeks have you had multiple climaxes?

(a) Yes □
(b) No □
(c) Don't know □

20. At present what ways do you use to achieve sexual climaxes? Please rank all the methods you use from the choices listed below. List the most frequently used method first, using the corresponding letter. (If you are not experiencing sexual climaxes at present, skip this question).

List answers here

(a) Intercourse only __________
(b) Hand and/or oral stimulation by husband ______________
(c) Self-stimulation (masturbation) ______________
(d) Combination of intercourse and other stimulation ______________
(e) Mutual masturbation ______________
(f) Other. (please describe on these lines): ____________________________

21. Presently what is the order in which you and your husband are using the following positions for intercourse? Using the corresponding letter, list the most frequently used position first. (If you are not having intercourse at present, skip this question).

List answers here

(a) Man on top (male superior) __________
(b) Woman on top (female superior) __________
22. Right now how do you feel about your overall sexual relationship with your husband? Make an "x" opposite the answer that is closest to your present feelings.

(a) Extremely satisfied
(b) Satisfied
(c) Mixed feelings
(d) Unsatisfied
(e) Extremely unsatisfied (miserable)

23. What are your feelings about changes in your body (such as enlargement of the abdomen, discolouration of the skin etc.) if any?


(a) Yes
(b) No

25. Have you received any advice on sexual relationships during pregnancy?

(a) Yes
(b) No

If the answer is "yes", from whom?

THANK YOU! Before handing in your completed questionnaire, please be sure that you have filled in all the pages completely and have not skipped any questions on the pages of the questionnaire. Your help is greatly appreciated and all information will be treated confidentially.
APPENDIX F

POSTNATAL SEXUALITY SCALE

DATE:

HOW MANY WEEKS POST-PARTUM ARE YOU?

Please answer all questions as honestly and accurately as you can. All of your responses will be held in the strictest confidence. Please ask if you need help with anything on this questionnaire.

INSTRUCTIONS: Choose your answer and place an "x" in the space provided. There are no right or wrong answers. If you do not understand, please feel free to ask.

1. How do you feel right now about being non-pregnant?
   (a) Extremely happy
   (b) Happy
   (c) Not sure (mixed feelings)
   (d) Unhappy
   (e) Extremely upset

2. How do you think your husband would respond, if he were to be asked how he feels right now about your being non-pregnant?
   (a) Extremely happy
   (b) Happy
   (c) Not sure (mixed feelings)
   (d) Unhappy
   (e) Extremely upset

3. Did being pregnant scare you?
   (a) Yes
   (b) No
   (c) Don't know

4. Did labour and delivery scare you?
   (a) Yes
   (b) No
   (c) Don't know
5. In general, how do you feel \textit{physically} compared to before pregnancy?
   (a) Better
   (b) Worse
   (c) The same

6. Do you feel \textit{more attractive} or \textit{less attractive} now, after the delivery of the baby?
   (a) More attractive
   (b) Less attractive
   (c) The same

If you have answered "a", circle reasons:
   (a) Feminine
   (b) Sensual
   (c) Sexual
   (d) Womanly
   (e) Increased breast size
   (f) Thin
   (g) Other

If you have other reasons for feeling more attractive, please state them here:
__________________________________________________________________________________________________________________________________________________________
__________________________________________________________________________________________________________________________________________________________

If you have answered "b", circle reasons:
   (a) Sexually unattractive
   (b) Body fat/flabby
   (c) Stretch marks
   (d) Increased breast size
   (e) Other

If you have other reasons for feeling less attractive, please state them here:
__________________________________________________________________________________________________________________________________________________________
__________________________________________________________________________________________________________________________________________________________
__________________________________________________________________________________________________________________________________________________________
If you have answered "c", give reasons:

__________________________________________________________________________

__________________________________________________________________________

7. If your husband were asked whether he finds you more attractive or less attractive now, after the delivery of the baby, how do you think he would answer?

(a) More attractive
(b) Less attractive
(c) The same

If you have answered "a", circle reasons:

(a) Feminine
(b) Sensual
(c) Sexual
(d) Womanly
(e) Increased breast size
(f) Thin
(g) Other

If you feel that your husband has other reasons for finding you more attractive now, please state them here:

__________________________________________________________________________

__________________________________________________________________________

If you have answered "b", circle reasons:

(a) Sexually unattractive
(b) Body fat/flabby
(c) Stretchmarks
(d) Increased breast size
(e) Other

If you feel that your husband has other reasons for finding you less attractive now, please state them here:

__________________________________________________________________________

__________________________________________________________________________
If you have answered "c", give reasons:

8. How would you rate your present need or desire to be held or cuddled (apart from sexual relations)?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No desire
   (e) "Turned off" (repulsed)

9. How would you describe your level of sexual desire or interest at the present time?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No desire
   (e) "Turned off" (repulsed)

10. Has your level of sexual desire increased, decreased or remained the same from pre-pregnancy to now?
    (a) Increased
    (b) Decreased
    (c) Remained the same

    If your answer is "a", go to the next question; if your answer is "b", go to Question 10b; if your answer is "c", skip and go to Question 11.

10(a). If you are experiencing an increase in sexual desire what do you think are the reasons? Use all of the answers listed below and rank them in the order of importance to you. Using the corresponding letter, list the most important reason first.

   List answers here

   (a) Feeling more attractive (sexually)
   (b) No fear of pregnancy
   (c) Happy and relaxed about being non-pregnant
   (d) Feel greater sensation in genitals (clitoris and/or vagina)
   (e) Breasts or other body parts feel more erotic
(f) Husband shows increased interest
(g) No fear of harming the baby anymore
(h) Third party (foetus) not present during intercourse anymore
(i) Body no longer strange
(j) Other reasons. (Please describe on these lines):

10(b) If you are experiencing a decrease in sexual desire, what do you think are the reasons? Use all of the answers listed below and rank them in the order of importance to you. Using the corresponding letter, list the most important reason first.

List answers here

(a) Not feeling good (fatigue)
(b) Not feeling sexually attractive
(c) Husband not very interested
(d) Too occupied with the baby
(e) Baby gives me sensual satisfaction
(f) Intercourse is uncomfortable
(g) Intercourse is painful
(h) Doctor's recommendation - no sexual activity
(i) Lost interest (sexually)
(j) Body sexual embarrassment (milk ejection during intercourse, vagina tight/slack)
(k) Body ugly (stretchmarks, varicose veins)
(l) Afraid of hurting myself
(m) Depressed
(n) Other reason. (i.e. Episiotomy, Caesarean, etc.).
11. How would you describe your present feelings of sexual enjoyment during lovemaking (sexual relations)?
   (a) Great  
   (b) Moderate  
   (c) Slight  
   (d) No enjoyment  
   (e) "Turned off" (repulsed)

12. During the past two weeks how many times have you had sexual intercourse?
   (a) None  
   (b) 1 to 3 times  
   (c) 4 to 8 times  
   (d) 9 to 14 times  
   (e) 15 or more times

13. During the same two weeks would you have preferred more intercourse, less intercourse, or the same amount as you indicated?
   (a) More intercourse  
   (b) Less intercourse  
   (c) Same amount

14. How often do you presently initiate (start) lovemaking (sexual relations)?
   (a) Never  
   (b) 1 to 25% of the time  
   (c) 26 to 50% of the time  
   (d) 51 to 75% of the time  
   (e) 76 to 100% of the time

15. Have you ever had an orgasm or sexual climax?
   (a) Yes  
   (b) No  
   (c) Don't know

Note: If your answer is "yes", go to the next question. If "no" or "don't know", skip and go to Question 21.
16. During the past two weeks have you had orgasms or climaxes?
   (a) Yes
   (b) No
   (c) Don't know

17. In general, how would you estimate the intensity (strength) of your present climaxes?
   (a) Strong
   (b) Moderate
   (c) Weak
   (d) No climaxes presently
   (e) Don't know

18. Have you ever had multiple climaxes (one after another)?
   (a) Yes
   (b) No
   (c) Don't know

19. During the past two weeks have you had multiple climaxes?
   (a) Yes
   (b) No
   (c) Don't know

20. At present what ways do you use to achieve sexual climaxes? Please rank all the methods you use from the choices listed below. List the most frequently used method first, using the corresponding letter. (If you are not experiencing sexual climaxes at present, skip this question). List answers here
   (a) Intercourse only
   (b) Hand and/or oral stimulation by husband
   (c) Self-stimulation (masturbation)
   (d) Combination of intercourse and other stimulation
   (e) Mutual masturbation
   (f) Other (i.e. breastfeeding). (Please describe on these lines):
21. Presently what is the order in which you and your husband are using the following positions for intercourse? Using the corresponding letter, list the most frequently used position first. (If you are not having intercourse at present, skip this question).

List answers here

(a) Man on top (male superior) __________________________
(b) Woman on top (female superior) ______________________
(c) Side-by-side (facing) ________________________________
(d) Rear entry (vaginal intercourse from the back) _______
(e) Other position. (Please describe on these lines):
______________________________________________________________________________

22. Right now how do you feel about your overall sexual relationship with your husband? Make an "x" opposite the appropriate answer in the space provided.

(a) Extremely satisfied [ ]
(b) Satisfied [ ]
(c) Mixed feelings [ ]
(d) Unsatisfied [ ]
(e) Extremely unsatisfied (miserable) [ ]

23. What are your feelings about changes in your body after having been pregnant, if any?
______________________________________________________________________________
______________________________________________________________________________

24. Are you attending antenatal classes?

(a) Yes [ ]
(b) No [ ]

25. Have you received any advice on sexual relationships during the post-partum (postnatal) period?

(a) Yes [ ]
(b) No [ ]

If the answer is "yes", from whom?
26. Are you breastfeeding at present?
   (a) Yes
   (b) No

27. If you have answered "no", did you breastfeed at all?
   (a) Yes
   (b) No

28. If you have answered "yes, for how long?"
   If the answer was "no", go to Question 32.

29. Whilst breastfeeding, how did you feel?
   (a) Womanly
   (b) Sensual
   (c) Other

30. Have you had orgasms whilst breastfeeding?
   (a) Yes
   (b) No

31. If so, how did you feel?
   (a) Embarrassed
   (b) No feeling
   (c) Sexual

32. Are you on any method of birth control now?
   (a) None
   (b) Pills
   (c) IUD
   (d) Foam
   (e) Withdrawal
   (f) Rhythm
   (g) Sheath/Condom
   (h) Other

33. Type of Delivery?
   (a) Natural
   (b) Caesarean
   (c) Forceps
34. Husband present at birth?
   (a) Yes
   (b) No

35. Were you attending prenatal classes during pregnancy?
   (a) Yes
   (b) No

36. If you answered "yes", did you benefit from the classes?
   (a) Yes
   (b) No

Give reasons for your choice please:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

THANK YOU! Before handing in your completed questionnaire, please be sure that you have filled out all the pages completely and have not skipped any questions on the pages of the questionnaire. Your help is greatly appreciated and all the information will be treated confidentially.
NON-PREGNANT SEXUALITY SCALE

DATE: 

Please answer all questions as honestly and as accurately as you can. All of your responses will be treated with the utmost confidentiality. Please ask if you need help with anything on this questionnaire.

INSTRUCTIONS: Choose your answer and place an "x" at the corresponding letter in the space provided. There are no right or wrong answers. If you do not understand, please feel free to ask.

1. How would you rate your desire to be held or cuddled in the past 3 months?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No desire
   (e) "Turned off" (repulsed)

2. How would you describe your level of sexual desire or interest at present?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No desire
   (e) "Turned off" (repulsed)

3. How would you describe your present feelings of sexual enjoyment during lovemaking (sexual relations)?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No enjoyment
   (e) "Turned off" (repulsed)

4. On average, how many times during a two-week period are you having sexual intercourse?
   (a) None
   (b) 1 to 3 times
   (c) 4 to 8 times
   (d) 9 to 14 times
   (e) 15 or more times
5. Would you prefer more intercourse, less intercourse, or the same amount as you have indicated?
   (a) More intercourse
   (b) Less intercourse
   (c) Same amount

6. How often do you initiate lovemaking (sexual relations)?
   (a) Never
   (b) 1 to 25% of the time
   (c) 26 to 50% of the time
   (d) 51 to 75% of the time
   (e) 76 to 100% of the time

7. Have you ever had an orgasm or sexual climax
   (a) Yes
   (b) No
   (c) Don't know

   Note: If your answer was "yes", go to the next question; if it was "no" or "don't know", skip and go to Question 13.

8. During the past two weeks, have you had orgasms or climaxes?
   (a) Yes
   (b) No
   (c) Don't know

9. How would you describe the intensity (strength) of your climaxes?
   (a) Strong
   (b) Moderate
   (c) Weak
   (d) No climaxes in 3 months
   (e) Don't know

10. Have you ever had multiple orgasms (one after another)?
    (a) Yes
    (b) No
    (c) Don't know
11. During the past **two weeks**, have you had multiple orgasms?

   (a) Yes
   (b) No
   (c) Don't know

12. What ways do you use to achieve sexual **climaxes**? Please rank all the methods you use from the choices below. List the **most frequently used** method first.

   List answers here

   (a) Intercourse only
   (b) Hand and/or oral stimulation by husband
   (c) Self-stimulation (masturbation)
   (d) Combination of intercourse and other stimulation
   (e) Mutual masturbation
   (f) Other. (Please describe on these lines):

13 What is the order in which you and your husband use the following **positions** for intercourse? By using the corresponding letter, please list the **most frequently used position** first.

   List answers here

   (a) Man on top (male superior)
   (b) Woman on top (female superior)
   (c) Side-by-side, facing
   (d) Rear entry (vaginal intercourse from back)
   (e) Other position. (Please describe on these lines):
14. How do you feel about your overall sexual relationship with your husband? Make an "x" opposite the letter of the answer that is closest to your sexual feelings.

(a) Extremely satisfied □
(b) Satisfied □
(c) Mixed feelings □
(d) Unsatisfied □
(e) Extremely unsatisfied (miserable) □

15. What are your feelings about your body?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

THANK YOU! Before handing in your completed questionnaire, please be sure that you have filled out all the pages completely and have not skipped any questions on the pages of this questionnaire. Your help is greatly appreciated and all information will be treated confidentially.
INFORMED CONSENT FORM (HUSBAND)

I, the undersigned, agree to participate in this study with the full understanding that this is an investigation into the psychological aspects of pregnancy. I will be asked to fill out a self-evaluating questionnaire containing questions of a personal and intimate nature.

It is my understanding that the research is being done for pure, acceptable scientific purposes, and that all the information will be treated with the utmost confidentiality and that confidentiality of all the participants will be maintained at all times.

My participation or non-participation will in no way affect my wife. I do expect that the information I have given will be treated confidentially and will not be discussed with my partner.

DATE: ___________________  SIGNED: ___________________
HUSBAND - PRE-PREGNANT SEXUALITY SCALE

DATE:

HOW MANY WEEKS PREGNANT IS YOUR WIFE?

HOW MANY WEEKS POST-PARTUM (delivered baby) IS YOUR WIFE?

CODE HPF*

Please answer all the questions as honestly and as accurately as you can. All of your responses will be treated with utmost confidentiality. None of your responses will be discussed with your wife.

INSTRUCTIONS: Choose your answer and make an "x" opposite the corresponding letter in the space provided. There are no right or wrong answers.

1. How would you describe your level of sexual desire or interest prior to your wife's pregnancy?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No desire
   (e) "Turned off" (repulsed)

2. On average, how many times during a two-week period were you having sexual intercourse prior to your wife's pregnancy?
   (a) None
   (b) 1 - 3 times
   (c) 4 - 8 times
   (d) 9 - 14 times
   (e) 15 times or more

3. During this period would you have preferred more intercourse, less intercourse, or the same, as indicated?
   (a) More intercourse
   (b) Less intercourse
   (c) The same
4. How would you describe your past feelings of sexual enjoyment during lovemaking (sexual relations), prior to your wife's pregnancy?

(a) Great
(b) Moderate
(c) Slight
(d) No enjoyment
(e) "Turned off" (repulsed)

5. How often did you initiate lovemaking (sexual relations) prior to your wife's pregnancy?

(a) Never
(b) 1 to 25% of the time
(c) 26 to 50% of the time
(d) 51 to 75% of the time
(e) 76 to 100% of the time

6. How did you feel about your overall sexual relationship with your wife, prior to her pregnancy?

(a) Extremely satisfied
(b) Satisfied
(c) Mixed feelings
(d) Unsatisfied
(e) Extremely unsatisfied (miserable)

I would like to thank you sincerely for answering all these questions. All the information will be treated confidentially. No information will be given to your partner.
APPENDIX J

HUSBAND - PREGNANT SEXUALITY SCALE

CODE HPF

DATE:

HOW MANY WEEKS PREGNANT IS YOUR WIFE?

Please answer all the questions as honestly and as accurately as you can. All of your responses will be treated with utmost confidentiality. None of your responses will be discussed with your wife.

INSTRUCTIONS: Choose your answer and make an "x" opposite the corresponding letter in the space provided. There are no right or wrong answers.

1. How would you respond if you were asked how you felt right now about your wife being pregnant?
   (a) Extremely happy
   (b) Happy
   (c) Not sure (mixed feelings)
   (d) Unhappy
   (e) Extremely upset

2. Do you find your wife more attractive or less attractive now that she is pregnant?
   (a) More attractive
   (b) Less attractive
   (c) The same

If you answered "a", circle the reasons:
   (a) Feminine
   (b) Sensual
   (c) Sexual
   (d) Womanly
   (e) Increased breast size
   (f) Other. (Please state them here):

__________________________________________
__________________________________________
If you answered "b", circle the reasons:

(a) Unfeminine
(b) Sexually unattractive
(c) Body clumsy and fat
(d) Body size too big
(e) Ugly and misshapen
(f) Body looks foreign
(g) Increased breast size
(h) Other. (Please state them here):
________________________
________________________
________________________

If you answered "c" give the reasons:
________________________
________________________
________________________

3. How would you describe your level of sexual desire or interest at the present time?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No enjoyment
   (e) "Turned off" (repulsed)

4. Has your level of sexual desire increased, decreased or remained the same since your wife became pregnant?
   (a) Increased
   (b) Decreased
   (c) Same as before she became pregnant

Note: If your answer is "a", go to the next question; if your answer is "b", go to Question 4(b); if your answer is "c", go to Question 5.

4(a) What do you think are the reasons why you are experiencing an increase in sexual desire? Use all the answers and rank them in the order of importance to you. Using the corresponding letter, list the most important reason first.
4(b) What do you think were the reasons why you experienced a decrease in sexual desire during your wife’s pregnancy? Use all the answers and rank them in the order of importance to you. Using the corresponding letter, list the most important reason first.

(a) Wife not feeling good (fatigue, nausea) ________________
(b) Wife physically unattractive (sexually) ________________
(c) Wife not interested ________________
(d) Afraid of hurting foetus or mother ________________
(e) Doctor’s recommendation - no sexual activity ________________
(f) Intercourse is uncomfortable and painful ________________
(g) Upset that wife is pregnant ________________
(h) Lost interest (sexually) ________________
(i) Awkward body size ________________
(j) Feel presence of third party (foetus) ________________
(k) Wife more maternal - less erotic ________________
(l) Total fulfilment - no need for sexual contact with wife ________________
(m) Wife’s body is a sexual embarrassment to me (vagina tight, dry; breasts leak) ________________
(n) Other reasons. (Please describe on these lines):

__________________________
5. During the past two weeks, how many times have you had sexual intercourse?
   (a) None
   (b) 1-3 times
   (c) 4-8 times
   (d) 9-14 times
   (e) 15 times or more

6. During the same two weeks, would you have preferred more intercourse, less intercourse, or the same amount as indicated?
   (a) More intercourse
   (b) Less intercourse
   (c) The same

7. How would you describe your present feeling of sexual enjoyment during lovemaking? (sexual relations)
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No enjoyment
   (e) "Turned off" (repulsed)

8. How often do you presently initiate lovemaking (sexual relations)?
   (a) Never
   (b) 1 to 25% of the time
   (c) 26 to 50% of the time
   (d) 51 to 75% of the time
   (e) 76 to 100% of the time

9. Right now how do you feel about your overall sexual relationship with your wife?
   (a) Extremely satisfied
   (b) Satisfied
   (c) Mixed feelings
   (d) Unsatisfied
   (e) Extremely unsatisfied (miserable)
10. Is a woman's pregnant body sexually more attractive to you or sexually less attractive to you?

   (a) More attractive
   (b) Less attractive

I would like to thank you sincerely for answering all these questions. All the information given will be treated confidentially. No information will be given to your partner.
HUSBAND - POSTNATAL SEXUALITY SCALE

DATE: 

HOW MANY WEEKS POST-PARTUM (delivered baby) IS YOUR WIFE? 

Please answer all the questions as honestly and as accurately as you can. All of your responses will be treated with utmost confidentiality. None of your responses will be discussed with your wife.

INSTRUCTIONS: Choose your answer and make an "x" opposite the corresponding letter in the space provided. There are no right or wrong answers.

SECTION 1

1. How would you respond if you were asked how you felt about your wife being non-pregnant now, instead of pregnant?
   (a) Extremely happy 
   (b) Happy 
   (c) Not sure (mixed feelings) 
   (d) Unhappy 
   (e) Extremely unhappy

2. Do you find your wife more attractive or less attractive being non-pregnant now, than prior to her pregnancy?
   (a) More attractive 
   (b) Less attractive 
   (c) The same

   If you answered "a", circle the reasons:
   (a) Feminine 
   (b) Sensual 
   (c) Sexual 
   (d) Womanly 
   (e) Increased breast size 
   (f) Thin 
   (g) Other. (Please state on these lines): 

---

CODE: HPPF

---
If you answered "b", circle the reasons:

(a) Sexually unattractive
(b) Body fat and flabby
(c) Stretchmarks
(d) Increased breast size
(e) Other. (Please state on these lines):

If you answered "c", give reasons:

________________________________________________________________________

________________________________________________________________________

3. How would you describe your level of sexual desire at the present time (wife non-pregnant)?

(a) Great
(b) Moderate
(c) Slight
(d) No desire
(e) "Turned off" (repulsed)

4. Has your level of sexual desire increased, decreased or remained the same from prior to your wife's pregnancy to after the delivery of the baby (now)?

(a) Increased
(b) Decreased
(c) The same

Note: If your answer is "a", go to the next question; if your answer is "b", go to Question 4(b); if your answer is "c" go to Question 5.

4(a) What do you think were the reasons why you experienced an increase in sexual desire after the delivery of the baby (now)? Use all the answers below and rank them in the order of importance to you. Using the corresponding letter, list the most important reason first.

List answers here

(a) Wife physically more attractive (sexually)
(b) Breasts and other body parts feel more erotic
(c) Wife shows increased interest
(d) No fear of harming the baby anymore

(e) Happy and relaxed after the delivery of the baby

(f) Third party (foetus) no longer present during intercourse

(g) Body no longer strange

(h) Other reasons. (Please describe on these lines):

4(b) What do you think were the reasons why you experienced a decrease in sexual desire after the delivery of the baby (now)? Use all the answers below and rank them in the order of importance to you. Using the corresponding letter, list the most important reason first.

List answers here

(a) Wife too tired

(b) Added responsibility of parenthood

(c) Wife physically sore

(d) Sexually changed (i.e. vagina tight, breasts leak milk)

(e) Wife not very interested

(f) Doctor’s recommendation - no sexual activity

(g) Lost interest (sexually)

(h) Wife sexually unattractive (stretchmarks)

(i) Wife too occupied with baby

(j) Intercourse uncomfortable

(k) Intercourse painful

(l) Wife depressed

(m) Wife more maternal - not erotic

(n) Other. (Please state here):

5. During the past two weeks, how many times have you had sexual relations?
6. During the same two weeks, would you have preferred more intercourse, less intercourse, or the same amount as indicated?

(a) More intercourse
(b) Less intercourse
(c) The same amount

7. How would you describe your present feelings of sexual enjoyment during lovemaking (sexual relations)?

(a) Great
(b) Moderate
(c) Slight
(d) No enjoyment
(e) "Turned off" (repulsed)

8. How often do you presently initiate lovemaking (sexual relations)?

(a) Never
(b) 1 to 25% of the time
(c) 26 to 50% of the time
(d) 51 to 75% of the time
(e) 76 to 100% of the time

9. Right now, how do you feel about your overall sexual relationship with your wife?

(a) Extremely satisfied
(b) Satisfied
(c) Mixed feelings
(d) Unsatisfied
(e) Extremely unsatisfied (miserable)
10. How do you feel about the changes in your wife’s body from prior to her being pregnant to now (after delivery of the baby)?

I would like to thank you sincerely for answering all these questions. All the information will be treated confidentially. No information will be given to your partner.
SECTION II

1. How would you describe your level of sexual desire during your wife's pregnancy?
   (a) Great
   (b) Moderate
   (c) Slight
   (d) No enjoyment
   (e) "Turned off" (repulsed)

2. Has your level of sexual desire increased, decreased or remained the same from prior to your wife's pregnancy to during her pregnancy?
   (a) Increased
   (b) Decreased
   (c) The same

Note: If your answer is "a", go to the next question; if your answer is "b", go to Question 2(b); if your answer is "c" go to Question 3.

2(a) What do you think were the reasons why you experienced an increase in sexual desire during your wife's pregnancy? Use all the answers below and rank them in the order of importance to you. Using the corresponding letter, list the most important reason first.
   (a) Wife physically more attractive (sexually)
   (b) No fear of pregnancy
   (c) I am happy and relaxed about my wife's pregnancy
   (d) Breasts and other body parts feel more erotic
   (e) Wife shows increased interest
   (f) Other reasons. (Please describe on these lines):

2(b) What do you think were the reasons why you experienced a decrease in sexual desire during your wife's pregnancy? Use all the answers below and rank them in the order of importance to you. Using the corresponding letter, list the most important reason first.
   (a) Wife not feeling good (fatigue, nausea)
   (b) Wife physically unattractive (sexually)
(c) Wife not interested

(d) Afraid of hurting foetus or mother

(e) Doctor's recommendation - no sexual activity

(f) Intercourse is uncomfortable and painful

(g) Upset that wife is pregnant

(h) Lost interest (sexually)

(i) Awkward body size

(j) Feel presence of third party (foetus)

(k) Wife more maternal - less erotic

(l) Total fulfilment - no need for sexual contact with wife

(m) Wife's body is a sexual embarrassment to me (vagina tight, dry; breasts leak)

(n) Other reasons. (Please describe on these lines):

__________________________________________________________________________

3. Is a woman's pregnant body sexually more attractive to you or sexually less attractive to you?

(a) More attractive

(b) Less attractive

I would like to thank you sincerely for answering all these questions. All the information given will be treated confidentially. No information will be given to your partner.
RORSCHACH INKBLOT TEST

Instructions to Rater:

BARRIER SCORE (a)

The scoring categories are as follows:

1. All separate articles of clothing are scored Barrier. This is true also of all articles of clothing worn by animals and birds. If the clothing is being worn by a person, however, it is scored only if it is unusual in its covering or decorative function. Note these examples of clothing being worn by someone that are scored as Barrier responses:

- woman in a highnecked dress
- person in a fancy costume
- woman in a long nightdress
- man with a crown
- man in coat with a lace collar
- man in a robe
- imp with a cap that has a tassel on it
- people with mittens or gloves
- people with hoods
- feet with fancy red socks
- man with a cook's hat
- man with chaps

The popular boots on Card IV, the bowtie on III are not scored as clothing because of the frequency with which they are given. Examples of clothing being worn which are not scored, woman in a dress, man with a hat, man with a coat on. (Since 1958a all clothing is scored as Barrier).

2. Animals or creatures whose skins are distinctive or unusual are scored only if more than the head of the animal is given. The following is a complete list of such animals:

   alligator  peacock
   badger     penguin
   beaver     porcupine
   bobcat     prairie dog
   chameleon  rhinoceros
   coyote     scorpion
   crocodile  sea lion
   fox        seal
   goat       sheep or lamb
   hippo      siamese cat
   hyena      skunk
   leopard    tiger
   lion       walrus
   lizard     weasel
   lynx       wildcat
   mink       wolverine
   mole       zebra
   mountain goat

Any animal skin (except bearskin on Card IV) may be considered Barrier if unusual emphasis is placed on the textured, fuzzy, mottled, or striped character of the surface. Examples:
included in this general covering category are all shelled creatures except crabs and lobsters. Crabs and lobsters are excluded because of their frequency of occurrence. Lobsters and crabs are scored only in the unusual instances in which the shell alone is seen. Examples of shelled creatures:

- Snail
- Mussel
- Turtle
- Shrimp
- Clam

3. Score references to enclosed openings in the earth. Examples:

- Valley
- Ravine
- Canal
- Mine shaft
- Well

4. Score references to unusual animal containers. Examples:

- Bloated cat
- Pregnant woman
- Kangaroo
- Udder

5. Score references to overhanging or protective surfaces. Examples:

- Umbrella
- Awning
- Dome
- Shield

6. Score references to things that are armoured or much dependent on their own containing walls for protection. Examples:

- Tank
- Battleship
- Rocket or ship in space
- Armoured car
- Man in armour

7. Score references to things being covered, surrounded or concealed. Examples:

- Bowl overgrown by a plant
- House surrounded by smoke
- Log covered by moss
- Person behind a tree
- Person hidden by something
- Man covered with a blanket
- Someone peeking out from behind a stone
- Donkey with a load covering his back
- Person caught between two stones

8. Score reference to things with unusual container-like shapes or properties. Examples:

- Bagpipes
- Throne
- Ferris wheel
- Chair

9. Do not score masks or buildings. There are, however, a few exceptional instances in which unique structures are scored. The following are the exceptions:
* Since 1958a all buildings are scored for Barrier.

10. Do **not** score instruments which grasp or hold. Examples:

- pliers
- tweezers

Additional general examples of Barrier responses:

- basket
- bay
- bell
- book
- book ends
- bottle
- bubble
- cage
- candle holder
- cave
- cocoon
- cove
- curtain
- dancer with veil
- frosting on cake
- fuzzy poodle
- globe
- harbour
- head dress
- hedge along a walk
- helmet
- inlet
- lake surrounded by land
- island
- mountain covered with snow
- net
- pot
- river
- screen
- spoon
- urn
- wall
- wallpaper
- wig

In scoring any given Rorschach record, the total number of responses falling into the above categories is compiled. Each response is given a value of 1. The final score is simply equal to the total number of Barrier responses.

(a) Fisher and Cleveland 1958a.
Instructions to Rater:

**PENETRATION SCORE (a)**

Penetration of Boundary Score:

An individual's feelings that his body exterior is of little protective value and can be easily penetrated is believed to be expressed in his Rorschach responses in three general ways:

1. In terms of images that involve the penetration, disruption, or wearing away of the outer surfaces of things. Examples: "deformed", "hurt", "bullet penetrating flesh", "shell of a turtle that has been broken open", "squashed bug", "badly worn away animal skin". Fisher and Cleveland (1958a) do not count hides nailed to walls.

2. In terms of images that emphasize modes or channels for getting into the interior of things or for passing from the interior to the exterior. Examples are "vagina", "anus", "open mouth", "an entrance", "doorway".

3. In terms of images that involve the surfaces of things as being easily permeable or fragile. Examples: "soft ball of cotton candy", "fleecy fluffy clouds", "mud that you can step through". Count all clouds, except dark or rain-filled clouds.

More examples of sub-categories of Penetration responses:

1. Mouth being opened or being used for intake or expulsion. Examples include:
   - dog eating
   - dog yawning
   - man sticking tongue out
   - animal drinking
   - man vomiting
   - boy spitting
   - person with mouth open

   Do not score references to use of the mouth for singing or talking.

2. Evading, bypassing, or penetrating through the exterior of an object and getting to the interior. Examples include:
   - X-ray picture
   - body as seen through a fluoroscope
   - cross section of an organ
   - body cut open
   - inside of the body
   - autopsy

   Note: In Fisher and Cleveland's (1958a) sample protocols, they do not score percepts like "lungs", "kidneys", etc. seen alone without an elaboration of how one is privileged to view that image, so do not score lists of inner organs, vertebrae, spinal cords, etc. Do not score skulls or skeletons. Do not score "foetuses", but do score "aborted foetus".

3. Body wall being broken, fractured, injured or damaged. Examples include:
   - mashed bug
   - wounded man
   - person bleeding
   - wound
   - man stabbed
   - man's skin stripped off
## Summary of the Biographical Data of the Female Cross-Sectional Samples

<table>
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<tr>
<th>Variable</th>
<th>Non Pregnant</th>
<th>First Trimester</th>
<th>Second Trimester</th>
<th>Third Trimester</th>
<th>Post-Natal</th>
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</table>
Do not score instances in which simple loss of a body member has occurred (e.g. amputation, head cut off) unless there is a description of concomitant bleeding.

Another sub-variety of this category includes responses involving some kind of degeneration of surfaces. Examples include:

- withering skin
- diseased skin
- withered leaf
- deteriorating flesh

Fisher and Cleveland (1958a) count "rot" or "rotting". Count surfaces which are burnt/ashy. Do not count fuel burning behind space ships, rockets etc. Count "exploding penis", "erupting volcanoes" etc. According to Fisher and Cleveland (1958a) "simple explosions, or A-bomb, are not scored Penetration. If reference is made to something being broken or burst by the explosion, a scoring for Penetration would be indicated.

4. Openings in the earth that have no set boundaries or from which things are being expelled. Examples include:

- bottomless abyss
- geyser spurting out of the ground
- fountain shooting up
- oil gusher coming in

5. All openings. Examples include:

- anus
- birth canal
- doorway
- entrance
- looking into the throat
- nostril
- rectum
- vagina
- window

6. Things which are insubstantial and without palpable boundaries. Examples include:

- cotton candy
- ghost
- clouds
- shadow
- soft mud

7. Transparencies. Examples include:

- can see through the window
- transparent dress

8. Further general examples of Penetration of Boundary responses include:

- animal chewing on a tree
- broken-up butterfly
- jigsaw not put together
- doorway
- fish with meat taken off
- broken body
- man defecating
- bat with holes
- torn fur coat
- frayed wings
- deteriorated wings
- grasshopper pecking at something
- harbour entrance
Any single response can be scored only once as Barrier and once as Penetration even though it might qualify under a number of different sub-categories. However, any response may be scored both as Barrier and as Penetration of Boundary. Responses such as "man with broken armour", "bombed battleship", and "broken bottles" contain both references to unusual protective or containing properties which would qualify them as Barrier responses, and also reference to disrupted boundaries which would qualify them as Penetration responses.

In scoring any given Rorschach record, the total number of responses falling into the above categories is compiled. Each response is given a value of 1. The final score is simply equal to the total number of Penetration responses.

(a) Fisher and Cleveland (1958a)
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<th>Second Trimester (n = 44)</th>
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**Note:**

- Frequencies in brackets.
- \( N = 157 \)
- \( N = 157 \)
- \( N = 36 \)

Percentages are reported in all cases except where indicated differently. Percentages rounded to integers. Some questions more than 1 answer was given, therefore totals exceed 100.
### APPENDIX 0

**Summary of the Biographical Data of the Longitudinal Sample**

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<tr>
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<td>% of Total</td>
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**Sexual Development History**

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<td>10 years</td>
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<td>11 years</td>
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<td>12 years</td>
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<td>13 years</td>
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<td>15 years</td>
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<td>Indifferent</td>
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<td>Excited</td>
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<tr>
<td>Very excited</td>
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<table>
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<td>Brother/Sister</td>
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<table>
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<td>13 years</td>
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<td>14 years</td>
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<table>
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<td>Very upset</td>
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<td>Quite upset</td>
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<tr>
<td>Quite happy</td>
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<td>Very happy</td>
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<td>13-15 years</td>
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<td>16-18 years</td>
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<td>19-21 years</td>
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<td>22-26 years</td>
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<td><strong>Experienced Multiple Orgasms Ever</strong></td>
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**Note:** a Frequencies in brackets. Percentages rounded to integers. Some questions more than one answer was given, therefore total Z exceeds 100.