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WOMEN'S ATTITUDES AND PREGNANCY EXPERIENCES AS PREDICTORS OF SATISFACTION WITH CHILDBIRTH AND PERCEPTION OF PAIN DURING LABOR

By

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ABSTRACT

WOMEN'S ATTITUDES AND PREGNANCY EXPERIENCES
AS PREDICTORS OF SATISFACTION
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This study investigated the role that psychological variables associated with a positive pregnancy experience play in predicting women's perception of pain during labor and their satisfaction with the childbirth process. The subjects were 35 primiparous women who were participating in local childbirth preparation classes. During the third trimester of their pregnancy the women completed the Jourard Body Cathesix Scale, Rosenberg Self Esteem Scale, and several questionnaires designed to investigate attitudes toward childbirth, motherhood, menstruation, identification with one's mother, and expectation of pain and satisfaction. Four to six days after delivery the women completed self reports of their perception of pain, their satisfaction with childbirth, as well as completing again the Body Cathexis and Self-Esteem Scales.

Satisfaction with childbirth was found to be predicted by attitudes toward motherhood, whether or not the pregnancy was planned, and prenatal body image (multiple $R = .51$, $\alpha = .03$). Pain during labor was found to be predicted by attitude toward menstruation, positive attitudes

toward childbirth, and prenatal body image (multiple R = .50, α = .04). There was no relationship between the perception of pain during labor and women's satisfaction with their childbirth experience.

These results suggest that the perception of pain and satisfaction during childbirth are two separate aspects of women's birthing experience. In addition, some variables associated with a positive pregnancy experience are also predictive of women's childbirth experience. Additional factors which may contribute to women's experience of childbirth and which merit additional research are discussed.

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Special thanks go to all the instructors from the Association for Shared Childbirth, the Expectant Parent Organization, and the childbirth education staff at Lansing General Hospital for giving me their precious time and encouragement. My gratitude and admiration also goes to all the women who were willing to share this special time in their lives with me, and made this research a reality.

My final words and thoughts are for Rusty, whom I thank for sharing his love and his life with me.

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INTRODUCTION

Pregnancy, like many other events in women's lives, has received little attention from researchers in psychology. Most of the literature that does exist on women's experience of pregnancy and its relationship to psychological variables has focused on women who have had difficult pregnancies. For example, general moodiness, depression and overdependency have been shown to be related to physical complications in pregnancy, labor, and delivery (Heinstein, 1961). Complications of labor and delivery, including prolonged first and second stage of labor, and uterine intertia have been shown to be related to fear of self, fear for baby, and dependency (Erickson, 1976; Grimm, 1961). Low ego-strength and maternal anxiety have been shown to be related to length of labor and birth weight (McDonald, Gynthur, & Christakos, 1963). These studies have demonstrated the impact that aspects of women's personality have on their experience of pregnancy and childbirth. However, since this type of research focused on experiences of women who have had difficult pregnancies and labors, they contribute little towards understanding the experiences of women who have normal pregnancies and labors.

It is assumed that for most women the period of pregnancy is a period that provides both rewards and stresses. It is a period of

change and growth, a time for integrating new roles into one's sense of self. Psychological, social and biological factors can influence the way women experience pregnancy and labor. The present research focused primarily on psychological variables that are associated with a positive experience of pregnancy and two aspects of childbirth--the sense of satisfaction with the birthing experience and the perception of pain during childbirth.

Personality Development and the Experience of Pregnancy and Childbirth

Until fairly recently few personality theorists explored the relationship between events in adulthood, whether in men or women, and continued personality development. The early literature on the relationship between personality development and pregnancy reflects this bias. In addition, personality theory has reflected the biases of the society at large which has failed to study women seriously (Frieze, Parsons, Johnson, Ruble, & Zellman, 1978). Given this pervasive attitude in psychology concerning women as an object of study the lack of material on pregnancy and its relationship to women's development should not be surprising.

One theorist who has made a major contribution in the area of pregnancy and personality development was Helene Deutsch. She considered childbirth the primary opportunity for women to achieve a sense of self esteem, master, and autonomy. She compared labor's importance in a woman's life to the role of healthy sexual adjustment in a man's. She described childbirth as a highly pleasurable, sensual act, calling it "an orgy of masochistic pleasure" which "contains the acme of sexual pleasure" (Deutsch, 1945, p. 242). Childbirth was the sign of attaining mature personality development in a woman, and the final goal of female development. Deutsch (1939) also explained

childbirth from a perspective of women's place in society. The reproductive function gratified the female's urges for sublimation and sexual gratification. If not for the joys of childbearing, women would not have suffered being denied the opportunities for sublimation and sexual gratification available to men.

A major problem with Deutsch's view of pregnancy is that she clearly views childbirth as the one and only "final" goal of a woman's life. She accepts and reaffirms the idea that women's primary role is to bear children. In fact, she sees childbearing as the candy to sweeten and make palatable women's acceptance of their secondary status. Her discussions of childbirth and its relationship to psychological development justify women's role as it was, rather than investigate what the experience of pregnancy and childbirth is like for women.

As more recent personality theorists began to perceive development as an ongoing process throughout life, the view of childbirth as the final attainment of mature development also changed. Bibring for example, fit the experience of pregnancy and childbirth into a more general framework of adult development. Bibring considered pregnancy to be one of a number of turning points which demand a developmental adaptation during an adult's life.

> "Crises, as we see it, are turning points in the life of the individual, leading to acute disequilibria which under favorable conditions results in specific maturational steps toward new functions. We find them as developmental phenomena, as points of no return between one phase and the next when decisive changes deprive former central needs and mode of living of their significance, forcing the acceptance of highly charged new goals and functions" (Erickson, 1950). Pregnancy, as a major turning point in the life of the woman, represents one of these normal crises, especially for the primigrivada who faces the impact of this event for the first time. (Bibring, 1950, p. 119)

Benedek (1950) also developed the idea that pregnancy and labor are developmental tasks that are a part of a woman's continuing development, not merely the sign of attaining a mature personality.

These theoreticians considered pregnancy a developmental task which was dependent on a woman's prior development and which affected all future development. These theorists, however, still considered pregnancy a period of crisis, and usually explored pregnancy in women with poor psychological development. They were not interested in elaborating or exploring the experience of pregnancy and labor for women who did not experience it as a period of crisis and upheaval.

A differing view of pregnancy is portrayed in the literature on childbirth that has been written by people who have worked intensively with women during their pregnancies and labors. Writers such as Grantly Dick-Read, a British obstetrician, or Sheila Kitzinger, a mid-wife and anthropologist, agree that pregnancy and childbirth are challenges that hold the potential for psychological difficulties. However, they also feel that pregnancy and childbirth hold the potential for "a sense of exaltation and incomparable happiness . . . Many women have described their experience of childbirth as being associated with a spiritual uplifting the power of which they have never previously been aware" (Dick-Read, 1944, p. 13). Or as Kitzinger (1978, p. 13) states, "Giving birth is one expression of the individual's personality. It is not a matter of success or failure, of beating records or putting on a splendid performance, but of giving oneself, mind and body to a creative experience." These authors describe pregnancy and childbirth in language reminiscent of what Maslow describes as a "peak experience" (Maslow, 1970). Thus these writers

perceived the experience of pregnancy and childbirth as an opportunity for new growth and development.

Pregnancy: A Period of Good or Poor Adjustment

In trying to understand the experience of pregnancy, some researchers have tried to determine if pregnancy is, on the whole, a period of good or poor psychological adjustment. Hooke and Markes (1962) administered the MMPI to 24 women during their 8th month of pregnancy. These women scored higher than the original normative female group on seven scales, results that were interpreted as evidence that pregnancy is a period of good adjustment. These findings were supported by Robin (1962) who, through interviews with pregnant women, concluded that pregnancy is a period of well-being. Further, Osborne (1977) compared the MMPI score of 84 pregnant women in their first trimester to the MMPI scores of 1690 Medical patients. The pregnant women were considered to show better psychological adjustments, and showed especially high ego-strength. On the other hand Tolor and Negrazia (1977) using different methods, came to the opposite conclusion. They had 206 women, approximately fifty in each trimester of pregnancy and postpartum, make human figure drawings. The drawings by the pregnant women were compared to drawings by a group of gynecological patients. The drawings by the pregnant women showed more nude figures, emphasized the genitals more, and were smaller than the drawings made by the control group. These results were interpreted as evidence that pregnancy is a period of heightened body preoccupation, increased insecurity, and diminished self-esteem.

A problem with all these studies is that they make gross judgements of pregnancy as a whole being a period of increased or decreased

psychological health. They did not, for example, analyze what variables contributed to a woman's ability to maintain her well-being during pregnancy. It seems that pregnancy and childbirth, like any event in an adult's life, holds the potential for extreme pleasure and joy, extreme pain and despair, or any combination of a variety of emotions that people experience. Researchers must begin to more carefully explore the variables which are associated with different types of pregnancy experiences.

Psychological Variables Related to Healthy Pregnancies

There is a large body of literature that exists on the relationship between psychological variables such as stress and anxiety and the experience of pregnancy. This literature, which explores the experience of pregnancy of women with various psychological difficulties, will not be reviewed here. For summaries of this literature, see the papers by Leifer (1977) and Cohler (1970). Reviewed below are those studies that explore the relationship between psychological variables and the experience of pregnancy for women who have normal pregnancy and childbirth experiences.

Meyerowitz (1970) studied 407 primiparous couples. Over 300 items from interview material were factor analyzed and correlated with satisfaction during pregnancy. The cluster of items that accounted for almost all of the women's sense of satisfaction during pregnancy included having a positive body image, high self-esteem, and husband's support of her self-esteem. The women who felt most proud during pregnancy, liked their bodies even when distended, and were married to men who thought they were sexy when pregnant, had the best adjustment to pregnancy and the most satisfaction.

McConnel and Daston (1960) similarly found a strong relationship between positive body image and good adaptation to pregnancy. They administered the Rorschach and Osgood Semantic Differential to 28 multiparous women from three different clinics, and interviewed the women to derive their attitudes toward pregnancy. These instruments were given during the third trimester, and again three days postpartum. Findings indicated that women with the most positive body images had the most positive attitude toward pregnancy. In addition women experienced their bodies during pregnancy as potent and strong on the one hand and vulnerable on the other. Moreover, the women with the most positive body images showed less vulnerability, though this trend did not reach statistical significance.

Leifer (1976) intensively studied 19 white, middle class, primiparous women through their entire pregnancy and seven months postpartum. Those with high self-esteem and positive body image early in pregnancy not only had a satisfying pregnancy, but experienced it as a period of personal growth. Women who had the most positive feelings about their bodies reported feeling an increase in their sense of womanliness. Leifer also reported that particularly in the third trimester, women experienced more emotional stress. This study, as well as the one by McConnel and Daston, begins to demonstrate the complexity of the experience of pregnancy, a period when women may feel increased vulnerability and stress at the same time that they feel increased strength and womanliness

These studies indicate that women with a positive body image, good self-concept, and positive attitudes toward pregnancy experience their pregnancy positively; but women also experience stress and vulnerability,

particularly toward the end of pregnancy. The results of these studies suggest that the psychological variables body image, self-concept, and attitudes towards pregnancy and childbirth are critical for understanding women's experience of pregnancy. However, it is unclear how these variables, which seem associated with the positive experience of pregnancy, are related to the women's experience of the childbirth process.

Satisfaction with Labor

Some recent research has tried to explore the experience of childbirth and discern what type of woman has a positive childbirthing experience. Grimm and Venet (1966) studied 125 normal pregnant women through their entire pregnancy. A series of attitudinal ratings scales were used to study the relationship between emotional characteristics and childbirth experience. Obstetricians and nurses rated how well the women tolerated labor and delivery. Women who expressed the most favorable attitudes toward labor and delivery and who were "independent", tolerated labor and delivery best. "Independent" women were typified as self-reliant people who did not accept rigid cliches and who did not adopt a sick role during pregnancy.

Doering and Entwisel (1975) interviewed 279 mothers 9 weeks after childbirth. They found a strong positive correlation between preparation for childbirth, level of awareness during delivery, and sense of satisfaction with labor and delivery. They also found that women who prepared and actively participated in their labor and delivery felt the most satisfaction with the birthing process.

Davenport-Slack and Boylan (1974) studied 75 women, interviewing them four weeks prior to delivery and within 18 hours after delivery.

Women's verbatim accounts of their delivery experience were analyzed. It was found that women who had had training, who had a positive attitude toward childbirth, and described themselves as showing less pain than average described their birthing experience most positively.

All these studies suggest that women who have positive attitudes toward labor, who actively prepare for childbirth, who tend to be self-reliant, and do not perceive their pregnancy as a time of illness experience the most satisfaction with their labor. None of these studies, however, investigated how the sense of satisfaction with labor is related to the variables found to be associated with a positive experience of pregnancy. One purpose of the present research was to explore the relationship between satisfaction with labor and body image, self-esteem, and attitudes toward childbirth, all of which are psychological factors that are related to a positive pregnancy experience. It was hypothesized that the variables related to a positive pregnancy experience would also predict women's sense of satisfaction with childbirth.

Perception of Pain during Labor

One aspect of the experience of women during childbirth is their perception of the pain, an experience subject to modification of personal experiences, expectations, and culture (Melzak, 1961). Research on the perception of pain during labor indicates strong relationships between expectations about childbirth, personal attitudes towards becoming a mother and the perception of pain.

Eysenck (1961) studied 100 primiparous women who delivered without a history of miscarriage or Caesarian section. Prior to the delivery the women were given the Maudsley Personality Inventory and interviewed.

Following delivery, they were interviewed again and given a self-report of pain. The self-report of pain was highly correlated with fear during labor, hesitancy to have other children, and a sense of losing control during labor. Interestingly, there was no correlation between the women's self-reports of pain and ratings of pain made by the attendant nurses.

Davenport-Slack and Boylan (1974) related self-report of pain to 11 psychological and background variables in a study of 75 women. The women were interviewed 4 weeks prior to delivery, and within 18 hours after delivery. The perception of pain was not related to gravida, prenatal training, menstrual experience, sexual desire, medication expectation, wanting husband present, or general overt reaction to pain. The authors concluded that childbirth pain is relatively uniform and invariant. They found that training did reduce body-tenseness, as rated by nurses during delivery, but this fact did not affect the women's own self-report of pain. This result is similar to the finding of Eysenck (1961) that there was no relationship between the women's self-report of pain and nurses' ratings of pain. Measures of pain made by observers, even trained observers such as nurses, do not appear to accurately reflect how labor feels to the woman giving birth.

Standley (1978) interviewed a group of 53 primiparous couples late in pregnancy, and observed them during labor. The degree of pain exhibited by the women in labor was related to their "psychological perspective"--their ability to reconcile the anticipated conflict and changes parenting would bring. The greater the women's conflict about becoming a mother, the more pain she exhibited during labor.

Thus, data on the perception of pain during labor yield a rather complex inconsistent picture. The work of Eysenck, using a self-report of pain, and the work of Standley, using exhibition of pain, relate the perception of pain to fears about labor, conflicts about becoming a mother, hesitance to have other children, a sense of lack of control during childbirth. The work of Davenport-Slack and Boylan, using a self-report of pain, found no relationship between pain and 11 predictor variables. Given the lack of a relationship between self-report of pain and ratings of pain by attendant nurses, it is particularly difficult to interpret the results of these studies that used different instruments for measuring pain. Thus it is unclear if the perception of pain is invariant, as Davenport-Slack and Boylan claim, or if it is related to the conflicts mentioned above.

Further, none of these researchers related pain to variables found to be associated with a positive pregnancy experience--body image, and self-concept. Some of them did find a relationship between fears about childbirth and pain, though it is unclear how a positive experience of pregnancy is related to the perception of pain during childbirth. Thus, the proposed research also explored how the perception of pain during labor, when measured by self-report, was related to variables associated with a positive pregnancy experience.

Summary of Issues

Some of the literature on psychological aspects of pregnancy suggests that women who have a positive pregnancy experience have a positive body image, good self-concept, and positive attitudes toward childbirth. No research to date, however, has studied the relationship between these variables and the experience of satisfaction with

childbirth itself or the perception of pain during labor. The present research studied these relationships. This research assumes that pregnancy and childbirth are not events that happen to women, but that they are experiences which cannot be separated from the woman's development as an individual. It is expected that psychological variables which are associated with a positive pregnancy experience will also be related to satisfaction with the birthing process. These similar relationships exist because the same aspects of a woman's personality which enable her to experience her pregnancy positively will also enable her to experience the birthing process positively.

This research also hopes to clarify the relationship between women's experience of pain during labor and their sense of satisfaction with childbirth. Few researchers have attempted to evauate both women's satisfaction and their perception of pain during labor in relation to the same set of variables. Evaluating the contribution of the same variables to both women's sense of satisfaction and their perception of pain during childbirth should clarify if these are separate aspects of women's experience of childbirth.

In order to address these issues, measurements of body image, self-esteem, attitudes toward childbirth, demographic variables, and attitudes towards motherhood, menstruation, and one's own mother were made during the participants' third trimester of pregnancy. Multiple regression analyses were performed to determine the contribution of these variables towards the prediction of satisfaction with childbirth and the perception of pain during labor. Table 1 presents a list of variables examined.

TABLE 1

Third Trimester and Postpartum Variables

Third Trimester Variables	Postpartum Variables
Body Image	Body Image
Self-Esteem	Self-Esteem
Expectation of Satisfaction	Satisfaction with Labor
Expectation of Pain	Perception of Pain during Labor
Positive Attitude towards Childbirth	
Negative Attitude towards Childbirth	
Attitude towards Menstruation	
Identification with own Mother	
Attitude towards Motherhood	
Age	
Socioeconomic Status	
Training for Childbirth	
Pregnancy Planned	
Length of Relationship	

METHOD

Subjects

The subjects were 35 women from various childbirth education classes in the Lansing, Michigan area. About 10% of the women solicited to participate in the research volunteered. The average age of the women was 25.14 years (SD = 3.40), and mean length of marriage was 3.41 years (SD = 2.35). All women but one were married. Twenty-five of the women had planned their pregnancies, 10 had not.

All the women had been involved in childbirth education classes. Twenty-six of the women received Lamaze training, from one of two sources--the Association for Shared Childbirth[1], or Lansing General Hospital. Both of these sources hold classes which teach the Lamaze breathing procedures, and the classes are taught by certified Lamaze instructors. Nine of the women were trained through the Expectant Parent Organization (EPO). EPO training differs from Lamaze in that it teaches additional breathing techniques, uses only registered nurses as instructors, and seems to teach a greater acceptance of hospital procedures. There was very little substantive difference between either of the Lamaze programs or the EPO program.

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[1] One woman participated in Lamaze classes taught by her doctor's wife, a certified Lamaze instructor no longer associated with the Association for Shared Childbirth.

Instruments

The following instruments were completed by all the women:

1. Personal data form
2. Incomplete sentences
3. Body Image Scale
4. Rosenberg self-esteem scale
5. Satisfaction with labor scale
6. Perception of pain scale

Personal data form: The personal data form collected information on the women's age, education, occupation, length of marriage or relationship, type of training for childbirth, whether the pregnancy was planned, and the husband's occupation. See Appendix C for a copy of this instrument.

Incomplete sentences: The incomplete sentences were designed to provide an unstructured stimulus through which the women's attitudes towards childbirth and several other variables could be freely expressed. The following variables were derived from the scoring of the incomplete sentences: positive attitudes towards childbirth, negative attitudes towards childbirth, attitude towards motherhood, identification with one's mother, and attitude towards menstruation.

The positive and negative attitudes toward childbirth expressed in the sentences were scored using Westbrook's (1977) classification of positive and negative aspects of childbearing. Trained raters counted the total number of positive and negative aspects of childbirth in the women's responses to the first four sentence stems.

Attitude towards motherhood was derived from rating the response of sentence stem #5 on a five point scale ranging from negative attitude, scored as 1, to positive attitude, scored as 5. Identification with one's mother was derived from rating on a similar 5 point scale, the response to items six through eight, and then averaging these scores.

Attitude towards menstruation was similarly derived from rating items 9 and 10. See Appendix D for a copy of the incomplete sentences and scoring procedures.

All the variables derived from the incomplete sentences were rated independently by four trained raters; the rater's scores were then averaged to produce each woman's score for each of the variables. Table 2 contains the interrater reliability for each variable, and for each pair-wise combination of the 4 raters.

Body Image Scale (BIS): The BIS consists of 50 items rated on a 5 point scale ranging from very dissatisfied (1) to very satisfied (5). The BIS is a modification of the Jourard Body-Cathexis scale, modified to include reference to genitals and overall satisfaction with one's body. The BIS score is the sum of the endorsed responses divided by 50. This overall score has been shown to be highly related to satisfaction with self and to security with one's self-image. The measure has been shown to have good internal consistency and construct validity (Secord and Jourard, 1953; Jourard and Secord, 1955). See Appendix E for a copy of the BIS.

Rosenberg Self-Esteem Scale (Esteem Scale): The Esteem Scale consists of 10 items scored on a 4 point scale ranging from strongly agree to strongly disagree. It was chosen for its brevity and its high reliability (Rosenberg, 1955). See Appendix F for a copy of the Esteem Scale.

Satisfaction with Labor Scale: This self-report scale contains 10 items and was developed for this study. The items were scored on 5 point Likert scales, and the score for satisfaction was the sum of the endorsed items divided by the number of items endorsed. There

TABLE 2

Interrater Reliability for Incomplete Sentences

Variable	Pairwise Combinations of Raters 1:2	1:3	1:4	2:3	2:4	3:4	Avg. Reliability
Positive Attitude	.61	.77	.74	.63	.52	.52	.63
Negative Attitude	.76	.74	.66	.73	.61	.57	.68
Motherhood	.70	.65	.54	.71	.67	.64	.65
Identification with Mother	.75	.71	.73	.64	.74	.67	.71
Menstruation	.72	.73	.85	.93	.82	.84	.81
Avg. Reliability	.71	.73	.70	.73	.67	.65	.70

were two types of items on the scale. Items 1, 8, 9, and 10 were overall ratings of feelings such as satisfaction, pleasure, etc., associated with bodily sensations during delivery. Items 2 through 7 were the women's ratings of their ability to relax and feel in control of their bodies during the three stages of labor, and the support they received from their husband during childbirth. These items were based on the work of Doering and Entwisel (1975) which found an association between the expression of satisfaction with childbirth and taking an active role during childbirth. This scale was administered both during the third trimester and postpartum, with phrasing modified to make it appropriate to the particular time of administration. See Appendix G for both versions of the Satisfaction Scale.

Perception of Pain Scale: This scale is a 10 item self-report measure developed for this research. Each item is scored on a 5 point Likert scale. The total pain score was the total score for all endorsed items divided by the number of items endorsed. The items were derived from questionnaire items previously shown to be related to the perception of pain during labor (Eysenck, 1961; Davenport-Slack & Boylan, 1974) and from anecdotal accounts of childbirth (The Boston Women's Health Book Collective, 1976; Kitzinger, 1978). This scale was administered both during the third trimester and postpartum, with phrasing modified to make it appropriate to the particular time of testing. See Appendix H for both versions of this instrument.

Procedure

The participants in this study were contacted through local childbirth education classes. The researcher gave a brief presentation of the research including what volunteers would be expected to do during

the research. Interested women were then given an envelope containing a cover letter explaining the research again (see Appendix A), a consent form (see Appendix B), the personal data form, the incomplete sentences, BIS, Esteem Scale, Satisfaction Scale, and Pain Scale. The women completed these at home during their third trimester and mailed them back to the researcher at that time. The women were then contacted by phone by a research assistant, thanked for their help, and asked to contact the researcher when they gave birth. The women were also contacted periodically by research assistants to ensure that the time of birth would be accurately noted.

Four to six days after delivery, the BIS, Esteem Scale, Satisfaction Scale, and Pain Scale were administered to the women in their homes. If the women could not be interviewed within this time period, they were not included in the final sample. In addition, women who had Caesarian deliveries, or medical complications that required an extended stay in the hospital were not included in the final sample. Every effort was made to have the final contact made by the same research assistant who had been contacting the women prior to the birth.[2]

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[2]In addition to the procedures described above, all the women in the sample were interviewed during this contact, and the interviews tape recorded. The women were asked to respond to the following three questions: 1. Describe whatever thoughts or feelings you can recall experiencing from the time you first thought you were in labor until you gave birth. 2. In what way did your birthing experience differ from what you had expected? 3. Based on your own experience, what advice would you now give to someone about to have their first childbirth? This data has not yet been evaluated, and therefore will not be discussed in the remainder of this paper.

RESULTS

One step multiple regressions were performed to assess the contribution of third trimester variables toward variation among the women in the satisfaction and the pain that they reported. The first step in these analyses consisted of constructing a simple correlation matrix for all the possible pairwise combinations of the variables. The expected number of significant correlations for 18 pairwise combinations with alpha less than or equal to .05 is 7.62. This value is much less than the 32 significant correlations found in the present data. Before presenting the results of the multiple regression analyses, some comments are made regarding the significant simple correlations (see Table 3 for the significant correlations. $\alpha \leq .05$).

Inter-Correlations Among Third Trimester Variables

There were a number of unexpected relationships present among the third trimester variables. The significant relationships between age and self-esteem, and length of relationship with positive and negative attitudes towards childbirth were unexpected. They suggest that in this sample, women who were older had higher self-esteem and women with longer marriages had more positive attitudes toward childbirth. The negative relationship between body image and expectation of satisfaction with labor was also unexpected. The literature reviewed earlier in

TABLE 3

Significant Correlations*, Third Trimester and Postpartum Variables

		Third Trimester Variables															Postpartum Variables			
		Age	Length of Relationship	Pregnancy Planned	Socioeconomic Status	Training	Body Image	Self Esteem	Satisfaction	Pain	Positive Attitude	Negative Attitude	Menstruation	Motherhood	Identification with Mother	Body Image	Self Esteem	Satisfaction	Pain
Third Trimester Variables	Age		.35		.61			.31										.31	
	Length of Relationship			.46	.44						.33	-.63					-.29		
	Pregnancy Planned										.50						-.37		
	Socioeconomic Status																		
	Training																		
	Body Image							-.29	-.43	.38						.43	-.37		
	Self Esteem												.34	.41		.34	.61		
	Satisfaction																	.72	
	Pain																		.33
	Positive Attitude												.40	.30			-.33		-.41
	Negative Attitude																		
	Menstruation																		-.43
	Motherhood														.34			.34	
	Identification with Mother																.38		
Postpartum Variables	Body Image																		-.38
	Self Esteem																	.31	
	Satisfaction																		
	Pain																		

* $\alpha \leq .05$

this paper suggested that there would be a positive relationship between body image and the expectation of satisfaction with labor.

Self-esteem did not show the expected relationships to body image, positive attitude towards childbirth, or expectation of satisfaction with labor. This variable, however, did show a positive relationship to age, identification with one's mother, and attitude towards motherhood.

Having a positive attitude towards childbirth was positively related to body image, and attitude towards menstruation, which were as expected. Positive attitude towards childbirth was also positively related to length of relationship and whether the pregnancy was planned, which were results not previously found in the literature.

Interrelationships Among Postpartum Variables

Only two intercorrelations of the postpartum variables were significant, and both of these were in the expected direction. There was a positive correlation between self-esteem and perception of satisfaction. There was also a negative correlation between body image with the perception of pain during labor.

As in the third trimester measures, there was no relationship between body image and self-esteem.

Third Trimester Variables with Postpartum Variables

A number of variables were predictive of esteem following birth, though not all of them as expected. The length of the marital relationship, and having planned the pregnancy were both associated with lower self-esteem after childbirth. Body image in the third trimester was also negatively related to esteem postpartum. This pattern of findings indicate that for this sample, a more positive body image prior to

childbirth, a longer marital relationship, and having planned the pregnancy were associated with lower self-esteem postpartum. Other correlations, however, were in the expected direction. There was a positive relationship between identification with one's own mother and self-esteem postpartum. There was also a positive relationship between self-esteem in the third trimester and postpartum self-esteem.

The correlations between third trimester variables and body image postpartum were as expected. Body image and self-esteem during the third trimester were positively related to body image postpartum.

The variables that were significantly related to the perception of pain were all in the expected directions. Women who expressed positive attitudes towards childbirth and viewed their menstruation as more comfortable than most women's reported less pain. There was also a positive relationship between the expectation of pain in the third trimester and the report of pain following the birth.

The relationship between third trimester variables and the perception of satisfaction were all in the expected direction. There was a strong relationship between the expectation of satisfaction and the actual report of satisfaction following childbirth. Women who expressed more positive attitudes towards becoming mothers and who were older also reported more satisfaction with their labors.

Multiple Regressions

Simple one-step multiple regressions were performed to see if a cluster of third trimester variables would account for much more of the variance of either the perception of pain or sense of satisfaction than individual variables. One-step regression analyses were performed because there were no hypotheses about which variables had a more

primary causal relationship with criterion variables. Table 4 contains the significant multiple regression results.

The multiple regression analysis revealed that the motherhood, body image, and planned pregnancy variables accounted for 25% of the variance of satisfaction with childbirth. It was also found that the following variables accounted for 26% of the variance of the perception of pain: attitude towards menstruation, a positive attitude towards childbirth, and body image.

Change from Third Trimester to Postpartum

Body image, self-esteem, satisfaction with labor, and perception of pain were measured both during the third trimester and postpartum. Two tailed t-tests were performed to evaluate if there was a significant change in any of these measures from the third trimester to postpartum. See Table 5 for a summary of the results. There were two significant results. Self-esteem postpartum was significantly higher than esteem during the third trimester. The perceived pain was also significantly greater than the expectation of pain during the third trimester.

Table 4

Regression Analyses

Postpartum Variable	Third Trimester Variable	Multiple R	Simple R	Overall F	Probability
Satisfaction with Childbirth	Attitude towards Motherhood	.36	.36	4.72	.04
	Body Image	.45	-.27	3.74	.04
	Pregnancy planned	.51	.20	3.42	.03
Perception of Pain	Menstruation	.42	-.42	6.55	.02
	Positive Attitude	.49	-.40	4.76	.02
	Body Image	.50	-.25	3.25	.04

Table 5

Change from Third Trimester to Postpartum

Variable	Third Trimester Mean	Postpartum Mean	DF	t	Two-tailed Probability
Body Image	3.58	3.75	34	1.61	.116
Self Esteem	3.42	3.56	33	3.14	.004
Satisfaction	3.35	3.42	34	.79	.432
Pain	2.47	2.81	33	3.34	.002

DISCUSSION

One of the motivations behind this research was the hope of collecting data that would represent a wide range of women's birthing experiences. It had been hoped that women from a wide range of backgrounds with various training experiences would be participants. The actual sample did not reflect the diversity that had been hoped for. The greatest limitation was the fact that all the women were involved in extensive training for childbirth. Attempts were made to include in the sample women training for homebirths with a local midwife. Unfortunately only one woman from this group volunteered and gave birth prematurely so she could not be included in the sample. This sample showed no variability in terms of training, and also was more intensively involved in training for childbirth than is common.

The sample was almost entirely from the middle classes. In 43% of the families, the husbands were involved in factory jobs, trades, and other nonprofessional occupations. The rest of the sample included college graduates and professionals. The sample was entirely White. The mean age for the women was 25 years, which is typical of the age of subjects in other research on childbirth, but may be a bit old for a sample of primipari. Finally, the women who participated were volunteers. No attempts were made to explore the women's motivation

for participating. However, it is likely that these women were more motivated to learn about their pregnancies and to speculate on its role in their lives than other women who did not volunteer.

The special character of these women must be kept in mind when interpreting the results. The homogeneity of the sample may have tended to decrease the variance of the research variables, attenuating the possible range of the regression coefficients. In addition, it limits the degree to which the results are generalizable.

Prediction of Satisfaction with Labor

The hypothesis that body image, self-esteem, and attitudes towards childbirth would have a positive relationship with a sense of satisfaction with labor was partially supported. The single variable that contributed most towards the prediction of the women's satisfaction with childbirth was the women's attitude towards motherhood ($r = .34$). The prediction of satisfaction was strengthened when body image and the fact that the pregnancy was planned were included into the regression equation (multiple $R = .51$). In this sample, women who had the most positive attitude towards becoming a mother, who planned their pregnancies, and who in the third trimester had less positive body images, tended to express the most satisfaction with their labors.

It is interesting that in the multiple regression equation, body image has a negative relationship with sense of satisfaction. It had been hypothesized that a positive body image in the third trimester would be associated with satisfaction with the childbirth experience. This hypothesis was not supported. Myra Leifer (1977) studied the progress of 19 primipari from their first trimester through the seventh month postpartum. She reported considerable change in body image for

her sample throughout pregnancy. The women in her study reported less positive body images as the pregnancy progressed. It may be that in the present sample the decrease in body image by the third trimester was so great that the relationship between body image and satisfaction with labor was not in the expected direction. Another possible explanation is that women with very high body image scores in the third trimester were attempting to deny some of the increased anxiety and stress they were experiencing. In this case, women who could admit to their concerns, as expressed in a decreased body image, would also be able to most honestly feel satisfied with their experience of childbirth. Another consideration is that women in this sample were tested at varying points in their third trimester. While it is extremely difficult to determine with accuracy when women enter their third trimester, it may be important to control more precisely when testing is done during women's pregnancy.

A result that makes a great deal of intuitive sense is the contribution of whether the pregnancy was planned to the sense of satisfaction with labor. Women who planned their pregnancies showed greater satisfaction with labor. While this is not a surprising finding, the impact of planning for pregnancy on women's experience of childbirth has only been evaluated in one other study. Leifer (1977) reported that 4 women in her sample had unplanned pregnancies. These 4 women were the only respondents in Leifer's sample of 19 to experience a decrease in self-esteem during pregnancy. They did not show signs of increased maturation during pregnancy and experienced even more stress postpartum when confronting their new role as mother. They also showed less emotional attachment toward their infants than the

other women in the sample. These results, as well as the results of the present sample, suggest that exploring whether a woman has planned her pregnancy has implications for her experience of the birthing process. Leifer's study raises the additional concern of the impact of having a planned pregnancy on a woman's attachment to her child.

In the present sample, planning the pregnancy was also positively related to length of relationship and positive attitude towards childbirth. These correlations suggest that women who have been in their relationships longer, who view childbirth as having a positive impact on their lives, and planned to become pregnant were more likely to feel more satisfaction with their childbirth experience. Women who thought about the consequences of becoming pregnant, and who felt they were ready to assume the role of mother expressed greater satisfaction with delivery. Perhaps Grimm and Venet's (1966) and Doering and Entwisel's (1975) finding that women who actively prepare for labor find it more satisfying should include whether the pregnancy was planned as an aspect of active preparation for labor.

While women's age had a positive relationship with satisfaction when the simple correlations were examined, age did not enter into the multiple regression equation. Adding this variable to the equation with motherhood, the fact that pregnancy was planned, and body image both decreased the size of the regression coefficient and decreased the precision of the estimate. All the variables which did enter into the regression equation for satisfaction were correlated with positive attitude towards childbirth in the third trimester (motherhood $r = .30$, body image $r = .49$, pregnancy planned $r = .50$). These variables form an interrelated cluster of variables (motherhood, body

image, pregnancy planned) which are primarily related to the women's decisions to become mothers. On the other hand, the impact of age on satisfaction may represent the influence of broader socioeconomic and biological factors on the sense of satisfaction. Age was related to length of relationship ($r = .35$), socioeconomic status ($r = .61$) and self-esteem ($r = .31$). It is interesting to note that it is the psychological variables related to assuming the role of mother which accounts for most of the variance of the women's sense of satisfaction.

The women's expectations of their satisfaction actually had the strongest predictive relationship with their reported satisfaction, $r = .72$. The women's estimate of their satisfaction with labor had more predictive power than the cluster of third trimester variables which made a significant contribution toward the variance of satisfaction with labor. It seems that by the third trimester, women who have chosen to become pregnant, who have positive attitudes about motherhood, and have a less positive body image, have settled enough of their concerns about childbirth to accurately predict how satisfied they will be with their experience of labor. This is possible since the women who have taken an active role from the moment of planning their pregnancies will also actively plan for and arrange to have the type of childbirth experience they want.

Relationship of Self-Esteem Measure to Other Variables

The most difficult results to explain are those involving the relationship of the self-esteem measure to other variables. Self-esteem did not contribute to the prediction of satisfaction with labor, nor did it show the expected relationship to body image or positive attitudes toward childbirth. There are several possible explanations for

the lack of relationship between the self-esteem measure and the other variables. The first possibility to consider is how the data fit the assumptions of regression analysis. One may calculate a regression coefficient for any set of data, whether or not it is normally distributed. However, the possible range of the regression coefficients is constricted to the extent that the distributions involved differ from others in the sample (Carroll, 1961). Examining the distributions of the variables in the present study revealed that the distribution of the self-esteem measure was more lepto-kurtic than any other variable (Kurtosis = -1.13) and that it had the smallest standard deviation (S^2 = .32). Research has demonstrated that the sampling distribution of Pearson r in leptokurtic populations is significantly different than the theoretical distribution of r in samples of size 15 and 90. (Norris and Hjelm, 1961). Small, leptokurtic samples produce fewer significant correlations than expected. The distribution of the values of the self-esteem measure in this sample may have precluded obtaining a significant multiple regression coefficient which contained the self-esteem measure.

Several aspects of this sample probably contributed to the small variance of the self-esteem measure. All of the women in the sample may actually have had very high self-esteem. They all were volunteers and it is highly unlikely that women who had low self-esteem would have volunteered to participate in a study of this type. In addition, social desirability may have contributed to the women's tendency to endorse items reflecting high self-esteem. The power of the social desirability may have been especially strong for a sample of women involved in preparing for childbirth, and participating in the extensive

prenatal training of this sample. All of these factors would act together to decrease the variance of the self-esteem measure and decrease the range of possible regression coefficients.

The other factor to consider when evaluating the results involving the self-esteem measure was the instrument used. The Rosenberg Scale was chosen primarily because of its brevity. It is extremely simple, and only measures one aspect of self-esteem--the aspect of self-acceptance. It may be that this one notion is not complex enough to capture the contribution that previous researchers have described as self-image (Meyerawitz, 1970), or self-reliance and independence (Davenport-Slack & Boylan, 1974). By choosing a measure that would not intimidate potential volunteers, the meaningfulness of the variable may have been sacrificed.

A more meaningful measure which might be interesting to apply to research of women's pregnancy and birthing experience is Jane Loevinger's (1977) scale of ego development. Loevinger views ego development as related to psychosexual and cognitive development, yet at the same time separate. She also views it as related to the development of optimum mental health. Her scale provides both a developmental system, and a characterological system. Thus defining a person according to Loevinger's 10 stage scale provides one with information about their impulse control, character development, interpersonal style, conscious preoccupations and cognitive style. It would be interesting to explore how women who have higher ego development experience their labor. Would they tend to be the women who experience it as a "peak experience", a moment of growth and fulfillment? These speculations deserve future consideration.

Prediction of Perception of Pain

The results of the analysis of the perception of pain were interesting in that they did demonstrate a relationship between third trimester variables and the perception of pain during childbirth. The variable that contributed the most towards the perception of pain was the women's attitude toward menstruation. Women who reported their periods as more comfortable than most and as not painful also reported less pain during childbirth ($R = .42$). Positive attitudes towards childbirth increased the amount of variance of reported pain accounted for to 24%. Women with both positive attitudes towards menstruation and who expressed many positive feelings about childbirth were likely to experience less pain during childbirth, according to their self-report.

Body image did contribute to the regression equation for the perception of pain. Women with a higher body image reported less pain. However, the increase in the amount of variance accounted for by the addition of body image to the multiple regression equation was very small--only 1 percent. It is clear from research reviewed earlier that body image is a sensitive measure of women's experience of pregnancy. However, in terms of predicting women's perception of pain during labor, body image contributed little compared to women's attitude towards menstruation and attitude towards childbirth.

It is interesting that the regression equation that predicted pain contained positive attitudes towards childbirth, and not negative attitudes. The expression of negative feelings about childbirth was not associated with the report of more pain. Women who expressed both positive and negative feelings about childbirth were not more likely

to experience pain than women who expressed only positive feelings about childbirth. Women who have more positive feelings about childbirth perceive it as less painful, even if they are aware of and express some negative feelings about childbirth. This pattern is suggestive to women with higher ego development, who are able to perceive and articulate the complexity of their experiences.

These results do not support the work of Davenport-Slack and Boylan (1974), which found the perception of pain during childbirth invariant and unrelated to 11 predictor variables. Not only was there a significant relationship between reported pain and menstrual attitude and positive attitude towards childbirth, but there was clearly variation in the women's perception of pain during labor. This research suggests that the amount of pain which women perceive during childbirth does vary, and that having a positive attitude towards childbirth and a positive attitude towards menstruation are related to the perception of less pain during labor.

The women's expectation of pain was not as accurate a predictor of their self-report of pain as the combination of variables used in the regression analysis. In addition, women's expectation of pain in the third trimester tended to underestimate their actual self-report of pain following delivery. The difference between their expectation of pain during the third trimester and their actual self-report of pain was significant, $\alpha = .002$. It may be that while one may prepare for childbirth, and try to ready oneself for dealing with the pain, one cannot accurately anticipate how painful childbirth will actually be. It is also possible that different training procedures are better able to help women prepare and anticipate the pain during childbirth.

All the women in this sample participated in very similar training programs. In fact, there were no differences which training accounted for in this study. It would be interesting to see if women's expectation of pain differed if they went through different training procedures.

There was no direct relationship between the perception of pain and the sense of satisfaction with childbirth. For this sample, women who had very satisfying childbirth experiences were just as likely to experience as much pain as women who had less satisfying childbirth experiences. This is interesting in light of some of the interview material that was collected when the postpartum measures were administered, but which has not yet been analyzed. A number of the women in this sample, when describing their childbirth experience, reported some concern that if they had experienced pain, they were somehow failing at their childbirth experience. Some of them felt that if they had gone to class and studied their breathing techniques, they should not have experienced any pain. They saw pain as a sign of having failed in some sense. Fortunately, for the sample as a whole, the perception of pain did not diminish the women's sense of satisfaction with their childbirth experience.

Considerations for Future Research

The association between satisfaction with labor and attitude towards motherhood suggests a relationship between women's satisfaction with childbirth and Erik Erickson's theory of development (1965). Erickson outlines a theory of personality development that extends through adulthood. Each of the stages he defines is based in the outcomes of the previous stages and adds a new conflict for the individual

to confront. While he does not elaborate upon the adult stages, he lists the task of adulthood as developing "generativity". Generativity includes productivity, creativity, and also the concern with establishing and guiding the next generation. Erickson explicitly states that the mere fact of having children does not insure the achievement of generativity. For generativity marks the attainment of new growth, a new ego quality. Nor must one have children to attain generativity. However, I wonder if the women who found childbirth satisfying, who had chosen to become pregnant and saw motherhood as a positive role, were people who had begun to successfully resolve the conflict between generativity and stagnation. As Erickson so clearly states, their ability to resolve this task was determined by their previous development, their prior personality development. A fruitful course of research may be to explore whether or not women giving birth had begun to achieve Erickson's VII stage of development, of generativity vs. stagnation. One would predict that women at lower stages of Erickson's epigenetic chart would experience less satisfaction during childbirth. Women at the stage of generativity vs. stagnation would be more likely to find their childbirth experiences satisfying. This does not presume that childbirth is the only way to fulfill this stage of development. Rather, it can be hypothesized that women who have reached this stage, whose "identity" and "intimacy" needs have been filled or conflicts around these issues resolved, and who choose to become mothers will experience the most satisfaction and a sense of growth through the birthing process (Stollak, personal communication).

This research was primarily concerned with examining the relationship between certain aspects of women's personality and their

experience of childbirth. The research variables were able to account for approximately 25% of the variance of satisfaction and pain. The question remains, what may account for the other 75% of the variance?

An area that was not explored in this research was the impact of interpersonal variables on the women's birthing experience. Interpersonal variables include the woman's relationship with her husband, her doctor, and the support she received from those present during the actual delivery. The impact of the support from others must be studied in conjunction with when it occurs during the pregnancy and delivery. For example, in exploring the impact of a husband's support on his wife's birthing experience, one must evaluate the marital relationship during pregnancy as well as the husband's actual participation during the birthing process. Some research has demonstrated the impact of the marital relationship on the women's sense of satisfaction during childbirth (Novi, Block, Charles, Myering, Meyers, 1977; Meyerowitz, 1970; Davenport-Slack & Boylan, 1974). Some of the results of this study also suggest a relationship between the marital relationship and a woman's experience of pregnancy and delivery. For this sample, the length of the relationship was positively correlated with the pregnancy being planned ($r = .46$), and positive attitudes towards childbirth ($r = .33$). Research by William Henneborn and Rosemary Cogan (1975) demonstrated the need to explore not just the marital relationship during pregnancy, but the impact of how the husband participates during the labor. Henneborn and Cogan compared the labors of women whose husbands attended labor and delivery with the labors of women whose husbands attended only during the first stage of labor. All the subjects were enrolled in equivalent childbirth education programs,

and there were no differences between the two groups of husbands on a number of attitudinal measures recorded prior to childbirth. However, the women whose husbands remained present through the entire childbirth process reported more positive feelings and less pain than the women whose husbands were only present during the first stage of labor. The women whose husbands were present during delivery also took less medication during the birthing process.

The importance of the women's support during labor is also suggested by the work of Doering and Entwisel (1975). In this study, there was a significant relationship between awareness during childbirth and women's attitudes towards the birthing experience. Awareness during labor was strongly related to Lamaze training which emphasized the active participation of the women's husbands during the entire birthing process. Awareness during childbirth was also positively related to a positive initial reaction to the newborn child. This study suggests a relationship between the husband's support during labor, the quality of the wife's birthing experience, and the parent's attachment to their child. The results of this study and the study by Henneborn and Cogan suggest that the impact of support that women receive from others must be explored both during the period of pregnancy and during the actual birthing process.

In addition to the individual and interpersonal psychological variables, the impact of social factors must be considered. Social factors which need to be explored include social status (all the research on "normal" childbirths have had primarily middle class participants), roles which women are allowed to assume, and availability of alternative birthing facilities (i.e., hospital births vs. homebirths).

All of these larger social issues affect the amount of choice and control women can exercise over their birthing experiences. They also affect when and why women decide to become pregnant and whether her decision will be supported within her community.

It is clear that there are many additional avenues to explore to understand the forces that influence women's childbirth experiences. It is important that this work continue for at least several reasons. First, and most importantly, additional research will increase women's access to information about a major life event. Secondly, as more is known about the birthing process, professionals such as obstetricians and childbirth educators will be better prepared to help women. As the present research suggests, caring for women during their pregnancies must go beyond consideration of their physical condition alone. It seems important that doctors explore with women whether the pregnancy was planned, and what supports are available for them. It also seems important to examine how husbands are asked to join in the process of their wife's pregnancy. Doctors should evaluate what message they communicate if they do not invite husbands to participate in regular check-ups during the prenatal period. Finally, some researchers have suggested a relationship between women's childbirth experiences and their attachment to their children (Doering and Entwisel, 1975; Leifer, 1977). Given the work of Marshall Klaus and John Kennel (1976) on the attachment of parents to their children, research on women's birthing experience has implications not only for the women but for their children's development as well.

Summary

This research attempted to investigate psychological variables associated with a positive pregnancy experience and their relationship

to the perception of pain during childbirth and the sense of satisfaction with childbirth. The results suggest that women's experience with pregnancy and childbirth are affected by many of the same variables. A woman's pregnancy experience alone, however, cannot account for all the variance of women's response to the birthing process. In addition, one must explore the impact of the marital relationship both during pregnancy and the birthing process, as well as broader social factors which may influence a woman's decision of when and how to experience childbirth. In this study, some of the variables associated with a positive pregnancy experience, such as body image and attitudes toward childbirth, contributed towards the prediction of satisfaction with childbirth and the perception of pain during childbirth. Only self-esteem, which has been found to be associated with the positive experience of pregnancy did not contribute to either the prediction of pain or satisfaction.

For this sample, women who had a positive attitude toward motherhood, who had lower body images in their third trimester, and who planned their pregnancies reported the most satisfaction with the childbirth process. Women who had less discomfort during menstruation, expressed more positive attitudes towards childbirth, and had higher body images experienced less pain during the childbirth process. These results suggest that the perception of pain and satisfaction are two separate aspects of women's birthing experience. Satisfaction seems to be related to women's active decision to assume the new role of mother; pain seems to be related to prior menstrual experience and attitudes about childbirth in general.

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APPENDICES

APPENDIX A

LETTER TO PARENTS

APPENDIX A

LETTER TO PARENTS

Dear Parent-to-be:

I would like to enlist your help for some research I am conducting. The goal of the research is to gain a better understanding of the relationship between a woman's experience during pregnancy and her experience during labor and delivery. The ability to do this type of research depends on the willingness of women like you to share their time and experience so that we can all better understand pregnancy and childbirth.

I am seeking volunteers who are having their first child and have no history of miscarriage. You need not be married to volunteer. If you decide to volunteer, you will be asked to do two things: the first is to pick up a packet of questionnaires from your instructor during your third trimester.* Fill these questionnaires out and return them as soon as possible; the second is to permit one of the project's staff members to interview you within 4-6 days after giving birth and to complete a few brief questionnaires. Participation in this research will involve a maximum of 2-3 hours of your time.

All of the questionnaires you complete will be an anonymous part of the data. If you are interested, you may receive a summary of the results when the study is completed.

If you want to volunteer, please ask your instructor for a packet of questionnaires. Complete these as soon as possible. I will then contact you by phone to answer any questions you might have. Or, feel free to contact me at either of the following numbers:

487-6298 (my home at night)
353-8877 (Dr. Stollak's office)

I appreciate your time and consideration.

Sincerely,

Naomi Goldblum

APPENDIX A (cont'd.)

*It is very important that the first set of questionnaires be completed during the third trimester. If you wish to participate, but are not yet in your third trimester, please give your name and phone number to your instructor. I will contact you to make arrangements for your participation.

APPENDIX B

CONSENT FORM

APPENDIX B

MICHIGAN STATE UNIVERSITY
Department of Psychology

DEPARTMENTAL RESEARCH CONSENT FORM

1. I have freely consented to take part in a scientific study being conducted by:

   Naomi Goldblum

   under the supervision of:

   Gary Stollak

   Academic Title: Adaptation during Pregnancy & the Experience of Labor

2. The study has been explained to me and I understand the explanation that has been given and what my participation will involve.

3. I understand that I am free to discontinue my participation in the study at any time without penalty.

4. I understand that the results of the study will be treated in strict confidence and that I will remain anonymous. Within these restrictions, results of the study will be made available to me at my request.

5. I understand that my participation in the study does not guarantee any beneficial results to me.

6. I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

Signed:_____

Date:_____

APPENDIX C

PERSONAL DATA FORM

APPENDIX C

PERSONAL DATA FORM

Name_____

Address_____

Phone Number_____ Age_____

Expected date of delivery_____

Expected location of delivery_____

Type of training for delivery_____

Highest level of education attained_____

Occupation_____ Yrs. in occupation_____

Husband's (or important male friend) name_____

Length of marriage (or relationship)_____

Occupation_____ Yrs. in occupation_____

Pregnancy planned?_____

APPENDIX D

INCOMPLETE SENTENCES AND SCORING PROCEDURES

APPENDIX D

INCOMPLETE SENTENCES AND SCORING PROCEDURES

Below is a set of incomplete sentences. Please complete each sentence in a way which best describes your feelings at this time.

1. I am having a baby because
2. When I imagine myself giving birth I feel
3. When I feel excited about childbirth, it's because
4. When I feel less excited about childbirth it's because
5. When I imagine myself as a mother
6. When I think about how I was cared for by my mother
7. In caring for my child I will be similar to my mother
8. In caring for my child I will differ from my mother
9. During my periods, I usually feel
10. Compared to most women my periods are

APPENDIX D (cont'd.)

A CLASSIFICATION OF NEGATIVE AND POSITIVE ASPECTS OF CHILDBEARING DERIVED FROM MULTIDIMENSIONAL SCALING, SHOWING TITLES AND SOME DEFINING STIMULI OF CATEGORIES

From: Journal of Marriage and the Family, February, 1978, Mary T. Westbrook

Negative Aspects of Childbearing

1. Rejection
   - Embarrassment at baby's shortcomings
   - Disappointment at sex of child
   - Pregnancy unwanted

2. Problems in Labor
   - Fear of labor
   - Not dealing with labor as well as you hoped
   - Lack of support during labor

3. Fears for self
   - Wear and tear on body and beauty
   - Fear of damage to self at birth

4. Physical problems
   - Exhaustion, fatigue
   - Nausea, morning sickness
   - Awkwardness and discomfort during late pregnancy

5. Problems concerning marriage
   - Interference of relationship with husband
   - Disturbed sexual relations
   - Financial cost to marriage

6. Upsetting environments
   - Hospital environment and routine upsetting
   - Too much visiting from family and friends
   - General hubbub (confusion, mess, noise)

7. Disturbed way of life
   - Disturbance of way of life
   - Loss of status (feeling "just a housewife and Mum")
   - Being tied down

8. Worries
   - Worry because of conflicting advice
   - Worry about how family will cope
   - Worry over baby's well being

9. Problems concerning care of baby
   - Feeding problems with baby
   - Overwhelmed by work involved in care of baby

APPENDIX D (cont'd.)

Positive Aspects of Childbearing

1. Feelings of well being
   - Feeling of physical well being
   - The enjoyment of coping with a new experience
   - Makes you feel complete as a woman

2. Satisfaction from the baby
   - The satisfaction of fulfilling the baby's needs
   - Seeing the baby develop
   - Having a baby to love

3. Wider family satisfactions
   - Pleases grandparents
   - Improved relationship with your own mother

4. Satisfactions concerning enhancement of mother's femininity
   - Demonstrates your fertility
   - Gives you a feeling of importance
   - Proves your femininity

5. Value satisfactions
   - Something worthwhile to do with your life
   - Fulfilling God's plan
   - Your interest in a new ongoing life

6. Satisfactions to the marriage
   - Makes your marriage stronger
   - Makes your marriage happier
   - Makes your husband happy

7. Future satisfactions
   - Having someone who'll care about you when you're old
   - Gives you security for your old age
   - Provides continuity of the family

8. Traditional role domestic satisfactions
   - Being at home all day
   - Being able to leave work
   - Feel like all your friends who have babies

9. Growth of maturity
   - Makes you a more mature person

APPENDIX D (cont'd.)

Incomplete Sentences: Third Trimester

Subject #_____
Scored by_____
Date_____

Instructions for Items 1-4: Attitude Towards Childbearing

A. Positive Aspects: Mark down a score of one (1) for each positive aspect of childbearing. The score in any item will equal the total number of positive aspects for that item and can be greater than 1. Refer to the sheet on classification of positive and negative aspects of childbearing.

Item #	# of Positive Aspects
1	_____
2	_____
3	_____
4	_____
	Total Positive Aspects _____

B. Negative Aspects: Same as for Positive Aspects, only score one (1) for each Negative Aspect of Childbearing. The score on any item can be greater than 1.

Item #	# of Negative Aspects
1	_____
2	_____
3	_____
4	_____
	Total Negative Aspects_____

APPENDIX D (cont'd.)

Attitude toward motherhood - Item 5

Rate response of woman on scale below.

Negative attitude		Ambivalent		Positive Attitude
1	2	3	4	5

Identification with mother - Item 6-8

Rate response of woman on scales below.
Item 6

Negative attitude		Ambivalent		Positive Attitude
1	2	3	4	5

Item 7

Not similar at all		Ambivalent		Very Similar
1	2	3	4	5

Item 8

Very Different		Ambivalent		Not Different at all
1	2	3	4	5

$$\text{Identification with mother} = \frac{\text{sum of scores on items 6-8}}{3}$$

$$\text{Identification with mother} \quad \frac{\quad + \quad + \quad}{3} = \quad$$

Items 9 + 10 - Attitude towards menstruation
Rate responses on scales below:

Item 9

Great discomfort		Some Discomfort		No discomfort
1	2	3	4	5

Item 10

Worse than most		Same as Most		Better than Most
1	2	3	4	5

$$\text{Attitude towards menstruation} = \frac{\text{sum of scores on item 9 + 10}}{2}$$

$$\text{Attitude towards menstruation} = \frac{\quad}{2}$$

APPENDIX E

BODY IMAGE SCALE

APPENDIX E

BODY IMAGE SCALE

BIS

Below are listed various aspects of the body and its functioning. Please rate the extent to which you currently are satisfied or dissatisfied with these aspects as they apply to you. A "5" would indicate that you are currently very satisfied with the particular item you are rating. A "3" would indicate no feeling one way or the other. A "1" would indicate that you are currently very dissatisfied with the particular item you are rating.

Please circle the number that best represents your current satisfaction or dissatisfaction with each item.

		Very Dissatisfied				Very Satisfied
1.	Hair	1	2	3	4	5
2.	Hands	1	2	3	4	5
3.	Fingers	1	2	3	4	5
4.	Breathing	1	2	3	4	5
5.	Back	1	2	3	4	5
6.	Exercise	1	2	3	4	5
7.	Shape of Head	1	2	3	4	5
8.	Height	1	2	3	4	5
9.	Arms	1	2	3	4	5
10.	Digestion	1	2	3	4	5
11.	Lips	1	2	3	4	5
12.	Forehead	1	2	3	4	5
13.	Voice	1	2	3	4	5
14.	Knees	1	2	3	4	5
15.	Weight	1	2	3	4	5
16.	Trunk	1	2	3	4	5
17.	Facial Complexion	1	2	3	4	5
18.	Distribution of hair over body	1	2	3	4	5
19.	Sex drive	1	2	3	4	5
20.	Waist	1	2	3	4	5
21.	Ears	1	2	3	4	5
22.	Ankles	1	2	3	4	5
23.	Body Build	1	2	3	4	5
24.	Age	1	2	3	4	5
25.	Breasts	1	2	3	4	5
26.	Hips	1	2	3	4	5
27.	Legs	1	2	3	4	5
28.	Feet	1	2	3	4	5

APPENDIX E (cont'd.)

		Very Dissatisfied				Very Satisfied
29.	Health	1	2	3	4	5
30.	Posture	1	2	3	4	5
31.	Genitals	1	2	3	4	5
32.	Appetite	1	2	3	4	5
33.	Nose	1	2	3	4	5
34.	Wrists	1	2	3	4	5
35.	Energy Level	1	2	3	4	5
36.	Chin	1	2	3	4	5
37.	Neck	1	2	3	4	5
38.	Profile	1	2	3	4	5
39.	Width of shoulders	1	2	3	4	5
40.	Size of stomach	1	2	3	4	5
41.	Skin texture	1	2	3	4	5
42.	Teeth	1	2	3	4	5
43.	Sleep	1	2	3	4	5
44.	Sex activities	1	2	3	4	5
45.	Face	1	2	3	4	5
46.	Back view of head	1	2	3	4	5
47.	Buttocks (seat)	1	2	3	4	5
48.	Eyes	1	2	3	4	5
49.	General muscle tone or development	1	2	3	4	5
50.	Overall body appearance	1	2	3	4	5

APPENDIX F

ROSENBERG SELF-ESTEEM SCALE

APPENDIX F

ROSENBERG SELF-ESTEEM SCALE

SES

The following statements are concerned with your feelings about yourself. Please respond to each statement by circling the number which represents how much you agree or disagree with each statement:

If you circle a 1, you strongly agree with the statement. If you circle a 2, you agree with the statement. A 3 means you disagree with the statement. A 4 means you strongly disagree with the statement; it doesn't state how you feel.

		Strongly Agree			Strongly Disagree
1.	I feel that I'm a person of worth, at least on an equal basis with others.	1	2	3	4
2.	I feel that I have a number of good qualities.	1	2	3	4
3.	All in all, I am inclined to feel that I am a failure.	1	2	3	4
4.	I am able to do things as well as most other people.	1	2	3	4
5.	I feel I do not have much to be proud of.	1	2	3	4
6.	I take a positive attitude toward myself.	1	2	3	4
7.	On the whole, I am satisfied with myself.	1	2	3	4
8.	I wish I could have more respect for myself.	1	2	3	4
9.	I certainly feel useless at times.	1	2	3	4
10.	At times I think I am no good at all.	1	2	3	4

APPENDIX G

SATISFACTION WITH LABOR SCALE

APPENDIX G

SATISFACTION WITH LABOR SCALE

ESL (Expectation of Satisfaction with labor - third trimester)

Please answer all the following questions about your approaching experience of labor. Answer each question by circling the appropriate number.

1. Compared to other intense bodily experiences you have had, do you expect to find labor and delivery:

	Not at all / Moderately / Very much				
exciting	1	2	3	4	5
frightening	1	2	3	4	5
satisfying	1	2	3	4	5
sensual	1	2	3	4	5

2. Do you expect your doctor to respect your plans for the type of childbirth you want?

No respect		Moderate		Complete respect
1	2	3	4	5

3. In general, how satisfied do you expect to be with the support you receive from your husband (or important male friend)?

Not at all		Moderately Satisfied		Extremely Satisfied
1	2	3	4	5

4. Do you expect to be able to relax between contractions during the first phase of labor?

Not at all		Moderately		Completely
1	2	3	4	5

5. When you do relax, do you expect that it will require

Great Effort		Moderate		No Effort
1	2	3	4	5

APPENDIX G (cont'd.)

6. During the transition period, when your cervix will be stretching to its widest before the baby begins to descend, do you expect to be able to relax between contractions?

Not at all		Moderately		Completely
1	2	3	4	5

7. When you do relax during the transition period, do you expect it to be with

Great effort		Moderate		No effort
1	2	3	4	5

8. Do you expect the process of actually pushing down and delivering the child to be

	Not at all		Moderately		Very Much
exciting	1	2	3	4	5
frightening	1	2	3	4	5
satisfying	1	2	3	4	5
sensual	1	2	3	4	5

9. In general, how pleasurable to do you expect your experience of childbirth to be?

Not at all		Moderately		Completely
1	2	3	4	5

10. In general, how satisfying do you expect your actual experience of childbirth to be?

Not at all		Moderately		Completely
1	2	3	4	5

Please write down any reactions you had to completing this questionnaire. Your comments will be greatly appreciated.

APPENDIX G (cont'd.)

SWL (Satisfaction with Labor - Postpartum)

Please answer all the following questions about your approaching experience of labor. Answer each question by circling the appropriate number.

1. Compared to other intense bodily experiences you have had did you find your childbirth

	Not at all	/	Moderately	/	Very Much
exciting	1	2	3	4	5
frightening	1	2	3	4	5
satisfying	1	2	3	4	5
sensual	1	2	3	4	5

2. Did you feel that your doctor respected your plans for the type of childbirth you wanted?

Not at all		Moderately		Completely
1	2	3	4	5

3. In general, how satisfied were you with the support you received from your husband (or important male friend) during the labor and delivery?

Not at all		Moderately		Completely
1	2	3	4	5

4. In general, were you able to relax between contractions during the first phase of labor?

Not at all		Moderately		Completely
1	2	3	4	5

5. When you did relax was it with

Great effort		Moderate effort		No effort
1	2	3	4	5

6. During the transition period, were you able to relax between contractions?

Great effort		Moderate effort		No effort
1	2	3	4	5

APPENDIX G (cont'd.)

7. When you did relax, was it with

Great effort		Moderate effort		No effort
1	2	3	4	5

8. Was the process of actually pushing down and delivering the child

	Not at all /		Moderately /		Extremely
exciting	1	2	3	4	5
frightening	1	2	3	4	5
satisfying	1	2	3	4	5
sensual	1	2	3	4	5

9. In general, how pleasurable was your experience of childbirth?

Not at all		Moderately		Extremely
1	2	3	4	5

10. In general, how satisfied were you with your experience of childbirth?

Not at all		Moderately		Extremely
1	2	3	4	5

Please write down any reactions you had to completing this questionnaire. Your input will contribute to our understanding of your experience.

APPENDIX H

PAIN SCALE

APPENDIX H

PAIN SCALE

EPS (Expectation of pain - third trimester)

Please answer all the following questions about your approaching experience in labor. Answer each question by circling the appropriate number.

1. During labor, do you expect that the pain may feel overwhelming?

Not at all		Moderately		Extremely
1	2	3	4	5

2. What drugs do you plan on taking during labor? You may check more than one type if that is necessary.

_____General anesthesia
_____Caudal, epidural or spinal block
_____Pudendal block
_____Sedatives or tranquilizers
_____Inhalation of gas
_____Other. Please describe.

3. Did you request these drugs or were they someone else's recommendation?

My decision		A mutual agreement		Someone else's recommendation
1	2	3	4	5

The other person involved in this decision was _____

4. Do you expect that you may want to ask for additional drugs during labor?

Not at all		Moderately		Extremely
1	2	3	4	5

5. Compared to other intense bodily experiences you have had, how painful do you expect your labor to be?

Not at all		Moderately		Extremely
1	2	3	4	5

APPENDIX H (cont'd.)

6. In general, do you expect your contractions during the first phase of labor to be painful?

Not at all		Moderately		Extremely
1	2	3	4	5

7. In general, do you expect the contractions during the transition period to be painful?

Not at all		Moderately		Extremely
1	2	3	4	5

8. Do you expect the process of actually pushing down and delivering the child to be painful?

Not at all		Moderately		Extremely
1	2	3	4	5

9. Do you expect the delivery of the afterbirth to be painful?

Not at all		Moderately		Extremely
1	2	3	4	5

10. Do you expect the pain you may experience in labor to enter into your decisions to have other children?

Not at all		Moderately		Extremely
1	2	3	4	5

Please write down any reactions to this questionnaire. Your comments will help us to understand your experience better.

APPENDIX H (cont'd.)

PPS (Perception of Pain - Postpartum)

Please answer all the following questiona about your recent experience of labor. Answer each question by circling the appropriate number.

1. During labor, did you ever feel that the pain would overwhelm you?

Not at all		Moderately		Extremely
1	2	3	4	5

2. What drugs did you take that you had planned on taking?

_____General anesthesia
_____Caudal, epidural or spinal block
_____Pudendal block
_____Sedatives or tranquilizers
_____Inhalation of gas
_____Other. Please describe.

3. Did you consider asking for additional drugs during your labor?

Not at all		Moderately		Extremely
1	2	3	4	5

4. Which drugs did you take which you had not planned on?

_____General anesthesia
_____Caudal, epidural or spinal block
_____Pudendal block
_____Sedatives or tranquilizers
_____Inhalation of gas
_____Other. Please describe.

5. Was this your choice or someone else's?

My choice		Mutual agreement		Someone else
1	2	3	4	5

6. Compared to other intense bodily experiences that you have had, was your labor painful?

Not at all		Moderately		Extremely
1	2	3	4	5

7. Were your contractions during the first phase of labor painful?

Not at all		Moderately		Extremely
1	2	3	4	5

APPENDIX H (cont'd.)

8. Were your contractions during the transition phase of labor painful?

Not at all		Moderately		Extremely
1	2	3	4	5

9. Was the process of actually pushing down and delivering the child painful?

Not at all		Moderately		Extremely
1	2	3	4	5

10. Was the delivery of the afterbirth painful?

Not at all		Moderately		Extremely
1	2	3	4	5

11. Will the pain you experienced during labor enter into your decision to have other children?

Not at all		Moderately		Extremely
1	2	3	4	5

Please write down any reactions to this questionnaire. Your comments will help us understand your experience better.