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Perceived Stressors Between Partnered and Unpartnered Women

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PERCEIVED STRESSORS BETWEEN
PARTNERED AND UNPARTNERED WOMEN

By

Sandra Kay Newman

A THESIS

Submitted to
Grand Valley State University
in partial fulfillment of the requirements for the
degree of

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Thesis Committee Members:

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ABSTRACT

PERCEIVED STRESSORS BETWEEN PARTNERED AND UNPARTNERED WOMEN

By

Sandra Newman

The purpose of this study was to compare the differences in stress perceived by healthy partnered and unpartnered women in the second trimester of pregnancy. Neuman's Theory of Stress was used as the conceptual framework to explain the potential for greater perceived stress in unpartnered women during pregnancy. A descriptive correlation study was conducted using Norbeck's (1989) Life Events Questionnaire and Underwood's (1993) Perceived Life Stress Scale II, for a convenience sample of N=40.

T-tests were used to test the hypothesis that unpartnered women would perceive more stress than partnered women. Mann Whitney U tests were used to identify differences in perceptions of specific stressors. Study findings included the following: no significant relationship between partner status and the amount of stress perceived. The Mann Whitney U tests supported that partnered women were more distressed by changes in partner closeness, pregnancy effect, and financial changes. Unpartnered women were more distressed by concerns for the unborn child, health, and upsets with this pregnancy. These results suggest the importance of risk assessment during pregnancy.

DEDICATION

This research is dedicated to my wonderful children Damian and Rachel Newman for supporting my professional grow. They have enhanced the meaning of trust and support in my life. Also to Dr. Robert H. Hydrick, for his support, persistance, and his wisdom in teaching me that learning is a life long process.

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CHAPTER ONE

INTRODUCTION

Health care is limited in clinical settings by time allotments, cost effectiveness, staff shortages, protocols designed to guide practice, and the priorities of a specialty when assessing clients. These limitations often become obstacles to the clinician-client relationship. In order to acknowledge and effectively support clients at risk for stress during pregnancy, a means of identifying those at risk is needed.

Pregnancies frequently catch single women in situations of inadequate social and economic support resulting in situational crisis states. Differences between married and single gravidas suggest that pregnancy may have a significant situational crisis associated with increased anxiety for single women (Tilden, 1984). However, despite evidence of increasing numbers of adult and emancipated women who continue a single pregnancy, little is known of their psychosocial states by nurses involved in their prenatal care.

Childbearing is also a normal developmental crisis that generates psychological disequilibrium. The symptoms are usually temporary and under optimal conditions personal growth is possible. Tilden (1984) states that when a situational crisis is superimposed on a developmental

crisis, greater psychological disequilibrium is likely to occur. In order for a successful crisis resolution, additional support may be needed. Both perceived and received support contribute to pregnant women's adherence to recommended health behaviors (Aaronson, 1989).

Research has described pregnancy as a state of increased anxiety and stress. Nursing is in a position to look at the stressors as they are perceived by women during pregnancy. A combination of the nurse's acknowledgement of perceived stressors and the supportive role in the nurse-client relationship can help the nurse to identify coping strategies that will assist women in achieving a more supportive prenatal experience. Norbeck and Anderson (1989) state that prenatal anxiety might be decreased by stress reduction techniques, social support, or both. For these reasons, it is important for nurses to assess prenatal anxiety and its antecedents. Since prenatal stress has been implicated in negative intrapartum outcomes (Norbeck & Tilden, 1983; Underwood, 1986), it is important to examine stress during this time and to identify particularly vulnerable populations. Unpartnered women may fall into a high risk category, but no studies were found which specifically examined this question.

Perceived stress can interfere with self-care measures. Stressors are situations or events with potential for taxing a person's pattern of daily functioning. An appraisal or perception of stress denotes a person's judgement that a

situation or event is harmful or threatening (Walker, 1989). In reviewing the literature, a number of studies cited a positive correlation between stress and pregnancy (Tilden, 1983; Tilden, 1984; Mercer & Ferketich, 1988; Norbeck & Anderson, 1989). Chen, Chen, and Huang (1989) examined stressors perceived by women during the course of pregnancy. Two studies examined the effects of stress on pregnancy outcome (Tilden, 1983; Mercer & Ferketich, 1988). Three studies alluded to the stress response in relation to partner status. They measured state anxiety (situation-specific emotional response) and its effects on partner status (Tilden, 1984; Norbeck & Anderson, 1989; Albrecht & Rankin, 1989). No studies were found that specifically correlate stress and unpartnered women.

The purpose of this descriptive correlational study was to describe the sources of stress perceived by women in the second trimester of pregnancy and to compare the differences, if any, between partnered and unpartnered women.

CHAPTER TWO

LITERATURE AND CONCEPTUAL FRAMEWORK

Pregnancy is a developmental task that occurs in the life of most women. Sociocultural mores concerning pregnancy predominately center around partnered women in our society. Community programs designed to educate and support women through the antepartal experience are influenced by these mores. The physiological process of pregnancy is well understood by clinicians and enhanced by large amounts of continuous research. Yet the psychological stress that accompanies pregnancy is still not well understood. With the rise in number of pregnancies among unpartnered women, it is crucial that we understand their stressors in order to facilitate and promote high level wellness. As a basis for studying the implications of pregnancy in women without partners three categories of studies were examined: the effects of stress on pregnancy, perception of stress across pregnancy, and the antecedents of perceived stress, i.e., supportive/formal partner relationships.

Literature Review

The effects of stress on pregnancy. Tilden (1983) examined the effects of life stress on emotional disequilibrium during pregnancy. Life stress was measured by negative life events using the Sarason Life Experiences Survey. Emotional disequilibrium was measured by scores on anxiety, depression, and self esteem scales. The sample consisted of 40 women in their second trimester. Gestation

was limited to the second trimester to control for effects of trimester on research variables and to avoid the normally inflated anxiety of the first and third trimester. Using hierarchical multiple regression analysis, Tilden found that life stress explained 30% of the variance in emotional disequilibrium during pregnancy. Marital/partner status was viewed as a possible moderating variable on social support and life stress. It was included in the regression analysis, but did not account for a significant portion of the variance in emotional disequilibrium.

Mercer and Ferketich (1988) examined stress as a predictor of anxiety and depression during pregnancy. Stress was measured using Norbeck's (1984) 82-item adaptation of Sarason, Johnson, and Siegel's (1978) Life Experiences Survey. Anxiety was measured by the State Anxiety Scale. Depression was measured using the 20-item Center Epidemiologic Studies Depression Scale. The sample consisted of 153 women at high risk and 218 women at low risk for pregnancy problems during the third trimester of pregnancy. As was hypothesized, high risk women had greater negative life events stress (mean 12.50) than low risk women (mean 9.62) ($t = 2.40$, $df=369$, $p = .02$). High risk women had higher depression (mean 17.81) than low risk women (mean 11.19) ($t = 6.78$, $df = 271$, $p = .0001$). High risk women also reported more anxiety (mean 44.33) than low risk women (mean 33.52) ($t = 9.25$, $df = 368$, $p = .0001$). Using hierarchical regression, negative life events accounted for

less of the variance in anxiety among the high risk group than among the low risk group. The low amount of variance in anxiety accounted for among high risk women (10.04%) suggests the presence of stressors other than negative life events.

Perception of stress across pregnancy. Only one study was found which measured stressors associated with pregnancy as perceived by women during each of the three trimesters of pregnancy. Chen, Chen, and Huang (1989) developed a 30-item Pregnancy Stress Rating Scale that rated the incidence and severity of stressors associated with pregnancy. The study was conducted in a large metropolitan hospital in Taiwan. The sample consisted of 65 partnered women. The same sample was retested in each trimester. A factor analysis categorized the pregnancy stress variables as stress from altering body structure and body function, stress from identifying the maternal role, and stress from seeking safe passage for herself and her child through pregnancy, labor, and delivery. An analysis of variance revealed significant differences in stress from altering body structure and body function across trimesters ($F=3.54, p < .05$). Stress due to this source gradually increased throughout the pregnancy and maximized during the third trimester. Stress due to the two other factors did not change significantly across the three trimesters.

The antecedents of perceived stress. Albrecht and Rankin (1989) examined a group of women ($N=47$) between 6 and 30 weeks gestation. Forty of the women were partnered and 7

were unpartnered. The study looked at anxiety and support systems. The Spielberger State-Trait Anxiety Inventory was used to measure anxiety. The Personal Resources questionnaire (Brandt & Weinert, 1981) was used to measure support systems. A significant but low negative association existed between state anxiety and social support ($r = -.28$, $p = .05$). Therefore, it was concluded that pregnant women who had fewer support systems had higher state anxiety.

Norbeck and Anderson (1989) examined the effects of life stress and social support on anxiety in the second and third trimester of pregnancy among low income women. The same sample was tested in both trimesters and consisted of 190 mostly partnered (75%) women. Stress was measured by negative scores on the Life Events Questionnaire. The state form of Spielberger's State-Trait Anxiety Inventory measured anxiety. The results for life stress showed a consistent strong positive effect on anxiety, explaining 26% of the variance in both the second and third trimesters. During the second trimester, specific sources of social support that were significant were partner, mother, and a trend towards relatives' support. In the third trimester, partner support was the only source. For both trimesters, the highest mean of state anxiety was found in the high stress/low support group, while the lowest anxiety was found in the low stress/high support group. State anxiety was used to measure changing affective states rather than a stable personality trait. This study supports the importance of identifying

women with high stress and low partner support early in pregnancy.

Tilden (1984) examined the relationship of life stress and anxiety to the single status of adult women during pregnancy. Life stress was measured using the Sarason Life Experiences Survey with 141 women in their second trimester of pregnancy. The sample consisted of 116 partnered women and 25 unpartnered women. Analysis of data confirmed earlier research and clinical evidence that single women experience greater negative life events stress (mean 11.52) than partnered women (mean 8.05) during pregnancy ($t = 1.98$, $df = 139$, $p = .03$). Anxiety was measured using the Spielberger Strait-Trait Anxiety Inventory. The mean score for state anxiety for single women was 42.88, as opposed to 37.19 for partnered women ($t = 2.29$, $df = 139$, $p = .01$). Single women were not more predisposed to being anxious and thus trait anxiety was not considered a predisposing variable to single pregnancy. Findings of this study support that single women are significantly higher in state anxiety during pregnancy. Part of this may be due to being unpartnered during pregnancy.

Summary. In the first category of studies, effects of stress on pregnancy were examined. Both studies correlated the effects of stress with anxiety and depression during pregnancy. Mercer and Ferketich (1988) obtained higher means for the high risk population, but negative life events accounted for less of the variance in anxiety among high risk

groups. Instrument revision may be necessary to capture other factors contributing to anxiety. The data were collected in the women's third trimester, in which anxiety is normally increased. High-risk women were hypothesized to have higher scores of anxiety, and the results confirmed the hypothesis. It would be interesting to see this study duplicated during the second trimester of pregnancy.

Tilden (1983) examined the effects of life stress on emotional disequilibrium. The amount of variance in emotional disequilibrium explained by life stress (29.71%) is high compared to most studies where stress accounts for only 3% to 4% of the variance in the dependent variable. Most other studies use total life events rather than negative life events to represent life stress and a certain amount of redundancy may exist between measures of life stress and emotional disequilibrium. The data were collected during the second trimester of pregnancy to control for effects of trimester on research variables.

In conclusion both studies supported the view that pregnancy was a stressor to the client system resulting in emotional disequilibrium. The effects of stress correlated with anxiety and depression as emotional disequilibrium during pregnancy (Tilden, 1983). Negative life events stress was associated with emotional disequilibrium during pregnancy among low risk populations and with anxiety among those with pregnancy complications (Mercer & Ferketich, 1988).

The study of Chen, Chen, and Huang (1989) was the only

one found that looked at stressors associated with pregnancy as perceived by women throughout the three trimesters. Stress from altering body structure and body function was significant throughout pregnancy with increased and maximized results in the third trimester. Cultural differences may have affected the results, if the study had been conducted in the United States. It may be beneficial to replicate this study, since the stress variables are pertinent to pregnancies of all cultures.

In the previous three studies, higher levels of stress were correlated with pregnancy. How stress affects pregnancy outcome is still not definitive, but research supports that there is a positive correlation. None of these studies examined partner status as a variable.

The last three studies examined anxiety levels in correlation with supportive/formal relationships. Norbeck and Anderson (1989) obtained the highest mean for state anxiety with the high stress/low support group.

Albrecht and Rankin's (1989) results supported that pregnant women with fewer support systems had higher state anxiety. Tilden (1984) was the only study that examined the relationship of variables to single status, and the findings indicated that single pregnant women had greater life stress and higher state anxiety.

All three studies suggested a correlation between high stress/high anxiety and low support or an unpartnered status. The results in these three studies were particularly

significant in relation to the sample size and indicate a need for further research.

Theoretical Framework

According to a study done by Walker (1989), stressors are situations or events with potential for taxing a person's pattern of daily functioning. Perception of stress denotes a person's judgement that a situation or event is harmful or threatening. Walker went on to state that perceived stress can interfere with self-care measures.

To explain how an event could be perceived as stressful to one client and non-stressful to another in this study, Neuman's Systems Model was used. The model is an open system, consisting of stressors, reactions to stressors, and the client as major components.

According to Neuman's assumptions, a client is in a steady state when the physiological, psychological, sociocultural, developmental, and spiritual variables are balanced within the client. This balance protects the client against possible reaction to a stressor or builds resistance within the client. When one or more stressors disrupt the client's steady state, disequilibrium occurs among the variables posing a reaction. It is the client's perception of the stressor that determines reconstitution of these variables. Each stressor differs in its potential for disturbing a client's usual level of stability (Neuman, 1989).

Description of the model. Neuman's model views the client system as a core surrounded by concentric rings that

act as boundaries for the client. The concentric rings function interdependently as defense mechanisms that protect the system. These mechanisms are composed of individual characteristics of the client (ego strengths, genetic response patterns, cognitive ability, organ strengths and weakness, body temperature maintenance), and the interrelationship of the five variables (physiological psychological sociocultural developmental and spiritual). The client system is in continuous interaction with the environment. Everyday stressors are not a threat to the steady state of the client as long as the defense mechanisms are intact. Stressor invasion occurs from a breakdown of defense mechanisms that no longer protect the steady state resulting in disequilibrium to the system.

Natural and learned defense mechanisms along with the interrelationship of the five variables react interdependently to return the system to a steady state. The new steady state can be weaker or stronger than the previous steady state. Determining factors include the client's physiologic condition, sociocultural influences, developmental state, cognitive skills, and spiritual considerations. Reaction is also influenced by timing of the encounter with the stressor, the nature and intensity of the stressor, the amount of energy needed to cope with the stressor compared to what is available in the system, and the client's perception of the stressor.

Summary and implications for this study. The physiologic changes produced by pregnancy create a disequilibrium so the potential is there for given objective conditions to produce more of a reaction. Sociocultural and psychological factors that normally work to maintain a steady or wellness state are also affected by the pregnancy. If the psychological factor of partnered support is not present, the model would suggest that the ability to protect against a potential stressor would not be as strong as it might be otherwise. Therefore, when faced with a potential stressor, the likelihood of that objective condition being perceived as a stressor is greater. This reasoning served as a basis for the hypothesis that unpartnered women would perceive more stress in their lives than partnered women. The one problem is that it may not simply be the factor of partnership but whether the relationship is viewed as supportive, particularly in relation to the dimensions of aid and affect.

Research Questions and Hypothesis

The research question asked in this study was what differences are there in perceived stress between partnered and unpartnered women in the second trimester of pregnancy? The hypothesis was that unpartnered women would perceive more stress than partnered women.

Definition of Terms

Partnered women were defined as married or single but involved with a committed partner. Unpartnered was defined

as single without a committed partner. The second trimester of pregnancy was 14-27 weeks gestation. Stress was a response that potentiated disequilibrium of an individual's steady state, which resulted not from a particular life event per se but from the perception of that event (Mercer & Ferketich, 1988).

CHAPTER THREE

METHODOLOGY

Study Design

A descriptive correlation design was used to examine the differences in perceived stress between partnered and unpartnered women in the second trimester of pregnancy. The aim of using descriptive correlational research was to describe the relationship among variables rather than to infer cause and effect. The purpose of this study was not to understand what caused perceived stress, but to describe an existing relationship between perceived stress and partner status. It was hypothesized that unpartnered women would perceive more stress than partnered women. A comparison was made of the perceived stress levels between the two groups. The most stressful items from each group were identified and compared. Descriptive research can play a crucial role in nursing precisely because many of the interesting problems to be solved in the field are not amenable to experimentation. Descriptive research sometimes lays the groundwork for further, more rigorous research.

In correlation studies there is no manipulation of the independent variable which was partner status in this study. There may have been factors which may have had a substantial role in influencing perceived stress other than those tested for.

Sample and Setting

The sample for this study was derived from two obstetricians' offices. The offices were both located in a conservative Midwest community with a metropolitan population of approximately 700,000. The inclusion eligibility criteria consisted of pregnant women between 14 and 27 weeks gestation. The women had to be able to read and write English to eliminate communication barriers which could have added to perceived stress. Finally, the women had to be at least 20 years of age. This was done to eliminate factors present during teenage years that could influence perceived stress.

Women were excluded from participation in the sample if any of the following factors were present: history of chronic illness, use of prescriptive stress medications before or during pregnancy, artificial means of insemination, and pregnancy due to rape or incest. The idea was to eliminate factors which could have enhanced the client's perceived stress before she answered the questionnaire, eliminating as much bias towards the study as possible. A convenience sampling method was used for this study. A quota of n=20 partnered and n=20 unpartnered women was selected from the interest forms (see appendix A).

Instruments

Two instruments were used to measure perceived stress, the PLSSII (Underwood, 1993) and the LEQ (Norbeck, 1984). The PLSSII (P.W. Underwood, personal communication, November 18, 1993) was devised by adding four questions from the Stress Amount Checklist (SAC) (Brown, 1986) to the original PLSS (Underwood, 1986). This was done to enhance the content validity of the instrument. Content validity for the SAC and PLSS was supported through the work of Brown (1986) and Underwood (1986). The PLSS test-retest reliability (Underwood, 1986) in describing perceived stress for a given period was supported ($r = .82$).

The PLSSII allows subjects to rate the amount of concern/pressure that they have experienced since they became pregnant in relation to 13 life areas. Examples of life areas include financial difficulties, job concerns, health and major crises happening to relatives/friends. The subjects circle "yes" if the area has been experienced since pregnancy and "no" if it has not. Subjects then rate each of the "yes" items on a 7-point response scale to indicate the amount of concern/pressure they perceive they have experienced since pregnancy. The scale ranges from "not at all" (0) to "very" (6). The ratings for areas experienced are summed to obtain the PLSSII perceived stress score.

Test-retest reliability on the PLSSII was not measured for this study. Concurrent validity of the PLSSII was examined using Spearman's Correlation. Norbeck's (1984) Life Events Questionnaire (LEQ) designed for female

respondents was ranked with the PLSSII. The results reflected a significant correlation ($\rho = .68$, $p < .001$). Concurrent validity in this study was supported, making the PLSSII a useful clinical assessment tool.

The LEQ is exceptionally long to use in a clinical context, but its use in research has been supported. The LEQ contains 82 Life Events categorized under domains such as Health, Work, School and Finances. The format and instructions of the original LEQ developed by Sarason, Johnson, and Siegel (1978) were used in this revised questionnaire. For each life event respondents have experienced in the past year, they are instructed to circle whether this event was good or bad. They then rate the experienced events on a 4-point scale according to perceived impact of the event (0 = no effect, 4 = great effect). Two scores were obtained for the LEQ. The life events score was achieved by summing the number of events experienced. The perceived impact score was obtained by totaling the impact ratings for the experienced events.

Content validity for the LEQ was supported through work of Norbeck (1984) and Mercer (1993). Test-retest reliability was high ($r = .78$ to $.83$) in a study done by Norbeck (1984).

Procedure

Following approval from the Human Subjects Review Committee of the University, two physicians' offices were contacted and approval obtained for data collection to be done at each site. The investigator left interest forms (see Appendix A) in each of the offices to obtain signatures

of those interested in participating in the study. A list of inclusion and exclusion criteria was left with a key person in each office. The investigator scheduled appointments by phone with each of the eligible subjects to meet with her at her next scheduled prenatal checkup. At that time, any additional questions by the participants were answered, consent forms were signed and the questionnaires were completed (PLSSII and LEQ). The results were collected by the investigator as the participants finished.

The data were collected from January 4, 1994, until March 14, 1994. The demographic sheet and two instruments remained anonymous, coded only for data analysis purposes. As anticipated, no risks occurred with subjects. The investigator was prepared with psychological resources had referrals been necessary and allowed for time with each client individually to support any personal concerns that may have risen due to the question content on the questionnaires regarding stressors. The clients were assured verbally by the investigator of confidentiality. The number coding system for the instruments was explained.

CHAPTER FOUR

DATA ANALYSIS

Sample Characteristics

Demographic data were analyzed using inferential and descriptive statistics. An overall analysis for N=40 follows. The ages of the participants ranged from 22 years to 42 years. The mean age was 29 years for partnered and 27 years for unpartnered women. Due dates were between May of 1994 and August of 1994, which confirmed the second trimester of pregnancy for each participant at the time of data collection. Ten women lived in a rural area as compared to 30 in the city. The sample included 28 (70%) participants who were white, 10 (25%) were African American, and 2 (5%) were Spanish. Thirteen of the 40 women (33%) were unemployed, 5 (13%) were employed less than 20 hours/week, and 22 (55%) were employed 30 or more hours/week. Twenty different occupations were listed for the 27 women employed. Six women (15%) had not completed high school, 9 (23%) completed high school, and 25 (63%) had between one and four years of college. Twenty-nine women did not smoke, 7 smoked under a pack a day, and 4 a pack a day. Fourteen women had an income of less than 11,000/year, 15 between 11,000-25,000, and 10 over 25,000. One participant had missing data in this area. The number of children at home was: zero for 15 participants, 1 for 12 participants, 2 for 12 participants, and three for one participant.

For specific demographic characteristics related to partnered and unpartnered see Table 1. The significant differences between the partnered and unpartnered groups were found in three areas: Unpartnered women were more likely to be minorities, tended to have less education, and had lower income.

Occupation was not listed on Table 1. There were 20 different occupations reported by the women who were employed (n=27). A total of 12 (60%) unpartnered women worked and 8 (40%) were unemployed. A total of 15 (75%) partnered women worked and 5 (25%) were unemployed. One (5%) student was listed in each group. Two (10%) from each group worked in nonprofessional service areas (cashier, child care, waitress). Seven (35%) in the unpartnered group worked as unskilled labor in factories compared to two (10%) in the partnered group. Two (10%) in the unpartnered group worked as professionals compared to ten (50%) in the partnered group (optometrist, social work, managers).

Data Analysis

In preparation for data analysis data were coded from a code book prepared for this study. The partner status of the participants was included on the eligible subjects list given to the investigator by each of the physician's offices. A confirmation of partner status was also received from the participants. In order to keep insured confidentiality, partner status was coded on each questionnaire by the investigator only.

Table 1

Comparison of Characteristics of Partnered and UnpartneredWomen

	<u>Partnered</u>	<u>Unpartnered</u>
<u>Variable</u>		
<u>Ages</u>	22 - 42	22 - 38
(mean-age)	(29)	(27)
<u>Residence</u>		
City	14	16
Rural	-6	-4
<u>Ethnic group</u>		
White	17	11
African American	-3	-7
Spanish	--	-2
<u>Employment</u>		
Not employed	-5	-8
<20 hours/week	-3	-2
30 or more hours/week	12	10
<u>Education: highest level achieved</u>		
Jr. High -3 years/h.s.	--	-6
4 year high/school	-6	-3
college 1-2 years	-4	-4
college 3-4 years	-4	-4
college over 4 years	-6	-3
<u>Smoking: # per day</u>		
none	15	14
less than a pack	-3	-4
a pack a day	-2	-2
<u>Economics: Current yearly income</u>		
less than 11,000	-2	12
11,000 - 25,000	-9	-6
more than 25,000	-9	-1
<u>Children at home</u>	15	10

The data from the PLSSII and the LEQ were first analyzed using frequency distributions to describe the life events and life areas of concern/pressure experienced by the partnered (n=20) and unpartnered women (n=20). T-tests were used to examine the differences between the two groups relative to the number of areas/events experienced. The PLSSII included the total number of life areas perceived as generating concern and or pressure (see Table 2). The LEQ included the total number of life events occurring in the past year (see Table 3). There were no significant differences found in the number of life areas or events between partnered and unpartnered women (PLSSII $t = -.55$, $p = .57$ and LEQ $t = -1.77$, $p = .09$).

Two perceived stress scores were obtained for each subject by totaling the life area ratings on the PLSSII (see Table 4) and the event impact ratings (see Table 5) on the LEQ. T-tests were used to test the hypothesis that unpartnered women in the second trimester would perceive more stress than partnered women. No significant differences in perceived stress were found using either instrument (PLSSII $t = -1.26$, $p = .22$ and LEQ $t = -.47$, $p = .64$).

The frequency with which events/life areas were experienced were ranked for both the LEQ and PLSSII. Table 6 reflects the five most frequently experienced events/areas for each instrument. Items on the LEQ and PLSSII were also rank ordered on the basis of perceived impact/stress (see Table 7). The top five variables from each instrument, selected on the basis of order of stress/impact rating were

Table 2

Number of Life Areas Perceived as Generating Concern/Pressure
for Partnered and Unpartnered Women.

	<u>Number of Scores</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Standard Error</u>
<u>Underwood's PLSSII</u>				
<u>Partnered women</u>	20	4.55	2.35	.526
<u>Unpartnered women</u>	20	4.95	2.25	.505
T-Test				
<u>Underwood's PLSSII</u>		<u>Pooled Variance Estimate</u>		
<u>F Value</u>	<u>2-Tail Prob.</u>	<u>T Value</u>	<u>Degrees of Freedom</u>	<u>2-Tail Prob.</u>
1.08	.865	-.55	38	.568

Table 3

Number of Life Events Occurring in the Past Year for
Partnered and Unpartnered women

	<u>Number of Scores</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Standard Error</u>
<u>Norbeck's LEQ</u>				
<u>Partnered women</u>	20	14.65	7.25	1.62
<u>Unpartnered women</u>	20	20.50	12.89	2.88

T-Test

<u>Norbeck's LEQ</u>		<u>Separate Variance Estimate</u>		
<u>F Value</u>	<u>2-Tail Prob.</u>	<u>T Value</u>	<u>Degrees of Freedom</u>	<u>2-Tail Prob.</u>
3.16	.016	-1.77	29.93	.087

Table 4

Total Amount of Perceived Stress for Partnered and
Unpartnered Women

	<u>Number of Scores</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Standard Error</u>
<u>Underwood's PLSSII</u>				
<u>Partnered Women</u>	19	18.52	11.82	2.71
<u>Unpartnered Women</u> (4 missing cases)	17	23.70	12.87	3.12
T-test				
<u>Underwood's PLSSII</u>		<u>Pooled Variance Estimate</u>		
<u>F Value</u>	<u>2-Tail Prob.</u>	<u>T Value</u>	<u>Degrees of Freedom</u>	<u>2-Tail Prob.</u>
1.19	.723	-1.26	34	.217

Note. In coding the instruments for data analysis a missing value was used when a participant answered one portion of a question but not the other. The four participants with missing data resulted when they checked life areas positively for concerns/pressures, but not filling out the 7-point scale which measured perceived stress of that particular area.

Table 5

Total Perceived Impact of Events for Partnered and
Unpartnered Women

	<u>Number of Scores</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Standard Error</u>
<u>Norbeck's LEQ</u>				
<u>Partnered Women</u>	20	27.60	17.96	4.01
<u>Unpartnered Women</u>	20	30.20	16.97	3.79

T-Test

<u>Norbeck's LEQ</u>		<u>Pooled Variance Estimate</u>		
<u>F Value</u>	<u>2-Tail Prob.</u>	<u>T-Value</u>	<u>Degrees of Freedom</u>	<u>2-Tail Prob.</u>
1.12	.806	-.47	38	.641

Table 6

Five Most Frequently Experienced Events/Life Areas in Order
of Frequency (N=40)

Norbeck's LEQ Events

1. Pregnancy
2. Change in finances
3. Change in personal habits
4. Change in sleep habits
5. Major decision-immediate
-future

Underwood's PLSSII Life Areas

1. Unborn child
 2. Financial situation
 3. Related to work
 4. Related to health
 5. Upsets with this pregnancy
-

Table 7

Rank Order of Five Events/Life Areas with Highest Perceived
Impact/Stress (N=40)

Norbeck's LEQ Perceived Impact

1. Pregnancy - effect
2. Change in finances
3. Change partner closeness
4. Change in sleeping habits
5. Change in personal habits

Underwood's PLSSII Perceived Stress

1. Unborn child
 2. Financial situation
 3. Related to work
 4. Related to health
 5. Upsets with this pregnancy
-

then compared between the partnered and unpartnered groups using the Mann Whitney U test (see Tables 8 & 9). For the LEQ partnered women ranked higher on all five variables (i.e., pregnancy-effect, finances, partner closeness, sleeping habits, and personal habits). For the PLSSII unpartnered women ranked higher in three of the five variables (i.e., unborn child, health, upsets-pregnancy). Partnered women ranked higher regarding finances and work on the PLSSII.

Table 8

Mann Whitney-U Comparison of Partnered and Unpartnered Women
on LEQ Areas of Highest Impact

Norbeck's LEQ Areas

1. Pregnancy - effect
2. Change in finances
3. Change in partner closeness
4. Change in sleeping habits

Partnered		Unpartnered		<u>U</u>	<u>W</u>
n	<u>Mean Rank</u>	n	<u>Mean Rank</u>		
1. 17	19.62	17	15.4	108.5 *	333.5*
2. 12	13.08	11	10.8	53.0 *	119.0*
3. 10	13.05	12	10.2	44.5 *	130.5*
4. 07	11.93	14	10.5	42.5 *	10.54*

*p = .05

Note. Area five was excluded when entering data.

Table 9

Mann Whitney-U Comparison of Partnered and Unpartnered Women
on PLSSII Areas of Highest Stress

Underwood's PLSSII

1. Unborn child
2. Financial situation
3. Related to work
4. Related to health
5. Upsets with this pregnancy

Partnered		Unpartnered			
n	<u>Mean Rank</u>	n	<u>Mean Rank</u>	<u>U</u>	<u>W</u>
1. 19	15.6	18	23.1	98.0 *	415.0*
2. 19	20.55	20	19.5	179.5*	390.5*
3. 19	20.79	20	19.3	175.0*	395.0*
4. 20	19.70	19	20.3	184.0*	386.0*
5. 20	19.02	20	22.0	170.5*	380.5*

*p = .05

Summary

The research question asked what differences were there in perceived stress between partnered and unpartnered women in the second trimester of pregnancy. The impact of stressors were analyzed between the two groups using T-tests. The five events/life areas with the highest ratings (impact/pressure-concern) on each instrument were compared across groups using the Mann Whitney-U test. According to these results pregnant women do perceive increased stress during pregnancy. However, the results suggest that partnered women are more concerned about factors involving relationships with others (finances, closeness, work). Unpartnered women seem more concerned with factors directly related to their pregnancy. The hypothesis was not supported that unpartnered women would perceive more stress than partnered women.

CHAPTER FIVE

DISCUSSION

The research question for this study was: What differences are there in perceived stress between partnered and unpartnered women in the second trimester of pregnancy? When the overall impact was examined using either the LEQ or the PLSSII no significant differences were found between partnered and unpartnered women. The following possibilities may help explain the results.

1. In reality the "partnership" does not make a difference. Unpartnered women did not select a partner variable as being of greatest concern on either the LEQ or the PLSSII. They were more concerned with the pregnancy and the unborn child.

2. The influence may depend more on the quality of the relationship than on the presence/absence of a partner. This was not measured. Other issues of concern according to test results were finances, health, work and changes in sleeping patterns. Three of these concerns were ranked highest by partnered women.

3. Sample size may have been too small to detect differences. In the unpartnered group there was a higher mean and SD for the number of life events that occurred within the last year and the total perceived impact of those events. This indicates that unpartnered women experience more events and that there is more variation within this

group. Therefore the sample size $n=20$ may not have been large enough to detect differences between the two groups with T-Tests.

4. Particular instruments may not have been sensitive enough. Unpartnered women lack psychological support of a partner and decreased sociocultural support within the mores of the U.S. society. Perhaps they are more affected, but the content variables were not specific enough to acknowledge a difference.

5. Differences, if they exist, may be more evident in traditionally stressful times during pregnancy. The second trimester is reported as being the least stressful during the pregnancy (Tilden, 1983).

Ten variables of greatest stress perception from the LEQ and the PLSSII were compared between the two groups. Partnered women ranked higher on 1) pregnancy-effect, 2) finances, 3) change in partner closeness, 4) sleeping habits, 5) personal habits 6) work. Unpartnered women ranked higher on 1) unborn child, 2) their health, 3) upsets-pregnancy. According to these results pregnant women do perceive increased stress during pregnancy. However, the results suggest that partnered women are more concerned about factors involving relationships with others (finances, closeness, work). Unpartnered women seem more concerned with factors directly related to their pregnancy.

It is difficult to compare findings from other studies with those from this study because of the differences in subject characteristics, sample size, instruments used and

data analysis. Four of the six studies in the literature review used life events to examine life stress (Tilden, 1983, 1984; Mercer & Ferketich, 1988; Norbeck & Anderson, 1989), however only negative life events were used. Only two studies considered partnered and unpartnered status. In both of these studies the percentage of unpartnered women was low (Tilden 17% and Norbeck & Anderson 25%). All of these studies correlated negative life events to anxiety, social support, depression and self esteem scales.

Limitations

There are several areas which present possible limitations to this study. Norbeck's LEQ for female respondents was developed for use with graduate nurses and both single or partnered mothers. It has never been used with partnered and unpartnered pregnant women.

The use of a convenience sample is another limitation of the study because it decreased the generalizability of the study results to other physicians offices and clinics. However the diversities in the sample regarding education, ethnicity, and salary range were compatible with the pregnancy population for the area where data collection took place.

Negative life events in past studies have been related to negative outcomes, which have been cited in the literature as psychological disturbances in the form of depression or anxiety. This study allowed subjects to indicate whether the event was perceived as good or bad but only used the total

impact score as the indicator of life stress. Stress is not defined as negative outcomes in this study but as a state of disequilibrium which could be defined as challenge or distress.

Nursing Implications

This study has offered insights into the stress paradigm including partnered and unpartnered pregnant women. However, it has also raised issues and questions that need further clarification. The nurse practitioner in women's health is in a prime position to explore the stressors that may be pertinent to pregnant women. Support groups could be established to support and try to better understand the variability of unpartnered women during pregnancy. Analysis of pertinent variables is necessary to develop instruments with increased reliability in relation to perceived stress during pregnancy.

Neuman's Systems Model (1989) describes the consequences of disequilibrium when the client system is unable to cope with daily stressors. If health care were offered to all pregnant women with concern and caring regardless of their economic status, nursing could be on the front lines with health promotion. Nursing must continue to be politically involved and learn to collaborate with other health care professionals in order to become influential in caring for women's needs. Community needs could be addressed by advanced practice nurses, if their perception and awareness were backed by research.

Recommendations for Further Research

Additional research needs to be conducted to further define sources of stress, differences on the basis of partner status, and individual and situational characteristics which may be indicative of increased risk. The types of coping techniques correlated with perceptions of stress, specific to pregnancy might be another area for research. Instrument revision using stressors more specifically related to pregnancy may be another area to consider. Additional testing of partnered and unpartnered women during pregnancy would provide a larger population to determine generalizability of results. Longitudinal studies for three trimesters with the same groups would be useful to measure trends, reliability of data and degree of success of planned interventions. Measuring total life events, good and bad, rather than only the events designated as negative would reduce the possibility of a bias response and increase community awareness that stress is not only a distress but a challenge as well.

As the health care climate continues to change and advanced practice nursing becomes more evident in the primary care setting, role modeling, educating, and supporting pregnant women through the developmental crisis of pregnancy will become an essential part of prenatal nursing. Further research is needed to guide our interventions and to add to the empirical knowledge base that is necessary to develop a clearer understanding of the variables that are perceived as

stressors to pregnant women. By understanding more about the stress paradigm and pregnant women, nursing can target high risk groups for intervention.

APPENDIX A

Interest Form

APPENDIX A

Letter to Our Patients:

Sandra K. Newman, R.N.,B.S.N., is conducting a study of stresses women face during pregnancy. Her study will involve talking to women about the stress they are experiencing. With the permission of our patients, this office plans to provide her with a list of women in their second trimester of pregnancy. The inclusion of your name on the list does not mean that you will automatically be contacted for this study and will in no way obligate you to agree to participate, if asked. You may make that decision after Ms. Newman contacts you, explains the study and fully answers any questions you may have. Your decision to participate or not participate will in no way influence the care you receive from this office. If you do not wish your name to be included on the list, please let the nurse know.

APPENDIX B

Consent Form

Consent Form

I understand that this is a study that describes my outlook on stress, and that the knowledge gained is expected to help nurses and physicians to provide health care in a manner which will be responsive to the needs of pregnant women.

I also understand that:

1. participation in this study will involve one 30 minute session where I will answer questions on a questionnaire regarding my outlook on stress.
2. that I have been selected for participation because I am in my second trimester of pregnancy.
3. it is not anticipated that this study will lead to physical or emotional risk to myself or my infant.
4. the information I provide will be kept strictly confidential and the data will be coded so that identification of individual participants will not be possible.
5. a summary of the results will be made available to me upon my request.

I acknowledge that:

I have been given an opportunity to ask questions regarding this research study, and that these questions have been answered to my satisfaction.

In giving my consent, I understand that my participation in this study is voluntary and that I may withdraw at any time, without affecting the care I receive from my physician.

I hereby authorize the investigator to release the information obtained in this study to scientific literature. I understand I will not be identified by name.

I have been given Sandra Newman's phone number so that I may contact her at any time if I have questions.

I acknowledge that I have read and understand the above information, and that I agree to participate in this study.

Participant Signature

Date

_____ I am interested in receiving a summary of the results of the study.

APPENDIX C

Demographic Questionnaire

Please answer the following questions by checking the appropriate response so that we can describe in a very general way the women who participated in this study.

For Office Use Only

I.D. # _____ Rec: 1
(1-2) (3)

Year of Birth _____
(4-5)

Due Date _____
(6-7) (8-9)

Do you live in the:

1. city _____ (10)
2. rural area _____

Ethnic group:

1. White _____
2. African American _____
3. American Indian _____
4. Spanish _____ (11)
5. Asian _____
6. Mid-Eastern _____
7. Other _____

Employment:

1. Not employed _____
2. Employed less than 30 hours/week _____ (12)
3. Employed 30 or more hours/week _____
Occupation _____ (13-14)

Education: What is the highest level of education you have achieved?

1. _____ Jr. High
2. _____ 1 year/high school
3. _____ 2 year/high school
4. _____ 3 year/high school (15)
5. _____ 4 year/high school
6. _____ college 1 - 2 years
7. _____ college 3 - 4 years
8. _____ college over 4 years

Smoking: Approximately how many cigarettes do you smoke per day?

_____ None _____ # of cigarettes per day (16-17)

Economics: What is your current yearly income?

1. _____ less than \$11,000
2. _____ \$11,000 - \$25,000
3. _____ more than \$25,000 (18)

How many children do you have living at home? _____ (19-20)

APPENDIX D

Perceived Life Stress Scale II

Have you experienced this since the pregnancy began?			How stressful has it been for you?							
			<u>Not at all</u>		<u>Moderately</u>			<u>Very</u>		
	No	Yes	1	2	3	4	5	6	7	
1. Illness or death in your parents	No	Yes	1	2	3	4	5	6	7	
2. Major crises happening to relatives/friends	No	Yes	1	2	3	4	5	6	7	
3. Upsets with this pregnancy	No	Yes	1	2	3	4	5	6	7	
4. Partner having major changes or stresses	No	Yes	1	2	3	4	5	6	7	
5. Concern/pressure in relation to your work	No	Yes	1	2	3	4	5	6	7	
6. Concern/pressure in relation to school	No	Yes	1	2	3	4	5	6	7	
7. Concern/pressure in relation to your home environment (moving, structure of living environment, etc)	No	Yes	1	2	3	4	5	6	7	
8. Concern/pressure in relation to your children	No	Yes	1	2	3	4	5	6	7	
9. Concern/pressure in relation to your partner status	No	Yes	1	2	3	4	5	6	7	
10. Concern/pressure in relation to your financial situation	No	Yes	1	2	3	4	5	6	7	
11. Concern/pressure in relation to your health	No	Yes	1	2	3	4	5	6	7	
12. Concern/pressure in relation to your social obligations or commit- ments (example: church, community organizations, clubs, etc.)	No	Yes	1	2	3	4	5	6	7	
13. Concern in relation to your unborn child	No	Yes	1	2	3	4	5	6	7	

APPENDIX E

Life Events Questionnaire

LIFE EVENTS QUESTIONNAIRE

Number _____

Date _____

Instructions

Listed below are a number of events which may bring about changes in the lives of those who experience them.

Circle the events that have occurred in your life during the past year and circle whether these were Good or Bad.

Show how much the event affected your life by circling the appropriate number which corresponds with the statement (0 = no effect, 1 = some effect, 2 = moderate effect, 3 = great effect).

If you have not experienced a particular event in the past year, leave it blank.

Please go through the entire list before you begin to get an idea of the type of event you will be asked to rate.

Event	Type of Effect		Effect of Event on Your Life			
			no effect	some effect	moderate effect	great effect
A. HEALTH						
1. major personal illness or injury	Good	Bad	0	1	2	3
2. major change in eating habits	Good	Bad	0	1	2	3
3. major change in sleeping habits	Good	Bad	0	1	2	3
4. major change in usual type and/or amount of recreation	Good	Bad	0	1	2	3
5. major dental work	Good	Bad	0	1	2	3
6. (female): pregnancy	Good	Bad	0	1	2	3
7. (female): miscarriage or abortion	Good	Bad	0	1	2	3
8. (female): started menopause	Good	Bad	0	1	2	3
9. major difficulties with birth control pills or devices	Good	Bad	0	1	2	3
B. WORK						
10. difficulty finding a job	Good	Bad	0	1	2	3
11. beginning work outside the home	Good	Bad	0	1	2	3

Event	Type of Effect		Effect of Event on Your Life			
			no effect	some effect	moderate effect	great effect
12. changing to a new type of work	Good	Bad	0	1	2	3
13. changing your work hours or conditions	Good	Bad	0	1	2	3
14. change in your responsibilities at work	Good	Bad	0	1	2	3
15. troubles at work with your employer or co-workers	Good	Bad	0	1	2	3
16. major business readjustment	Good	Bad	0	1	2	3
17. being fired or laid off from work	Good	Bad	0	1	2	3
18. retirement from work	Good	Bad	0	1	2	3
19. taking courses by mail or studying at home to help you in your work	Good	Bad	0	1	2	3
C. SCHOOL						
20. beginning or ceasing school, college, or training program	Good	Bad	0	1	2	3
21. change of school, college, or training program	Good	Bad	0	1	2	3
22. change in career goal or academic major	Good	Bad	0	1	2	3
23. problems in school, college, or training program	Good	Bad	0	1	2	3
D. RESIDENCE						
24. difficulty finding housing	Good	Bad	0	1	2	3
25. changing residence within the same town or city	Good	Bad	0	1	2	3
26. moving to a different town, city, state, or country	Good	Bad	0	1	2	3
27. major change in your living conditions (home improvements or a decline in your home or neighborhood)	Good	Bad	0	1	2	3

Event	Type of Effect		Effect of Event on Your Life			
			no effect	some effect	moderate effect	great effect
E. LOVE AND MARRIAGE						
28. began a new, close, personal relationship	Good	Bad	0	1	2	3
29. became engaged	Good	Bad	0	1	2	3
30. girlfriend or boyfriend problems	Good	Bad	0	1	2	3
31. breaking up with a girlfriend or boyfriend or breaking an engagement	Good	Bad	0	1	2	3
32. (male): wife or girlfriend's pregnancy	Good	Bad	0	1	2	3
33. (male): wife or girlfriend having a miscarriage or abortion	Good	Bad	0	1	2	3
34. getting married (or beginning to live with someone)	Good	Bad	0	1	2	3
35. a change in closeness with your partner	Good	Bad	0	1	2	3
36. infidelity	Good	Bad	0	1	2	3
37. trouble with in-laws	Good	Bad	0	1	2	3
38. separation from spouse or partner due to conflict	Good	Bad	0	1	2	3
39. separation from spouse or partner due to work, travel, etc.	Good	Bad	0	1	2	3
40. reconciliation with spouse or partner	Good	Bad	0	1	2	3
41. divorce	Good	Bad	0	1	2	3
42. change in your spouse or partner's work outside the home (beginning work, ceasing work, changing jobs, retirement, etc.)	Good	Bad	0	1	2	3

Event	Type of Effect		Effect of Event on Your Life			
			no effect	some effect	moderate effect	great effect
F. FAMILY AND CLOSE FRIENDS						
43. gain of a new family member (through birth, adoption, relative moving in, etc.)	Good	Bad	0	1	2	3
44. child or family member leaving home (due to marriage, to attend college, or for some other reason)	Good	Bad	0	1	2	3
45. major change in the health or behavior of a family member or close friend (illness, accidents, drug or disciplinary problems, etc.)	Good	Bad	0	1	2	3
46. death of spouse or partner	Good	Bad	0	1	2	3
47. death of a child	Good	Bad	0	1	2	3
48. death of family member or close friend	Good	Bad	0	1	2	3
49. birth of a grandchild	Good	Bad	0	1	2	3
50. change in marital status of your parents	Good	Bad	0	1	2	3
G. PARENTING						
51. change in child care arrangements	Good	Bad	0	1	2	3
52. conflicts with spouse or partner about parenting	Good	Bad	0	1	2	3
53. conflicts with child's grandparents (or other important person) about parenting	Good	Bad	0	1	2	3
54. taking on full responsibility for parenting as a single parent	Good	Bad	0	1	2	3
55. custody battles with former spouse or partner	Good	Bad	0	1	2	3

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Event	Type of Effect		Effect of Event on Your Life			
			no effect	some effect	moderate effect	great effect
H. PERSONAL OR SOCIAL						
56. major personal achievement	Good	Bad	0	1	2	3
57. major decision regarding your immediate future	Good	Bad	0	1	2	3
58. change in your personal habits (your dress, life-style, hobbies, etc.	Good	Bad	0	1	2	3
59. change in your religious beliefs	Good	Bad	0	1	2	3
60. change in your political beliefs	Good	Bad	0	1	2	3
61. loss or damage of personal property	Good	Bad	0	1	2	3
62. took a vacation	Good	Bad	0	1	2	3
63. took a trip other than a vacation	Good	Bad	0	1	2	3
64. change in family get-togethers	Good	Bad	0	1	2	3
65. change in your social activities (clubs, movies, visiting)	Good	Bad	0	1	2	3
66. made new friends	Good	Bad	0	1	2	3
67. broke up with a friend	Good	Bad	0	1	2	3
68. acquired or lost a pet	Good	Bad	0	1	2	3
I. FINANCIAL						
69. major change in finances (increased or decreased income)	Good	Bad	0	1	2	3
70. took on a moderate purchase, such as a T.V., car, freezer, etc.	Good	Bad	0	1	2	3
71. took on a major purchase or a mortgage loan, such as a home, business, property, etc.	Good	Bad	0	1	2	3
72. experienced a foreclosure on a mortgage or loan	Good	Bad	0	1	2	3

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Event	Type of Effect		Effect of Event on Your Life			
			no effect	some effect	moderate effect	great effect
73. credit rating difficulties	Good	Bad	0	1	2	3
J. CRIME AND LEGAL MATTERS						
74. being robbed	Good	Bad	0	1	2	3
75. being a victim of a violent act (rape, assault, etc.)	Good	Bad	0	1	2	3
76. involved in an accident	Good	Bad	0	1	2	3
77. involved in a law suit	Good	Bad	0	1	2	3
78. involved in a minor violation of the law (traffic tickets, disturbing the peace, etc.)	Good	Bad	0	1	2	3
79. legal troubles resulting in your being arrested or held in jail	Good	Bad	0	1	2	3
K. OTHER						
Other recent experiences which have had an impact on your life. List and rate.						
80. _____	Good	Bad	0	1	2	3
81. _____	Good	Bad	0	1	2	3
82. _____	Good	Bad	0	1	2	3

APPENDIX F

Permission to use the Perceived Life
Stress Scale II

January 3, 1994

Sandra Newman
1840 Crescent Drive
Grand Rapids, MI 49503

Dear Sandy,

You have my permission to use the PLSSII in your study examining the differences in perceived stressor between partnered and unpartnered women in the second trimester of pregnancy. You also have my permission to include a copy of the instrument in the appendix of your thesis.

Sincerely,

Patricia W. Underwood, PhD, RN
Associate Professor
Kirkhof School of Nursing
Grand Valley State University

APPENDIX G

Permission to use The Life Events
Questionnaire



October 21, 1993

Sandra Newman
1840 Crescent Drive
Grand Rapids, MI 49503

Dear Ms. Newman:

I am writing to grant you permission to place my Life Events Questionnaire (1984) in the appendix of your thesis. You have already obtained permission to use the instrument, and I have no objections to you reproducing it in your thesis.

Best wishes for the successful completion of your research.

Sincerely,

A handwritten signature in cursive script, which appears to read "Jane S. Norbeck".

Jane S. Norbeck, RN, DNSc, FAAN
Professor and Dean

APPENDIX H

Permission from the Human Research Committee
of Grand Valley State University

GRAND
VALLEY
STATE
UNIVERSITY

1 CAMPUS DRIVE • ALLENTOWN MICHIGAN 49401-9411 • 616 895-6611

January 4, 1994

Sandra K. Newman
1840 Crescent Dr.
Grand Rapids, MI 59403

Dear Sandra:

The Human Research Review Committee of Grand Valley State University is charged to examine proposals with respect to protection of human subjects. The Committee has considered your proposal, "*Perceived Stressors Between Partnered and Unpartnered Women*", and is satisfied that you have complied with the intent of the regulations published in the Federal Register 46 (16): 8386-8392, January 26, 1981.

Sincerely,



Paul Huizenga, Chair
Human Research Review Committee

LIST OF REFERENCES

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