STRESS, SOCIAL SUPPORT, AND SELF ESTEEM IN PREGNANCY

by

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CHAPTER I

Introduction

The purpose of this study is to determine if there is a relationship between perceived stress, social support, and self esteem among pregnant women and if these psychosocial factors are perceived differently by women with differing obstetrical and sociodemographic characteristics. Further evaluation of these factors and their interrelationship is important for future research on the impact of psychosocial factors on pregnancy outcome.

Negative pregnancy outcomes include a range of factors such as abnormal labor, complications of delivery and postpartum, and maternal and infant ill health. Infant low birthweight (LBW) is a specific undesirable pregnancy outcome that alarms health care providers (Curry, 1987a; Institute of Medicine, 1985), and is currently regarded as the key index of poor infant outcome (Donaldson & Billy, 1984). Infants weighing 2500 grams or less (LBW) are almost 40 times more likely to die during their first month of life than those infants with normal birthweight. Furthermore, LBW infants are at increased risk for many health problems. Low birthweight is an indicator of inadequate fetal growth and results from preterm birth,

poor weight gain for a given duration of gestation, or both (Institute of Medicine, 1985).

Many factors have been identified which can increase a woman's chance of delivering a low birthweight infant. They include demographic characteristics, medical risk, environmental factors, and health care factors, including inadequate prenatal care (Institute of Medicine, 1985). Low socioeconomic status is viewed as an underlying risk factor for low birthweight outcome, and very low socioeconomic status is expected to be an even greater risk factor (Creasy & Herron, 1981). This relationship suggests that a woman's response to her environment may have an impact on pregnancy outcome. Therefore, psychosocial factors have been identified as possible risks for low birthweight (Institute of Medicine, 1985).

If psychosocial factors, in particular those examined in this study, stress, social support, and self esteem, are found to be related in low income women, it will provide direction for nursing practice and future nursing research.

Review of Literature

The review of the literature is divided into four areas. A representative selection of narrative and theoretical literature exploring the relationship between emotional and psychosocial factors and

pregnancy is presented first, followed by an examination of stress in pregnancy. The third area describes the literature related to social support in pregnancy. Finally, self esteem is reviewed.

Relationship between Emotional and Psychosocial Factors and Pregnancy

Pregnancy and its relationship to emotional and psychosocial factors has been examined by many health care professionals over the years. Ferreira (1965), in an attempt to document the importance of emotional factors in pregnancy, reviewed evidence compiled prior to 1965. He concluded that the prenatal environment shaped the pregnant woman's behavior pattern and that, at times, a pregnant woman's negative attitude could be reflected in complications of pregnancy. McDonald (1968) explored the relationship of emotional factors to obstetric complications by reviewing 15 years of pertinent articles and concluded that no causal relationship between the two was established. However, he reported that support was found for the positive relationship between psychological and physiological functioning during pregnancy.

Pregnancy has been described as a normal phase in a life cycle (Grossman, Eichler, & Winickoff, 1980; Rubin, 1970, 1975; Tilden, 1980). Rubin identified pregnancy as a period of identity reformulation,

relationship reordering, and personality maturation. Further, Rubin described pregnancy as a condition with underlying instability, change, and unpredictability. Grossman et al. recognized pregnancy as a turning point in the life cycle of a woman and her family. This developmental crisis of pregnancy was viewed as a conflict or anxiety-producing psychological adjustment, requiring adaptation. Tilden described pregnancy as a life crisis and viewed it as a state of ego instability with the opportunity for growth and maturation. Tilden noted that the potential for psychological problems is high when psychosocial stress is high, as well as when there is a failure to master the developmental tasks of pregnancy.

Cohen (1979) and Lederman (1986) approached emotional and psychological factors as disorders of pregnancy. Cohen developed and explained a classification scheme for emotional and psychiatric disorders associated with pregnancy and the postpartum period. The author based the scheme on clinical experience and did not claim scientific validity. He described several life experiences as stressful factors which, if unresolved, could lead to maladaptation to pregnancy. Lederman, in reviewing literature on maternal anxiety, concluded that maternal prenatal stress and anxiety were associated with many patterns

of abnormal labor and perinatal complications of delivery.

Stress in Pregnancy

The second area of the literature review examines literature related to stress in pregnancy and is divided into the following four sections: (a) the concept of stress and related theories, (b) the physiological nature of stress in pregnancy, (c) measurement of stress, and (d) research investigating stress and pregnancy outcome.

Stress is a concept frequently used in the health care setting, although in the literature its definition is not consistent. The term stress is used with many definitions to represent a wide range of problems (Lyon & Werner, 1987). Three major theories of stress have emerged from the literature and are as follows: (a) stress as a response, (b) stress as a stimulus, and (c) stress as a transaction. Physiological stress can be described as a response to any type of demand made on the body. Expanding the concept to include psychosocial aspects, stress has been described as the nonspecific response to demands made on the body. Furthermore, stress can require adaptation to the demands it makes. The general concept of stress in this theory includes pleasant as well as unpleasant experiences (Selye, 1974).

Stress has also been defined as a stimulus and as such is conceptualized as causing a negative response. Within this definition positive and negative life change or life events are viewed as stress stimuli (Holmes & Rahe, 1967).

As a transaction, stress is not a singular concept but also requires a judgment, an appraisal, by the individual that the demands being made exceed the resources available to manage them. If adaptation and coping do not accompany this perceived stress, destructive or maladaptive responses can result (Holroyd & Lazarus, 1982; Lyon & Werner, 1987). The transactional model allows for individual differences and is consistent with the nursing perspective, which views human experiences as arising out of dynamic individual-environment transactions and focuses on individualized health care needs of people (Lyon & Werner, 1987).

A portion of the reviewed literature addressed the physiological nature of stress in pregnancy. Hobel (1984) identified stress as playing an important role in increasing risk for preterm labor. He hypothesized that stress activates the sympathetic nervous system and endogenous release of catecholamines, resulting in increased uterine irritability.

Lederman, Lederman, Works, & McCann (1981) studied the psychological and physiological correlates of progress in labor. The researchers investigated a sample of 32 primigravid, white, middle-class married women. Three interviews were held during the last trimester of pregnancy to obtain demographic and psychosocial data. Rating scales were later used to quantify the data. The psychological variables rated included quality of relationship with husband, mother, and father; acceptance of the pregnancy; identification of a motherhood role; the amount and kind of preparation for labor; and anticipated fears in labor. Low scores for these variables indicated low conflict or fear, and high scores indicated high conflict or fear. At the onset of labor the women's plasma epinephrine levels were obtained, anxiety was assessed by the State-Trait Anxiety inventory, and fetal heart rates (FHR) were monitored. After delivery, infant Apgar scores were determined. The results showed that abnormal FHR patterns had a significant inverse relationship with Apgar scores and positive correlations with epinephrine levels and anxiety scores. Epinephrine levels were significantly positively correlated with anxiety scores, conflict in acceptance of pregnancy scores, and fear of loss of self esteem scores. The authors did not attempt to

establish a causal relationship but concluded that a correlation existed between maternal anxiety and fetal/newborn health status due to the physiological effects of epinephrine.

In animal research, vasculature of uterine tissues has been shown to be sensitive to vasoconstrictive effects of epinephrine (Rosenfeld, Barton, & Meschia, 1976). The researchers suggested that relatively low arterial concentrations of epinephrine might cause negative effects in pregnant women by decreasing the blood flow to the uterus, thereby decreasing oxygen and nutrients to the fetus and inhibiting fetal growth and well-being.

The development of instruments for measurement of stress has been guided by various stress theories. Holmes and Rahe (1967) introduced a Social Readjustment Rating Scale (SRRS), based on the stress as a stimulus theory, to provide a quantitative basis for examining clusters of life events requiring adaptation or coping. A convenience sample of 394 subjects was selected and instructed to rate 43 life events for relative degree of necessary adjustment. The sample population consisted of a majority of white, Protestant, middle-class, highly educated men and women. The authors' purpose in examining the magnitude of life events, whether positive or negative, was to provide a

quantitative basis for new epidemiological studies of disease onset. The SRRS has subsequently been widely used in research as a measure of stress but does not provide for individual experiences and variations regarding the impact of stress.

Barnett, Hanna, and Parker (1983) developed a life event scale incorporating unique aspects of obstetric groups. A primiparous sample of 72 women and a multiparous sample of 42 women were recruited for the study at one month postpartum. The women were asked to state which of 54 life events had happened to them in the past 12 months and to provide a distress rating for each item, whether or not it had occurred. The samples were predominantly suburban and middle class. The 54 items in this scale contained specific nontrivial life events and events specific to the pregnancy experience. The authors concluded that the undesirability of an event was the most accurate measure of stressfulness of life events. Although this instrument asked for perceived response to stress events, the scale enumerated life events and, therefore, is based on the stress as a stimulus theory.

Two other instruments, both utilizing the transactional stress theory, were reviewed, but neither was found to have been used by researchers studying stress in pregnancy. One instrument, the Perceived

Stress Scale, was developed by Cohen, Kamarack, and Mermelstein (1983) to measure the degree to which life events are appraised as stressful. Kanner, Coyne, Schaefer, and Lazarus (1981) developed the Hassles and Uplifts scales, which focused on everyday minor events in life. By using stepwise regression analyses the investigators found their scales to be better predictors of stress and its subsequent symptoms than the life events scales. The authors hypothesized that a reason for the improved predictability of their scales was their incorporation of essential components of the transactional theory of stress, adaptational processes, personal resources, and concurrent positive experiences. Life events scales measured only the event and not the individual experience. However, like previous researchers, they used a predominantly middle-class sample, and the results cannot necessarily be generalized to other social classes.

Measurement of stress in research, therefore, has evolved from the narrow approach of measuring the number of life events (Holmes & Rahe, 1967) to modifications of that approach, including emphasis on negative life events and the use of life events specific to the population being studied (Barnett et al., 1983). Further evolution has been evidenced by the development of stress instruments which include the

consideration of individual subjective significance and adaptation of an event (Cohen et al., 1983; Kanner et al., 1981).

Research studies examining stress in pregnancy are numerous. Early studies did not have the advantage of instruments developed to measure stress. These studies attempted to describe and define stress in pregnancy (Larsen, 1966; Wortis & Freedman, 1962). In a descriptive study examining stress and pregnancy with a preterm delivery outcome, Wortis and Freedman hypothesized that the high incidence of preterm labor among women of the low socioeconomic class might be related to stress reaction to their life experience. In a study of 267, the majority being black women, the authors compared the social situation of mothers of preterm infants with that of mothers of term infants by examining their histories. Details of the study's methods and analysis were not explained. The singular difference found by the researchers was that women who delivered preterm were younger. The authors recognized the need for future predictive studies.

Stress of women during pregnancy, as determined by recall in a retrospective study by Larsen (1966) appeared to have little predictive value for future postpartum stress. The sample of 130 mothers were asked questions postpartally about stress during

pregnancy and after delivery in an open-ended interview. The authors concluded that stress has a subjective component and is experienced individually.

Many researchers accepted the Holmes and Rahe (1967) concept of life events as stress and used the SRRS or a modified version in their studies (Berkowitz & Kasl, 1983; Gorsuch & Key, 1974; Helper, Cohen, Beitenman, & Eaton, 1968; Jones, 1978; Nuckolls, Cassel, & Kaplan, 1972; Ramsey, Abell, & Baker, 1986; Smilkstein, Helsper-Lucas, Ashworth, Montana, & Pagel, 1984; Williams, Williams, Griswold, & Holmes, 1975). Helper et al. used a convenience sample of 129 women from six different groups for their cross-sectional study. The six groups were composed of women from various church and community organizations. One group (N=30) were pregnant women receiving prenatal care in a particular clinic. Pregnancy status of the women in the other five groups was not given. The researchers attempted to determine what kinds of life events were judged by women to be difficult on adjustment to pregnancy by having the women rank life events in order of stressful impact. Two circumstances were found to represent threat to that adjustment: rejection of the pregnancy by the baby's father and past experience of a defective child. The authors concluded that their

study supported the findings of Holmes and Rahe (1967) for ratings of the stressfulness of life events.

Williams et al. (1975) and Berkowitz and Kasl (1983) investigated duration of pregnancy and its relationship to life change. The Berkowitz and Kasl study also investigated pregnancy attitude and its influence on duration of pregnancy. Both studies were correlational and retrospective with life change instruments administered in the postpartum hospitalization period. In the Williams et al. study the sample size of 46 included 23 full term and 23 preterm deliveries. In the Berkowitz and Kasl study 299 full term and 166 preterm pregnancies were examined. Both studies used convenience samples. Berkowitz and Kasl concluded that along with a high pregnancy desirability score, as determined from an attitude questionnaire, those persons with a high level of life events were twice as likely to deliver prematurely as those with low levels of life events. In addition, the overall risk of a preterm delivery among white, but not black, women was shown to be higher for those with a low pregnancy desirability score. Williams et al. concluded that the degree of life change prior to or during pregnancy did not influence duration of pregnancy, but that life change did have an etiologic effect on perinatal problems. A

causal effect, however, was conjecture because the research design and data analysis examined correlation, not causal or predictive relationships. The Williams et al. study was limited by its small sample size. The retrospective design of the two studies must be considered a weakness as a preterm birth might have distorted memories of previous events.

Nuckolls et al. (1972) studied the relationship between psychosocial assets and social stresses with regard to prognosis of pregnancy, as measured by normal or complicated outcome. The authors measured stress by a life change score of the previous two years at 22 weeks gestation, and they measured psychosocial assets with a questionnaire administered prior to 24 weeks gestation. Their convenience sample consisted of 170 white primigravid wives of military enlisted men. The results of the prospective, ex post facto study indicated that high psychosocial stress and low psychosocial assets might enhance susceptibility of the pregnant woman to complications of pregnancy, as broadly defined in this study. Women with high life change scores but high psychosocial assets had lower pregnancy complications. Although the authors used life events to measure stress, their study incorporated individual experience as a powerful determining factor of outcome by including psychosocial assets in the

assessment of adaptive potential. Results of this study were replicated, in part, by Tilden (1983) and will be reviewed later in this section.

In a prospective study Gorsuch and Key (1974) examined anxiety and life stress and their ensuing relationship to abnormalities of pregnancy. The researchers used a convenience sample of 118 low income pregnant women. Results of the study indicated that anxiety in the first trimester related to abnormalities of pregnancy, parturition, and infant status. Life stress during the second and third trimesters was associated with similar abnormalities.

A convenience sample of 102 subjects was used by Ramsey et al. (1986) in their nonexperimental investigation of infant birthweight outcome and its relationship with family structure, family functioning, and life events. The main focus of the prospective study was not stress but, rather, the nature of the family. Two instruments were administered at the initial pregnancy visit to measure family function and structure. At the time of delivery, life events of the periods before and during pregnancy were measured by the Holmes and Rahe (1967) Schedule of Recent Events (SRE). The authors found that money-related stress was the most powerful determinant of birthweight. In examining the Holmes and Rahe scale it is unclear,

however, which items the authors judged as money-related. Administering life events instruments at the time of delivery might have distorted the response.

Jones (1978) and Smilkstein et al. (1984) in prospective, descriptive studies investigated psychosocial risks as predictors of pregnancy complications. Jones identified life change, personality, and anxiety as psychosocial variables and measured them by administering the Holmes and Rahe (1967) SRE, the Minnesota Multiphasic Personality Inventory, and five other instruments. The SRE was scored for life changes occurring in the past six months, six months to one year, and one to two years ago. Jones recruited a convenience sample of 122 white, lower socioeconomic pregnant women for his study. Each of the women in the study completed the predictor measures shortly after admission to an antepartum unit, located in a resident facility for indigent women, typically two weeks prior to the expected delivery date. Complications of labor were used as the outcome measure and included six criterion factors, such as premature rupture of membranes, stillbirth, and elevated blood pressure.

Smilkstein et al. (1984) identified life events, family function, and social support as psychosocial variables and assessed those factors using the SRE, the

Family APGAR, and a questionnaire regarding number of social resources and satisfaction with those resources. The Family APGAR and social support questionnaire were administered one time only, but the SRE was administered twice, once prenatally to score life events in the preceding year and once shortly after delivery to score life events during pregnancy. Another variable, antepartum biomedical risk, was assessed from health history, and physicians and nurses notes in the patients' hospital charts. Smilkstein et al. recruited a convenience sample of 93 pregnant women from a small city in eastern Washington. The authors did not describe their sample beyond indicating that the mean age was 25.9 years, all had childbirth education, and students were overrepresented in both samples. Pregnancy complications studied as outcome included 35 items, not listed by the authors. Outcome also included postpartum complications, such as bleeding, infection, and infant ill health.

While Smilkstein et al. (1984) concluded that higher life change scores related to higher delivery and postpartum complications, Jones (1978) concluded that lower life change scores indicated a greater probability of complications. It is possible that the two opposing conclusions could be attributed to the difference in the time and circumstances of data

collection. Smilkstein et al. collected data from the first prenatal visit and two or three days postpartum. Jones collected data in the ninth month, two weeks prior to delivery and while the women were already hospitalized. The antepartum unit was described by the staff as being stressful to patients due to the fact that the patients had come from all over the state and that many were away from home for the first time. It is possible that for some of those patients, being away from home was an opportunity to relax. Either situation could influence a subject's response to the instruments. The opposing results of the Smilkstein et al. and the Jones research could also emphasize to future researchers the limitations of conceptualizing stress as life change and the limitations of generalizing from a singular specific instrument to a broad concept of psychosocial risk.

Other researchers used the life events concept for stress measurement in their studies but used instruments other than those based upon the Holmes and Rahe (1967) study to quantify those events (Brown, 1986; Newton, Webster, Binu, Maskrey, & Phillips, 1979; Tilden, 1983). Newton et al. (1979) measured stress with the Life Events Inventory, which was administered to subjects three to four days postpartum in a retrospective study. That inventory, like the SRRS,

listed events and assigned scores to each, but the events were more detailed and, for the most part, undesirable. A convenience sample of 132 women was used, of which 83 had given birth to full term infants, 30 preterm (33-36 weeks gestation), and 19 very preterm (<33 weeks). A cross-section of social classes were represented in the sample population. The purpose of the study was to examine to what extent psychosocial stress determined the onset of premature labor by analyzing demographic data and life events of the three subgroups, which were matched for age, parity, and gravidity. Results showed that the number of life events in the week prior to the onset of labor was far higher in the preterm groups. Further, the more preterm the onset of labor, the higher the level of psychosocial stress. Results were independent of any effect of social class composition.

Tilden (1983) and Brown (1986) studied the influence of stress and social support in pregnancy on emotional disequilibrium and on health status. Tilden, like Nuckolls, et al. (1972) in a prior study, focused on the interacting influence of life stress and social support in pregnancy. Tilden studied emotional disequilibrium as the outcome variable, which was defined by state anxiety, trait anxiety, depression, and self esteem. Tilden conducted a cross-sectional,

descriptive study with a convenience sample of 141 women with varying ethnic background and parity status. The women were tested prenatally in their second trimester with demographic and psychometric instruments. Stress was measured by the Sarason Life Experiences Survey, which allowed respondents to indicate perception and impact of life events. Social support was measured by a questionnaire which rated support network as to emotional, informational, and tangible support.

Brown (1986) recruited a convenience sample of 313 expectant couples from eight military hospital clinics. The outcome studied in this cross-sectional research was health, as measured by a Health Response Scale. Social support was measured by an investigator-developed inventory, and stress was measured by the Stress Amount Checklist. All instruments were administered in the second half of pregnancy. The author examined the relationship of social support and stress to health status and also compared the responses of mothers and fathers.

Results from the Tilden (1983) study indicated that stress and social support exerted separate and significant effects on emotional disequilibrium, and, in particular, emotional disequilibrium decreased with decreased life stress and increased social support.

Results from the Brown (1986) study indicated that stress was an explanatory variable in health response, more so for pregnant women than for their partners.

In summary, literature related to stress in pregnancy provides support for the supposition that stress in pregnancy is related to negative pregnancy outcome, including labor and delivery complications, pregnancy abnormalities, and perinatal medical problems.

Of the prospective studies reviewed, all but one showed a relationship between increased stress and negative pregnancy outcome. Two main weaknesses prevalent in these studies emerged. First, in all of these studies stress was narrowly defined and measured by the use of the life change scales, which do not measure individual perceptions of stress. Secondly, numerous methodological problems were present. The stress instruments were administered in a wide variety of points throughout pregnancy, from second trimester to time of delivery, resulting in possible distortion of responses. Also, none of the prospective studies examined current stress status; but, rather, women were asked to retrospectively recall life events of various intervals of time.

The results of the retrospective and cross-sectional studies also showed a relationship between

stress and negative pregnancy outcome. The two weaknesses noted in the prospective studies, narrow stress definition and measurement and methodological problems, also were found in these studies. Two early studies, however, added scope to the body of literature by attempting to define and describe stress rather than to measure it. Two of the cross-sectional studies incorporated an expanded concept of stress by using instruments that measured individual impact of life events, and one of those studies attempted to measure stress experienced during pregnancy.

Sample populations in most of the studies were homogeneous, white, and of the middle class. All recruited convenience samples, and all used nonexperimental designs.

Future research should include studies that qualitatively examine stress, use instruments that measure perceived stress, and investigate stress experienced in pregnancy. The research would benefit from use of broader sample populations and should include low socioeconomic samples.

Social Support in Pregnancy

The third area of the literature review examines literature related to social support in pregnancy. First, an overview of the development of the concept of social support will be described. Next, issues

involved in methods and goals of measurement of the concept specific to pregnancy, with a description of the tool that will be used in this study, will be described. Finally, a representative review of research studies examining social support in pregnancy will be examined.

The concept of social support has been used in relation to health issues with varying degrees of specificity of definition. In the early stages of defining the concept of social support, Cobb (1976) wrote of its protective aspects, facilitating an individual's ability to cope with and adapt to life stress, crisis, and transition. As such, social support was viewed as preventative medicine, guarding against the health consequences of stress. Cobb's definition was limited to emotional aspects, it being conceived of as information leading an individual to believe that he is cared for and loved, esteemed and valued, and a member of a network of communication and mutual obligation. Omitted from this definition are the tangible or practical aspects of support.

The concept of social support was further clarified and developed by Schaefer, Coyne, and Lazarus (1981) who defined it as being composed of three subconcepts of emotional (similar to Cobb), informational, and tangible support. Informational

support included advice in problem solving and feedback about current performance. Tangible support was direct aid of either material supplies or services. An important aspect of social support that Schaefer et al. introduced was the necessity not only to describe the composition of persons in an individual's support network, but also to assess their perception of the supportive value of these relationships. One must acknowledge the demands, constraints, and conflicts that are associated with social relations, not assuming that all relations are helpful. Schaeffer et al. introduced the notion that there is a multidimensionality of the concept of support. Measurements of support must take this into consideration because different types of support, and a person's perception of how adequate the supports are, may impact independently upon health and psychological functioning.

House (1981) defined social support as interpersonal transactions involving one or more of the following: (a) emotional concern (liking, love, empathy), (b) instrumental aid (goods and services), (c) informational support (advice, suggestion, directives), and (d) appraisal support (information relevant to self evaluation). He proposed that support could come from both informal sources, as in spouse and

friends, and from formal sources, as in professionals and self help groups.

Thoits (1982) described the buffering effects of social support for the individual who is striving to cope with stress caused by life change. An individual with a strong social support network should be better able to cope with major changes, while those with little or no support may be more vulnerable. In the health field, attention must be given to this aspect of social support because it is probably easier to improve and strengthen support systems than it is to prevent stress and crisis from occurring.

Tilden (1985) reviewed the issues related to the validity of measurements of social support. Social support can either be measured subjectively as individuals describe what role and significance it plays in their lives, or it can be measured objectively as outside viewers describe the subject's social network structure. Tilden, in agreement with Schaeffer et al. (1981), believed that in health issues, it is the subjective perception of support which is most valid because an individual's perception of the adequacy of support is what reflects his/her ability to cope. Relying on subjective perceptions also simplifies measurement because the subject's perceptions become the criteria by which the individual

is measured; the same subjective criteria can then be used in the collection of other data about the individual subject, such as on stress and self esteem. Problems of interrater reliability are avoided this way as well.

The tool that will be used in this study for the measurement of social support is one that was developed by Brown (1986a) and based upon the concept of social support that was defined by House (1981) which was discussed earlier. Responding to the requirement that measures of social support are best made from a respondent's perspective, a Supportive Behaviors Inventory (SBI) was developed through a series of steps, beginning with interviews of 14 expectant couples, to generate a list of supportive behaviors. This list was evaluated by an additional 45 expectant couples who rated each item on a 5 part scale; only those items which elicited mean support scores of 4.5 (very supportive) remained on the SBI. These descriptors of support were then evaluated by a panel of three independent judges who were required to be in unanimous agreement that an item fit into the House conceptual framework of social support in order for it to remain in the inventory. The SBI that remained consisted of 45 items, half specifically applicable to pregnant populations, and half applicable to any

population. A shortened, 11 item version of this scale was formed by combining items which were determined by statistical correlations to be redundant.

It is the shortened version of the SBI that was used in this research project to measure social support. Research that Brown (1986b) conducted using this tool will be described in the next section of this review where research regarding social support in pregnancy is described.

A comprehensive review of research studies regarding social support in pregnancy was completed by Oakley (1985), in which she discussed the notion that positive pregnancy outcomes can be influenced by adequate supportive social relationships. Based on a review of literature which included observational studies, nonrandomized intervention studies, and randomized controlled trials of social interventions, she concluded that intervention programs aimed at improving the "social" side of antenatal care may also have a positive effect on birthweight, an easily measurable aspect of pregnancy outcome.

In a study using the Support Behaviors Inventory (SBI) that was described earlier, Brown (1986b) collected data in a cross-sectional study of 313 expectant couples (of varied demographic characteristics) to determine the influence of social

support and stress on the health of each partner. Two subscales of the SBI were formed: Satisfaction with Partner Support and Satisfaction with Other People's Support by having subjects respond to the 10 point inventory regarding each of these two separate components of their support system. Analysis of the data showed that social support and stress were useful in predicting health. Expectant father's health was particularly dependent upon spousal support (explaining 10% of the variance in health), while expectant mother's health depended upon a larger constellation of supports, including friends. The health of expectant mothers was more significantly affected by stress (9% of the variance).

In another cross-sectional study, involving a convenience sample of 141 medically normal adult women, Tilden (1983) examined the relationship of stress and social support to emotional disequilibrium in pregnancy. Emotional disequilibrium decreased in response to increased social support and decreased stress. Stress was found to have a much more significant impact on disequilibrium (30%), than did social support (3%). Deficient support systems were one of the aspects of pregnancy that was judged most stress producing, introducing a conceptual dilemma regarding the role of social support. Does social

support reduce the likelihood of occurrence of life stress, thereby indirectly reducing emotional disequilibrium, or does social support buffer the deleterious effects of life stress once the stress has already occurred?

In retrospective studies, Plechnick and Corbett (1985) and Heins, Nance, and Ferguson (1987) found that the incidence of low birth weight (LBW) infants could be significantly reduced if antenatal programs which addressed psychosocial issues were implemented. Both studies focused upon the pregnant adolescent population and the necessity of developing programs specific to their needs. Plechnick and Corbett compared pregnancy outcomes of 493 teenagers cared for by a multidisciplinary team (managed by midwives) with a comparative group of 2014 pregnant teenagers chosen throughout South Carolina, and cared for by Department of Health Clinics. Both groups were evaluated by the same antenatal risk scoring system and found to be medically low risk. In analysis of the total sample, the LBW rate for the study group was 9.1% compared to 12.7% in the control group, while results were even more remarkable for patients under age 15 with 8.8% LBW in the study group compared to 21% for the control group.

Heins et al. compared 565 matched pairs (case/control) of rural teenage primigravidas with single pregnancies who were either cared for with or without (study vs.control) the social support of Resource Mothers. Resource Mothers were paid nonprofessional women who combined warmth, parenting experience, and knowledge of local community services to support the teens. Although results of the study were contaminated by the fact that there were significantly more patients in the study group who received adequate prenatal care, results did show that study participants had significantly fewer LBW infants than the controls (10.6% vs. 16.3%). The results of both of these studies are limited to the population studied (teenagers), and in neither study is it possible to determine whether the reduction in incidence of LBW babies was due to increased support or to generally improved prenatal care. More rigorous study designs, with randomized treatments provided to otherwise identically cared for populations, are necessary before definitive results can be obtained.

Nuckolls, Cassel, and Kaplan's (1972) classic study (cited in most health related social support literature subsequent to that time) found that the imbalance created by the existence of stressful situations and the unavailability of multiple

psychosocial assets explains enhanced disease susceptibility. Specifically, pregnant women lacking in psychosocial assets have increased risk for pregnancy complications. The prospective study of 170 white primigravidas married to enlisted men was conducted at a large military hospital. A limitation of this study is that the concept of social support is not defined separately, but is included in a larger, more general, construct of psychosocial assets. Also included in this construct are measures of ego strength and attitudes towards the pregnancy. Another limitation involves the study population which was comprised of enlisted men's wives. Their life stress and social support patterns may differ significantly from women who live in more naturally occurring and stable social situations.

In a study similar in design to that of Nuckolls et al. (1972) but using a naturally occurring population (n=117) from various racial, marital, and socioeconomic groups, Norbeck and Tilden (1983) found similar results regarding the stress buffering effects of psychosocial assets. Although Norbeck and Tilden's results showed less effect of social support on stress, their findings are more generalizable because of the study population, and more interpretable because the construct of psychosocial assets was divided for

measurement into the subconcepts of social support (emotional and tangible support) and ego functioning variables (self esteem, anxiety and depression).

In prospective studies that were described more fully in the literature review on stress, Ramsey, Abell and Baker (1986) and Smilkstein, Helsper-Lucas, Ashworth, Montano, and Pagel (1984) investigated the role that family structure and family function play in infant birth weight and other complications of pregnancy. Ramsey et al. found that infants delivered to mothers perceiving their families as disengaged or as enmeshed weighed less than those from moderately cohesive families; enmeshment was more strongly determinant of low birthweight than was disengagement. This data demonstrates that the family can act negatively by producing stress, instead of playing a positive role by lending support. Overly involved families may cause mothers to feel that they lack privacy, independence, and the psychological space that is necessary in the transition to parenthood. Smilkstein's results suggest that family function, as measured by Family APGAR score, was the psychosocial variable most predictive of pregnancy complications, particularly postpartum complications.

In summary, the literature review demonstrates the evolution of the concept of social support, provides

criteria for measurement of the concept, and establishes the importance of the concept to health, specifically in the assessment and care of obstetric populations. The concept of social support that was used for this project is defined as interpersonal transactions that involve one or more of the following: emotional concern, instrumental aid, informational support, and appraisal support. Validity of the measurement of the concept requires that the subject's perception of the supportive value of their support network be assessed in order to determine the possibility of health consequences.

Existing research has established that there is some relationship between social support and pregnancy outcome, although the strength of the relationship and the existence of other contributing factors remains unclear. The majority of the research has been retrospective or cross-sectional studies where other variables have not been controlled. The present state of the research points towards the notion that social support and stress place opposing forces (positive vs. negative) on the individual, thereby affecting emotional stability and, consequently, healthy pregnancy outcomes.

Further research is needed in order for the relationship of social support to pregnancy outcomes to

be more clearly defined. In the teenage population, particularly younger teens, programs which strengthen social support appear to positively affect pregnancy outcome. Randomized treatments of increased support provided to otherwise identically cared for populations are needed before this relationship can be established. Studies need to be done with populations of various demographic characteristics as well.

Self Esteem in Pregnancy

The final area of literature review involves the concept of self esteem and its possible relationship to positive pregnancy outcomes. More research has been done regarding the impact of stress and social support on health in general and pregnancy in particular than has been done regarding the impact of positive or negative self esteem. The little research that has been done on self esteem and its relation to health topics, as well as research that has attempted to address the concept of self esteem and its relation to pregnancy outcome, will be reviewed.

The concept of self esteem was defined by Crouch and Straub (1983) as a life process whereby the individual interacts with his social environment and develops a sense of his own self worth. Crouch and Straub defined two levels of self esteem: a basic level that is developed in early childhood, usually in

amily interactions, and is a relatively unchangeable self definition, and functional esteem that develops through interactions with others throughout life. Functional self esteem is more changeable than basic self esteem; positive experiences and supportive relationships later in life may allow an individual to exceed the basic level of self esteem built in childhood. Crouch and Straub believed that individuals who are experiencing a time of life transition, particularly times that require changes in self definition, are vulnerable to feelings of low self esteem as they strive to meet the challenges that life change brings. Pregnancy, as a time of transition, may be such a time of vulnerability.

Crouch and Straub (1983) further defined self esteem as reflecting the degree to which the individual believes that his perceived self and ideal self are in agreement. A person with low self esteem sees a large discrepancy between ideal self and perceived self. The tool for measuring self esteem that will be used in this research project measures this aspect of self esteem. Rosenberg (1965) developed a Self Esteem Scale (SE) of 10 items measuring respondents self acceptance as a measure of self esteem. As measured by the SE scale, high self esteem expresses the feeling that one is "good enough". The individual feels that he is a

person of worth, respects himself for what he is, but does not necessarily consider himself superior to others. In contrast, a person with low self esteem lacks respect for the self he observes; self rejection, self dissatisfaction, and self contempt are implied.

Research by Antonucci and Jackson (1983) introduces the idea that there may be a relationship between self esteem and health. Data was taken from a cross-sectional study of 2,264 adults (21 years and older) throughout the United States who were surveyed on measures of health, self esteem, and a number of sociodemographic characteristics thought to have independent effects on health and self esteem. Self esteem was measured using the Rosenberg Self Esteem Scale.

Data was analyzed to determine whether perceptions of good or ill health, the existence of a health problem, or the type of health problem had effects on levels of self esteem. Results showed a clear relationship between self reported health and self esteem. Regardless of the type or severity of the health problem, it was associated with lower self esteem than was reported by those with no health problems. The direction of causality of this relationship is unclear. Are those with low self esteem at increased susceptibility to ill health, or

does the fact that one is in poor health lower self esteem? Results of potential relevance to this proposed research study were those showing that the relationship between health and self esteem was stronger for women than for men. No explanation for this was attempted.

In a cross-sectional study using a convenience sample of 98 adults living in a large apartment complex in a Southwestern city, Muhlencamp and Sayles (1986) used questionnaires to identify relationships among perceived support, self esteem, and positive health practices. Findings showed that persons with high self esteem perceived their social supports to be very adequate and maintained more positive health practices than did those with low self esteem and poor social support. Further analysis showed that social support did not directly affect health practices, instead its effect was indirectly caused by having an influence on increased self esteem which <u>did</u> directly affect health practices. High self esteem promotes a feeling of self worth which encourages one to take care of oneself. Limitations of this study are that the sample was not randomly sampled, was largely Caucasian (86%), single (69%) and young (mean age 29). Of possible relevance to the research proposed here, were tentative findings that the health care practices of women may be

particularly influenced by self esteem and social support. Further research is needed for this to be definitively shown.

Hallal (1982) conducted a descriptive, correlational study using a sample of 207 women drawn from a variety of settings, to determine whether there was a difference in the health beliefs, health locus of control, and self esteem of adult women who practiced Self Breast Exams (SBE), as compared to those who did not. It was her hypothesis that a person with high self esteem would have a high level of positive regard for her bodily self, consequently her health, and would have a more positive attitude toward good health practices. Her hypothesis was supported in that subjects practicing SBE (80%) were significantly correlated with high self esteem scores as compared to the group that did not practice SBE (20%).

Limitations of this study are that the demographic, socioeconomic, and educational characteristics of the study sample are unclear. These characteristics could conceivably have strong effects upon study results. The preliminary results of this study are important, and worthy of more study, as the finding that women with high self esteem have more positive health practices has relevance to the issue of

whether the self esteem of pregnant women affects whether they seek adequate prenatal care.

Research regarding the self esteem of childbearing women was done by Curry (1982) as part of a study to determine what effect early skin to skin contact between mother and baby had upon maternal-infant attachment. Because self esteem was believed to have an effect upon maternal attachment behaviors, it was a variable that was measured. The study sample of 20, mostly Caucasian, married primiparas was evaluated with a self esteem scale that was administered both prenatally and three months postpartum. Results were limited by the small, homogenous sample, but showed that the women's self esteem scores were largely stable over time and tended to increase postpartally if there was any change at all.

Research that has been done specific to self esteem in pregnancy is very limited, and when it has been measured, the concept of self esteem has been included in a construct of other psychosocial variables for measurement. This is the case in research done by both Nuckolls, Cassel, and Kaplan (1972) and Norbeck and Tilden (1983) that was described in the review of literature on stress and social support in pregnancy. Nuckolls et al. found that women with multiple psychosocial assets (which included ego strength) were

less susceptible to pregnancy complications. Norbeck and Tilden found that the three emotional variables of anxiety, depression, and self esteem were highly correlated and formed a single construct that was significantly related to the health of the infant at birth, although not related to complications for the mother.

A summary of the research related to self esteem and health, particularly pregnancy outcomes, shows that the research thus far has been limited. Definition has been given to the concept of self esteem, it being divided into two levels of basic esteem and functional esteem which reflect the degree to which an individual is satisfied that his perceived self compares adequately with an ideal self.

Research shows that there is a relationship between health status and self esteem, particularly for women, although the direction of causality of this relationship is still unknown. Self esteem does appear to have an effect on health in that people with high self esteem engage in positive health practices more than do those with poor self esteem. This relationship is particularly strong for women.

The effect that high self esteem can have on positive pregnancy experiences has been introduced by this review, but further research is needed before the

degree to which it influences the experience of pregnancy, women's attempts to obtain prenatal care, and pregnancy outcome can be determined. Further research is needed with attention paid to the need to study women of differing socioeconomic and educational groups. The preliminary studies regarding the relationship between self esteem and health that have been done thus far have sampled largely white, middle class, fairly well educated samples exclusively. Very little is known about the self esteem of low socioeconomic groups, pregnant women in particular, and what effect it may have on their health status and practices.

Summary of the literature on stress, social support and self esteem in pregnancy

In summary, the literature provides definition of the concepts of stress, social support, and self esteem and suggests criteria that should be employed when the concepts are measured. Research has begun to evaluate how the three concepts operate, both separately and in conjunction, to affect health in general and pregnancy outcome in particular. The following summary will describe the present state of this knowledge and propose what future research is needed to further the knowledge related to psychosocial aspects of pregnancy.

Conceptual definitions have been developed in the

literature for stress, social support, and self esteem in the following manner. Stress is defined as a transaction in which the individual interacts with his environment, forming an appraisal that the demands being made upon him are exceeding available resources. The concept of social support is defined as an interpersonal transaction in which a social network provides the individual with one or more of the following: emotional concern, instrumental aid, informational support, and appraisal support. Self esteem is defined as a reflection of the degree to which the individual is satisfied that his perceived self compares adequately with an ideal self.

The three concepts are all defined as reflecting the individual's perception of their impact on his/her life. Individual perceptions of what situations are stressful and the adequacy of their social supports and levels of self esteem will all differ. Because it is the person's perceptions that have an impact upon health status, measurements of these concepts must be made from the subjective perspective.

The existing research largely shows that there is a relationship between increased stress and poor pregnancy outcome, and that stress may be mitigated by the perception of adequate social supports. It is the imbalance between the perception of too much stress and

inadequate social support that appears to cause emotional disequilibrium and consequently increased risk for poor pregnancy outcome. Research has shown a relationship between self esteem and health status in that persons with poor health have decreased self esteem, and those with high self esteem appear to follow better health practices. Adequate social support has been shown to have a direct impact upon positive self esteem, thereby indirectly affecting health care practices. The relationships between self esteem and health care practices have been shown to be particularly strong for women, and therefore may have an impact upon their seeking prenatal care. The research has not yet been done to support this supposition.

Further research is needed with attention paid to the need to measure stress, social support, and self esteem from the individual perspective. Measurements thus far, particularly of stress and social support, have tended to measure from an objective standpoint, measuring the occurrence of stressful events and the existence of social support networks. In order to determine how these concepts impact upon pregnancy, more research is needed in which the concepts are measured separately, and subsequent determinations are made of how they interrelate. Measurements made during

different times of gestation would be helpful in determining how the levels of the three concepts may change throughout pregnancy. Finally, measurements need to be made on differing population groups, particularly groups such as low socioeconomic women who may be at increased psychosocial risk for poor pregnancy outcome.

Conceptual Framework

Factors that influence pregnancy outcome can be categorized into five areas: (a) biomedical status (presence of acute and chronic medical problems), (b) obstetric history (such as previous preterm delivery or gestational diabetes), (c) life style (smoking, work setting, nutrition), (d) sociodemographic status (age, income, education), and (e) psychosocial variables (stress, social support and self esteem). The conceptual framework for this study was developed to explain how these five factors may interrelate to affect pregnancy outcome.

In this conceptual framework, the four factors of biomedical status, obstetric history, lifestyle and sociodemographic status are viewed as having a direct impact upon pregnancy outcome, either separately or as they interact together. The psychosocial construct is viewed as encompassing or surrounding the other four areas, indirectly affecting pregnancy outcome by

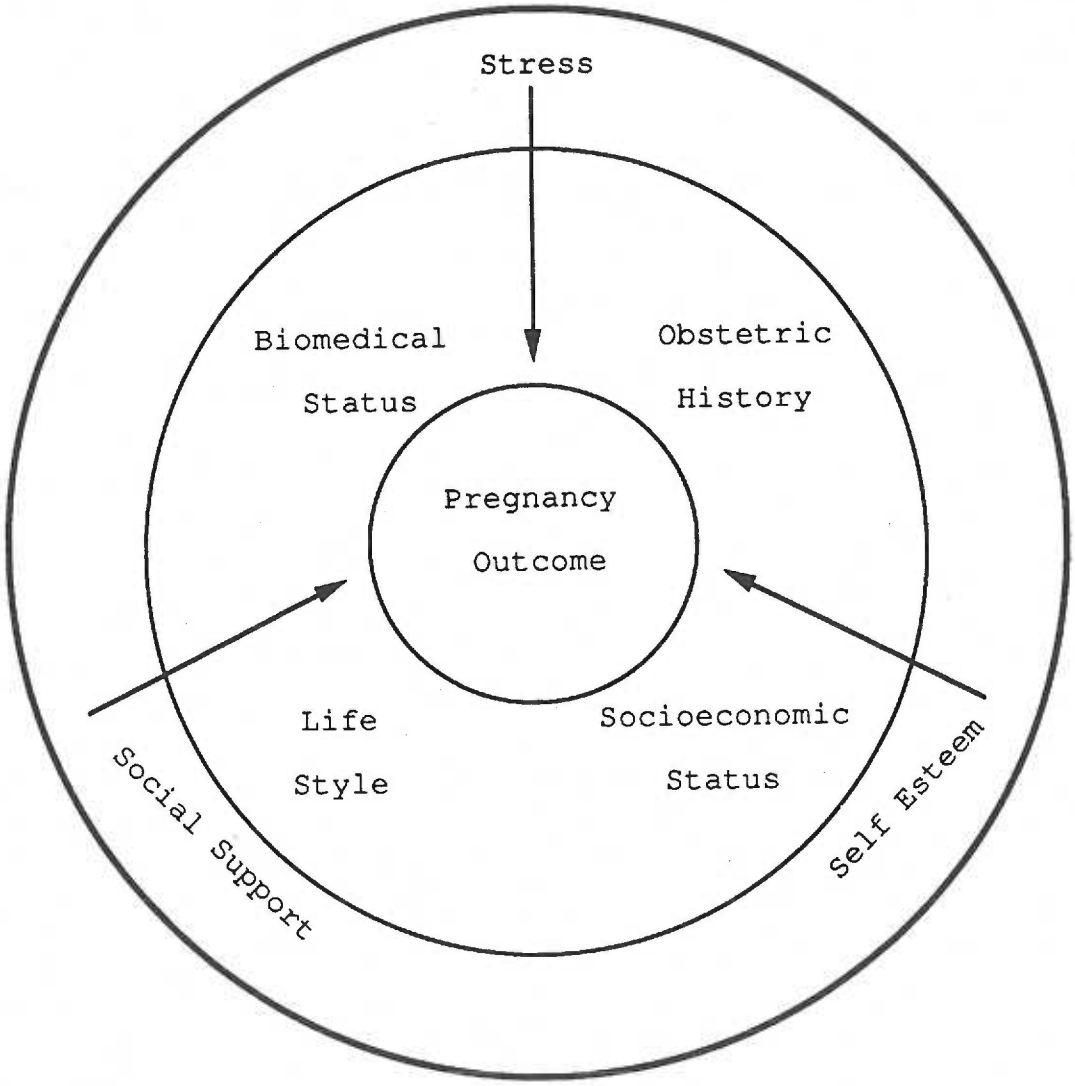
affecting how well the pregnant women is able to cope with these four direct factors (see Figure 1).

An example of this interplay would be a woman who has an obstetric history of preterm labor, thus placing her at risk for poor pregnancy outcome. If in addition, she works in a setting that requires heavy physical work, life style and obstetric history interrelate to directly increase her risk for premature labor. The psychosocial variables which impact upon this woman may be less obvious but will affect how strongly the first two factors impact upon her pregnancy. A woman with a supportive partner at home will be much more able to cope with, or change the situation than would someone in an abusive relationship. Home will be less stressful, a supportive partner may allow her to rest more while she is there, and she will likely have a higher level of self esteem, enabling her to at least attempt discussing her needs for more rest with her supervisor.

The focus of study in this research project are the psychosocial variables of stress, social support, and self esteem. Stress is defined as a transaction in which the individual interacts with the environment and forms an appraisal that the demands being made upon them are exceeding available resources. Social support

Figure 1

Conceptual Framework



is defined as interpersonal transactions in which the social network provides the individual with one or more of the following: emotional concern, instrumental aid, informational support, and appraisal support. Self esteem is defined as reflecting the degree to which the individual is satisfied that his perceived self compares adequately with an ideal self.

Based upon this conceptual framework and these definitions of the concepts of stress, social support, and self esteem, the purpose of this research is to answer the following research questions:

1. What are the relationships among perceived levels of stress, social support, and self esteem in pregnant, low socioeconomic women?

2. Are there relationships among selected sociodemographic and obstetric characteristics and perceived levels of stress, social support, and self esteem?

CHAPTER II

Methods

This chapter describes the methods used to answer the following research questions: (a) What are the relationships among perceived levels of stress, social support, and self esteem in pregnant, low socioeconomic women? (b) Are there relationships among selected sociodemographic characteristics, selected obstetrical characteristics, and perceived levels of stress, social support, and self esteem? First, the design is described, followed by the setting, sample, and protection of human subjects. A description of the instruments is presented next, followed by the completed procedures. Methods of data analysis conclude this chapter.

Design

The design used was nonexperimental. Ethical conflicts precluded the manipulation of the stress variable in this study. Social support and self esteem are inherently not manipulable. Therefore, a nonexperimental, ex post facto design examining the naturally occurring variables was preferred. Moreover, by using the ex post facto design, the researchers did not attempt to infer a causal relationship among stress, social support, and self esteem, but rather tested for a correlation among the variables. A cross-

sectional approach was incorporated into this design. Self-assessments of stress, social support, and self esteem were collected for women at one time during their current pregnancies.

Setting

The setting for this research project was a large university hospital women's clinic in the Pacific Northwest. The university hospital clinic is in a large urban area but serves patients from an even larger geographic area, including suburbs and rural communities. Prenatal care and labor and delivery services are provided by certified nurse midwives and physicians. The clinic is part of a teaching hospital and, therefore, other personnel involved in patient care include medical students, interns, residents, and undergraduate and graduate students in nursing.

The majority of the clients are low income women who pay for prenatal care with Medicaid or are self-pay patients on a sliding fee scale basis.

Sample

A convenience sample of 91 subjects was recruited from among the clinic's clients who met the following criteria: (a) pregnant, (b) had family incomes at 185% of the federal poverty standard or less, (c) consented to participate, and (d) were 18 years of age or older. The income eligibility level was selected because it is

the WIC Program[1] eligibility standard and is the standard of low income status used in Oregon.

Protection of Human Subjects

Potential subjects were assured that participation in the study was voluntary and that they had the right to refuse to participate or to withdraw at any time during the interview. The potential subjects were also told that refusal to participate in the study or withdrawal from the study would not affect their prenatal care at the clinic. The potential subjects were informed that the study was designed to examine stress, social support, and self esteem in pregnant women.

The potential subjects were assured that privacy and confidentiality would be maintained by the researchers. They were told that their names would not be identified, and a coding system would be used to gather medical and demographic data from their charts.

The potential subjects were informed that possible risks for participants would be discomfort in answering the questions and that there were no known personal benefits. If discomfort or further discussion ensued from any of the questions, the researcher replied with the following two-point response: (a) Do you want to

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[1] WIC is a federally funded supplemental food program for women, infants, and children.

discuss this issue with your prenatal care provider? (b) Would you like me to approach your prenatal care provider with this issue for you? In addition, the interviews concluded with the following questions: (a) Did this interview bring up any concerns or questions that you would like to discuss with your prenatal care provider? (b) Would you like the researcher to approach your prenatal care provider with this concern or question for you? The researchers consulted with the prenatal care providers in oral or written form when so directed by the clients.

Instruments

This research focused on the three variables of stress, social support, and self esteem and their relationships with one another in the sample population. Data was collected on the three variables by using the Psychosocial Assessment Tool (PAT) (Curry, 1987b). Demographic and socioeconomic data was collected by use of the Pregnancy Data Form. All data was collected at one time only during each subject's pregnancy.

The PAT was developed to assess women's perceptions of stress, social support, and self esteem (Curry, 1987b). The PAT is comprised of three sections, the Assessment of Stress, the Assessment of

Support, and the Assessment of Self Esteem (Appendix A).

The Assessment of Stress is an 11-item list of factors to which the participants were asked to judge their current level of stress. Possible responses on the four-point scale are no stress, some stress, moderate stress, and severe stress. The highest possible score is 44, indicating high stress, and the lowest is 11, indicating low stress. The 11 items on which the participants were asked to judge their current level of stress are as follows: (a) financial worries (basic needs), (b) other money worries (additional expenses), (c) problems related to family, (d) having to move, (e) recent loss of a loved one, (f) current pregnancy, (g) current abuse, (h) problems with alcohol, drugs, (i) work problems, (j) problems related to friends, and (k) generally "overloaded."

The Assessment of Stress was developed by Curry (1987b). She selected items from scales previously used in research, including the Hassles and Uplifts Scales (Kanner, Coyne, Schaefer, & Lazarus, 1981) and Sarason's Life Experience Survey (Sarason, Johnson, & Siegel, 1978). The author strengthened the content validity of the Assessment of Stress for use in obstetric clients by inclusion of items chosen through consultation with clinicians (Curry, 1987b). The

instrument was congruent with this study's conceptual definition of stress because it allowed for the individual perception of the 11 items. This congruity between the instrument and the conceptual definition of stress enhanced construct validity of the instrument.

The Assessment of Support is a shortened version of the Support Behavior Inventory (SBI) (Brown, 1986a). The SBI has an internal consistency reliability of .91. The 11 items in this assessment elicit satisfaction or dissatisfaction with the amount of partner support and support from others on a six-point Likert scale. The 11 items are as follows: (a) shares similar experiences with me, (b) helps keep up my morale, (c) helps me out when I'm in a pinch, (d) shows interest in my daily activities and problems, (e) goes out of his/her way to do special or thoughtful things for me, (f) allows me to talk about things that are very personal and private, (g) lets me know I am appreciated for the things I do for them, (h) tolerates my ups and downs and unusual behaviors, (i) takes me seriously when I have concerns, (j) says things that make my situation clearer and easier to understand, (k) lets me know that he/she will be around if I need assistance. This assessment has a possible score range of 11 to 66 for each of its two sections, partner support and support from others, for a total score of 22 to 132.

The Assessment of Self Esteem includes the ten-item Rosenberg Self-Esteem Scale (Rosenberg, 1965), which measures the self-acceptance aspect of self esteem and has a Guttman scale reproducibility coefficient of .92. After consultation with clinicians, an additional question was added (Curry, 1987b). The ten items of the Rosenberg Self-Esteem Scale are as follows: (a) feel that you're a person of worth, at least on an equal basis with others, (b) feel that you have a number of good qualities, (c) all in all, feel that you are a failure, (d) feel you are able to do things as well as most other people, (e) feel you do not have much to be proud of, (f) take a positive attitude toward yourself, (g) on the whole, feel satisfied with yourself, (h) wish you could have more respect for yourself, (i) feel useless at times, (j) at times think you are no good at all. The final question of the 11-item scale is: feel like you have control over your life. Subjects responded to these items on a four-point Likert scale, indicating they strongly agreed, agreed, disagreed, or strongly disagreed with the items. A score range from 11 to 44 was possible for this assessment. Items (c), (e), (h), (i), and (j) were reversed in scoring by the researchers for continuity of scores. The scores were calculated so that the lowest possible score, 11, indicated low self

esteem, and the highest possible score, 44, indicated high self esteem.

The scores for the three scales were adjusted to allow comparison and analysis. Averages were determined so that a score of 1 reflected the lowest stress, social support, and self esteem levels, while 4 reflected the highest level for stress and self esteem and a 6 signified the highest level of social support.

Demographic data was collected using the Pregnancy Data Form (Appendix B). The information collected from this instrument, including age, race, educational background, and so forth, was used to describe the sample population.

Measurement of Variables

1. Psychosocial factors: Perceived stress, social support, and self esteem as measured by the PAT.

2. Sociodemographic characteristics: Age, income level, and education by Pregnancy Data Form.

3. Obstetrical characteristics: Gestational age by weeks and primiparity or multiparity by patient clinic charts and Pregnancy Data Form.

Procedures

Permission to collect data from the university hospital clinic was obtained. Institution protocols and stipulations for research were followed.

All prenatal patients who met eligibility criteria were approached at the time of a regularly scheduled prenatal visit by the researchers. Participation in the study was requested until the sample size of 91 subjects was reached. This took four weeks. After the women checked in for their appointments and were placed in an exam room, they were asked to participate in the study. They were told that this study was designed to find out what levels of stress, social support, and self esteem women have during pregnancy. It was emphasized that participation was strictly voluntary and had no bearing on their prenatal care. Other issues of human subjects rights previously discussed were also emphasized. The potential subjects were told that if they agreed to participate they would answer questions of general information, as well as answer questions about stress, social support, and self esteem. The potential subjects were told that this interview would take approximately ten minutes to complete.

Women who agreed to participate met with one of the two researchers who administered the questionnaires as an interview. All interviews took place in the privacy of the exam room. Accompanying adult persons were asked to leave the room during the interview with an appropriate explanation.

The PAT was administered by the two researchers using similar procedures. The questions were read exactly as written on the questionnaire forms. Responses were elicited with the aid of response cards available for the participants to view as questions were asked. If further participant questions or concerns arose, the participant was told that it was appropriate to discuss the issue with the prenatal care provider. Further, the participants were asked if they would like to discuss it with their prenatal care provider and if they would like to have the researcher approach the prenatal care provider for them.

Anonymity and confidentiality were maintained by the researchers. Consent forms explaining the research and identifying subjects' rights were signed by all participants prior to the interviews (see Appendix C).

Data Analysis

Data were analyzed using the CRUNCH statistical package. Descriptive statistics were used to summarize data collected through the administration of the PAT. Descriptive analysis included computation of the means, standard deviations, and frequency distributions. Correlations were provided using computation of Pearson's r, and scale reliabilities were determined by Cronbach's alpha coefficient. Differences in mean were determined by two-tailed t-tests. Significance was

established at the .05 level.

CHAPTER III

Results and Discussion

In this chapter results of the study will be presented along with a discussion of those results. The sample will be described, the reliability of the tool will be discussed, and the research questions will be answered. Findings in addition to those answering the research questions will be included.

Results

Description of the Sample

Interviews using the Psychosocial Assessment Tool (PAT) were completed with 91 subjects. Missing data included two responses for education, one response for parity, and three responses for income, although income eligibility was ascertained for all subjects. All 91 subjects responded to all scale questions.

Demographic data for the sample is delineated in Table 1 by age, education, income, weeks gestation, and parity. The sample ranged in age from 18 to 40 years and had a mean age of 24.5 years. The large majority of the sample was white (85%). There were six blacks, one hispanic, and three native Americans. Four women felt they did not fit any of the categories for race.

Approximately 70% of the subjects had completed at least a high school education, and 21 of these persons had education beyond high school. The majority of the

Table 1

Demographic characteristics of sample

	Mean	SD	Range
Age (years)	24.5	4.5	18-40
Education (years)	11.8	1.7	8-17
Income (per month)	$555	$429	$0-2200
Weeks gestation (at interview)	32.3	8.1	6-43
Parity	1.4	0.5	primiparous or multiparous

sample were living with a partner, 41% of these were married and 25% were unmarried. Six women were married but not living with their husbands, and twenty-five (27.5%) were single and living alone.

Income levels were calculated to reflect 100% and 185% of poverty level based on household size. Seventy-three per cent of the sample fell below 100% of poverty, while the remaining had incomes from 100% to 185% of the poverty level.

The mean gestational age of the sample was 32 weeks and ranged from 6 to 43 weeks. Most of the women interviewed were multiparous (62%).

Tool Reliability

Measures of internal consistency using Cronbach's alpha were completed to determine reliability of the PAT. Cronbach's alpha coefficients were .78 for the stress scale, .92 for the social support scale, and .89 for the self esteem scale. The social support scale consisted of the combined social support-partner and social support-others components. The alpha coefficient for the entire PAT was .78. Reliability calculations supported utilization of the PAT scales for this study's sample. Table 2 summarizes this information.

Table 2

PAT: Mean scores, standard deviations, range, and scale reliability

Scale	Mean	SD	Range	Alpha
Stress	1.79	0.49	1-4	.78
Social Support-Partner	4.82	1.04	1-6	.93
Social Support-Other	4.53	1.21	1-6	.95
Social Support-Combined	4.63	0.95	1-6	.92
Self Esteem	3.12	0.52	1-4	.89
Total Scale	a	a	a	.79

a
Not computed

Research Questions

The first research question asked: What are the relationships among stress, social support, and self esteem in low socioeconomic pregnant women? Pearson's correlations of the three scales revealed that stress was inversely correlated with social support and self esteem at a significant level. Social support and self esteem were significantly positively correlated. Significance was established at the $p<0.05$ level. Table 3 summarizes this data.

The second research question considered in the study was: Are there relationships among selected sociodemographic and obstetrical characteristics and perceived levels of stress, social support, and self esteem? For analysis of the sociodemographic data each variable was divided into dichotomous groups as follows: age (18 to 24 years and 25 years and above); income (less than 100% of poverty and 100% to 185% of poverty); education (8 to 11 years and 12 years or more); trimesters (first through second trimesters and third trimester); and parity (multiparous and primiparous).

Once these groups were separated, Pearson's correlations were calculated between each subgroup and the stress, social support, and self esteem variables. Correlations were significant for most subgroups and

Table 3

Pearson's correlations of stress, social support, and self esteem scores for the total sample

	Social Support	Self Esteem
Stress	-.67 p<.0000	-.49 p<.0000
Social Support	---	.42 p<.0000
Self Esteem	---	---

the variables. The three exceptions were the poorly educated and the primiparous women, whose self esteem did not significantly correlate with stress or with social support, and the third trimester women, whose self esteem did not significantly correlate with social support.

Data analysis using t-tests was done to determine significant differences in mean scores of each variable (stress, social support, and self esteem) for each demographic subgroup. Income was the only sociodemographic subgroup in which a significant difference was found. Women with lower incomes had higher stress scores. Additional Pearson's correlations were computed between income and the scales. The only significant result was an inverse correlation between stress and income ($p<0.0007$).

Additional Findings

In an effort to determine if a profile could be developed for pregnant women of high risk, those women with higher stress, lower support, and lower self esteem scores were further examined. Scores one standard deviation above or below the mean were used to identify those women at risk. A total of 23 women was found in this group, 15 with high stress, 13 with low support, and 12 with low self esteem. Thirteen women had two or more risk factors, and four women showed

extreme risk by falling into all three categories. Income, age, education, and parity of these women were examined to see if any common patterns existed. None were identified, which is not unexpected given the homogeneous nature of the sample.

Discussion

The findings of this study suggest, as anticipated, that the three psychosocial concepts of stress, social support, and self esteem are related in a sample of low socioeconomic pregnant women. The perception of high stress is related to low social support and low self esteem. The converse is also true. Social support and self esteem levels tend to be congruent. No causal relationship between the concepts are being suggested from this study, but the consistent relationship of stress, social support, and self esteem, despite various demographic discriminations within the sample, offer strong support for consideration in clinical and research settings.

Stress has been implicated in research as having a negative impact on pregnancy (Berkowitz & Kasl, 1983; Gorsuch & Key, 1974; Nuckolls et al., 1972; Smilkstein et al., 1984; Williams et al., 1975). Most of the previous research on pregnant women focused on stress as measured by life events scales and did not define stress as a transactional concept (Berkowitz & Kasl,

1983; Gorsuch & Key, 1974; Helper et al., 1968; Nuckolls et al., 1986; Smilkstein et al., 1984; Williams et al., 1975). For this study stress was defined as a transaction between the individual and the environment and, therefore, used a more realistic tool for measuring stress than life events scales. The stress scale scores were examined in relationship to social support and self esteem. No longitudinal examination of stress throughout the pregnancy or as related to pregnancy outcome was proposed or completed in this study.

In literature social support has been frequently examined in relationship to stress. Theoretically, social support has been proposed as a stress-buffering concept (Thoits, 1982) and in pregnancy some evidence of that effect has been found (Norbeck & Tilden, 1983; Nuckolls et al., 1972; Tilden, 1983). Previous research also has examined social support in relation to pregnancy outcome with the results suggesting that poor pregnancy outcome could be reduced by social support (Heins et al, 1987; Plechnick & Corbett, 1985). The findings of this study supported the previous research which suggested an inverse relationship with stress and, perhaps, a stress-buffering effect.

The third psychosocial concept studied in this research, self esteem, has not been the focus of

previous research to the extent that stress and social support have. Literature has theoretically defined self esteem (Crouch & Straub, 1983), and its positive relationship to health and health practices has been identified (Antonucci & Jackson, 1983; Hallal, 1982; Muhlenkamp & Sayles, 1986). Study of self esteem in pregnancy has been limited and in this research was conceptually expected to impact stress and social support in low socioeconomic pregnant women. The findings suggest that self esteem correlates positively with social support and negatively with stress, although three exceptions were noted. In the poorly educated and primiparous women self esteem was not significantly correlated with stress or social support, and with women in the third trimester it was not significantly correlated with social support.

There might be something unusual about the experience of pregnancy which affects women's self esteem, particularly as the pregnancy progresses closer to delivery, and in those who are pregnant for the first time. While not statistically significant ($p=0.1044$), the mean self esteem scores showed greater variation by education than in any other of the demographic variables. It seems likely that education has a positive effect on self esteem; how self esteem and education are related in pregnancy remains unclear.

In this study the demographic variables of age, education, income, weeks gestation, and parity gave little added information to the relationship among stress, social support, and self esteem. Each variable was used to divide the sample into two groups for analysis of mean scale scores. Only the income variable showed a significant difference in any of the scale scores, and the difference was found only in the mean stress scores. The findings indicated that the lower the income, the greater the stress in pregnancy. This is not an unexpected conclusion. Literature has suggested that low socioeconomic status places a pregnant woman at greater risk for stress in pregnancy (Wortis & Freedman, 1962) and at greater risk for poor pregnancy outcome (Creasy & Herron, 1981; Institute of Medicine, 1985). Because the social support and self esteem scores did not differ in the subgroup of the sample with incomes below the poverty level, perhaps the indication is that those two variables do not buffer stress as effectively in those women. It must be pointed out, however, that only low income women were studied in this research, and a comparison with all income-level groups would give a more complete picture of the nature and relationship of income and stress in pregnancy.

Responses on the PAT were ranked in order to determine which items were more frequently associated with extreme stress, social support, and self esteem scores (see Tables 4, 5 & 6). The stress scale items most associated with high stress were the two income-related items, supporting the findings that higher stress was found in the lower income women. An unexpected finding was the low ranking in the stress scale of alcohol and drug problems and current abuse. One would expect these items to contribute more frequently to stress levels in this population. This gives rise to the question of whether or not responses were candid.

Two social support items receiving high ranking of both partner and others were the "Lets me know that he/she will be around if I need assistance" and "Helps me out when I'm in a pinch." These are the only two support items that could reflect financial support. This suggests the possibility that financial matters are an important component of social support, just as they were an important component of stress.

In general, support received from partners appears to be more meaningful in this sample than support received from others. When ranking items from the two combined sources, the top seven items were from the

Table 4

Rank order of scale items in PAT: Stress

Scale item	Mean score (range 1-4)	Item descriptor
2	2.41	Other financial worries
1	2.40	Financial worries
11	2.16	Overloaded
3	1.98	Problems related to family
6	1.95	Current pregnancy
4	1.91	Recent or future move
9	1.60	Work problems
10	1.40	Problems related to friends
5	1.38	Recent loss of loved one
8	1.26	Problems with alcohol, drugs
7	1.24	Current abuse

Table 5

Rank order of scale items in PAT: Social Support [Partner (P) and Others (O)]

Scale item	Mean score (range 1-6)	Item descriptor
P 11	5.37	Assistance
O 11	5.23	Assistance
P 9	5.10	Takes seriously
P 6	5.07	Allows to talk
P 3	5.03	Helps in pinch
P 5	5.01	Does special things
P 7	4.88	Appreciates
O 9	4.82	Takes seriously
P 4	4.74	Shows interest
O 3	4.66	Helps in pinch
P 2	4.64	Helps morale
P 1	4.62	Shares experiences
O 2	4.61	Helps morale
O 7	4.60	Appreciates
O 10	4.52	Makes situation clear
O 8	4.51	Tolerates ups and downs
P 8	4.47	Tolerates ups and downs
P 10	4.44	Makes situation clear
O 4	4.38	Shows interest
O 1	4.37	Shares experiences
O 5	4.33	Does special things
O 6	4.30	Allows to talk

Table 6

Rank order of scale items in PAT: Self Esteem

Scale item	Mean score (range 1-4)	Item descriptor
9	2.53	Feel useless *
8	2.23	Wish more self respect *
11	1.98	Have control
10	1.92	No good *
6	1.85	Positive attitude
7	1.83	Feels satisfied with self
4	1.81	Do things well
2	1.71	Good qualities
1	1.60	Equal with others
3	1.54	Feel a failure *
5	1.52	Not proud *

* Negatively coded items that were recoded for analysis.

partner except for one item from others, that of "assistance."

The self esteem items that elicited the strongest responses were disagreement with "Feel you do not have much to be proud of" and "All in all feel like you are a failure." The two items ranked lowest for self esteem were "Feel useless at times" and "Wish you could have more respect for yourself." The self esteem scale varied from the stress and social support scales in that it included negatively worded items. Upon administering the questionnaire, it became apparent that the respondents often found the wording confusing. It is interesting to note that it was the self esteem variable that did not correlate as consistently as the other two scales, which might suggest a scale weakness rather than a conceptual problem.

CHAPTER IV

Conclusions

Summary

This research was conducted to descriptively examine low socioeconomic pregnant women in the psychosocial areas of stress, social support, and self esteem. The researchers conceptualized the three areas as interacting upon each other and collectively influencing factors that directly impact upon pregnancy outcome. Those factors included biomedical status, obstetric history, life style, and socioeconomic status.

Definitions of stress, social support, and self esteem have been developed in the literature and for this study were conceptualized as being based on individual perceptions. Stress was defined as a transaction in which the individual interacts with her environment, forming an appraisal about the demands being made upon her are exceeding available resources. The concept of social support was defined as an interpersonal transaction in which a social network provides the individual with one or more of the following: emotional concern, instrumental aid, informational support, and appraisal support. Self esteem was defined as the reflection of the degree to

which the individual is satisfied that her perceived self compares adequately with an ideal self.

A review of the literature showed strong evidence of the negative impact of high stress and low social support on pregnancy. Social support has been demonstrated to have a buffering effect on stress and a positive effect on self esteem. Self esteem has been shown to positively affect health practices, particularly in women, and may impact upon their decision to seek prenatal care. Because low socioeconomic women are at particular risk for poor pregnancy outcome, these psychosocial variables were investigated to determine their role and relationship in this population. The research questions were: What are the relationships among perceived levels of stress, social support, and self esteem in pregnant, low socioeconomic women? Are there relationships among selected sociodemographic and obstetric characteristics and perceived levels of stress, social support, and self esteem?

Ninety-one low socioeconomic pregnant women were interviewed using the Psychosocial Assessment Tool (PAT), which included separate scales for stress, social support, and self esteem. Demographic and obstetric data were also collected. A statistically significant inverse relationship between stress and

social support and between stress and self esteem was discovered. Social support and self esteem were found to be statistically significantly positively correlated. Of the demographic and obstetric variables of age, education, income, weeks gestation, and parity, only income showed a significant difference in any of the variables; the lower the income, the higher the stress scores.

Limitations of the Study

The sample used for this study consisted of mostly white, high school educated, low income women in their third trimester of pregnancy. The study was conducted in a prenatal clinic and, therefore, excluded women of high psychosocial risk who do not receive prenatal care. Another high risk group not included in this study are women under the age of 18. The impact of psychosocial variables on this group is unknown but likely to be substantial. Because this sample was homogeneous, the results cannot be generalized to all pregnant women or even to all low income pregnant women.

Measurement of the psychosocial variables took place at one time during each woman's pregnancy, most frequently in the third trimester, and, therefore, changes throughout pregnancy were not reflected. Individual perceptions of stress, social support, and

self esteem could be expected to fluctuate throughout the pregnancy experience with resulting variations in impact on pregnancy.

Results and implications of this research were limited by the fact that few of the large possible number of demographic variables were studied. Age, income, education, weeks gestation, and parity were examined but not with regard to how they were interrelated. Other possible variables to include would be past pregnancy experiences, chronic health problems, nutritional practices, and employment status.

Two limitations were noted on the measurement procedures of this study. There is the possibility that participants might not be candid in answering sensitive questions asked in interviews. For example, very few women acknowledged that drug and alcohol problems or current abuse were stressors in their lives. The results in a self-administered questionnaire might have been different. During the interviews it became evident that many respondents were confused by the self esteem scale. It was not uncommon that clarification of items and response choices was needed to complete this scale. In order to minimize measurement error in similar samples verbal administration should be considered.

Implications for Nursing Practice

Pregnancy and its successful outcome have been shown to be affected by the psychosocial variables of stress, social support, self esteem. The inverse relationship of stress and social support and of stress and self esteem, as shown by this study, can serve as a basis for planning effective prenatal care. Interventions that would assuage stress, mobilize social support, or bolster self esteem could direct prenatal care toward a goal of more successful outcome. Incorporation of these psychosocial aspects provides for comprehensive assessment and care, a priority in nursing care.

A high risk population was identified in this study and described through this sample. Psychosocial needs are apparent in the low socioeconomic pregnant women and should be addressed during prenatal care. The PAT can be a useful instrument in identifying women with psychosocial vulnerability. The tool is easily administered and allows identification of specific needs within each scale. Individualized care focusing on these needs could then be implemented. The needs of this population can be overwhelming and, at the same time, nursing contact can be limited. Therefore, any means found to facilitate efficient care by targeting

vulnerabilities and allowing implementation of appropriate action would strengthen nursing care.

For example, a woman is seen in the prenatal clinic, and from examination of her responses to the PAT it is evident that she has high financial stress and low support from an abusive husband. She also rates low on self esteem, particularly in the area of having control over her life. This information guides the practitioner to specific intervention including referrals to a support group for abused women and to welfare and charity agencies. If these psychosocial deficits are strengthened through intervention, the results could ultimately be reflected in a healthier pregnancy outcome, as explained by the conceptual framework.

Future Research

A secondary data analysis of the results of this study would allow further definition of this population. Stress, social support, and self esteem were found to be highly correlated in all but a few sociodemographic subgroups. Through a multivariate analysis an explanation might be found for these exceptions. In the poorly educated and primiparous women self esteem did not significantly correlate with stress or social support, and in the third trimester women self esteem did not significantly correlate with

social support. Perhaps some accompanying sociodemographic characteristic could help to explain these noted exceptions. Results may further show that there are some sociodemographic characteristics reflective of increased levels of psychosocial vulnerability.

In order to examine the psychosocial effect on pregnancy outcome, a prospective study of the results of the pregnancies of this study's sample could be completed. Low birthweight or pregnancy complications could be examined in relationship to the psychosocial variables. Due to the relatively small sample size in this study, poor pregnancy outcome would not be expected to occur in large numbers and, therefore, prospective research using a much larger sample is recommended. A prospective study which showed effects of stress, social support, and self esteem on measurable pregnancy outcomes, such as low birthweight, would have important implications for nursing.

This study was limited to low income pregnant women over the age of 18 years. Replicating this study in women of other income groups and in teenagers would help to describe the effect of the psychosocial variables on those populations and would provide a comparison of those populations with the population of the present study. For example, income may have a

different effect on stress levels in middle class women.

The majority of this study's sample was white, high school educated, and within the third trimester. For generalization of the findings to the population of low income pregnant women, research involving samples with a greater variety of racial composition and education levels, and an adequate representation of the trimesters of pregnancy is required.

Future research examining stress, social support, and self esteem throughout the pregnancy would provide a description of how these psychosocial concepts change with respect to a progressing pregnancy. This examination could be accomplished by interviewing every subject one time during each of the trimesters. Perhaps stress would be found to increase throughout the pregnancy, maybe self esteem would be highest in the first trimester, and possibly social support would not show any change. A better understanding of possible psychosocial patterns during pregnancy could direct specific nursing interventions at the most optimum time.

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Appendix A

Psychosocial Assessment Tool

PSYCHOSOCIAL ASSESSMENT TOOL

I. Assessment of Stress

Possible answers: 1. No stress; 2. Some stress; 3. Moderate stress; 4. Severe stress

1. Financial worries (e.g., food, shelter, health care, transportation).
2. Other money worries (bills, etc.).
3. Problems related to family (partner, children, etc.).
4. Having to move (recent or future).
5. Recent loss of loved one.
6. Current pregnancy
7. Current abuse (sexual, emotional, physical).
8. Problems with alcohol, drugs.
9. Work problems (laid off, etc.).
10. Problems related to friends.
11. Generally overloaded.

II. Assessment of Social Support

Range of answers: 1 through 6, dissatisfied through very satisfied. Scale rated twice, once for partner (P) and once for others (O).

1. Shares similar experiences with me.
2. Helps keep up my morale.
3. Helps me out when I'm in a pinch.
4. Shows interest in my daily activities and problems.
5. Goes out of his/her way to do special or thoughtful things for me.
6. Allows me to talk about things that are very personal and private.
7. Lets me know I am appreciated for the things I do for them.
8. Tolerates my ups and downs and unusual behaviors.
9. Takes me seriously when I have concerns.
10. Says things that make my situation clearer and easier to understand.
11. Lets me know that he/she will be around if I need assistance.

III. Assessment of Self Esteem

Possible answers: 1. Strongly agree; 2. Agree; 3. Disagree; 4. Strongly disagree.

1. Feel that you're a person of worth, at least on an equal basis with others.
2. Feel that you have a number of good qualities.
3. All in all, feel that you are a failure.
4. Feel you are able to do things as well as most other people.
5. Feel you do not have much to be proud of.
6. Take a positive attitude toward yourself.
7. On the whole, feel satisfied with yourself.
8. Wish you could have more respect for yourself.
9. Feel useless at times.
10. At times think you are no good at all.
11. Feel like you have control over your life.

Final Questions:

Did this interview bring up any questions or concerns that you would like to discuss with your prenatal care provider? Yes/No

Would you like the researcher to approach your prenatal care provider with this concern or question for you? Yes/No

Appendix B

Pregnancy Data Form

Pregnancy Data Form

Date: Age:

Years education completed: Monthly income:

Total number of persons in household:

Partner status (check one): ___ married living with partner; ___ married not living with partner; ___ single living with partner; ___ single not living with partner

Race (check one): ___ White; ___ Black; ___ Southeast Asian; ___ Hispanic; ___ Native American; Other (specify) _____

Expected delivery date:

Weeks gestation:

Trimester:

Parity (check one): ___ multiparous; ___ primiparous

Appendix C

Consent Form

Oregon Health Sciences University

Consent Form

Ruth Ann Campbell, RN and Megan Christian, RN Masters Students in the Department of Family Nursing at the Oregon Health Sciences University are conducting a study titled "Stress, Social Support, and Self Esteem in Pregnancy". The purpose of this study is to find out what stresses, supports, and feelings of self esteem women experience during pregnancy, and to see how different types of women may feel about these three things.

If I agree to participate in the study, I will be asked some questions today. It will take about 10 minutes to answer the questions. The questions may give me some things to think about or worry about. I understand that if this happens I can talk with the person who takes care of me today or at another visit. I also understand that if the interviewer sees that I am in any distress, she will stop the questions and make sure that I can talk to someone.

I understand that all questionnaires and my answers will be kept strictly confidential and neither my name or identity will be used for publication or publicity purposes.

Megan Christian has offered to answer any questions I might have and she can be reached by calling (503) 279-7855.

I understand that I may refuse to participate or withdraw from this study at any time, without affecting my care at this clinic. I understand that I will not be compensated for participating in this study.

The Oregon Health Sciences University as an agency of the State, is covered by the State Liability Fund. If you suffer any injury from the research project, compensation would be available to you only if you establish that the injury occurred through the fault of the University, its officers, or employees. If you have further questions, please call Dr. Michael Baird at (503) 279-8014.

I have read the foregoing and agree to participate in the study.

Signed_____Date_____

Witness_____Date_____

AN ABSTRACT OF THE THESIS OF

Ruth Ann Campbell and Megan Christian

For the MASTER OF SCIENCE

Date of Receiving this Degree: June 9, 1989

Title: STRESS, SOCIAL SUPPORT, AND SELF ESTEEM IN PREGNANCY

Approved: [redacted]

Mary Ann Curry, R.N., D.N.Sc., Thesis Advisor

This research was conducted to descriptively examine low socioeconomic pregnant women in the psychosocial areas of stress, social support, and self esteem. The researchers conceptualized the three areas as interacting upon each other and collectively influencing factors that directly impact upon pregnancy outcome. Those factors included biomedical status, obstetric history, life style, and socioeconomic status.

Ninety-one low socioeconomic pregnant women were interviewed using the Psychosocial Assessment Tool (PAT), which included separate scales for stress, social support, and self esteem. Tool reliability was tested and found to be adequate for all three scales

and for the total instrument. A statistically significant inverse relationship between stress and social support and between stress and self esteem was discovered. Social support and self esteem were found to be statistically significantly positively correlated.

Demographic and obstetric data were also collected. Of the demographic and obstetric variables of age, education, income, weeks gestation, and parity, only income showed a significant difference in any of the psychosocial variables; the lower the income, the higher the stress scores.

The sample used for this study consisted of mostly white, high school educated, low income women in their third trimester of pregnancy. The study was conducted in a prenatal clinic and, therefore, excluded women of high psychosocial risk who do not receive prenatal care. Another high risk group not included in this study are women under the age of 18. The impact of psychosocial variables on this group is unknown but likely to be substantial. Because this sample was homogeneous, the results cannot be generalized to all pregnant women or even to all low income pregnant women.