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First-Time Parenting Couples' Stress Associated with At-Risk Pregnancy and Antenatal Hospitalization

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SUMMARY

The goals of this study were: (1) to determine the contribution of the stressors (at-risk pregnancy and antenatal hospitalization), the resources (conjugal adjustment and satisfaction from others) and the perception of the stressors (primary stress appraisal: threat, challenge, centrality; and secondary stress appraisal: control-self, control-others, incontrollable) to first-time parenting couples' global stress associated with at-risk pregnancy and antenatal hospitalization, and (2) to assess congruence between the partners' perceptions of stress in terms of similarities. Three types of similarities are considered, produced from combinations of self-perceptions (a person's direct perception) and metaperceptions (a person's perception of another person): actual similarity, perceived similarity and understanding. The non-probabilistic sample of 109 couples was recruited from 12 perinatal units in the Montreal region. The couples completed four questionnaires: The Personal and Pregnancy Information Guide, the Dyadic Adjustment Scale, the Support Behaviors Inventory, and the Stress Appraisal Measure. Using Boss' model (1988) *The Contextual Model of Family Stress* to study the first research goal, 52% of the variance regarding the women's global stress was explained by primary stress appraisal (threat, challenge, centrality), while 60% of the variance regarding the men's global stress was explained by the stressors (gestation, prenatal classes, education) and primary stress appraisal (threat, centrality). For the couples' models, 33% of their global stress at the level of actual similarity was explained by primary stress appraisal (threat, centrality), while at the level of perceived similarity, 32% of the explained variance was due to primary stress appraisal (threat, centrality) and secondary stress appraisal (control-self, control-others). At the level of understanding, 32% of the explained variance is attributed to the resources (dyadic cohesion) and primary stress appraisal (threat, centrality). Further analyses were conducted on couples' perceptions since primary stress appraisal was found to be a significant predictor of their global stress (second research goal). In order to attain this, five hypotheses were tested: H1: There is a significant difference in the perceived similarity of global stress appraisal between women and men (confirmed); H2: There is a significant difference in understanding of global stress

appraisal between women and men (confirmed); H3: There is congruence between women's and men's perceived similarity and actual similarity for global stress appraisal (partially confirmed); H4: There is congruence between women's and men's understanding and actual similarity for global stress appraisal (partially confirmed); and, H5: There is congruence between women's and men's understanding and women's and men's perceived similarity for global stress appraisal (partially confirmed). Despite the couples' moderate stress appraisal, women perceive at-risk pregnancy and antenatal hospitalization as a threat, and their global perception of stress is significantly higher than that of the men. Men perceive the same stressors as a challenge and being in control of the situation. The couples are congruent in actual similarity except for the means of challenge and self-control. Regarding perceived similarity, there are no significant differences for the women whereas for the men, there are significant discrepancies for the means of threat and global stress. For women's understanding, there are significant discrepancies between the means of for threat and global stress, while for the men, there are no significant differences. Women are more stressed by at-risk pregnancy and antenatal hospitalization than the men, resulting in a greater lack of congruence between the different similarities. They are less available for the conjugal relationship, while the men are more understanding and more available to devote themselves to the relationship: the men's optimism appears to reduce the women's stress with an impact on the relationship. Regarding couples' stress, there is a gradual shift in perceiving the stressors as threatening to perceiving them as important for their well-being. Also, control and the conjugal relationship become more important at the levels of perceived similarity and understanding respectively. In conclusion, women and men do not perceive the stressors in the same way, and that nurses and other health care professionals should consider both partners' perceptions as well as that of the couple's in their global evaluation of stress during their interventions. Nurses' greater challenge is to help a couple to be 'a couple' in the hospital setting in order to help them protect their love and intimacy.

Keywords: at-risk pregnancy, antenatal hospitalization, first-time parenthood, stress, perceptions, conjugal relationship

RÉSUMÉ

Les buts de cette étude étaient: (1) d'évaluer la contribution des stresseurs (la grossesse à risque et l'hospitalisation), des ressources (l'ajustement conjugal et la satisfaction du soutien des autres) et de la perception des stresseurs (évaluation primaire: menace, défi, centralité; évaluation secondaire: contrôle-soi, contrôle-autres, incontrôlable) sur le niveau de stress relié à la grossesse à risque et l'hospitalisation anténatale chez des couples sans enfant; et (2) d'évaluer la congruence entre les perceptions des partenaires en termes de similarités. Trois types de similarités sont analysés, lesquels proviennent de la combinaison des auto-perceptions (la perception directe d'une personne) et des méta-perceptions (la perception qu'une personne a de l'autre): la similarité actuelle, la similarité perçue et la compréhension. L'échantillon nonprobabiliste comprend 109 couples recrutés dans 12 unités périnatales de la grande région de Montréal. Les couples ont rempli quatre questionnaires: le Guide d'information personnelle et périnatale, l'Échelle d'ajustement dyadique, l'Inventaire de comportements de soutien, et l'Échelle d'évaluation du stress. Afin d'atteindre le premier but de la recherche, *Le modèle contextuel de stress familial* de Boss (1988) a été utilisé: 52% de la variance du stress global chez les femmes est expliqué par l'évaluation primaire (menace, défi, centralité), tandis chez les hommes, 60% de la variance de leur stress global est expliqué par les stresseurs (gestation, cours prénataux, éducation) et l'évaluation primaire (menace, centralité). En ce qui concerne les modèles chez les couples, 33% de leur stress global au niveau de la similarité actuelle est expliqué par l'évaluation primaire, tandis qu'au niveau de la similarité perçue, 32% de la variance est expliqué par l'évaluation primaire (menace, centralité) et l'évaluation secondaire (contrôle-soi, contrôle-autres). Au niveau de la compréhension, 32% de la variance est expliqué par les ressources (cohésion dyadique) et l'évaluation primaire (menace, centralité). Les analyses sur la perception des stresseurs ont été approfondies puisque celle-ci expliquait le stress global stress chez les femmes, les hommes et les couples (deuxième but de la recherche). Donc, cinq hypothèses ont été testées: H1: Il y a une différence significative entre le niveau de similarité perçue du stress global des femmes et celui des hommes (confirmée); H2: Il y a une différence significative entre le niveau de compréhension du stress global des femmes et celui des hommes (confirmée); H3: Il y a congruence entre la similarité perçue chez les femmes et les hommes et la similarité

actuelle du stress global (partiellement confirmée); H4: Il y a congruence entre la compréhension chez les femmes et les hommes et la similarité actuelle du stress global (partiellement confirmée); et, H5: Il y a congruence entre la compréhension chez les femmes et les hommes et la similarité perçue chez les femmes et les hommes du stress global (partiellement confirmée). Malgré le niveau de stress moyen des couples, les femmes perçoivent la grossesse à risque élevé et l'hospitalisation anténatale comme une menace, et leur niveau de stress global est significativement plus élevé que chez les hommes. Les hommes perçoivent les mêmes stresseurs comme un défi et d'être en contrôle de la situation. Les couples sont congruents quant à la similarité actuelle sauf le défi et le contrôle-de-soi. À l'égard de la similarité perçue, il n'y a pas de différence significative chez les femmes, tandis que pour les hommes, il y a des différences significatives entre les moyennes de la menace et du stress global. Au niveau de la compréhension des femmes, il y a des différences significatives entre les moyennes de la menace et du stress global, tandis qu'il n'y a pas chez les hommes. Les femmes sont plus stressées que les hommes face aux stresseurs de la grossesse à risque et de l'hospitalisation anténatale, ayant comme conséquence un plus grand manque de congruence entre les différents niveaux de similarités. Elles sont donc moins disponibles pour la relation conjugale. Tandis que les hommes semblent plus compréhensifs et plus disponibles pour se consacrer à la relation conjugale, leur optimisme semble diminuer le stress ressenti par les femmes. En ce qui concerne le stress global des couples, les résultats suggèrent qu'il y a un transformation graduelle de la perception du stresseur vers une perception basée sur le bien-être du couple. Aussi, le contrôle et la relation conjugale deviennent plus importants aux niveaux de la similarité perçue et de la compréhension respectivement. En conclusion, les femmes et les hommes ne perçoivent pas les stresseurs de la même façon. Les infirmières et les autres professionnels de la santé doivent tenir compte des perceptions de chaque partenaire ainsi que celles du couple dans l'évaluation globale du stress. Le plus grand défi des infirmières est d'aider le couple 'd'être couple' en milieu hospitalier afin de protéger leur intimité.

Mots-clefs: grossesse à risque élevé, hospitalisation anténatale, primiparentalité, stress, perceptions, relation conjugale

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LIST OF ABBREVIATIONS

DAS: The Dyadic Adjustment Scale

PPIG: The Personal and Pregnancy and Information Guide

SAM: The Stress Appraisal Measure

SBI: The Support Behaviors Inventory

DEDICATION

This thesis is dedicated foremost to the babies
born to those women and men
who have experienced at-risk pregnancy
and antenatal hospitalization.
Children are life's most precious gift.

I would also like to dedicate this thesis
to my own son, Ben.

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N'ABANDONNE PAS

Quand la route est remplie d'obstacles
Et que tu n'attends aucun miracle.
Il est permis de t'arrêter
Mais non d'abandonner.
Quand le succès te fuit
Et que le doute t'envahit
Peut-être qu'à ton insu
Tu es près du but.
C'est quand tu as tout essayé
Qu'il ne faut pas abandonner.
-Source inconnue

INTRODUCTION

INTRODUCTION

The introduction presents the organization of the thesis followed by an explanation of the three articles at the heart of this study and their interrelationship with the goal of the study. This thesis is divided into six chapters. The *first* chapter presents the problem statement regarding at-risk pregnancy and antenatal hospitalization, the conceptual framework, the explanatory model containing the study variables, and the contribution of the study to the nursing profession. The conceptual framework underlying this study is based on Boss' model (1988), "The Contextual Model of Family Stress".

In the *second* chapter, a review of the literature pertaining to family transitions, the transition to parenthood, normal and at-risk pregnancy, antenatal hospitalization, the resources and the perception of the stressors is featured as well as an empirical review of studies pertaining to the two stressors. The interpersonal perceptual approach involving auto-perceptions and metaperceptions and their combinations producing three types of similarities (actual similarity, perceived similarity and understanding is described. The five hypotheses testing differences and congruence amongst the three similarities are presented at the end of the second chapter. The first article focusing on "Stress Management" contained within the second chapter was written for an American textbook on childbirth education (Childbirth Education: Practice, Research and Theory, edited by F. Nichols and S.S. Humenick, Philadelphia: W.B. Saunders, 2000, pp. 510-524). It contains a literature review of general stress and stress associated with the transition to parenthood, both normal and at-risk, a description of the perinatal educator's experiential knowledge base, the implications for perinatal education practice including the teaching objectives and approach, and the strategies for stress management.

In the *third* chapter, a general discussion of the methodological approach is highlighted. This includes an explanation of the research design and settings, the sampling strategy, a description of the research instruments, the data collection and data analysis procedures, and lastly, the ethical considerations. The *fourth* chapter presents the second

article, "The Stressful Impact of At-Risk Pregnancy and Antenatal Hospitalization on First-Time Parenting Couples". Boss' model is applied to the examination of the stressors, the resources and the perceptions of the stressors and their impact on couples' global stress. The *fifth* chapter features the third article, "First-Time Parenting Couples' Stress Appraisal of At-Risk Pregnancy and Antenatal Hospitalization". Stress appraisal of the two stressors is obtained through the examination of couples' primary, secondary and global evaluations from women's, men's and couples' perspectives.

In the *last* chapter, the findings from the last two articles are discussed and interpreted. In order to do this, the discussion is organized according to the three types of similarity, namely, actual similarity, perceived similarity, and understanding. Four issues emerge from the findings: the objective of this section is to demonstrate how the findings contribute to further theoretical knowledge regarding stress within the transition to parenthood. The study's strengths and limitations are presented as well as future research and implications for the nursing profession.

Three articles are at the heart of this thesis and each one contributes differently to the thesis. The first article involving stress management is directed toward perinatal educators who are important in their teaching about the transition of parenthood, both normal and at-risk, to first-time parenting couples. The second article involves the application of a theoretical model to understanding couples' global stress associated with at-risk pregnancy and antenatal hospitalization. Further examination of couples' stress appraisal of the two stressors by using the interpersonal perceptual approach is presented in the last article. The doctoral candidate is the sole author for the first article, while for the other two articles, she is the principal author with her co-authors identified at the beginning of each article.

CHAPTER 1

PROBLEM STATEMENT, CONCEPTUAL MODEL, AND PERTINENCE OF THE STUDY

In this chapter, the problem statement is first presented. This is followed by the conceptual model. Family stress theories are reviewed historically in order to better understand the conceptual model used in this study, namely, Boss's model of family stress. Lastly, the contribution of this study for the nursing profession is discussed.

1.1 PROBLEM STATEMENT

Pregnancy can be a time of major upheavals in the life of a family, involving changes in communication, intimacy and sexuality (Colman & Colman, 1973). First-time parenthood is characterized by the most changes (Broom, 1984; Cowan & Cowan, 1988; Fedele, Golding, Grossman & Pollack, 1988; Lederman, 1984; Osofsky & Osofsky, 1984; Provost & Tremblay, 1991). These upheavals are negatively perceived by the conjugal partners (Colman & Colman, 1973; Cowan & Cowan, 1988; Provost & Tremblay, 1991; Randell, 1989; Tremblay, 1990), and are more important for women than for men (Belsky, Spanier & Rovine, 1983; Cowan & Cowan, 1988), resulting in lowered satisfaction with the quality of the relationship (Belsky et al., 1983; Cowan & Cowan, 1988; Grossman, Eichler & Winickoff, 1980). Support from the social network, especially the nuclear family and closest friends, may be helpful during this time (Brown, 1986a, 1988b, 1986c).

The usual adaptation process to pregnancy is perturbed when the health of the mother or the fetus or both are threatened. Risk that is associated with pregnancy stems more from physical conditions such as diabetes, premature labor, hypertension, premature rupture of the membranes, and bleeding (Philippe, Frigoletto, Van Oeyon, Acker & Kitzmiller, 1982). Between 10% and 20% of pregnancies are labeled at-risk (Jones, 1986; Kemp & Page, 1986), while 10% to 25% of pregnant women are hospitalized (Loos & Julius, 1989; Kramer, Coustan, Kreminski, Broudy & Martin, 1986). Despite this high number, there is a dearth of literature on the psychological impact of this experience. It

appears that this experience perturbs the pregnant woman, her male partner and other family members resulting in a stressful situation for them (Heaman, 1990; Merkatz, 1978). A woman may experience a range of emotions such as anger, guilt, sadness, hopelessness, and disappointment (Galloway, 1976; Penticuff, 1982), and can develop fears such as the possibility of having an abnormal baby and loss of control over the outcome of pregnancy (Johnson & Murphy, 1986). Women have reported that the relationship with the male partner is amongst their most frequently expressed concerns as well as distance from home and separation from the family (Merkatz, 1978; White, 1981; White & Ritchie, 1984). Other studies have confirmed these results (Curry & Snell, 1985; Kirk, 1989; Loos & Julius, 1989; Roussy, 1992; Taylor, 1985).

Despite the paucity of literature regarding the experience of the male partner, he appears to feel similar emotions as those of his partner (Galloway, 1976; Penticuff, 1982). The partners will experience many emotional and psychological perturbations, potentially leading to tension between them (Galloway, 1976; Heaman, 1990; Penticuff, 1982). Mercer and her colleagues (Mercer, Ferketich, May & DeJoseph,1987) have conducted the only longitudinal study on parental stress during antenatal hospitalization. Their findings reveal that the majority of hospitalized pregnant women are scared, depressed and in a state of shock following these events. Their partners report that family functioning and conjugal relationships are significantly perturbed when compared to the partners of women experiencing low-risk pregnancy. Support received from the network is the most helpful during antenatal hospitalization for the women. It appears that the conjugal relationship can deteriorate during at-risk pregnancy and antenatal hospitalization, potentially resulting in separation and divorce (Gyves, 1985; Johnson & Murphy, 1986; Penticuff, 1982). Support from other members of the social network may be beneficial by alleviating some of the couple's stress (Burke & Weir, 1982; Gilbert & Harmon, 1993). Antenatal hospitalization appears to have direct, negative and prolonged effects on the health of the woman and her partner which are still felt eight months after birth (Mercer & Ferketich, 1990). However, antenatal hospitalization is not stressful for all women

(Merkatz, 1978), and can even have beneficial effects for certain women, couples, and families (Gyves, 1985; Murphy & Robbins, 1993).

According to family theory (Von Bertalanffy, 1968), it is plausible that the dynamics of the conjugal relationship affect and are affected by the perception of the stressful event since the family is more than the sum of its parts (= its members), and what happens to one family member will be felt by the others (Boss, 1987). Boss (1987, 1988) proposes, "The Contextual Model of Family Stress", in which family stress is defined as a disturbance in the steady state of the family. She theorizes that the family's stress level is determined by the stressor, their resources, and their perception of the event. Boss also states that the family's perception of a stressor is the most powerful factor in explaining how the family defines and reacts to the stressful event. Similarity or congruence between perceptions of the family members can become the family collective perception (Boss, 1987). Yet, how conjugal partners develop similarity or congruence between their perceptions (Deal, Wampler & Halverson, 1992) and share meaning from stressful events through their perceptions is part of the stress process (Patterson, 1988). Perceptual congruence helps to develop a shared reality in relationships, resulting in understanding between partners (Duck, 1994). The couple's shared reality changes continuously (Crosby, 1991).

The study of perceptions (Laing, Phillipson & Lee, 1966) facilitates examining the internal environment of the conjugal relationship (Gottlieb, 1985). Interpersonal perceptions are the building blocks through which partners construct shared understandings of their experiences together (Kenny & Acitelli, 1994). The perception that a person has of a situation is called a direct perception or *self-perception*, and a person's perception of another person is referred to as a *metaperception* (Allen & Thompson, 1984). The analysis of self-perceptions and metaperceptions within the conjugal dyad can reveal the quality of the couple's interpersonal communication (Allen & Thompson, 1984), especially in the stressful situation of at-risk pregnancy and antenatal hospitalization. According to Lowery (1987), an individual's or in the case of the conjugal dyad, the

couple's perception or meaning given to the stressful situation is seen to serve as basic to reactions to the stressor. No matter how threatening a stressor is perceived by the conjugal partners, it is unlikely to evoke a stress reaction unless it is perceived as such by them. Deal, Wampler and Halverson (1992) have studied the importance of similarity between partners' perceptions; combinations of self-perceptions and metaperceptions can produce three different types of similarity, namely, actual similarity, perceived similarity, and understanding (Thompson & Walker, 1982). Clinicians are most interested in these types of similarities (Deal et al., 1992), but Thompson and Walker (1982), and Larzelure and Klein (1987) suggest that this approach is also valid in the research domain. This approach can be considered as an alternative to the more traditional one in which emphasis is put on the simultaneous inside/subjective and outside/objective study of the family system.

In summary, no data exist regarding the impact of at-risk pregnancy and antenatal hospitalization on the couple as the unit of analysis. Review of the literature reveals that only the viewpoint of the pregnant woman is featured; when necessary, the viewpoint of the male partner is presented indirectly through that of the pregnant woman. Only one study (Mercer et al., 1987) presents women's and men's viewpoints. In this study, the viewpoints of both conjugal partners are considered as well as that of the conjugal dyad regarding the two stressors. Therefore, how the stressors affect the couple's stress as well as the quality of their relationship, the support from the social network and their perceptions of the stressors are examined within this research.

1.2 CONCEPTUAL MODEL

In this section, a historical overview on family stress theories and an explanation of Boss' model are presented.

1.2.1 Historical Background on Family Stress Theories

Stress comes from the French word *détresse*, which means "placed under narrowness or openness" (Mack, 1995, p. 91). Hans Selye (1976) studied the stress concept throughout his career, defining stress as the nonspecific threat result of any demand upon the body, be the effect mental or somatic. A variety of dissimilar situations have the potential to produce stress, yet no single cause can, in itself, be pinpointed as the cause of the reaction as such (Selye, 1993). Stress is neutral, yet it may be perceived positively, producing feelings of satisfaction and happiness, or negatively, contributing to illness or fatigue. The situations that trigger the stress response or the agents that cause the conditions of stress are called stressors (Bomar, 1989; Lowery, 1987; Nichols & Zwelling, 1997). Feuerstein, Labbé and Kuczmierczyk (1986) indicate that positive events often require as much adaptation and may trigger the same biochemical changes as negative events. An apparently negative event may not be necessarily considered as a stressor to some individuals, and not all potentially stressful stimuli evoke a stress response in all individuals.

According to Boss (1987), families have always been concerned with natural disasters and events of change, trouble and ambiguity as presented in the Bible and the Talmud. The interest in and study of stress experienced by families is a recent scholarly endeavor. Family stress research first began at the University of Michigan and the University of Chicago following the aftermath of the Depression in the 1930s. The first scientists to study the stressor of family income loss due to the Depression were Angell (1936) and Cavan and Ranck (1938). Based on his research, Angell (1936) inductively derived the two major determinants of a family's reaction to the sudden loss of income, namely, family integration and family adaptability. Family integration was defined in terms of family interdependence and other bonds of coherence and unity, whereas family adaptability was defined as the flexibility of the family unit in decision- making. Angell (1936) also observed that 'plastic' families, in which roles were interchangeable rather than rigid, were best equipped to surmount obstacles. Cavan and Ranck's (1938)

contribution was the finding that the family's previous methods of meeting difficulties were related to their present difficulty.

Koos (1946) also studied families dealing with high stress, labeling their stress response as 'the roller-coaster pattern of response to stress'. This was studied further by Hill (1949), who examined family separation due to World War II, considering family organization as a product of its culture and its internal behaviors. Based on the earlier findings of Angell (1936), Cavan and Ranck (1938) and Koos (1946), Hill developed a list of 10 items to test family adequacy in relation to the two concepts of family integration (coherence) and family adaptability (flexibility). He labeled these 10 items as family resources which were useful to mediate the stress associated with World War II. His most lasting contribution was the development of his model permitting a substantial base for scientific inquiry into family stress. In Hill's (1965) ABC-X Family Stress Model, stress is defined as a reaction response to stressful events, and is the interaction of three variables ABC (A - stressful event, B - family resources, and C - family definition of the stressful event), producing X, which represents the outcome of either stress or crisis. The study of family stress is a recent phenomenon despite the rapid growth of family theories since the 1950s (Bomar, 1989). The models of family stress have emerged from theories relating to physiological stress (Selye, 1976) and psychological stress (Lazarus, 1966). Hill's model generated other models of family stress, namely, McCubbin and Patterson's (1983) Family Adjustment and Adaptation Double ABC-X, McCubbin and McCubbin's (1987) T-Double Family Adjustment and Family Adaptation ABC-X Model, Patterson's (1988) Adjustment and Adaptation Model, and Boss' (1987) The Contextual Model of Family Stress.

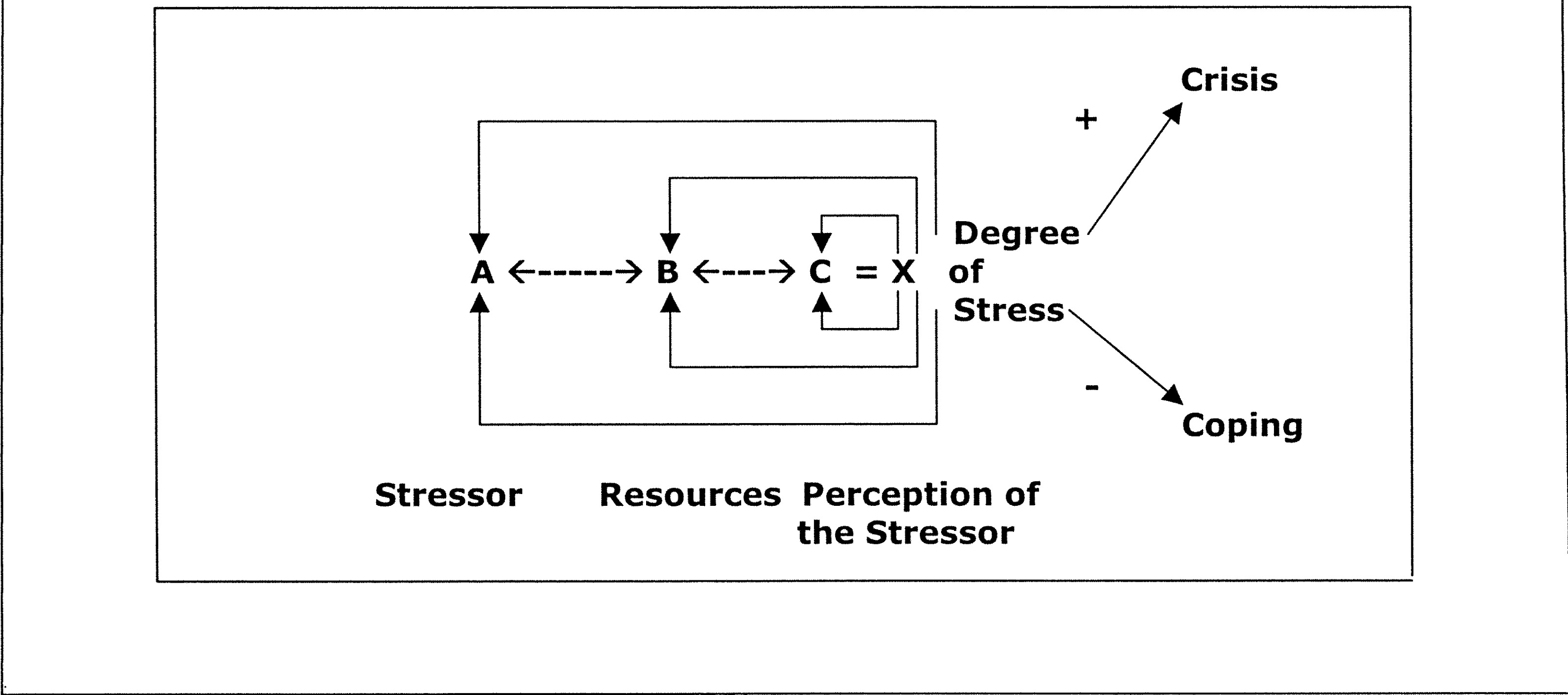
1.2.2 Boss' Contextual Model of Family Stress

In The Contextual Model of Family Stress (see Figure 1), Boss upholds the principles of two theories: von Bertalanffy's (1968) General Systems Theory and Burr's (1973) Symbolic Interaction Theory. From the first theory (von Bertalanffy, 1968) focusing on circularity within a systemic viewpoint, the family is a group of individuals in constant interaction with each other so that what affects one family member will have consequences for the other members and for the family unit. In the second theory (Burr, 1973), the family's perception of a stressful event is based on the family's shared meaning of the event and on the expectations regarding the roles of each person within that shared meaning. The meaning associated with the stressful event is influenced by the family's external environment.

Boss defines the family as "a continuing system of interacting personalities bound together by shared rituals and rules even more than by biology" (Boss, 1988, p. 12). She also defines family stress as "pressure or tension in the family system. It is a disturbance in the steady state of the family" (Boss, 1988, p. 12). Family stress is conceptualized as both a state and a process. As a state, stress is characterized by physiological and emotional manifestations. Boss indicates that the level of family stress is high when one family member demonstrates physiological or emotional perturbations. Stress can also be conceptualized as a process since the family must continuously adapt to change. The stress process is influenced by the external and the internal contexts. The external context refers to the environment and includes five dimensions: economic, historical, developmental, cultural, and genetic. The internal context contains three dimensions: structural, philosophical, and psychological (defense mechanisms). The structural dimension refers to the family boundaries, the role assignments, and the rules regarding who is within and who is outside those boundaries. The psychological dimension refers to the family's ability to mobilize its defense mechanisms in its perception of the stressor event. Lastly, the philosophical dimension refers to the family's values and beliefs at the micro level. Boss affirms that the family has no control over the external context since

Figure 1

Boss' Model: The Contextual Model of Family Stress



it is less accessible and malleable than the internal one upon which the family does have control. Like Hill (1965), Boss indicates that stress is a combination of three variables: A - the provoking event or stressor, B - the family resources or strengths, and C – the perception of the stressful event. Out of the three elements of the stress process, it is the perception of the stressful event (Variable C) which is the determining factor in regard to the outcomes of stress (Variable X), either adaptation or crisis. A more elaborate explanation of each of these elements follows as well as their connection with the present research study.

The Variable A or the stressor event is an occurrence that is of significant magnitude to provoke change in the family system (Boss, 1988). The stressor event which has no attribution of its own except neutrality has both the potential to cause change and to raise the family's level of stress. Both positive and negative events can be stressors. Stressor events can be classified: as normative, developmental, predictable or situational and unexpected; as ambiguous or nonambiguous; as volitional or nonvolitional; and, as acute or chronic. The source of the stressor event can be from within the family or outside of it. The accumulation of stressor events is a phenomenon in which several stressor events or situations occur at the same time or in quick sequence, thus compounding the degree of pressure on the family.

The Variable B representing the family's resources, especially its individual and collective strengths, are assets upon which members can draw in response to a single stressor event or an accumulation of events (Boss, 1988). Examples of family resources are economic security, health, intelligence, job skills, relationship skills, as well as network and social supports. According to Boss, a family may have resources, but it does not imply whether or how a family will use them. The availability and amount of family resources remains a static (nonprocess) variable.

The Variable C refers to the meaning that a family gives to the stressor event; it is also called the family's perception, appraisal, definition or assessment of the event. Boss

(1988) explains that how the family sees an event that is happening to them is critical in determining the degree of stress felt by the family and the outcome, namely, coping or crisis. What seems stressful to one family may not be stressful to others. The same family may perceive the same event differently over time. When the perceptions of the family members are congruent, a collective or family perception is obtained. However, perceptions among the family members may differ, just as perceptions among families differ. Boss stipulates that the family's perception of the event is the most powerful variable in explaining how the family defines and reacts to a stressful event. Therefore, the degree of stress caused by the event depends not only on the actual magnitude of the event, but also on the family's perception of that event.

Family stress (Variable X) is a disturbance of the family's steady state producing a change in the family's equilibrium. Boss (1988) explains that family stress becomes problematic when the degree of stress or change or pressure reaches a certain level in which family members become dissatisfied or show physical or emotional symptoms of disturbance. Family stress can result in adaptation (coping) for the family or it may find itself in crisis. Many families have the capacity to avoid crisis by holding the stress at a tolerable level: Boss calls this process coping, adaptation, management or problem solving. A family crisis is defined as a disturbance in the equilibrium that is so overwhelming, a pressure that is so severe, and a change that is so acute that the family system is incapacitated. The four indicators of family crisis are usual family roles and tasks are not performed, decision-making and problem solving processes are difficult, inability for family members to care for each other, and a shift to individual survival. Recovery from crisis is possible if there is a change in the stressor event or in the family's resources, or in the family's perception. Boss distinguishes family stress from family crisis in the following way: whereas family stress is a continuous variable with degrees of stress, family crisis is a categorical variable in which a family is or is not in crisis. In family strain, a family is still functional yet under enormous pressure. If stress should be added to a strained family, then they may find themselves in crisis.

1.2.3 Application of Boss' Model to the Present Study

Boss' model was chosen for the following four reasons; first, it is a heuristic theoretical model which can be easily applied to the study of at-risk pregnancy and antenatal hospitalization; second, the concepts are clearly defined including family stress; third, the section on perceptions is highly developed due to Boss' clinical family practice and research; and lastly, the study variable and their interrelationships are precisely represented by the concepts contained within the model.

Each concept of Boss' model (1988) is described as it is applied in the context of the present study. The first concept, Variable A, represents the stressor of at-risk pregnancy and antenatal hospitalization. The conjugal relationship and support from the social network are the two resources (Variable B) measured in this study. The concept *conjugal adjustment* (Spanier, 1976) was chosen to represent the conjugal relationship. The concept *satisfaction with support from others* (Goulet, Polomeno & Harel, 1995) based on Brown's original conceptualization (1986a, 1986b, 1986c) was chosen to represent support from the social network. Peacock and Wong's (1990) definitions of stress appraisal were used to elaborate the perception of the stressor (Variable C) and the stress level (Variable X). Stress appraisal can be classified as primary, secondary, and global. Primary and secondary stress appraisal represent the perception of the stressor (Variable C), while global stress appraisal, shortened to global stress in this study, represents the level of stress (Variable X).

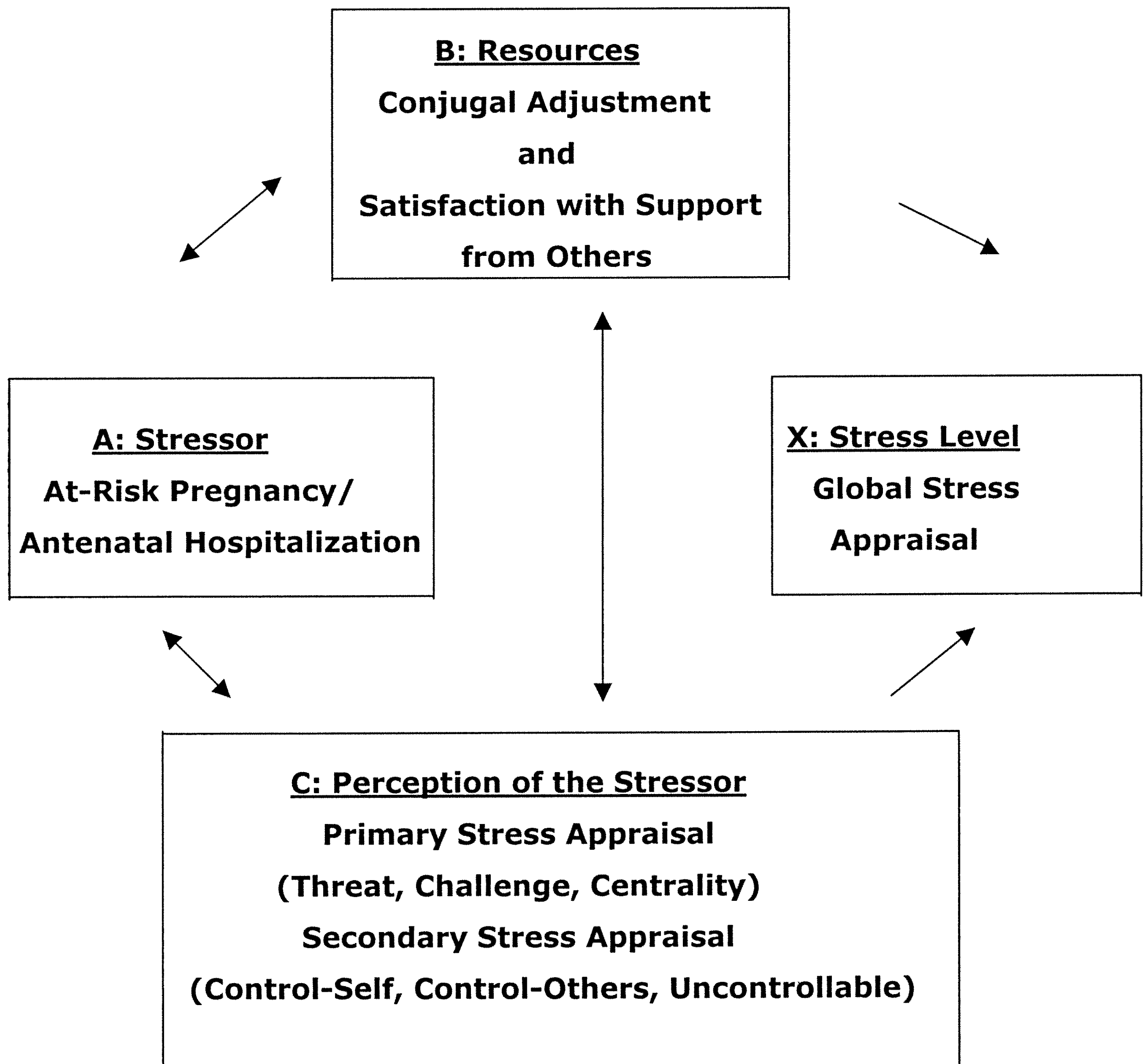
Figure 2 presents the explanatory model of first-time parenting couples' stress associated with at-risk pregnancy and antenatal hospitalization. Each concept as described above is represented in the explanatory model. The Variables A, B, and C are the independent variables, while Variable X is the dependent variable in the model.

FIGURE 2

Explanatory Model of First-Time Parenting

Couples' Stress Associated with At-Risk Pregnancy

and Antenatal Hospitalization



1.3 CONTRIBUTION OF THE PRESENT STUDY

The goal of this study is to assess couples' stress associated with at-risk pregnancy and antenatal hospitalization. Its relevance is considered in relation to the nursing profession and perinatal education.

From a *theoretical* viewpoint, the heuristic quality of Boss' model permits the mapping out of the chosen research variables and their interrelationships. An explanatory model as presented in the previous section was developed for this study from the conceptual one, in order to assess women's, men's and couples' stress respectively. Also, this study integrates the interpersonal perception approach by using various combinations of self-perceptions and metaperceptions into the couples' models, sustaining Boss' proposition that the family perception contains individual and collective perceptions. Three couples' models are tested which are based on the perception combinations, resulting in actual similarity, perceived similarity and understanding. Major transformations of an entire family system can occur as a result of or be precipitated by major life events such as those presented in this study. Change is dependent on the perception of the problem (Wright & Leahey, 1994), since what affects one family member affects the others, and any significant event or change in one family member affects all family members in varying degrees.

From a *research* viewpoint, this study proposes an alternative approach to the traditional one using the insider/outsider approach, including the simultaneous application of subjective and objective research methods to the study of family phenomena (Anderson, 1994; Olson, 1977). The disadvantages of this latter approach are its high costs and the high number of subjects needed for the research study. Also, families experiencing stress may refuse to participate in such studies as they are too taxing, potentially increasing their stress level. This study proposes another way to study families under stress, namely, by using family members' perceptions and metaperceptions (Deal, et al., 1992). The use of the interpersonal perception approach as applied in this study can help perinatal health nurse

researchers conducting dyadic research to better grasp conjugal dynamics and contribute to their understanding of why couples' satisfaction with their relationship decreases with the arrival of children, moreover, complications associated with the transition to parenthood. The statistical procedures developed in this study are unique in their contribution to the analysis of relational data by testing couples' explanatory models based on three levels of similarity (actual similarity, perceived similarity, and understanding).

From a *practice* viewpoint, the findings from this study will help nurses and perinatal educators better plan their interventions and educational programmes. Perinatal health nurses and perinatal educators are concerned with conjugal partners who become parents, since the important task is to accept all family members' perceptions and to offer the family another view of their problems as there are very different yet valid perceptions of problems. When a couple experiences greater stress associated with at-risk pregnancy and antenatal hospitalization, family stability as well as its functioning and its health are perturbed (Mercer et al., 1987). The maintenance of the integrity of the family unit is a priority for nurses (Heaman, 1990) and perinatal educators (Polomeno, 2000a). Perinatal health nurses can plan interventions to help couples to cope better and reduce the stress associated with the two stressors, to maintain or to attain a new level (equilibrium) of functioning, to promote conjugal dynamics through better communication and understanding between the partners, and to prepare the couple for the baby's arrival. This is a special time for the couple promoting family growth and nurses can play a major role at this level. Jones and Meleis (1993) explain that the nurse is a resource person since she can assist the family to mobilize its strengths, and to facilitate their access to personal and environmental resources, which promote their locus of control, their perception of self-efficacy, and their health. As nurses theorize about and involve families in healthcare, they are altering or modifying their usual patterns of clinical practice. The required knowledge and clinical skills of these new competencies can be acquired most efficiently by studying the whole family unit rather than by studying each family member in isolation (Wright & Leahey, 1994).

Perinatal education is becoming a recognized specialty with an evolving scientific base (Polomeno, 2000a). Many perinatal health nurses, including the doctoral candidate, are clinically involved with perinatal education. Perinatal education is composed of a variety of different types of classes that address the needs of all family members as the family moves from one developmental life cycle stage to another during the childbearing years (Nichols & Zwelling, 1997). This study can provide perinatal educators with the content to teach about stress and its relationship to the perinatal family, a description of their multiple teaching roles such as informant, communicator, counselor, facilitator, and advocator, and specific teaching objectives underlying the teaching approach using Duck's (1994) model. They can teach different individual and family stress management strategies to help expectant and new parents cope better with the transition to parenthood. Developing effective strategies to manage stress during the childbearing year can be beneficial and become a valuable lifelong skill.

CHAPTER 2

LITERATURE REVIEW, EMPIRICAL SUPPORT AND HYPOTHESES

In this chapter, the literature is reviewed for each concept pertaining to Boss' model presented in the first chapter. The first article focusing on stress management is contained within the literature review. This is followed by a section containing empirical support for this study whereby studies pertaining to at-risk pregnancy and antenatal hospitalization are critiqued. Lastly, the study hypotheses are presented.

2.1 STRESSOR: AT-RISK PREGNANCY AND ANTENATAL HOSPITALIZATION

In this section, family transitions, the transition to parenthood, and the changes associated with normal pregnancy are discussed. At-risk pregnancy and antenatal hospitalization are then described.

2.1.1 Family Transitions

Before presenting a discussion of the stressors under study, it is important to understand their context from a risk-free perspective. This means that transitions from a general viewpoint are discussed, followed by the transition to parenthood including normal pregnancy.

The family life cycle refers to those nodal events that are tied to the comings and goings of family members, such as the birth and raising of children, the departure of children from the household, retirement and death (Duvall, 1977; Roth, 1989). Transitions are pauses in the family life cycle or periods of disorganization and reorganization as the family and its members advance from one stage to another (Falicov, 1988; Roth, 1989; Selder, 1989). Cowan (1991) defines transitions as long-term processes that result in a qualitative reorganization of both inner life and external behavior. He also states that for a life change to be designated as transitional, it must involve a qualitative shift from the

inside looking out (how the individual understands and feels about the self and the world) and from the outside looking in (reorganization of the individual's or family's level of personal competence, role arrangements, and relationships with significant others. Encountering changes is an inevitable part of the family life cycle (McCubbin, 1993).

Family stress and uncertainty are always greatest at transition points (Carter & McGoldrick, 1989; Falicov, 1988; Selder, 1989) since there are changes in predictable patterns of behavior such as role structure, decision-making, affection, and communication. The division of tasks must be renegotiated to meet the changing needs of the family and individual members (Bomar, 1989; Roth, 1989). According to Selder (1989), a life transition is initiated when a person's current reality is disrupted and must be reconstructed to form a new reality. The emerging reality integrates or incorporates the family event in such a way that the integrity of the person or the family is maintained intact. The structuring of the new reality follows expectations held by that person or family of what that reality should or could become for them. The purpose of the structuring is to create new meaning in the life of the family when the old meanings have been fractured. Thus, according to Selder, a transition will occur if the disruption of a reality necessitates reorganizing or reconstructuring the existing one.

According to Cowan (1991), there are three phases within any particular transition: the first or early phase is characterized by conflict and uncertainty; the middle phase involves testing new alternatives; and the late phase witnesses a return to previous equilibrium or to the establishment of a new equilibrium. Chick and Meleis (1986) refer to the same three phases as entry, passage, and exit. Certain conditions exist during transitions including meanings, expectations, level of knowledge and skill, the environment, level of planning, and emotional and physical well-being (Schumacher & Meleis, 1994). Meanings are extremely important in the appraisal of a transition, since they are the subjective appraisal of an anticipated event or experienced transition and the evaluation of its likely effect on a person's life. The awareness of the meaning associated with a transition is essential for a person's understanding of his or her experience as well

as its health consequences (Schumacher & Meleis, 1994). Transitions can be categorized as 1) normative, expected, developmental, and maturational, or 2) unusual, unpredictable, and situational (Cowan, 1991; Mederer & Hill, 1983).

It is important that members of a family unit accomplish the developmental tasks associated with each stage of the family life cycle in order to successfully move on. If crises are encountered during the family life transition and are not resolved, then fixations, regressions, and other forms of psychological dysfunction may result (Cowan, 1991). According to Schumacher and Meleis (1994), the indicators of a successful transition are a subjective sense of well-being, the mastery of new behaviors, and the well-being of interpersonal relationships. Family stress theory has been used in family nursing research to answer the persistent question of why some family systems adapt, grow and thrive when faced with normative transitions or situational stressors, while other family units seem to deteriorate and disintegrate under similar circumstances (McCubbin, 1993).

2.1.2 Transition to Parenthood

One particular normative or developmental transition is the transition to parenthood. The transition to parenthood is classically defined as the time period beginning with a pregnancy and terminating a few months after the baby's arrival (Goldberg, 1988). However, Gottlieb and Pancer (1988) have extended this definition, proposing that the transition to parenthood begins with a couple's decision to become pregnant and terminates when the child is between 2 and 3 years of age. Cowan, Cowan, Heming and Miller (1991) believe that the transition terminates when the first child is about two years old. Therefore, there are three phases within the transition to parenthood: the period before conception, the period of pregnancy, and the postnatal period stretching from the baby's birth to the second birthday. Only the period of pregnancy is considered in this thesis.

The key principle in the emotional process associated with this transition is the

acceptance of new members into the family system (Carter & McGoldrick, 1989). It is the arrival of the first child which most affects the couple's relationship as they transform themselves from dyad to triad (Bradt, 1989; Broom, 1984; Clulow, 1982; Gottlieb & Pancer, 1988; Saunders & Robins, 1987; Wallace & Gotlib, 1990). Also, how first parenthood is perceived by each conjugal partner is influenced by their gender (Clulow, 1991). Rossi (1989) indicates that there are four factors that make first parenthood so difficult: 1) the paucity of preparation, 2) the limited learning during pregnancy with parenthood adjustment being more difficult than conjugal/marital adjustment, 3) the abruptness of transition with the new mother starting out immediately on 24-hour duty, and 4) the lack of guidelines for successful parenthood.

There are positive and negative consequences of the transition to parenthood on the conjugal relationship. The positive consequences include: (a) the feeling of increased closeness resulting from the maturity that comes with the process of merging into new roles together (Lederman, 1984); (b) an intense degree of affection and empathy, a satisfying sexual adjustment, goal mutuality, and flexibility in decision-making (Shereshefshy & Yarrow, 1973); (c) a feeling of being a team (Belsky, et al., 1983); and (d) the equalization of power imbalances and reinforcement of the partners' commitment to each other (Whitbourne, 1986). On the other hand, the negative consequences include: (a) a decline in marital satisfaction (Cowan, et al., 1991); (b) increased stress which amplify the differences between the partners (Cowan, et al., 1991); and (c) increased stress related to everyday living involving fatigue, additional household work and financial burdens, and concerns about parental competence (Bomar, 1989).

2.1.3 Normal Pregnancy

Over the years, pregnancy has been viewed as a maturational or developmental process (Mederer & Hill, 1983; Osofsky & Osofsky, 1980, 1984), or a stressful life crisis (Bibring, 1959; Lederman; 1984; LeMasters, 1957; Tilden, 1980), or as a time of fulfillment for the woman (Deutsch, 1947). Pregnancy evokes a range of emotions for the

pregnant woman such as uncertainty, anxiety, hope, and joy (Flagler & Nicoll, 1990). It appears that a woman must accomplish certain developmental tasks (Rubin, 1975) associated with pregnancy in order to successfully adapt to her mothering role (Tanner, 1969): accept and integrate the fetus as a part of her body, perceive the fetus as a separate being, and prepare for giving up the fetus and establishing a caretaking relationship with the infant. According to Colman and Colman (1973), the woman's whole psyche becomes focused on her pregnant state, and life becomes a new experience centered on the major changes that are occurring to her.

Pregnancy, childbirth and parenting are also emotional experiences for fathers (Jordan, 1990). Expectant fathers experience a range of emotions such as doubt, fear, ambivalence, joy, confusion, frustration, and insecurity (Nichols & Zwelling, 1997). Jordan indicates that the essence of expectant and new fatherhood is laboring for relevance which consists of: a) grappling with the reality of the pregnancy and the child, b) struggling for recognition as a parent from his partner, coworkers, family, friends, baby and society, and c) plugging away at the role-making of involved fatherhood. May (1982) suggests that first-time fathers experience a characteristic pattern of developmental change and emotional involvement during pregnancy. During the first phase of announcement, the fathers' task is to accept the pregnancy; the process of acceptance is usually slower for the men than for the women. They may experience joy and excitement, or shock, anger and disappointment during this period. In the next phase of moratorium, the fathers' tasks include accepting the fetus, adjusting to reality, and coming to terms with the pregnancy. Men at this time may become introspective, potentially resulting in an emotional distance between the partners. In the final focusing phase, the task is to accept the birth of the baby and the future parenting role. Men feel more in tune with the pregnancy at this time, and become more tender and protective of their partner. Men may have mixed feelings regarding the woman's changing body: some find the transformation joyful and positive, while others may be turned off. Men appear to be involved in pregnancy in three ways: the observer expectant father is a bystander feeling an emotional distance from the pregnancy; in the instrumental style, the man is

more involved and more concerned with concrete tasks; and in the expressive style, the father becomes greatly involved emotionally.

Even though pregnancy is a normal and in most situations a happy event, it is an event that creates major changes in the lives of the woman, her partner, and the other members of their families and friends (Zwelling, 1997). The marital relationship is considered a significant predictor of pregnancy (Lederman, 1990), and that pregnancy causes changes within the marital relationship (Niven, 1992). Pregnancy represents a major transition between two lifestyles, from being an individual or part of a couple with responsibilities only to oneself or to each other, to having full-time responsibility for a child (Roth, 1989; Zwelling, 1997). It appears that the changes experienced by the couple as they transform themselves from partner to parent are perceived more negatively, since there are changes in several aspects of the relationship, such as the reduction in time spent together as a couple, and in common leisure activities as well as the increase in chores and responsibilities (Cowan & Cowan, 1988; Randell, 1989; Provost & Tremblay, 1991). Changes associated with first-time parenthood are irreversible (Lederman, 1984; Osofsky & Osofsky, 1984). This particular transition is more demanding and perturbing for the conjugal partners than the arrival of other children (Broom, 1984; Cowan & Cowan, 1988; Fedele et al., 1988; Provost & Tremblay, 1991), and more important for women than for men (Belsky et al., 1983; Cowan & Cowan, 1988). The perturbations associated with this transition involve changes in roles, lifestyle, sharing of household tasks, daily activities, professional lives, finances, communication, intimacy and sexuality (Colman & Colman, 1973; Lederman, 1984; Osofsky & Osofsky, 1984; Tremblay, 1990). First-time expectant fathers may feel confused as their conjugal relationship changes (Barclay, Donovan & Genovese, 1996). Donovan (1997) indicates that there is a mismatch in female and male expectations regarding the relationship during pregnancy, leading to the couple feeling overwhelmed (Sherwen, 1987).

Pregnancy may be perceived as a stressor event (Avant, 1988) in which certain couples adjust with ease, while others find themselves in a more difficult situation

(Zwelling, 1997). Scott-Heyes (1983) found that the major change between husbands and wives during pregnancy concerns the degree of nurturance (looking after and caring for) and dependence (being looked after and cared for) shown by each partner to the other. The wives can become more dependent on the husbands while the husbands provide more nurturance to their wives. Many couples find themselves becoming closer as they engage in nest-building (Niven, 1992). The couple must work hard to communicate their needs of affection, attention and support (Assor & Assor, 1985); if these needs are not realized, their relationship could be adversely affected. According to Martin and Starling (1989), couples have three major developmental tasks during pregnancy: accepting the impending parental role, renegotiating conjugal roles, and resolving ambivalence. The developmental stage of pregnancy is critical not only to the well-being of each partner of the conjugal dyad and the fetus, but also to the well-being of the couple's relationship (Malnory, 1996).

2.1.4 At-Risk Pregnancy: Scope of the Problem

In this section, at-risk pregnancy is defined, the purpose of pregnancy classification is explained, and the complications of pregnancy as well as their incidences are featured. Kemp and Page (1986) define at-risk pregnancy as a pregnancy in which physiologic and/or psychologic factors exist in the mother or fetus that imply a threat to the health of the maternal-fetal unit, and any psychologic or physiologic condition having a potentially negative impact on the pregnancy. Barger and Fein (1997) state that the purpose of classifying pregnancies into low- and high-risk categories is to provide an appropriate level of care for each group and to better allocate health care resources.

Prenatal care becomes a screening process to differentiate those babies and mothers at jeopardy (high risk) from those in little danger (low risk) (Aumann & Baird, 1993). Because the fetus in any given pregnancy is now at greater risk than the mother, the concept of "at risk" is applied to both maternal and fetal outcome (Aumann & Baird, 1993). The perinatal period, as a stage on the continuum of the family life cycle, is unique

in that outcome is frequently reliant upon the early recognition and management of problems (Aumann & Baird, 1993). Indeed, complications and emergencies can happen to any woman at any stage of the pregnancy (World Health Organization, 1993). Jones (1986) stipulates that there are few risk conditions that affect only the mother or only the fetus and that their psychosocial aspects affect the entire family.

Estimates for the number of pregnancies were obtained during the planning phase of the project. Thus, the number of pregnancies considered at-risk range from as low as 10% (Kemp & Page, 1986) to as high as 20% (Jones, 1986; Kemp & Page, 1986; Penticuff, 1982). The World Health Organization (1993) states that more than 150 million women become pregnant every year, that at least 23 million of these women (approximately 15.3%) develop complications which require skilled treatment, and for half a million women the complications are fatal. Philippe et al. (1982) indicate that 12% of women are hospitalized during their pregnancy. More recent estimates from Haas, Berman, Goldberg, Lee & Cook (1996) and White (1989) report higher values, with 20% to 25% of pregnant women requiring hospitalization. The statistics for the Quebec situation during the planning phase of the research present a similar portrait. From 1993 to 1994, 2909 women in Québec had been hospitalized for at-risk pregnancy for a total hospital stay of 12307 days and an average hospital stay of 4.2 days (Ministère de la santé et des services sociaux, 1994). From 1994 to 1995, 3306 women in Québec had been hospitalized for high-risk pregnancy for a total hospital stay of 11986 days and an average hospital stay of 3.6 days (Ministère de la santé et des services sociaux, 1995). However, the more recent picture has slightly changed. Between 1998 and 1999, 2317 pregnant women were hospitalized for a total hospital stay of 11442 days, with an average hospital stay of 3.08 days (Ministère de la santé et des services sociaux, 1999). Also, between 1999 and 2000, 2198 women were hospitalized for a total hospital stay of 10805 days, with an average hospital stay of 2.86 days (Ministère de la santé et des services sociaux, 2000). Although the average hospital stay has slightly decreased, there are still many pregnant women who are hospitalized for long periods of time in Québec.

There are two major types of at-risk pregnancy: in the first type of at-risk pregnancy, women have chronic conditions that dispose them to problems during pregnancy, and in the other type, women develop a health problem during pregnancy that was previously unsuspected (Johnson & Murphy, 1986). Only those women experiencing complications during pregnancy are to be considered for this research study. Complications can develop at any moment during the pregnancy: examples of the major conditions are pregnancy-induced hypertension, multiple gestation, diabetes mellitus, threatened premature delivery, suspected fetal growth retardation, placenta previa, antepartum bleeding, hyperemesis gravidarum, Rh isoimmunization and ABO incompatibility, and premature rupture of the membranes (Barger & Fein, 1997; Heaman, 1990; Williams, 1986). See Table 1 which presents complications of pregnancy with their incidences.

TABLE 1
Complications of Pregnancy and Their Incidences

Complication	Incidence
1. Antepartum bleeding: -placenta previa	.5% of all pregnancies*
2. Pregnancy-induced hypertension	6 to 8% pregnancies*
3. Premature rupture of the membranes gestation	8 to 10% beyond 20 weeks*
4. Intrauterine growth retardation	3 to 7% of all pregnancies*
5. Preterm labor	25% of all pregnancies**
6. Gestational diabetes	3% of all pregnancies***
7. Multiple gestation	1.2% of all pregnancies***
8. Hyperemesis gravidarum	.4% of all pregnancies***
9. Rh isoimmunization	2% of all pregnancies***

* Aumann & Baird (1993) ** Lipshitz, Pierce & Arntz (1993) *** Barger & Fein (1997)

2.1.5 The Stressors of At-Risk Pregnancy and Antenatal Hospitalization

In this section, at-risk pregnancy and antenatal hospitalization as stressors are discussed. Three perspectives are considered in regard to these two stressors: the women's, the men's and the conjugal relationship. Empirical support for these stressors is considered later in this chapter.

Care for women experiencing at-risk pregnancy may be a double-edged sword in which procedures to protect mothers and infants from physical damage may simultaneously create profound psychosocial problems (Cohen, 1979). From a medical perspective, at-risk pregnancy represents a biophysical problem, with the focus of care on the woman and the maternal-fetal-unit while the family remains at the periphery (Stainton, 1994). A woman experiencing at-risk pregnancy must deal with two simultaneous crises: the normal developmental process of pregnancy and the situational crisis of an at-risk pregnancy (Galloway, 1976; Murphy & Robbins, 1993; Snyder, 1979; Waldron & Asayama, 1985; Weil, 1981; White & Ritchie, 1984; Zwelling, 1997).

The usual emotional reactions to pregnancy are intensified and the normal developmental tasks associated with pregnancy may be altered by the additional stressful situation (DaCosta, Larouche, Dristsa & Brender, 1999; Galloway, 1976; Gilbert & Harmon, 1993; Kemp & Page, 1986; Murphy & Robbins, 1993). Certain pregnant women may experience anxiety and stress often caused by worry about their health status or that of their fetus (Galloway, 1976; Gilbert & Harmon, 1993; Gyves, 1985), resulting in such behaviors as helplessness, apathy, restlessness, irritability or anger (Mercer et al., 1987). Some women and their partners may demonstrate denial due to failure to seek prenatal care, to acknowledge the risk factor or to be compliant with the medical regimen (Gilbert & Harmon, 1993). Ambivalence may be seen with greater frequency and for longer periods during an at-risk pregnancy since the expectant parents feel confused about whether to continue the at-risk pregnancy or if it is better to end it (Kemp & Page, 1986). There is an intense desire for a healthy child and, at the same time, fear that the unborn

child will not survive or will be damaged (Penticuff, 1982).

Blame is a common reaction on the part of an at-risk pregnant woman, with it being self-directed, directed at the partner or at the health care team (Galloway, 1976; Gilbert & Harmon, 1993; Murphy & Robbins, 1993). If blame is self-directed, feelings of guilt or failure may be expressed since the pregnancy is not normal and she has not performed satisfactorily in the task of producing a healthy baby (Penticuff, 1982). If the blame is directed towards the partner, marital strain may result since he may have heightened emotions on top of all the other ones. A woman may decide not to comply with the medical treatment if the members of the health care team are to blame. Anticipatory grief may be felt by the parents as they face the possibility of loss of the fetus or change in its health status (Murphy & Robbins, 1993). In consequence, some parents may not permit themselves to emotionally attach to the fetus for fear that the emotional pain would be too difficult to bear. This could jeopardize their attachment with the baby after the birth and even the parent-child relationship.

Expectant women may be confused about what is happening to their body (Murphy & Robbins, 1993) and their existing coping behaviors may no longer be adequate (Snyder, 1979). Women experiencing preterm labor are significantly more distressed by the body changes caused by their pregnancies and less tolerant of what is happening to them compared with women experiencing normal pregnancy (Richardson, 1996). Their self-esteem may be threatened since they feel that the diagnosis of the at-risk pregnancy is a blow to their self-confidence as a woman due to the loss of a perfect pregnancy and as a mother due to the loss of the perfect baby (Gilbert & Harmon, 1993). Other women express positive emotions such as reasssurance in regard to the diagnosis of an at-risk pregnancy since they are receiving attention from the health care team and are in awe of the availability of modern obstetrical care (Gyves, 1985).

During at-risk pregnancy, the expectant father (Gyves,1985) becomes more protective of his partner since he is concerned about her health, and takes on more

responsibilities at home. There appears to be a lack of a clearly defined role for the male partner in at-risk pregnancy (Penticuff, 1982). He may feel insecure about his competence as a man (ability to produce strong progeny) and as a provider (ability to provide a safe environment for his family). He may feel increased jealousy of the fetus and worry that his mate will no longer have time for him and his needs. Actually, he may have many unmet needs (Penticuff, 1982). According to Conner and Denson (1990), little information is available on the expectant fathers' response to pregnancy, much less the fathers' response to an at-risk pregnancy. These authors wonder if these men's responses to pregnancy would differ depending on whether the event threatened the partner's health or life versus the threat to the fetus or infant. However, such data do not exist.

There are few publications on the stressors associated with antenatal hospitalization, however, in the general population, hospitalization is considered a stressful event (Volicer, 1974). Its effects have been studied in many domains (Axelrod, 1986; Coxon, 1989; Creditor, 1993; Egan, 1990; Knafl, 1988; Rocheleau, 1983), and alternatives to traditional hospital care have been proposed based on forming a partnership with the patient and the family (Cox & Groves, 1990; Grieco, McClure, Komiske & Menard, 1994; Reiser, 1993). Bedell, Cleary and BelBanco (1984) have coined the term 'the kindly stress of hospitalization'. They identified generally accepted hospital policies and procedures which were detrimental to patients' response to illness, and which actually impede recovery. The experience of being hospitalized may, in some instances, actually interfere with the individual's ability to adapt appropriately to the needed changes. This is in part due to the dependency role forced upon people by restrictive hospital regulations which control so many aspects of a patient's daily life. During hospital confinement, responsibility for diet, personal attire, and scheduling of the day's events are entirely the prerogative of the hospital staff. Patients give up their rights as well as privacy in the name of safety. Doors are kept open, semi-open gowns are commonly used, and hospital personnel peer in uninvited and given instructions which are designated as orders, not requests.

Nurses have observed that hospitalized pregnant women have difficulty to adapt to their at-risk situations (Merkatz, 1976; Rosen,1975), and that the stress of these women

and their families increased with the duration of hospitalization (Kirk, 1989; Kramer et al., 1986; Mercer at al., 1987; Merkatz, 1976; Murphy & Robbins, 1993; White & Ritchie, 1984), or with bedrest (Maloni, 1993; Maloni, 1996; Maloni, Chance, Zhang, Cohen, Betts & Gange, 1993). Hospitalization is not usually anticipated as an intercurrent event in the normal physiologic process of pregnancy (Merkatz, 1978); women experience various emotions such as hostility, anger and depression (Dore & Davies, 1979; Gyves, 1985; Loos & Julius, 1989; Williams, 1986), and confusion since they do not feel sick (Murphy & Robbins, 1993). Others are afraid of being in the hospital since this setting is often associated with illness and death, and depersonalized care (Murphy & Robbins, 1993). The male partner may express feelings such as fear, vulnerability, and anxiety (McCain & Deatrick, 1994). Women's stress and that of their family's are further amplified if bed rest should be required, if physical activities are restricted (Crowther & Chalmers, 1989), and if hospitalization is prolonged (Murphy & Robbins, 1993). The male partner and other family members can feel left out in the hospital setting (Kemp & Page, 1986) and have similar emotional reactions as the pregnant women (Murphy & Robbins, 1993).

However, the hospital setting can reduce the stress of certain women, their partners and their families since they feel that the pregnant woman is receiving attention from the health care team (Gyves, 1985; Williams, 1986). It appears that the continued presence of health care workers and direct access to services and to fetal well-being evaluation reduce the anxiety associated with the situation. Johnson and Murphy (1986) mention that the couple's active participation in the care and in the decision-making process supports their adaptation to hospitalization. Hospitalized women can develop their own support amongst themselves or through organized group support, resulting in the creation of their very own subculture (Dore & Davies, 1979; Murphy & Robbins, 1993; Snyder, 1984; Williams, 1986). Other women consider the hospital as a refuge especially if they are having multiple personal problems (Murphy & Robbins, 1993).

2.2 FIRST ARTICLE: STRESS MANAGEMENT

This section presents the first of three articles at the heart of this thesis. The candidate of this thesis was invited by Dr. Sharron Smith Humenick, Professor and Chair of the Maternal Child Nursing Department of Virginia Commonwealth University (Richmond, Virginia), to write a chapter on stress management for the second edition of Childbirth Education: Practice, Research and Theory (Edited by F. Nichols and S.S. Humenick, Philadelphia: W.B. Saunders, 2000, pp. 501-524). The candidate was chosen for the following reasons: 1) her research project focusing on couples' stress associated with at-risk pregnancy and antenatal hospitalization, 2) her knowledge base regarding the transition to parenthood, 3) her clinical expertise in perinatal education, and 4) her numerous publications in perinatal education. The objectives in writing this chapter were: 1) to review the literature on stress in relation to the transition to parenthood, both normal and at risk, 2) to describe the perinatal educator's experiential knowledge base, 3) implications for practice including the perinatal educator's roles, teaching objectives and the teaching approach, 4) teaching strategies including individual, family and alternative stress management, and 5) implication for research in perinatal education. The candidate received an honor certificate from Lamaze International for her contribution to the field of childbirth education and for recognition and contribution as an author to Childbirth Education: Practice, Research and Theory. See Appendix 9 for the certificate.

FIRST ARTICLE: STRESS MANAGEMENT

Published in Childbirth Education: Practice, Research and Theory

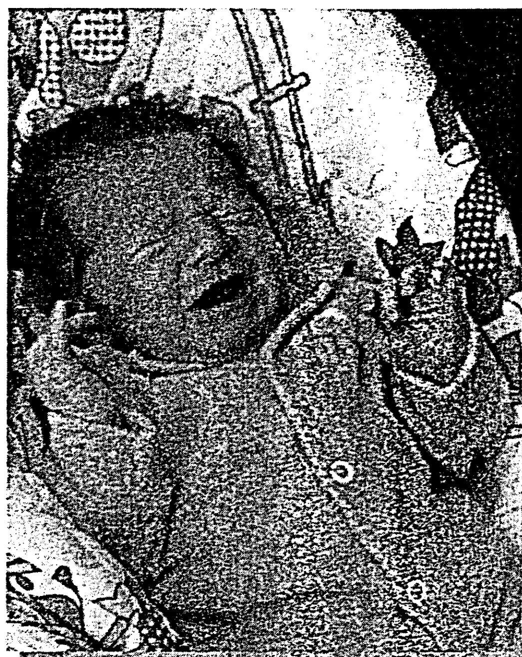
Editors: F. Nichols and S.S. Humenick

Philadelphia: W.B. Saunders, 2000, pp. 501-524

chapter 26

Stress Management

Viola Polomeno



Stress comes in all types and shapes during the childbearing year. Developing effective strategies to manage stress during this period can be beneficial and become a valuable lifelong skill.

INTRODUCTION
THE PERINATAL EDUCATOR'S EXPERIENTIAL KNOWLEDGE
REVIEW OF THE LITERATURE
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Stress and the Intrapartum
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IMPLICATIONS FOR PRACTICE
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INTRODUCTION

The transition from pregnancy through parenthood is filled with many physical and psychological changes for the pregnant woman, her partner, their relationship, and the other members of the social network. Such changes can produce anxiety and stress because roles, communication patterns, and activities of daily living must be redefined and renegotiated. If complications should arise in relation to the transition to parenthood, the stress experienced by each family member is increased. The family's stress level may be further increased if hospitalization is required for the pregnant woman or the new baby.

Perinatal education classes are the ideal place for pregnant women and their significant others to begin to understand stress in association with the transition to parenthood and to develop coping strategies for their situation.

THE PERINATAL EDUCATOR'S EXPERIENTIAL KNOWLEDGE BASE

The transition through pregnancy and into parenthood is the essence of the work of the perinatal educator. More than most family stage transitions, this transition is fraught with the potential for physical and psychological upheavals for the woman and the members of her social network, including her partner, her other children, the grandparents, and friends. A characteristic of even the smoothest transition in pregnancy and early parenthood is its accompanying stress (Cowan, 1991; Saunders & Robins, 1987) because many changes are involved with roles, family structure, communication, and activities of daily living. Many perinatal educators are themselves parents and have first-hand knowledge of this transition and the related stressors. This personal knowledge may hinder the teaching process just as it can facilitate it.

The perinatal educator must be aware of her or his personal experience with these transitions and its impact on perinatal education practice. Some level of psychological work must be done by the perinatal educator to accept and integrate the personal experience of the transition through pregnancy and early parenthood, while developing an objectivity in order to make the perinatal education classes beneficial for those attending them. The perinatal educator can selectively use her or his personal experience to enhance teaching, but it should always be done with the participants' needs in mind. The classes can be therapeutic for the perinatal educator if she or he should need healing from the experience of pregnancy, birthing, or parenting, but the educator should take care to refrain from using the class as a sounding board for personal unresolved issues. In contrast, attending to the needs of others and listening to the participants' stories of birth or parenthood can internally quell some previous negative aspects or emotions associated with the perinatal educator's personal experiences.

Another experiential aspect the perinatal educator should work to become aware of is her or his personal coping with stress. This has the potential to influence the perinatal class both directly through comments and reflections and indirectly through body language. The perinatal educator should ask herself the questions about the experience of stress shown in Box 26–1.

The perinatal educator has the potential to increase her or his sensitivity to the stress process and the transitions through pregnancy and early parenthood after answering these questions and analyzing the data. This may be a solitary activity, or it may be an activity for a group of educators. Consequently, the educator's sensitivity to expectant and actual parents' stress responses can be greatly enhanced by personal knowledge and can be used positively to become an effective professional tool in helping parents cope with their situations. The educator can further increase his or her

Box 26–1. Questions for the Perinatal Educator About the Experience of Stress

- *How do I define stress?*
- *How do I know when I am stressed?*
- *How do I cope when I am stressed or dealing with a stressful situation?*
- *What strategies do I use that are the most helpful for my coping with a stressful situation? The least helpful?*
- *How does my own family deal with stress?*
- *How do I influence my family?*
- *How does my family influence me?*
- *What was the most stressful about the experience of becoming a parent? The least stressful? What helped most? What helped least?*
- *How does my reaction to stress influence my teaching of perinatal education classes?*
- *How does my personal experience with pregnancy, birthing, and parenting and its accompanying stress influence my teaching?*
- *How do I really feel about high-risk pregnancy, labor and delivery, and parenting?*
- *How do I really feel about teaching this subject matter?*

effectiveness by studying the details of the stress process, its stressors and its mediators, and its relationship with the transitions through pregnancy, labor, birth, and parenting. Content based on knowledge of stress management and the various coping strategies can be included in the classes, thus attending to this particular need on behalf of the participants. The perinatal educator is not only partaking of information but is also contributing to the participants' successful preparation and adaptation to these transitions.

REVIEW OF THE LITERATURE

The Stress Process

GENERAL BACKGROUND

Stress comes from the French word *détresse,* which means "placed under narrowness or openness" (Mack, 1995, p. 91). Stress may be of two types: positive, which produces feelings of satisfaction and happiness, or negative, which can contribute to illness or fatigue.

Hans Selye (1993) studied the stress concept throughout his career and defined stress as "the nonspecific threat result of any demand upon the body, be the effect mental or somatic" (p. 7). A variety of dissimilar situations have the potential to produce stress, yet "no single factor can, in itself, be pinpointed as the cause of the reaction as such" (Selye, 1993, p. 7). Certain biochemical changes occur when stress is present, and these objective indices of stress form the base of the General Adaptation Syndrome (GAS) or the Biologic Stress Syndrome (Selye, 1936).

The three stages of GAS are alarm, resistance, and exhaustion. "The alarm phase provokes an initial quick response including lowered blood pressure and tachycardia. This prepares the body for a fight or flight response to continued stress. There is increasing production of adrenocorticotrophic hormones, with raised blood pressure and heart rate. If this is prolonged to the point where the adaptation required is too great, the body becomes increasingly vulnerable and exhaustion follows" (Mack, 1995, p. 92). The body cannot remain in a heightened state of arousal. The sympathetic nervous system becomes activated with vasoconstriction of blood vessels, increased blood pressure, increased heart rate, and increased secretion of adrenaline. The immune system becomes suppressed, and the increased production of cortisol increases the level of cholesterol and other lipids in the blood (Stein & Miller, 1993). Atherosclerosis may then develop due to the increased presence of cholesterol. Prolonged excess stress has consequences on the body such as increased heart disease, stroke, digestive tract complications, migraines, ulcers, and infections (Breznitz & Goldberger, 1993). (See Fig. 26–1 for the principal pathways of the stress response).

The situations that trigger the stress response or the agents that cause the conditions of stress are called stressors (Bomar, 1989; Lowery, 1987; Nichols & Zwelling, 1997). Stressors may be physical, such as heat, exertion, cold, trauma, and infection, or psychological, such as fear, anxiety, and disappointment (McEwen, 1993). Stressors may also be classified as outside or inside the person. Examples of external stressors include poverty and poor housing, as well as certain life events. "Internal stress results from our perception of a situation. If something is perceived as threatening, we activate the fight/flight response" (Mack, 1993, p. 94). Factors that alter response to stress are called mediators (Fig. 26–2). The responses to stressors vary, and individual physiologic and behavioral differences exist (McEwen, 1993). Genetics, developmental factors, experience, and social context can influence a person's interpretation and response to a stressor (Lowery, 1987). Some individuals appear to be more resilient and to cope better with stress; others are more vulnerable to it.

Feuerstein, Labbé and Kuczmierczyk (1986) emphasize the following aspects of stress and stressors:

1. Positive events often require as much adaptation as negative events.
2. An apparently negative event may not be necessarily considered as a stressor to some individuals.
3. Positive experiences may trigger the same biochemical changes as negative events.
4. Not all potentially stressful stimuli evoke a stress response in all individuals.
5. It cannot be assumed that exposure to a stimulus will result in a stress response in all individuals observed.

Persons usually recognize change in feelings, behavior, and mood when they are stressed. Mack (1995) produced the list of physical, emotional, and mental symptoms related to stress shown in Box 26–2.

SOCIAL AND FAMILY STRESS

Stressors at the social and family levels have received much attention in the last 20 years (Doherty & Campbell, 1988; Pearlin, 1989; Wong, 1993). "Social stress results from the actual or perceived threats in one's social environment, such

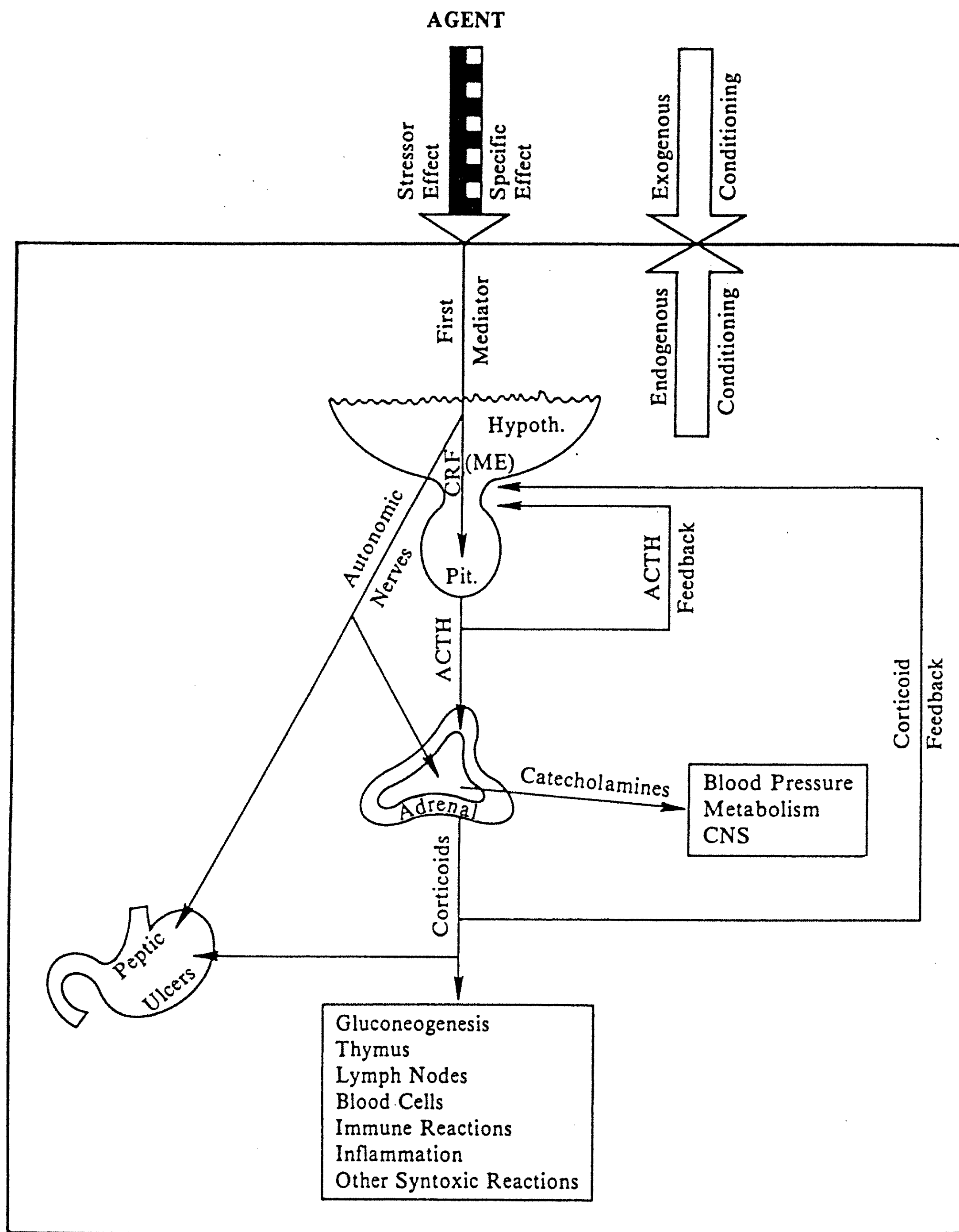

FIGURE 26–1. Principle pathways of stress response. (From Goldberger, L. Breznitz, S. (1993). *Handbook of stress: Theoretical and clinical aspects* (p. 12). New York: The Free Press.)

as relationships at work, conflicts at school, or interactions within society" (Bomar, 1989, p. 104). Certain life events affect the family directly and indirectly (Boss, 1987) and could result in family stress. Family stress has been defined as "pressure or tension in the family system. It is a disturbance in the steady state of the family" (Boss, 1988, p. 12).

Boss (1988) has classified family stressor events as follows:

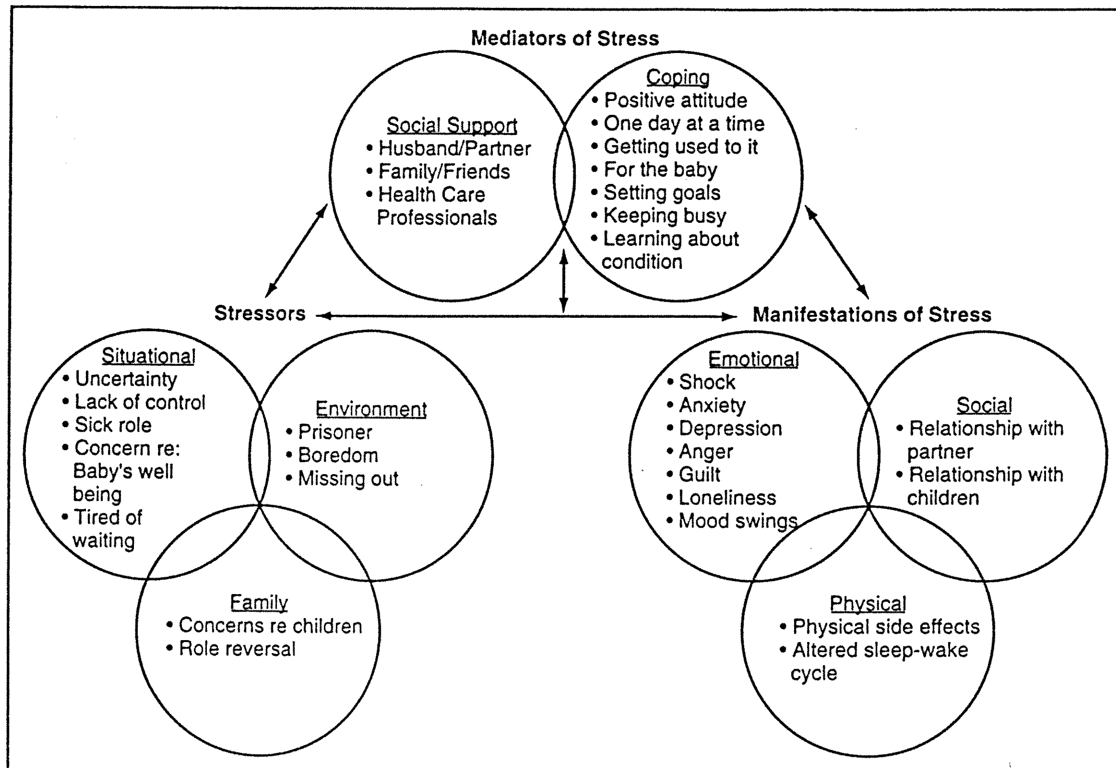

FIGURE 26–2. Mediators of stress (From Lupton, A. Heaman, M. Ashcroft T. [1997]. Bed rest from the perspective of the high-risk pregnant woman. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 26*[4], 426.)

- *Normal developmental*: predictable, part of everyday life such as birth and death
- *Unexpected/non-normative*: result of some unique situation, such as natural disasters
- *Ambiguous*: unclear facts about the event, such as a family member being diagnosed as dying but with uncertain timing
- *Nonambiguous*: clear facts, such as the predictable outcome of a hurricane
- *Volitional*: events a family controls and makes happen, such as a wanted divorce
- *Chronic*: events persisting over a long period of time, such as a parent coping with a handicapped child
- *Acute*: rapidly occurring events that last a short time, such as the hospitalization of a pregnant woman
- *Isolated*: single event that disturbs the family, such as a teenager being arrested

A comprehensive analysis of family stressors consists of 10 characteristics (Danielson, Hamel-Bissell, & Winstead-Fry, 1993; Lipman-Blumen, 1975; Box 26–3).

The accumulation of multiple life stress events are predictive of the family's level of stress, its subsequent vulnerability to crisis, or its ability to recover from a particular crisis (Boss, 1988). The family may experience stress because it is attempting to adjust, reorganize, consolidate, adapt, and establish new patterns of behaviors (Bomar, 1989). Stress always precedes a family crisis, but family stress does not always lead to crisis. "A family crisis is a) a disturbance in the equilibrium that is so overwhelming, b) a pressure that is so severe, or c) a change that is so acute that the family system is blocked, immobilized, and incapacitated" (Boss, 1988, p. 49). Boss (1988) lists the following four indicators of a family in a crisis: (1) family members are no longer able to perform their roles and tasks; (2) they cannot make decisions and solve problems; (3) they cannot take care of each other in the usual way; and (4) there is a shift from family to individual survival. (See Table 26–1 for the differences between stress and a crisis.)

Pearlin (1989) introduces the concepts of primary and secondary stressors because stressors "experienced by one individual often become problems for others who share the same role sets" (p. 247). "Primary stressors are those which are likely to occur first in people's experience ... secondary stressors come about as a consequence

Box 26–2. Physical, Emotional, and Mental Symptoms Related to Stress

Physical stress symptoms:
- tense muscles
- dry mouth
- nausea
- palpitations
- dizziness
- sweaty hands
- diarrhea

Emotional stress symptoms:
- anxiety
- irritability
- feeling depressed
- feeling insecure
- crying
- guilt feelings

Mental stress symptoms:
- difficulty making decisions
- difficulty concentrating
- memory lapse
- feeling under pressure

Behavior changes:
- increased smoking or drinking
- appetite changes
- sleep pattern changes

Mack, S. (1995). Complementary therapies for the relief of stress. In D. Tiran & S. Mack (Eds.). *Complementary therapies for pregnancy and childbirth* (p. 93). London: Baillière Tindall.

of the primary stressors" (p. 248). An example might be loss of self-esteem following a difficult, unsupported labor. Secondary stressors may produce more intense stress than the primary ones because they tend to last longer. Mediators such as coping resources and social support may buffer the effects of the stress response (Lowery, 1987). Changing an individual's or a family's perception may be sufficient to promote recovery from a stress event (Boss, 1987). Burr and Klein (1994) have proposed a conceptual framework of family coping strategies for family stress (Table 26–2).

Curran (1985) has noted that stressed families who are chronically in a state of high arousal report the characteristics shown in Box 26–4. Once a crisis occurs, the following may occur if a family does not recover from the crisis: (1) the family may fall apart and not get back together; (2) a family member may die or withdraw physically or psychologically into alcohol or drugs; and (3) there may be physical distance and lack of communication (Boss, 1988). A family is aided to come out of its crisis if the event has changed and is no longer threatening; if a sense of optimism and hope returns; if the family resumes its activities, tasks, and roles; if family functioning is back to normal or at a higher level; and if the family feels that the event has brought its members closer together with a greater sense of family commitment. Some families appear chronically stressed because they derive energy from a chaotic way of life. Although the members state that they are stressed, they are continually on the move from one major event to another. Such a family unit may be well organized, and knows how to conserve its energy for tasks and activities (Boss, 1988). Thus, the family functions well, although the stress may take a toll on the health of individual members.

Some family theorists (Boss, 1988; Lazarus, 1993) explain the appraisal of the stress event as

Box 26–3. Ten Characteristics of Family Stress

1. *Origin of stressor: outside or inside the family*
2. *Extent of the stressor's impact: on all the family or only a few*
3. *Severity of the stressor: mild or severe*
4. *Duration of the stressor: short- or long-term*
5. *Onset of the stressor: sudden or gradual*
6. *Control of the stressor: manageable or unmanageable*
7. *Cause of the stressor: natural, man-made, or unknown*
8. *Predictability of the stressor: predictable or uncertain*
9. *Resource demands of the stressor: great or small*
10. *Stigma of the stressor: great or small*

Data from Danielson C., Hamel-Bissell B., & Winstead-Fry P. (1993). *Families, health and illness.* St. Louis: Mosby; and from Lipman-Blumen (1975). Crisis framework applied to macrosociological family changes. *Journal of Marriage and the Family, 3,* 889–902.

Box 26–4. Characteristics of Families in a Chronic State of High Arousal

- *A constant sense of urgency and hurry; no time to release and relax*
- *A tension that underlies all relationships and causes sharp words, sibling fighting, and misunderstandings*
- *A mania to escape—to one's room, car, garage*
- *A feeling that time is passing too quickly; children are growing up too quickly*
- *A nagging desire for a simpler life; constant talk about times that were or will be simpler*
- *Little "me" or "couple" time*
- *Pervasive sense of guilt for not being or doing everything to and for all people in one's life*

Curran D. (1985). *Stress and the healthy family.* Minneapolis, Minn.: Winston.

TABLE 26–1
Differences Between Stress and Crisis

VARIABLE	STRESS	CRISIS
Definition	State of disturbed equilibrium	Point of acute disequilibrium
Time	Long-term	Short-term
	Continuous with low or high levels	Categorical, being present or absent
	Independent of crisis	Dependent on stress
Coping	Maintains equilibrium	Not effective
Family functioning	Continues with adjustments	Immobilized by adjustments

being the most important variable in the assessment of individual and family stress. "An appraisal consists of six key decisional components, three primary and three secondary (not to be confused with primary and secondary stressors). The primary appraisal components have to do with the motivational aspects of an encounter...the secondary appraisal components have to do with options for coping with expectations about what will happen" (Lazarus, 1993, pp. 27–28) (Components of appraisal are listed in Table 26–3.)

TABLE 26–2
The Proposed Conceptual Framework of Coping Strategies

HIGHLY ABSTRACT STRATEGIES	MODERATELY ABSTRACT STRATEGIES
Cognitive	Be accepting of the situation and others Gain useful knowledge Change how the situation is viewed or defined
Emotional	Express feelings and affection Avoid or resolve negative feelings and disabling expressions of emotion Be sensitive to other's emotional needs
Relationships	Increase cohesion (togetherness) Increase adaptability Develop increased trust Increase cooperation Increase tolerance of each other
Communication	Be open and honest Listen to each other Be sensitive to nonverbal communication
Community	Seek help and support from others Fulfill expectations in organizations
Spiritual	Be more involved in religious activities Increase faith or seek help from God
Individual development	Develop autonomy, independence, and self-sufficiency Keep active in hobbies

From Burr, W. & Klein S. (1994). *Reexamining family stress* (p. 133). Thousand Oaks, Cal.: Sage Publications. Reprinted by permission of Sage Publications, Inc.

The Perinatal Family

STRESS AND PREGNANCY

Transitions are periods of adjustment between stages of the family life cycle. They are usually characterized as stressful because many aspects of family life are subject to change. New roles are learned, daily tasks are renegotiated, and communication patterns are re-established (Roth, 1989). Consequently, life transitions may trigger, in the individuals or the family unit, or both, stresses leading to biologic changes, hormonal function shifts, and immune system vulnerability (Cowan, 1991; Dura & Kiecolt, 1991; Mauksch, 1974). Families vary, however, in their susceptibility to stress, their ability to use coping mechanisms successfully, and their total response to stressful situations (Mauksch, 1974).

Pregnancy is frequently a time of marked emotional upheaval (Merkatz, 1978) and of complex interrelated changes in physiologic equilibrium and interpersonal associations with spouse, parents, and friends (Lederman, 1990; Murphy & Robbins, 1993; Peterson & Peterson, 1993). These changes may significantly disrupt the family unit and its usual patterns of activity, role interactions, and communication process (Curry, 1990). The pregnant woman and her family must restructure themselves and readjust their goals and functions (Peterson, 1991). These psychological adaptations are characterized by some degree of stress (Avant, 1988), often producing a state of disequilibrium for the entire family, which must master developmental tasks in order to function and grow (Sherwen, 1987). The family may be further affected by

TABLE 26–3
Components of Appraisal

PRIMARY APPRAISAL COMPONENTS	SECONDARY APPRAISAL COMPONENTS
Goal relevance is concerned with what is at stake. If nothing is at stake, there is no emotion; if something is at stake, the emotion's intensity depends on the importance of the goal	*Blame and credit* depend on who is responsible for the harm or benefit and whether their actions could have controlled them
Goal congruence or incongruence is concerned with whether an encounter is considered threatening or beneficial to personal goals (threatening = negative emotion; beneficial = positive emotion)	*Coping potential* is the way a person-environment relationship can be influenced for better or worse
Type of ego involvement: Emotions typically engage one of six ego-identity facets—self/social esteem, moral values, ego ideals, meanings and ideas, persons and their well-being, and life goals	*Future expectations*—Changes in the person-environment relationship can be favorable or unfavorable

stress from negative life events such as pregnancy complications (Norbeck & Tilden, 1983; Smilkstein, Helsper-Lucas, Ashworth, Montano, & Pagel, 1984; Tilden, 1983). For example, poor family functioning has been associated with outcomes such as lower infant birthweight (Gennaro, Brooten, Roncoli & Kumar, 1993; Ramsey, Abell & Baker, 1986), and poor marital relationships have been associated with preterm births (Richardson, 1987).

With high-risk pregnancy, stress also increases (Kemp & Hatmaker, 1989; Oakley, Rajan, & Grant, 1990; Wadhwa, Dunkel-Schetter, Chicz-DeMet, Porto, & Sandman, 1996), and if antenatal hospitalization is required, the stress is further aggravated (Mercer, 1990). According to Penticuff (1982), 20% to 25% of pregnancies are labeled as high risk, meaning that either the health of the woman or that of her fetus, or both, is threatened. The pregnant woman's ability to adjust and adapt to such a situation may be jeopardized by the excessive level of stress (Rosen, 1975). She must modify the developmental tasks of normal pregnancy by adding high-risk ones: She must accept herself as a high-risk mother, she must accept uncertain outcome by asking herself if the pregnancy will remain viable, and she must adapt to the possibility of a less-than-perfect outcome by accepting the pregnancy as it is (Nichols & Zwelling, 1997).

In an attempt to evaluate the impact of hospitalization on the family, clinical observations and studies (Curry & Snell, 1985; Merkatz, 1978) have addressed the concerns and needs of hospitalized pregnant women. As a group, the expectant mothers state that separation from home and the family is their major concern (Curry & Snell, 1985; Jones, 1986; Kirk, 1989; White & Ritchie, 1984). Their other concerns are related to the separation from their children at home, the disruption of the mothering role, and the fulfillment of the children's needs. These women also experience altered body image, so they have greater difficulty assimilating and accommodating to the body changes of pregnancy, which leads to psychoemotional vulnerability with a potential to disrupt bonding with the fetus (Richardson, 1996). (See Box 26–5 for the psychological assessment of high-risk pregnancy.)

The other members of the family are also affected by the high-risk pregnancy and the antenatal hospitalization (Galloway, 1976; Mercer, Ferketich, May, & DeJoseph, 1987). Owing to the foregoing circumstances, the roles of couples have to be reassigned and status positions modified. Tasks normally assumed by the women may need to be temporarily attended to by their partners, who subsequently may experience difficulty fulfilling their additional roles or performing the additional chores. Furthermore, for those hospitalized, sharing accommodation with other women and the lack of privacy within the hospital setting may further contribute to the stresses experienced by the couple. The conjugal communication pattern and marital functioning could be jeopardized during this period of increased dependency between the partners. In summary, the entire realm of family functioning faces disequilibrium during antenatal hospitalization (Kemp & Page, 1986; White & Ritchie, 1984; Williams, 1986). The added stresses are similar when a woman is assigned to bedrest whether she is in the hospital or at home. Many of these women do not get to attend childbirth classes. They have many questions related to preterm birth and caring for a preterm infant. Thus, the childbirth educator may need to provide childbirth education to these women on an individual basis. See Box 26–5 for

a list that will assist women and their care providers in defining specifically what is meant when bed rest is ordered for the pregnant woman.

Only one study was found that studied the long-term effects of antepartum stress on family functioning and health (Merkatz, Ferketich, May, & DeJoseph. 1987). In that study, family functioning was measured using the 21-item Feetham Family Functioning instrument, which measures how things are as opposed to how they should be with a resulting discrepancy (Feetham & Humenick, 1982). The women and their partners in the high-risk group reported less optimal family functioning than did the couples in the low-risk pregnancy group. Both partners in the high-risk situation reported similar levels of family functioning, whereas the women in the low-risk situation reported significantly higher discrepant family functioning than did their partners. Other findings from the same study similarly suggested that the pregnancy risk situation and the antenatal stress of hospitalization had long-term effects on the health status of the couples, even when it was measured at 8 months postpartum

Box 26–5. Psychological Assessment for High-Risk Pregnancy

Health Perception–Health Management Pattern

What choices in your birth plan have been limited, such as attendance at childbirth education classes, type of delivery, need for anesthesia, or other medical interventions, because of the development of a high-risk condition?
Do you feel your control has been affected?

Nutritional-Metabolic Pattern

What dietary changes need to be made because of your high-risk condition?
Why do you need to make these dietary changes?

Elimination Pattern

What kinds of elimination changes, if any, have developed because of your high-risk condition or treatment?

Activity-Exercise Pattern

What activity changes have been necessary because of your high-risk condition?
Why do you need to make these activity changes?
What does bed rest or limited activity, if ordered, mean to you and your family?

Sleep-Rest Pattern

How do you feel after sleeping or resting at night?
Does this high-risk condition affect your normal sleeping pattern? If so, how?

Cognitive-Perceptual Pattern

Explain your understanding of the high-risk condition, proposed plan of treatment, and possible effects on self, fetus, and neonate.

Self-Perception–Self-Concept Pattern

What does this high-risk condition mean to you and your family?
Are you or your family experiencing any guilt feelings?
Is anyone upset at you or blaming you for this high-risk condition?
How do you feel it has affected your self-confidence, maternal role, and acceptance of the pregnancy?

Role-Relationship Pattern

What are the family stressors?
Who lives in the home?
How has this high-risk condition affected your home, work, and other responsibilities?
How can the nurse help you and your family plan needed restructuring of roles and activities?
What are your financial concerns because of this high-risk condition?

Sexuality-Reproductive Pattern

How does the modified or restricted sexual activity affect you and your significant other?

Coping-Stress Tolerance Pattern

What are you most worried or fearful about?
Identify stressors that are affecting you and your family because of this high-risk condition.
How is this hospitalization affecting your life?
How supportive is the baby's father and your family and friends?
What coping techniques have been effective for you in the past?
What referral services would be helpful?

Value-Belief Pattern

Which values, if any, are being affected or threatened by this high-risk condition?

From Gilbert, E. & Harmon, J. (1993). *Manual of high risk pregnancy and delivery* (p. 107). St. Louis: Mosby.

Box 26–6. Bed Rest Checklist: What Is Bed Rest?

The term bed rest is a familiar one to mothers experiencing high-risk pregnancies, but they are often confused about the exact parameters of their limitations. Variabilities depend on each mother, the extent of her complications and even on the physician himself. This chart has been developed in an attempt to help mothers and their doctors mutually define needs in specific situations. Since variables change during each individual pregnancy, you may wish to make several copies of this chart, to be completed at various stages of your pregnancy.

Date _____

What Can I Do Right Now?

1. *Activity Level*
   - *Maintain a normal activity level* _____
   - *Slightly decrease activity level* _____
   - *Greatly decrease activity level* _____
2. *Working Outside the Home*
   - *Maintain my full-time job* _____
   - *Work part-time (how many hours?)* _____
   - *Work in my home (how many hours?)* _____
   - *Stop work completely* _____
   - *Why:* ____________________
3. *Working Inside the Home*
   - *Continue doing all housework* _____
   - *Decrease housework including:*
   - *Heavy lifting (laundry, moving furniture, etc.)* _____
   - *Preparing meals (standing on feet for a prolonged period of time)* _____
   - *Vigorous scrubbing*
   - *Other:* ____________________
   - *Why:* ____________________
4. *Child Care*
   - *Care for other children as usual* _____
   - *No lifting children* _____
   - *Have another caretaker watch an active toddler* _____
   - *Have permanent caretaker for children* _____
   - *Why:* ____________________
5. *Mobility*
   - *Continue normal mobility* _____
   - *Limit mobility (sit down frequently)* _____
   - *Lie down each day (how many hours?)* _____
   - *Recline all day (propped up)* _____
   - *Lie down flat all day (on side)* _____
   - *May walk stairs (how many times a day?)* _____
   - *Stairs forbidden* _____
   - *Take a shower/wash hair* _____
   - *Eat lying down? Sitting up? Sitting at table?* _____
   - *Why:* ____________________
6. *Driving*
   - *May drive a car* _____
   - *May be a passenger in a car (frequency)* _____
   - *May not ride in a car, except to doctor* _____
   - *Why:* ____________________
7. *Bathroom Privileges*
   - *May use bathroom normally* _____
   - *Should actively avoid constipation* _____
   - *May not use bathroom (use bedpan)* _____
   - *Why:* ____________________
8. *Sexual Relations*
   - *May continue normal sexual relations* _____
   - *Should limit relations (maximum times a month?)* _____
   - *Should avoid sexual intercourse* _____
   - *Should avoid all types of relations which stimulate female orgasm* _____
   - *Should abstain from sexual relations* _____
   - *Why:* ____________________
9. *Maintenance of Pregnancy*
   - *Should monitor fetal activity* ___ *hours each day by hand, counting movements* _____
   - *Should drink wine each day (When? How much?)* _____
   - *Should stop smoking cigarettes* _____
   - *Should abstain from alcohol* _____
   - *Should limit cigarette smoking (no. per day?)* _____
   - *Should monitor fetus by uterine home monitoring (Termguard)* _____
   - *Should take (drug)* ____________________
   - ___ *times daily, dosage:* ____________________
   - *Reason:* ____________________
   - *Should take (drug)* ____________________
   - ___ *times daily, dosage:* ____________________
   - *Reason:* ____________________
   - *Should follow these dietary rules:*
   - *Plenty of: Protein, vegetables, fruits, calcium, other:* ____________________
   - *Avoid: Excess salt, excess fats, junk food, spicy foods, other:* ____________________
   - *Approximate number of calories a day:* _____

What Might I Expect in the Future?

1. *Decrease in activity level* _____
2. *Limitation at work* _____
   - *Stop working completely* _____
3. *Decrease housework* _____
4. *Need for children helper* _____
5. *Need to recline in bed* _____
   - *Need to stay in bed (total bedrest)* _____
6. *Limit driving* _____
   - *Stop driving* _____
7. *Limit sexual relations* _____
   - *Abstain from sexual relations* _____
8. *Need to self-monitor fetal activity* _____
9. *Need to use uterine home monitoring (Termguard) monitor* _____
10. *Need to take labor-inhibiting drugs* _____
11. *Need to have a cervical stitch put in* _____

Box 26–6. Bed Rest Checklist: What Is Bed Rest? *Continued*

12. Need to stay in hospital for some period of time ______
13. Need to have amniocentesis ______
14. Need to have sonograms/ultrasounds ______
15. Need to visit OB/GYN more frequently than normal ______
16. Need to visit a high-risk specialist ______
17. Need to have alpha-fetal protein levels done ______
18. Need to have blood sugar screening ______
19. Need to have a nonstress test ______
20. Need to have a stress test ______

If Problems Arise and I Go into Premature Labor . . .

1. When should I contact my OB/GYN? ______
2. Where will I be hospitalized? ______
3. Where might I be transferred? ______
4. Name of OB/GYN at other hospital? ______
5. Where would my baby be hospitalized? ______
6. Could my partner be present at delivery? ______
7. Is there a possibility of a cesarean? ______

Hospital Bed Rest

1. What position do I have to be in? ______
Trendelenburg (head lowered) ______
On side (left or right?) ______
2. Do I have to use a bedpan? ______
3. Can I reach for things, or should I use a reacher?
4. Personal hygiene ______
Can I take a shower? ______
Can I take a bath? ______
Do I have to take a bed sponge bath? ______
Can I get out of bed to wash my hair? ______
5. Mobility
Can I walk the halls? ______
Can I walk in my room? ______
Can I sit in the chair in my room? ______
Can I take a wheelchair to the lobby? ______
Can I take a wheelchair to the nursery? ______
Can I take a wheelchair to hospital support group meetings? (If applicable) ______
6. Visitors
When can my partner visit? ______
(If you do not have a partner:) Can I have another friend or relative visit at the times partners are normally permitted to visit? ______
Who can visit? When? ______
Can my children visit? When? ______
How many people can visit at a time? ______
If I am admitted to the labor room, who can visit? ______
Who can be present in the delivery room? ______
7. Consults
If appropriate, may I see:
a physical therapist ______
an occupational therapist ______
a neonatologist (about fetal development and/or a typical preemie) ______
a social worker ______
an ophthalmologist ______
a dermatologist ______
8. Other directions: ______

This chart was developed by Intensive Caring Unlimited, a Philadelphia/Southern New Jersey parent support Group. Copies may be made without permission. Please address questions and comments to:
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Permission granted by Lenette Moses, Intensive Caring Unlimited.

(Mercer et al., 1987). Thus, it is clear that a high-risk pregnancy can increase the normal stresses of a pregnancy for both parents.

STRESS AND THE INTRAPARTUM

The completion of pregnancy with a normal birth requires the harmonious functioning of the following components (Brucker & Zwelling, 1997):

1. *Psyche:* Psychosocial factors—intellectual and emotional processes of the pregnant woman influenced by heredity and environment, including her feelings about pregnancy and motherhood
2. *Powers:* Labor primary forces—myometrial forces of the contracting uterus
3. *Passenger:* Fetus—all the products of conception (fetus, placenta, cord, membranes, and amniotic fluid)
4. *Passage:* Birth passage—the vagina, introitus, and bony pelvis

If there is a disruption in any of the components, it can affect the others and may cause dystocia (abnormal or difficult labor). Dystocia has the potential to create a crisis for the birthing woman and her family, who may react by using unplanned coping mechanisms or may respond dysfunctionally. Thus, they may experience stress, anxiety, or fear, and these emotional states may further adversely affect the health of the laboring woman, that of her fetus, or both (Bernat, Wooldridge, Marecki, & Snell, 1992). Typically, the perinatal family looks forward to labor and birth as a rite of passage because a healthy baby is the expected result. This expectation can be jeopardized if complications arise. The expectant father

(Simkin, 1989) and other family members may react to the situation, thereby increasing the laboring woman's anxiety and stress (Berry, 1988; Tomlinson, Bryan, & Esau, 1996).

The woman in labor has two major concerns: Will her baby be born healthy, and will her labor be as anticipated? Her expectations for the labor and birth experience were initially developed during pregnancy in accordance with the developmental tasks of pregnancy (Lederman, 1990). They may have then been modified by her childbirth classes. A woman's level of stress and anxiety, however, may increase during the intrapartum if she does not understand the technical equipment, the language being used by the health care team, or what is happening to her (Bobak et al., 1989). Women often feel they have a task to do during labor and delivery, and must prepare themselves for it (Mackey, 1995). They need to have confidence in themselves for that task (Lowe, 1991). Physiologically, additional cathecholamines are released with increased fear, increasing physical distress and disrupting myometrial function. Thus, "the anxiety, fear, and pain experienced by the laboring woman may produce a vicious cycle, resulting in increased fear and anxiety because of continued central pain perception" (Lederman, 1990).

Those women who reported having difficulty with labor and delivery (Mackey, 1995) exhibited behaviors they perceived as undesirable such as moaning, groaning, complaining, grunting, being nasty, shedding tears, being at risk for losing control, and having problems breathing, pushing, and relaxing. In the same study, those who perceived they had managed poorly had screamed and yelled, and had felt they had been out of control. Women appeared to be satisfied with their birthing experience if they felt they had been able to cope with it (Green, Coupland, & Kitzinger, 1990). Nursing behaviors such as making the woman feel cared about as an individual, giving praise, appearing calm and confident, and assisting with breathing and relaxing helped the women to cope better with labor (Bryanton, Fraser-Lavey, & Sullivan, 1994). Thus, the health care team's attitude and behavior can influence a woman's performance and her evaluation of her labor and delivery experience (Mackey & Stepans, 1994).

How a woman and her social network respond to complications during the intrapartum period depends on the stage of labor, the degree of pain and fatigue, and the administration of analgesics or anesthesia. The emotional reactions may vary from stress and anxiety to fear and denial. Coping mechanisms may involve seeking more information about the threat to understand it better, or conversely, limiting the amount of information one is willing to receive, or expressing feelings of guilt or anger. Maternal or fetal complications that arise during the intrapartum may be gradual or sudden: The perinatal family may cope better with the situation when they have time to adjust to it gradually (Moore, 1997).

Part of the psychological adaptation to additional stress, such as intrapartum complications, involves a series of losses (Moore, 1997):

- Loss of normal labor experience—e.g., need for interventions such as external or internal fetal monitoring, fetal distress, or bed rest
- Loss of emotional control
- Loss of physical control—e.g., inability to push or use breathing or relaxation techniques, defecation, urination, or vomiting
- Loss of natural birth experience—e.g., preterm birth or need for episiotomy, forceps, vacuum extraction, or cesarean birth
- Loss of shared experience—e.g., absence of partner or significant other
- Loss of body image—e.g., presence of cesarean scar
- Loss of real versus ideal—e.g., intrauterine fetal demise

The interpretation of any of the above-mentioned losses by the perinatal family will be different from that of the health care team. The health care team understands the different levels of risk and the margins of safety associated with the complications. "Parents and family usually do not have sufficient knowledge to make these distinctions.... The laboring woman is usually concerned about the unborn.... The father['s] ... concern is usually his partner's well-being" (May, 1992, pp. 47–48). When the diagnosis involved preterm labor or fetal distress, fathers were shown to fear more for their partners' than for fetuses' high-risk condition. The fathers feared leaving the hospital alone after the loss of a partner (Mercer et al., 1987).

The perinatal family's stress is greatly increased under such circumstances because they typically have just enough energy to cope with what is happening. The health care professionals, however, must be able to anticipate any changes in the maternal or fetal condition. This can lead the health care team to use the so-called storm trooper approach characterized as "rushed or absent explanation of the situation to the woman and her family; no allowance for private discussion before a family decision is required or for any privacy of any sort; arbitrary and often unneces-

sary separation of the father or support person from the mother without appropriate follow-up" (May, 1992, p.46). This approach may have significant negative consequences for the family long after the baby's birth.

What happens to the fetus in the at-risk intrapartum situation? Labor, even under normal circumstances, is stressful for the fetus but is important to prepare him or her for the transition from the uterine environment to the outside world (Lowe & Reiss, 1996). The fetus relies on the presence of the fetal adrenal glands, which secrete catecholamines in response to the stress. It appears that catecholamine levels are higher in babies born vaginally than in those born by cesarean delivery (Copper & Goldenberg, 1990). "The production of catecholamines during stress is likely to benefit the fetus in that the resulting surge of hormones prepares the newborn to survive outside the uterus" (Copper & Goldenberg, 1990, p. 225). The respiratory system prepares for functioning, the newborn's metabolic rate is accelerated, and blood flow is increased to the vital organs.

One issue that appears to increase the stress of the perinatal family during the intrapartum period is pain. Most women can cope adequately with the pain of labor and delivery through the skilled application of certain techniques such as breathing, relaxation, and massage and by receiving support from a partner, older children, a doula, or the health care team. However, for other women, the pain may be so great, the support team may be so weak, or both to the point that the woman may experience "extreme distress." The resulting stress can contribute to vasoconstriction and fetal hypoxia from increased muscular tension and metabolic demands, leading to acidosis affecting fetal metabolic balance. A woman's sense of low self-esteem and her lack of confidence in her ability to maintain control of her physical and emotional responses may increase her stress level (Lowe, 1991). Medical interventions may also increase the woman's perception of pain. If the delivery should be cesarean, additional stress is added to the situation, affecting the woman and her family (Fawcett, Tulman, & Spedden, 1994).

STRESS AND THE POSTPARTUM

In the postnatal period, most women expect to have some physical discomfort associated with the birth: perineal trauma such as tears, bruising and hematomas, episiotomy, hemorrhoids, and an abdominal incision related to cesarean birth. Some women experience greater discomfort than anticipated. These women may feel anxiety and stress from not being able to move as they would like, not having more control over their bodies, and feeling a great desire to get back to their pre-pregnant condition. By initiating breastfeeding, another level of physical discomfort may be experienced, increasing her anxiety and stress. Learning to breastfeed and all that it entails can be a challenge for any new mother, especially if she is a first-time mother. Additionally, her hormonal shifts may influence her emotional state, which may be a mixture of feelings from joy and excitement about the baby's arrival to some "baby blues" or even to the beginning of postnatal depression (Mack, 1995).

Furthermore, the reaction of the partner and the other family members to the baby's arrival can influence a new mother's emotional state. If the reaction is positive, a new mother is more likely to ease into her new role with support, and experience satisfaction and happiness. On the other hand, if she should lack support or if the baby is not being welcomed by the social network, her level of stress may be increased, which can affect her relationship with her baby and her attainment of the mothering role (Mack, 1995). If the baby should be born with complications and should require time in the intensive care unit, the mother's attachment to her baby may be delayed because her energy will be focused on the baby's well-being (Harrison, 1997).

If a fetal or neonatal death should be experienced, the new mother and her family will be grieving this loss (Aradine & Ferketich, 1990). However, even in healthy outcomes, other types of loss may be experienced (Moore, 1997): real versus ideal neonate (nonpreferred gender or minor anomalies); real versus ideal postpartum experience, such as maternal complications or postpartum depression); of self-image (unanticipated labor experience); real versus ideal breastfeeding (neonate unable to suckle); and lifestyle (disruption in daily living activities, such as sleep, sexuality, and intimacy). Any of these perceived losses have the potential to cause stress and anxiety. How the new mother and her family cope depend on the support they receive from the social network, community resources, and the health care team.

STRESS AND POSTPARTUM FAMILY RELATIONSHIPS

The addition of a new family member can produce considerable stress and anxiety. Parenthood as a transition implies change in status that affects the family members and requires considerable role alteration (Roth, 1989). This initial parenting stage

of the family life cycle begins with the birth of the first baby and continues until the firstborn child is of school age (Sherwen, 1987). The pregnant woman and her partner begin the potentially challenging transition to parenthood. This and all subsequent stages of the family life cycle contain developmental tasks that must be accomplished so the family can grow and evolve. Family developmental tasks are "directed toward maintaining family well-being and continuation at any particular period during that life cycle" (Sherwen, 1987, p. 18). According to Duvall (1977), a family can achieve success or failure in meeting the associated family life cycle stage tasks or growth responsibilities. Theoretically, the tasks of each stage must be mastered in order for the family unit and its members to proceed in a healthy manner to the next stage. Developmental tasks associated with the childbearing family are listed in Box 26–7.

To come to the parenting role with good physical and mental health, adults must have a broad range of personal and coping resources. Social support and communication both within the conjugal relationship and within the family unit appear to be important in buffering some of the stress (Mercer, 1990). It appears that the arrival of the first child greatly affects most adults in the transition to parenthood. The actual change from dyad to triad is so abrupt that the parents may not be prepared for their new roles (Saunders & Robins, 1987; Wallace & Gotlib, 1990).

Once the baby has arrived, the couple must not only respond to the needs of their child but must also try to find the time and energy to respond to their individual needs. Consequently, the couple's relationship may be adversely affected and may not be considered a priority by the new parents (Wallace & Gotlib, 1990). However, the reverse may also be true: New parents may seek solace in their relationship by sharing thoughts and feelings, providing mutual emotional support, organizing the social network, exploring the new parental role, maintaining open communication, and reaffirming their love (Polomeno, 1997b). The couple's relationship can become a safe haven under such circumstances, and each partner may find new energy to cope with the transition to parenthood (Starn, 1993). The transition to parenthood may involve positive stress because the birth of a baby is often considered a happy event for the family unit.

Tomlinson (1996) examined whether the transition to parenthood results in marital disruption. A group containing 96 childbearing couples was tested 2 months before and 3 months after the birth of their first child using an instrument measuring marital satisfaction. Fifty-four nonparent couples were tested over the same interval. Females in the parent group showed the greatest decline in marital satisfaction because, they reported, marital partners frequently could not reach consensus on tasks, activities, goals, and values. In contrast, females in the nonparent group experienced increased marital satisfaction. In spite of the opposing direction of the measured change, "these results do not provide support for transition to parenthood as a crisis because at both pretest and posttest, new parents reported significantly higher marital satisfaction than did non-parent couples" (Tomlinson, 1996, p. 286). Thus, the decline in satisfaction for new mothers originated from a higher level and did not decline to a lower level than that of the nonparent females.

Do high levels of perinatal stress affect the establishment of the parent-child bond? Both parents appear to develop an attachment to the unborn before the birth, and this bond is enhanced by factors such as self-esteem, emotional balance, and satisfaction with the conjugal relationship (Cranley, 1981). Kemp and Page (1987) studied the relationship between high-risk pregnancy and maternal-fetal attachment in high-risk and low-risk pregnant women. There were no differences between the two groups for maternal-fetal attachment. In the study by Mercer and colleagues (1987), high-risk pregnancy and antenatal hospitalization did not influence fetal attachment. Neither did the other factors of self-esteem, depression, anxiety, or marital satisfaction. In the same study, prenatal attachment did not appear to influence postpartum attachment. "Thus, the conse-

Box 26–7. Developmental Tasks Associated with the Childbearing Family

1. *Arranging space for a child*
2. *Financing childbearing and childrearing*
3. *Assuming mutual responsibility for child care and nurturing*
4. *Facilitating role learning of family members (i.e., parental role)*
5. *Adjusting to changed communication patterns in the family to accommodate a newborn and young child*
6. *Planning related to subsequent children*
7. *Realigning intergenerational patterns (i.e., establishment of grandparent-grandchild subsystems)*
8. *Maintaining each family member's motivation and morale*
9. *Establishing family rituals and routines*

Developed based on concepts from Duvall, E. [1977]. *Marriage and family development.* Philadelphia: Lippincott; and Sherwen, L. [1987]. *Psychosocial dimensions of pregnant family.* New York: Springer.

quences of a high-risk pregnancy and birth on the process of prenatal and postpartum attachment are as yet poorly understood . . ." (May, 1992, p. 45). In general, however, infant attachment appears relatively resilient to at least some levels of perinatal stress.

The relationship between the new mother and the new father may be a source of stress. Each is trying to learn the parental role, develop an attachment with the new baby, respond to the needs of the new arrival, and cope with their individual needs and the activities of daily living. A period of temporary disequilibrium is normal as the new parents learn to adjust to the presence of the baby. Most couples report that some stress is inevitable because fatigue plays a major role in the beginning of the postpartum period (Mercer, 1990; Saunders & Robins, 1987). Eventually, most couples succeed in finding a new level of functioning and equilibrium. One issue that greatly preoccupies the new mother and her partner is the resumption of the sexual relationship. This is one postnatal stressor that can cause much anxiety and distress. The new mother is worried that sexual intercourse could be painful the first time; thus, she may avoid contact with her partner. On the other hand, the male partner would like to resume sexual relations but is afraid to do so because he is afraid he will hurt his partner (Polomeno, 1996). Mutual communication and support become important to reduce the couple's stress. A gradual four-stage process of reactivating the new mother's libido, as well as perineal massage, is proposed to assuage fears related to sexual intercourse (Polomeno, 1996; 1999).

IMPLICATIONS FOR PRACTICE

The Perinatal Educator's Roles

In the teaching of stress and its relationship with each of the stages of the transitions through pregnancy and early parenthood, the perinatal educator can adopt, as appropriate, any or all of the following roles:

- *Informant*—Information about the stress process and how it is modified during each stage of the transition to parenthood is shared with participants in perinatal education classes. This can be useful to class members and thus increase their potential for successful adaptation.
- *Communicator*—The perinatal educator can decide to selectively communicate her or his personal experience, thereby creating a bond with the participants and increasing her or his credibility with the participants. As discussed in the introduction, this role may not always be evident or directly addressed by perinatal educators because this role has the potential for misuse. However, a similar analogy may be how the perspective of hospitalization of numerous health care workers was permanently changed after having been patients.
- *Counselor*—Some women and their family members appear to have more difficulty coping with the stress associated with the transition to parenthood. The perinatal educator has the capacity to identify these people, to analyze and evaluate their situation with them, to propose coping strategies, and to enhance their resources. The art of listening and attending to the needs of expectant and actual parents is part of perinatal education practice. The skilled educator knows her strengths and limitations in the counseling role and develops a collaborative relationship with professionals who can help her decide when the counseling situation merits referral.
- *Facilitator*—The perinatal educator is able to facilitate coping with the stress associated with the transition to parenthood at several levels: As individuals, each class member can become aware of his or her stress and coping responses; as a member of a dyad, at the level of the couple's relationship, and how each partner influences the other; as part of a family, as the couple is establishing their relationship with the fetus and eventual newborn; as a member of a class, because group influences may come into play when a group is living through similar experiences; and as part of the relationship between the perinatal family and the health care providers.
- *Advocator*—The perinatal educator is not only helping the perinatal family deal with the internal stress associated with the transition to parenthood but also with potential external stress related to health care provision. Ideally, the perinatal family is well prepared. The family members have knowledge about the stress process and the potential complications associated with each phase of the transition to parenthood. Therefore, they can, to the extent they desire, contribute to decision-making regarding their health care and potential interventions and assertively make their wish to do so evident. As a result, they are calmer and better equipped to deal with any arising complications. Examples include coping better with the stresses of ante-

natal hospitalization and a high-risk newborn in special care.

Teaching Objectives

The following objectives underlie a teaching approach that could be used in the discussion of stress and the transition to parenthood:

- To teach the perinatal family to recognize the signs and symptoms of stress
- To help the perinatal family understand the stress process, its stressors and its mediators, and their impact on their situation
- To assist the perinatal family with its management of stress through the teaching of different coping strategies (individually, dyadically, and from the perspective of the family unit)
- To increase the perinatal family's knowledge about the normal stress associated with each stage of the transition to parenthood, including pregnancy, labor, birth, and parenting
- To make the perinatal family aware of complications that could arise during each stage of the transition to parenthood
- To enhance the perinatal family's coping mechanisms, support, and resources to cope with specific engendered stress
- To be able to identify the perinatal family at risk for difficulty with coping and adapting to their situation
- To refer the perinatal family to the appropriate resource when the perinatal educator has determined that the family is in a crisis mode
- To assist the perinatal family if it should find itself in the grieving process following complications associated with the transition to parenthood

The Teaching Approach

The teaching approach can occur at two levels: within the group setting at the level of the class, and at the level of the individual and couple. For the group level, a model using an approach derived from family therapy involving perceptions and meta-perceptions can be adapted from Duck's *General Model of the Serial Construction of Meaning* (1994).

To use this model, defining the key concepts is useful. A perception is the meaning a person gives to an event or to a situation. It is a type of assessment or appraisal of the event. It has both cognitive (thinking) and affective (feeling) processes. When the perception of one person is congruent with that of another person's in the same family, a collective or family perception is born (Boss, 1988). Several simultaneous perceptions are usually present within a group setting: The perception a person has of the situation is called a *direct perception* or *self-perception*, and a person's perception of another person or the group's perception is referred to as a *metaperception* (Allen & Thompson, 1984).

Perceived similarity exists when one person's self-perception is congruent with the perceived metaperception of others. Understanding is achieved when one person's metaperception of another is congruent with that other person's metaperception (Acitelli, Douvan, & Veroff, 1993). Congruent perceptions are important because they help increase family members' understanding of a situation and enhance their communication about thoughts and feelings (Duck, 1994). The result is that the group such as a family comes to develop a collective perception, a shared meaning about an event such as pregnancy, birthing, and parenting. A shared meaning is an ideal basis for shared coping or support.

In Duck's model, there are four stages (Fig. 26–3). In the first stage of *commonality*, a couple independently has the same attitude towards a topic, such as the meaning of the childbirth experience but is not aware that they have this in common. In the second stage of *mutuality*, through talk, the couple comes to realize they each have developed feelings about the topic. In the third stage, *equivalence*, each partner interprets to the other feelings about the common topic and realizes to what extent the same feelings are shared. In the last stage of *shared meaning*, a collective perception has developed and is integrated into the existing core of shared meaning. Application of this model occurs when, through class discussion or completion of homework assignments by the couple, feelings and beliefs are disclosed, discussed, and potentially merged. Its use encourages the educator to use class discussion as a teaching strategy.

However, this approach is not always sufficient when issues are more problematic for the person or couple and require a more therapeutic focus. Thus, broader principles from counseling theory may become more useful. Miles (1986) defines counseling as "a step in the intervention phase . . . whereby a professional . . . helps an individual or a family cope more effectively with their life situation . . . [and] help[s] a family reach a higher level of maturity, greater self-esteem, and closer relationships. The ultimate aim of counseling is to help the individual and family attain self-sufficiency, self-help, and an increased sense of re-

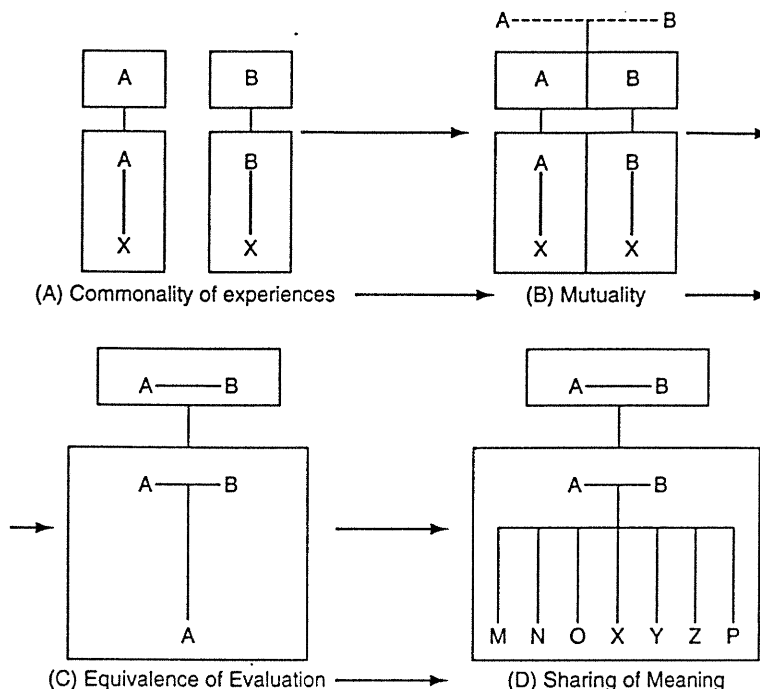

FIGURE 26-3. A general model of serial construction of meaning. (From Duck, S. [1994]. Meaningful relationships (p. 119). Thousand Oaks, Calif.: Sage Publications. Reprinted by permission of Sage Publications, Inc.)

sponsibility in dealing with their own problems" (pp. 343–344). Mack (1995) defines counseling as a "therapy that aims to help the client to clarify the problems, examine her resources for coping with them and her reasons for not feeling able to cope and to make choices for further action, in a non-judgmental and supportive atmosphere" (p. 99). This involves creating a therapeutic distance with a limit on emotional involvement, avoiding giving advice and interpreting, and a focus on listening and attending by valuing what the person is saying (Mack, 1995).

Egan (1982) proposes a three-stage model for counseling, which includes some concepts from Duck's model but is broader in scope because it is problem based: (1) identify and clarify the problem, (2) develop and choose goals, and (3) move toward the chosen goals. Perinatal teaching can be more effective "when counseling is used to help the individual act on the new knowledge that is given" (Miles, 1986, p. 344). Counseling strategies fall into four categories (Miles, 1986):

- *Relationship*—which may include a family-centered approach, expectations clarification, establishment of a trusting relationship, educator as a role model, and planning the termination of the relationship
- *Communication strategies*—which may include good listening skills, helping families develop better communication skills, providing new information, and using positive reinforcement
- *Problem-solving skills*—based on problem definition, confrontation and feedback as appropriate, family's strengths, and use of appropriate referrals and parent support groups
- *Personal attributes* of the counselor—get supervision or collaboration as appropriate, be responsive to burn-out awareness, and learn how to cope with one's own stresses

As discussed in the introduction to this chapter, the perinatal educator should be aware of her or his reactions to stress, her or his personal experience of the transition to parenthood, how she or he shares this knowledge with expectant and actual parents, the roles the educator will adopt to help the participants enhance their understanding of the relationship between stress and the transition to parenthood, the development of teaching objectives underlying a teaching approach based on perceptions and shared meaning, and the use of counseling strategies.

TEACHING STRATEGIES

Individual Stress Management

According to Pender (1987), the purpose of individual stress management is three-fold: (1) to min-

imize the frequency of stress-inducing situations, (2) to prepare psychologically to increase resistance to stress, and (3) to counter-condition in order to avoid physiologic arousal resulting from stress. From the following list, the perinatal educator will most likely find she or he can identify the use of many of these principles already built into the classes. With thought, however, some class content may benefit by modifications or additions based on these principles.

Components that minimize the frequency of stress-reducing situations are listed in Box 26–8.

Family Stress Management

According to Mealey, Richardson, and Dimico (1989), selected stress management approaches that are useful to the family unit within the context of perinatal education are as follows:

- *Stressor Control*—involves prevention of stressors, the recognition of stressors, and the elimination or avoidance of possible stressors. This particular group of family stress management techniques is enhanced by the use of individual stress management as well.
- *Problem Solving*—involves recognition of the problem, acceptance of the problem, generating alternatives and solutions, and evaluation of results.
- *Cognitive Restructuring*—involves redefining or relabeling beliefs or thought patterns through self-talk and building confidence in one's activities, such as birthing skills.
- *Conflict Resolution*—withdrawal by a family member, submission endings with revenge activities, compromise and standoff, claiming feelings.
- *Role Sharing*—involves participation by two or more people in the same role, such as parenting.
- *Communication Strategies*
- *Time Management*—involves setting priorities, using realistic planning, and making decisions based on identified goals, such as skill practice.
- *Intimacy*—involves private moments during which family members focus on each other.
- *Family Centering and Meditation*—involves restoration of family harmony and reduction of tension and anxiety through participatory exercises.
- *Humor*—involves relieving tension and stress through laughter and joke telling.

Alternative Stress Management

Examples of alternative stress management techniques that may be useful to expectant or new parents are listed in Box 26–9. Educators may add some of these techniques to their own list of skills or may simply make couples aware of self-help resources available to them.

Box 26–8. Strategies to Reduce the Effects of Stress

- Habituation—*Routines need to be maintained in situations of stress in order to conserve energy that can be reallocated to deal with the stressful event.*
- Change avoidance—*Any unneccessary changes (e.g., a household move for the purpose of adding space) should be avoided during periods of high stress.*
- Time blocking—*A person should set aside specific times daily, weekly, and monthly to focus on relaxation and to block out stress (e.g., practicing relaxation skills).*
- Time management—*A person needs to learn to break a task into smaller parts, avoid overload, and reduce time pressure and urgency perception.*
- Environmental modification—*Stress-producing situations and people need to be identified, and if necessary, the physical environment needs to be changed.*

Psychological preparation to increase stress resistance includes the following:

- Enhancing self-esteem—*through positive verbalization and identification of positive attributes of the self;*
- Increasing assertiveness—*expressing opinions and feelings, initiating conversation, disagreeing constructively with others when holding opposing viewpoints, and commenting on the positive characteristics of others; and*
- Re-orienting cognitive appraisal—*the personal perception of a situation or event that can determine a person's coping with the associated stress.*

Counter-conditioning to avoid physiological arousal entails the following skills, especially when used in a rehearsal exercise:

- progressive relaxation *through tension and relaxation techniques;*
- progressive relaxation without tension—*imagery, music, meditation, neuromuscular dissociation, controlled breathing, hydrotherapy, walking, and physical and emotional comfort measures; and*
- biofeedback.

Data from Pender, N. (1987). *Health promotion in nursing practice.* Norwalk, Conn.: Appleton & Lange.

Health Promotion Programs for Stress Management

There is a limit to the amount of useful content one can effectively teach in a preparation for

childbirth course. However, there is a large amount of material on both health promotion and stress management that could be useful in launching young families. Furthermore, the perinatal year is a time for families to be open to creating a healthier lifestyle. A number of course offerings designed to promote the health of a family unit have appeared in the literature. These courses aim to reduce the stress experienced by the family members indirectly while enhancing their coping mechanisms and resources. Some examples are summarized in Box 26–10.

Research Instruments

The following instruments have been developed for high-risk pregnancy and can be used by perinatal educators to enhance their teaching. The reader must write to the respective researcher to obtain permission to use the instrument.

The High-Risk Pregnancy Stress Scale (Goulet, Polomeno, & Harel, 1996): This scale is available in English and French and is a 16-item instrument to measure the environmental and psychological stressors of the at-risk pregnancy situation with or without hospitalization.

Preterm Learning Needs Questionnaire (Gupton & Heaman, 1994): This is a two-part English questionnaire to determine the learning needs of hospitalized women at risk for preterm birth. The first part contains 18 topics related to the importance of preterm birth; the second part contains four open-ended questions.

Box 26–9. Alternative Stress Management Techniques that May Be Useful for Expectant or New Parents

- Alexander Technique—*designed to correct bad postural habits, which can contribute to aches and pains, headache, and fatigue. It can be used in pregnancy when bad posture exacerbates discomfort and in childbirth to ease pain and speed recovery.*
- T'ai chi ch'uan *(or taijiquan)—originally developed in China as a martial art but adapted by the Western world for improvement of a person's physical health. It is used to improve stamina, increase flexibility, and promote general good health.*
- Aroma Therapy—*the use of essential oils in the environment to create a calming effect for the perinatal family during labor and birth.*
- Color Therapy

Used with permission from Mack, S. (1995). Complementary therapies for the relief of stress. In P. Tiran & S. Mack (Eds.) *Complementary therapies for pregnancy and childbirth* (pp. 91–112). London: Baillière Tindall.

Box 26–10. Techniques to Reduce the Stress of Family Members

- High-Risk Pregnancy *(Polomeno, 1997a)—A series of teaching strategies and activities for high-risk pregnancy within traditional childbirth education classes is featured.*
- Intimacy and Pregnancy *(Polomeno, 1996, 1997b)—Intimacy is the dimension of the couple's relationship that is most affected by pregnancy. This program promotes the couple's intimacy through a series of teaching activities and strategies.*
- Fetal Touch and Family Intimacy *(Polomeno, 1997c, 1998a)—The fetus is the best person to help the couple re-establish their bond during pregnancy. These articles sequentially present the theoretical background and practical aspects of the program.*
- Sexual Intimacy, Labor, and Birth *(Polomeno, 1998b)—The labor is critical to the couple's intimacy because it should be considered a sensual and sexual experience. Teaching activities are proposed to explore this issue with expectant parents.*
- Health Promotion of Expectant Fathers *(Polomeno, 1998c, 1998d)—Perinatal educators need to attend to the health needs of expectant fathers as their needs are often neglected by the health care team.*
- Grandparents *(Polomeno, 1999a, 1999b)—The older generation is just as affected by the arrival of the newborn as the younger generation is. They are likely to be dealing with the transition to grandparenthood, while potentially supporting older, middle, and younger generations.*
- Transition to Parenthood *(Polomeno, 1998h)—This article presents a series of teaching activities and strategies to facilitate the transition to parenthood.*

Antepartum Hospital Stressors Inventory (White, 1981): This inventory contains 47 statements describing seven categories of stressors specific to the hospitalized pregnant woman. The amount of stress is rated from 0 (no stress) through 5 (a great deal of stress).

Uncertainty Stress Scale-High-Risk Pregnancy Version (adapted by Clauson ([1996] from Hilton's [1994] Uncertainty Stress Scale): This instrument contains three parts that measure the degree and stress of uncertainty related to the high-risk pregnancy.

IMPLICATIONS FOR RESEARCH

The field of perinatal education continues to establish itself. Its knowledge base, as well as the perinatal educator's qualifications and certification

programs, is slowly being developed. Perinatal education is coming into it own and being recognized as a separate specialty within health care. There is a paucity of outcome research in the area of perinatal education and its impact on each stage of the transition to parenthood, namely pregnancy, labor, birth, and parenting. Similarly, there is a dearth of studies examining the relationships of stress, perinatal complications, and perinatal education. There is a continuing need to enhance the knowledge base in these areas.

Lorraine Walker (1992), in her book *Parent-Infant Nursing Science: Paradigms, Phenomena, Methods,* gives a thorough presentation on stress research in Chapter 3. She provides summaries of models and frameworks for studying stress, instruments for the measurement of stress, and a summary of stress research from a nursing perspective. Specifically, Walker presents descriptive research on the stressors among women of childbearing age, stressors among new mothers, responses of fathers and siblings, the stress associated with hospitalization, apnea monitoring, preterm birth, mental health of mothers, and cultural expectations and beliefs as stressors. This chapter further summarizes relational and predictive research studies on the impact of stressful life events on parenting and family functioning, the impact of stressful life events on health status, pain experiences in childbirth, relations between psychological and physiologic measures of stress and childbirth, expectations as predictors of stress, the

Box 26–11. Resource List

Maternal and Newborn Health/Safe Motherhood Unit
Family and Reproductive Health
World Health Organization
1211 Geneva 27, Switzerland
Tel: 41 22 791 21 11
Email: safemotherhood@who.ch
Produces a free newsletter in English, French, and Arab

Sidelines
2805 Park Place
Laguna Beach, CA 92651
National bed rest support group

Confinement Line
c/o Childbirth Education Association
P.O. Box 1609
Springfield, VA 22151
Tel: 703-941-7183

The Compassionate Friends
P.O. Box 3696
Oak Brook, IL 60522-3696
For those who have experienced a miscarriage or infant death

Resolve Through Sharing
1910 South Ave.,
LaCrosse, WI 54601
Tel: 1-800-362-9567

Motherisk Program
Hospital for Sick Children
555 University Ave.
Toronto, Ontario, Canada M5G 1X8
Fax: 416-813-7562
Email: momrisk@sickkids.on.ca

Canadian Institute of Child Health
512-885 Meadowlands Drive Easr
Ottawa, Ontario, Canada K2C 3N2
Tel: 613-224-4144

Internet sites:

HealthGate Healthy Women:
http://www.healthgate.com/woman/

HealthSeek:
http://www.healthseek.com/

National Institutes of Health:
http://www.nih.gov./

OB/GYN Net:
http://www.obgyn.net/

Women's Health:
WHERE-L (mailserv@medcolpa.edu)

Women's Reproductive Health:
WHAM (listproc@listproc.net)

America's Crisis Pregnancy Helpline:
www.thehelpline.org

New York Online Access to Health:
www.noah.cuny.edu

Birth Psychology Information:
www.birthpsychology.com

Complications, preterm labor:
http://ourworld.compuserve.com/homepages/ObGyn/complica.htm

Mayo Clinic:
www.mayohealth.org

Childbirth Information:
www.childbirth.org

Gestational Diabetes (Juvenile Diabetes Foundation Educational Publications):
www.jdfcure.com

stress of maternal employment and infant difficulty, and infant responses to stressful events. As a basis for designing further research, researchers in perinatal education would find consulting this chapter useful. Additional resources are listed in Box 26–11.

The following research questions could be administered by perinatal educators (Hallgren, Kihlgren, Norberg, & Forslin, 1995; Humenick, 1992):

- How effective is perinatal education in helping the perinatal family recognize and deal with stress?
- Which of the perinatal educator's roles is the most effective in teaching the stress process and its impact on the perinatal family?
- Which stress management strategy taught in perinatal education classes is most helpful for the pregnant woman's coping with the stress of her situation?
- Which stress management strategy taught in perinatal education classes is most helpful for the male partner's coping with the stress of his situation?
- Which stress management strategy taught in perinatal education classes is most useful to the couple in dealing with the stress of the changes associated with their situation?
- How well do perinatal education classes prepare the perinatal family to cope with the complications arising during pregnancy?
- How well do perinatal education classes prepare the perinatal family to cope with the complications arising during the intrapartum period?
- What is the impact of the use of the perceptions approach within perinatal education classes on helping the perinatal family cope with the stress associated with their situation?
- Which information on the stress process taught in the perinatal education classes was most helpful for a population of perinatal families?
- What are the stress indicators a perinatal educator can use within the classes to identify the perinatal family at risk for a potential crisis associated with their situation?
- What is the impact of using research instruments on stress within perinatal education classes?

SUMMARY

Perinatal educators are striving to strike a balance between content that is oriented toward promoting normally while preparing the parents' ability to cope with potential complications of childbearing and early childrearing. The perinatal health community accepts that stress is a normal part of each stage of the transition to parenthood, namely pregnancy, labor, birth, and early parenting. The stress of the woman and her family is known to increase if complications should arise during these time periods. Perinatal educators are in a pivotal position because they typically work with both parents and can prepare them to recognize signs of stress, help them cope with both their situation and any arising complications, and be more effective in joint decision-making with the health care team when the need presents itself. Ideally, perinatal education classes provide the perinatal family the occasion to explore these issues together with other families in an ambiance of security and simultaneously to be supported psychologically by well-prepared educators.

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2.3 RESOURCES: THE CONJUGAL RELATIONSHIP AND SUPPORT FROM OTHERS

In this section, family resources are first reviewed from a general perspective. This is followed by a discussion of the conjugal relationship and support from others in the context of at-risk pregnancy and antenatal hospitalization.

2.3.1 General Background on Family Resources

Otto (1963) first identified the strengths that characterize families. These strengths are considered as family resources in the domain of family theory (Burr & Klein, 1994). Hill (1965) later suggested that resources are those things that help a family cope with a stressful event. Much of the theoretical work in family stress subsequent to the publication of Hill's work has attempted to explicate this construct. Walker (1985) indicates that many contributors to the literature on family stress have either failed to differentiate individual resources from family resources, while others have been able to differentiate them. Individual resources are important in the assessment of a family's stress, since the same stressors affect family members in different ways. Also, because individual family members have different resources, unique individual coping patterns may be necessary (Walker, 1985). However, individual resources are not the focus of this research study. Rather, the emphasis is being put on family resources since the research study focuses on conjugal partners and their relationship during at-risk pregnancy and antenatal hospitalization.

Boss (1988) expanded on Hill's original conceptualization of family resources by integrating Lazarus' (1966) definitions of coping and the coping process. Boss defines family coping as the management of a stressful event or situation by the family as a unit with no detrimental effects on any individual in that family. Family coping is the cognitive, affective, and behavioral process by which individuals and their family system as a whole manage rather than eradicate stressful events or situations. The cognitive appraisal of a

stressful situation or event, and its subsequent emotional and behavioral reactions all happen within the individual family member, albeit within a systems context. Boss states that a family as a group is not coping functionally if even one member manifests distress symptoms. Both the individual and the family system as a whole are involved in the coping process.

2.3.2 The Conjugal Relationship as a Resource

According to McGoldrick (1989), becoming a couple is one of the most complex and difficult transitions of the family life cycle, since it requires that two people renegotiate together a myriad of issues they have previously defined individually, or that were defined by their families of origin, such when and how to eat, sleep, talk, have sex, fight, work, and relax. The couple will also have to renegotiate relationships with parents, siblings, friends, extended family, and co-workers in view of their relationship. If the couple should decide to marry, other aspects influence their relationship. At its heart, marriage is an interpersonal relationship fulfilling the psychological, material and sexual needs of the spouses. A good marriage can become a safe haven in itself as it offsets mental health problems such as loneliness, unhappiness, alienation, and depression (Cox, 1999). However, marriage brings duties and obligations, and self-identity changes to include the titles and roles of 'husband' and 'wife'. The conjugal relationship is a resource when partners seek solace in their relationship by sharing thoughts and feelings, providing mutual emotional support, organizing the social network, exploring their roles, maintaining open communication, and reaffirming their love (Cox, 1999; Polomeno, 1997a; Polomeno, 2000a).

The key attributes of successful relationships include love, interdependence, trust, tolerance, commitment, appreciation, communication, togetherness, values and optimism; these attributes are fostered by a pattern of mutual supportiveness (Cox, 1999; Cutrona, 1996; Gottman, 1994; Mackey & O'Brien, 1995; Morgan, 1987; Robinson & Blanton, 1993). Also, the physical and mental health benefits derived from partner support may, in

large part, be derived from the positive qualities that supportive networks nourish in the relationship (Cutrona, 1996). It appears that people who are married are happier, more satisfied with their lives, and enjoy better physical and mental health than those who are not married (Gottman, 1994; Gove, Hughes, & Style, 1983). These differences are found among people of all ages, races, and income levels (Gove et al., 1983).

However, according to Cutrona (1996), there is growing evidence that men and women are affected differently by their conjugal relationship, especially marriage. Marriage appears to be a stronger predictor among men than women for happiness, satisfaction with home life, and measures of mental health (Gove et al., 1983). Antonucci and Akiyama (1987) found that men are more satisfied with marriage and more reliant on marriage for happiness than women. For women, being married is not enough; the quality of the relationship is extremely important. It appears that for men, marital status is enough, while for women, marital quality is more important. Men rely more heavily on their spouses for support than do women since the spouse is usually the primary source of support within an intimate relationship like marriage (Burke & Weir, 1982). Women rely on a variety of sources, including friends, relatives and neighbors (Antonucci & Akiyama, 1987). The availability of support from sources outside the marriage does not appear to compensate psychologically for the strain of a poor quality marriage. Among women, psychological adjustment and well-being are closely linked to the level of support received within the marital relationship (Cutrona, 1996). Belle (1982) describes a support gap in male-female relationships. The woman receives less support from the male partner than she provides to him. However, short-term and episodic mobilization of the social network may have the beneficial effect of meeting the needs of the recipients of support. Also, striking a balance between the giving and receiving of support that occurs over time may be an important ingredient for the relationship's stability (Eckenrode & Wethington, 1990).

According to Steil (1997), intimacy must be continuously affirmed through shared experiences in which both partners feel understood and valued. Intimacy benefits both

partners under such circumstances, enriching their relationship and promoting psychological and emotional growth. Intimacy is associated with well-being even in times of stress because of the availability of an intimate and confiding relationship (Steil, 1997). Studies (Acitelli, 1992; Noller, 1980) have shown that husbands' communication skills, relationship talk, and intimacy maturity discriminate between couples who are high and low on marital adjustment (as assessed by measures of relationship satisfaction, closeness, expressions of affection, and lack of destructive conflict).

2.3.3 The Conjugal Relationship in Relation to At-Risk Pregnancy and Antenatal Hospitalization

The emotional reactions of the pregnant woman and her partner to at-risk pregnancy and antenatal hospitalization may have an impact on their conjugal relationship. In at-risk pregnancy, the feared loss of the desired child, the emotional turmoil of grieving and hoping, and the possible psychological escape into apathy all interplay uniquely for each conjugal partner (Penticuff, 1982). If the husband is not supportive, this may add strain to the relationship that may already be filled with strife (Weil, 1981). Partners often deal with their feelings independent of each other, causing increased emotional stress (Murphy & Robbins, 1993). The couple may experience ambivalence since each partner is afraid to express dissatisfaction, anger, fear or resentment, and they may not be able to give each other emotional support needed to cope with the problem pregnancy (Jones, 1986). A pattern of noncommunication may continue after the arrival of the baby. The sexual dimension of the conjugal relationship may be jeopardized since without sex, the couple has lost an important source of communication and support for each other (Weil, 1981), but they can learn to reconnect through interaction other than sexual activity (May, 1994). The consequences of this situation are serious for the couple to the point that the relationship can deteriorate resulting in potential physical and emotional abuse, separation and divorce (Gilbert & Harmon, 1993; Gyves, 1985; Penticuff,1982).

2.3.4. Support from the Social Network as a Resource

An important source of information about the extent to which a person can influence his or her own world is the behavior of significant others, including their response to individual's needs in times of stress (Berscheid, 1994). Kin relations and friends can have a considerable impact on the marriage (Burger & Milardo, 1995; Klein & Milardo, 1993), and the extended family can be a source of support (Bradt, 1989; Niven, 1992). However, these sources of support cannot compensate for a lack of intimacy or marital support (Coyne & DeLongis, 1986). The extended network can provide tangible aid and cognitive guidance. On the other hand, the network's counsel can be fallible as well as supportive. Virtually no attention has been paid to the ways that the network interferes with or disrupts the couple's adjustment, thus the network's supportive and conflictual functions must be considered (Gottlieb & Pancer, 1988).

2.3.5 Support from the Social Network in Relation to At-Risk Pregnancy and Antenatal Hospitalization

The emotional upheaval associated with the stressors makes it difficult for the couple to progress in unison throughout the experience, yet one of the effective ways of dealing with the situation is obtaining and using help from their social network (McCain & Deatrick, 1994; Penticuff, 1982). According to Gilbert and Harmon (1993), partners can adapt to at-risk pregnancy if they have adequate support from significant others: with it, the partners can achieve a sense of accomplishment in the face of adversity; and without it adequate support, there is a risk of permanent separation and divorce. Brown (1986a, 1986c) estimates that 80% of total support is marital, while 20% is from family and friends. Nuclear and extended family and friends may provide close and supportive relationships during at-risk pregnancy and antenatal hospitalization (Snyder, 1979). How family and friends are able to provide support to the couple during the hospitalization of the pregnant woman depends partially on their emotional reactions to it such as stress and anxiety within the family (Gyves, 1985; Jones, 1986). The greater the threat to the

pregnancy as perceived by the family members or the longer the duration of the hospitalization, the greater their reaction, leading to an unnecessarily pessimistic orientation toward the current pregnancy (Kemp & Page, 1986; Murphy & Robbins, 1993). Some families cope well while others do not (Gyves, 1985), which could influence the quality of their support. According to Snyder (1979), family members may feel discomfort with the uncertainty of pregnancy outcome and may not know how to behave in the situation. A lack of emotional support from family and friends may be in part due to their failure to perceive that the pregnant woman truly has an illness or that the fetus is at-risk (Merkatz, 1976).

2.4 PERCEPTION OF THE STRESSOR

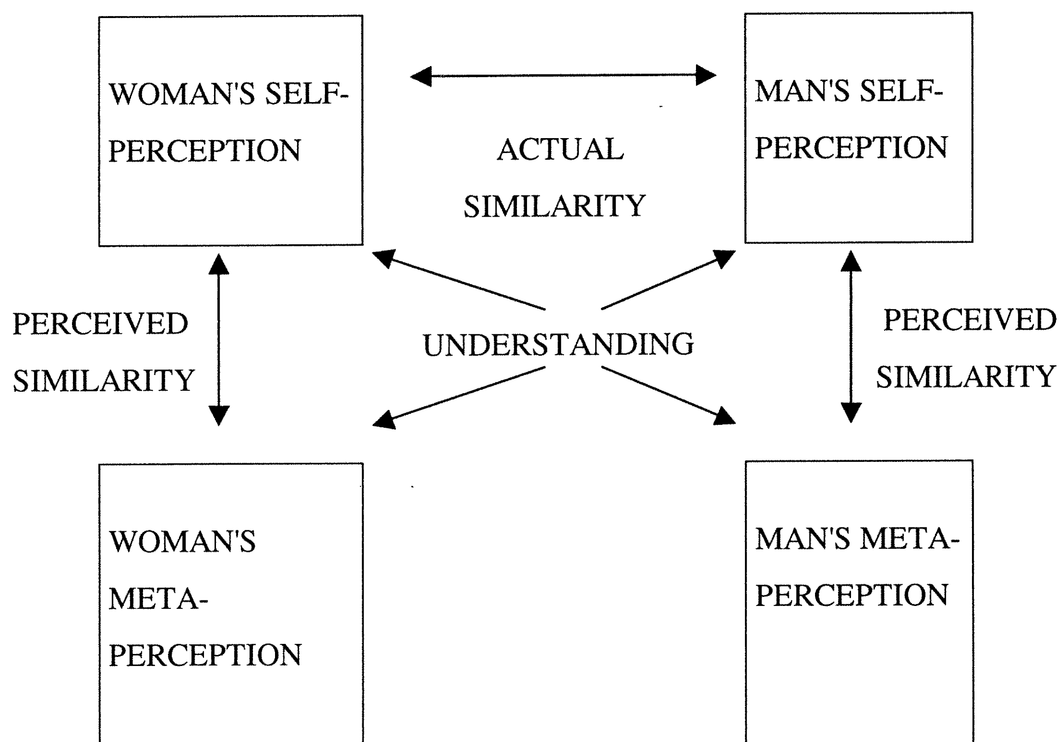
This section presents an overview of perceptions and their application in the context of at-risk pregnancy and antenatal hospitalization.

2.4.1 Overview of Perceptions

Exploring interpersonal perception can facilitate the examination of how conjugal partners independently and conjointly appraise stress. Laing et al. (1966) have developed a relational approach that integrates various perspectives within the conjugal dyad. The perception that a person has of the situation is called a direct perception or *self-perception*, while a person's perception of another person is referred to as a *metaperception* (Allen & Thompson, 1984; Bochner, Krueger & Chmielewski, 1982; Laing et al., 1966). When there is a match between perspectives, congruence or similarity is obtained. Combinations of self-perceptions and metaperceptions are referred to as perceptual congruence variables (see Figure 3). When both partners' self-perceptions are congruent, there is *actual similarity*; when one partner's self-perception and perception of other (metaperception) are congruent, there is *perceived similarity*; and when a partner's perception of the other (metaperception) corresponds with the other's self-perception, there is *understanding* (Acitelli, Douvan & Veroff, 1993, 1997).

FIGURE 3

PERCEPTUAL CONGRUENCE VARIABLES



2.4.2 Perceptions in At-Risk Pregnancy and Antenatal Hospitalization

Before applying perceptions to at-risk pregnancy and antenatal hospitalization, the question, 'whose marriage is it?' must first be answered (Crosby, 1991). There are two viewpoints of the relationship, reflecting each of the conjugal partners. Crosby explains that the reality of one partner is simply the perception, the interpretation, and the experience of the relationship. Each partner has his or her own reality which is experienced, created and constructed by that person. If each partner has his or her reality, then the congruency or overlap is the shared reality. Problems can arise when one partner

assumes or insists that his or her reality is similar to the other partner's when it is not. The shared reality or the congruent overlap between the two realities is constantly changing and being revised by either partner or both over time, moreover during at-risk pregnancy and antenatal hospitalization. There is a commonly held assumption that similarities in realities between partners result in greater self-disclosure or open communication, self-disclosure leads to increased understanding, and that understanding enhances satisfaction within significant relationships (Jourard, 1971; Kobes, 1992). However, congruence in developing a shared reality can lead to understanding between partners (Berger & Kellner, 1964; Deal et al., 1992; Duck, 1994). What one partner thinks the other is thinking is at the heart of all relationships (Bochner et al., 1982). Understanding is of the utmost importance since it enhances psychological similarity and marital satisfaction, and decreases marital conflict (Duck, 1994). This may become crucial in stressful situations such as at-risk pregnancy and antenatal hospitalization.

The prerequisite or precondition for change within the relationship is not understanding the “why” of a situation such as at-risk pregnancy and antenatal hospitalization, but rather understanding the “what”. Understanding alone does not lead to change. L'Abate (1994) proposes that dyadic evaluation can be carried out within the conjugal system as conjugal partners discuss the meanings of their communications to one another. People discussing the meanings attached to communications, clarifying communications, and discussing ways to improve future communications are defined as metacommunication (Hoffer, 1989). The latter leads to improvement in the relationships between partners: for example, during the first pregnancy, couples spend time discussing the changes that will occur in their lives after the birth of the child (Hoffer, 1989). Communication is the means by which conjugal partners deal with the responsibilities of family life. The way in which they communicate with one another influences their relationship and family life, and enables them to deal with the stresses of everyday life and life events such as at-risk pregnancy and antenatal hospitalization.

2.5 EMPIRICAL SUPPORT

In this section, empirical support for the present study is summarized. The first part features two studies focusing on at-risk pregnancy, while in the second part, the review of studies pertains to both at-risk pregnancy and antenatal hospitalization.

2.5.1 At-Risk Pregnancy: Women's and Men's Perspectives

The content in the previous section was extracted from theoretical and explanatory articles written by nurses and other perinatal health care professionals. The only studies cited here contain findings from actual scientific inquiry and is specific only to the experience of at-risk pregnancy. The first study presents the women's perspective, while the second one pertains to the men's perspective, albeit its specific context of activity-restricted pregnancy.

Kemp and Hatmaker (1989) explored relationships among risk in pregnancy, psychological stress, physiological stress, and social support. Using an ex post facto descriptive design, 49 women met the inclusion criteria, however, information was available on 39 women only (19 women in the high-risk group and 20 others in the low-risk group). Psychological stress was operationalized using Spielberger's State Anxiety Inventory, social support was measured using Brown's Support Behaviors Inventory, and physiological stress was operationalized using urinary catecholamine levels. High-risk pregnant women had greater physiological stress than women with a low-risk pregnancy, yet there were no significant differences between the state anxiety scores of both groups. It appears that the high-risk women experienced less stress when they felt support from their partner. Information about the male partner and the relationship were obtained indirectly through the women's reports. Limitations with this study include the small sample size, the difference in age between the two groups, and an inability to control for certain factors that may have influenced the catecholamine levels such as food, exercise, and postural changes.

May (1994) conducted a qualitative study describing the impact of women's activity-restricted pregnancies on expectant fathers. The sample consisted of 30 men: 15 men were recruited within 2 weeks of initiation of their partners' activity restriction for high-risk pregnancy (phase 1) and 15 others were recruited 1 to 2 years after the same previous experience (phase 2). In phase 1, two semi-structured interviews were conducted during the period of activity restriction and another after the birth. In phase 2, one semi-structured focus group interview was carried out. The men reported high levels of worrying immediately after the diagnosis of their partner's preterm labor and initiation of activity restriction, and distress over household and child care responsibilities and maintaining a supportive environment for their partners. They also reported few sources of personal support. The strengths of this study include its exclusive focus on men's experiences with their partners' activity restriction following a diagnosis of preterm labor, and the content analysis procedures. However, the subjects were recruited from two perinatal centers from the same city, limiting the applicability of the findings.

2.5.2 Antenatal Hospitalization: Women's Perspective

The studies cited in this section present findings on women's stress associated with at-risk pregnancy and antenatal hospitalization. Earlier studies focus on women's experiences. Gradually, the focus changes towards inquiry about the impact of antenatal hospitalization on the family, especially the male partner/spouse and the conjugal relationship. These latter perspectives are presented indirectly through the women's reports.

Rosen (1975) used a case study approach to examine the adaptation problems of a pregnant woman hospitalized for placenta previa. Using unstructured interviews, and nursing notes and observations, the identified adaptation problems included unsatisfactory explanations of tests, visitor restrictions, minimal communication with the staff, and difficulty in accepting a dependency role. This woman also expressed feelings of anger, hostility and irritation with senseless hospital routines. Rosen concluded that pregnant

hospitalized women who view themselves as healthy may have more adaptation problems than people who are hospitalized for illness.

Merkatz (1978) analyzed the verbalizations of 22 pregnant women hospitalized for extended periods of time for strict regulation of maternal blood glucose. The goal of her study was to explore whether antenatal hospitalization was a stressful event for the women. The study population was heterogeneous with 15 multiparous women, 12 of whom had from one to six dependent children at home. Merkatz developed a behavior rating scale which staff nurses used to identify behaviors in response to the stress of hospitalization. The women identified the following concerns: health concerns regarding herself and her baby, fear about the outcome for the baby, and concern for the spouse and children at home. Women also reported feeling bored, lonely and depressed. These findings suggest that hospitalization is a stressful event for pregnant women: certain women are more susceptible to the adverse circumstances of hospitalization, impacting their emotional growth, their mothering role and family dynamics. Although this study contributes to nurses' understanding regarding the concerns and feelings of hospitalized pregnant women, the methods used to gather and validate the data are unclear.

In 1981, White developed a self-report instrument, "The Antepartum Hospital Stressor Inventory" (AHSI), to identify the psychological stressors of pregnant, hospitalized women. The AHSI contains 47 potential stressors assigned to 7 major categories. This instrument was applied in the White and Ritchie study (1984). Using a convenience sample of 61 women, the age range of the women was from 17 to 37 years, 48 were married, 20 were primiparas, and the subjects were hospitalized for a variety of reasons. The findings reveal that separation from home and family and distressing emotions ranked highest amongst the stressors, followed by changing family circumstances, health concerns, and changing self-image. After two weeks in hospital, 12 of the women completed the same instrument: there was a significant increase in their stress levels, however, there was no change in the rank ordering of the stressors. Despite that the stressors identified in this study are similar to those reported in the Merkatz study

(1978), their rank ordering is different. This is the first study to measure hospital-related stressors of pregnant women.

In the Waldron and Asayama study (1985), 18 women with preterm labor admitted to a maternal fetal intensive care unit were interviewed about their reactions to hospitalization 3 days after admission and then every 7 days during their stay. All women admitted to the unit and who stayed three or more days during the study period were included in the study. The identified stressors were being away from home and spouse, physical discomforts, medication side effects, feelings of helplessness and loss of control, and uncertainty about the length of hospital stay. Waldron and Asayama explain that the marital relationship can be strained at this time since the partners have difficulty providing support to each other, and that husbands have increased home-related responsibilities. These findings reinforce the view that hospitalization is a stressful event for pregnant women (Merkatz, 1978; White & Ritchie, 1984). However, the small sample size, the lack of reporting on instrument development and the data analysis explanations limit the interpretation of these findings.

In the Curry and Snell prospective study (1985), 124 pregnant women experiencing antenatal hospitalization were interviewed and filled questionnaires at three different time periods: soon after hospital admission, at the end of the first week, and at the end of the second week. Eighty-four women completed the second set of instruments, while 40 completed the third set. The women's original feelings at being admitted to hospital involved shock and fear. However, by the end of the second week, most of the women were resigned to hospitalization and were bored. Their concerns were related to their frequent mood swings and lack of control, yet the women were less concerned about the status of their fetus after being in hospital for two weeks. The strengths of this study lie with its large sample size and use of three different test periods, yet the high attrition rate from one time period of data collection to the next reduces the understanding of long-term effects of antenatal hospitalization.

In a prospective study, Kramer et al. (1986) studied the effects of hospitalization on pregnant women. Nine women who were 18 years or older and expected to stay at least 7 days in the hospital comprised the final sample. Data collection methods included a demographic questionnaire, a semi-structured interview, standardized scales (Hopkins Symptom Checklist, Beck Depression Inventory, Spielberger State Anxiety Index and Profile of Mood States), and the Rating Form for Adverse Reactions to Hospitalization filled by a social worker. The women reported high concern about the effect of their illness on the fetus. Seven of the women reported the pregnancy as being moderately to highly stressful. All of the women who did well throughout hospitalization had lengths of stay of less than a month. The finding that the women were the most concerned about their unborn child confirms previous studies (Merkatz, 1978; Waldron & Asayama, 1985; White & Ritchie, 1984). Despite multiple data collection methods, these findings should be interpreted with caution since the sample size is so small.

Curry (1987) presents an analysis of the maternal behavior of 75 hospitalized pregnant women in a prospective, descriptive study. The predictor variables were initial pregnancy risk score and hospital risk score, the intervening variables were social support and self-concept, and the dependent variable, maternal behavior, was operationalized as acceptance of pregnancy, identification with motherhood role, and maternal-fetal attachment. Women who reported more negative stress had lower scores on the measures of maternal behavior. Also, women who perceived their life experiences as more positive than negative were more likely to accept their pregnancies. They reported constantly changing feelings especially regarding the wish for the pregnancy to be over, and the need to justify the pregnancy. The feelings reported in this study are similar to the ones reported in earlier studies (Merkatz, 1978; Waldron & Asayama, 1985). This is the first study to use a conceptual framework organizing the relationships among the variables.

The Richardson study (1987) was a comparison of interview descriptions and evaluations of important relationships identified by women experiencing preterm labor (n=30) with those of women experiencing normal pregnancy (n=15) at 31 to 32 weeks of

gestation. The interview schedule demonstrated face validity and reliability and contained four parts: (1) a list of those relationships considered important in their order of importance, (2) an assessment of the change that was felt to have occurred in each relationship early in pregnancy, midway through pregnancy, and in the last weeks prior to the interview, (3) a description of the changes occurring within each relationship, and (4) an identification of relationships that were worrisome or that compared unfavorably with a hypothetically similar relationship for an imagined average pregnant woman. The findings reveal that the women who experienced premature labor described and evaluated their important relationships as significantly more unsatisfactory than did women with normal pregnancies. Also, premature-labor subjects reported sharing more problematic relationships with their husbands and parental figures than did normal-pregnancy women. Premature-labor subjects characterized their marital relationships as having feelings of aloneness, uncertainty about the husband's love for her and his desire for the expected baby, the perceived lack of concern and support, fears of desertion, the husband's unpredictable moods, and increased numbers of arguments and fights. The strengths of this study include the focus on one at-risk pregnancy condition, the assessment of these women's social circumstances, the use of a comparative group strategy and a well-structured interview schedule, and detailed content analysis procedures. However, the inclusion criteria are not clearly stated and the sample size is small.

A phenomenological approach was used by Loos and Julius (1988) to explore the thoughts and feelings of 11 pregnant women hospitalized for more than 5 days. A questionnaire based on Lalonde's health field concept was developed and pretested with two women. The questionnaire items addressed four elements: (1) items within the element of biology related to pregnancy, (2) under environment, items related to residence, (3) for lifestyle, items concerned family and economic status, and (4) within the element of health-care organization, items addressed health-care services. Ten subjects reported feelings of loneliness related to partner, children and friends. All subjects experienced boredom. Ten women expressed distress concerning their inability to be in control of their pregnancies because of the hospitalization. These findings are similar to

the ones previously reported (Merkatz, 1978; Waldron & Asayama, 1985). Loos and Julius conclude by stating that the women in their study perceived having unmet psychosocial needs during their hospitalization.

The purpose of the Kirk study (1989) was to discover the experiences and needs of 50 pregnant women hospitalized for a minimum of three days. Data were collected with a structured interview and White's (1981) the Antepartum Hospital Stressors Inventory (AHSI). The major worries of the women centered on the health of their unborn baby. The women viewed their spouse as helpful and supportive, however, the women perceived their partners as being stressed due to increased household responsibilities and anxious about the women's condition. The women reported feelings of boredom, uncertainty, guilt, low-esteem, negative body image and ambivalence towards the pregnancy. Separation from family, especially those with children at home, was considered stressful. Despite the adequate sample size and the use of a psychometrically sound instrument, Kirk did not report the ranking of the categories of stressors as in the original conceptualization of the AHSI. However, the findings reported in this study support previous ones (Curry & Snell, 1985; Loos & Julius, 1988; Merkatz, 1978; Waldron & Asayama, 1985; White & Ritchie, 1984).

Ford and Hodnett (1990) described the effects of perceived stress and social support on the adaptation for 27 hospitalized pregnant women. A descriptive design was used to study these variables. The reasons for hospitalization included premature rupture of the membranes, premature labor, diabetes, bleeding, and pregnancy-induced hypertension. Perceived stress was measured on the "Stressors in Antepartum Hospitalization Tool", adaptation was measured on a one-item linear analogue scale developed by the investigator, and perceived adequacy of social support was measured on a six-item scale, the "Social Support Questionnaire". Three hypotheses were tested: (1) perceived stress is negatively related to adaptation, (2) perceived adequacy of social support is positively related to adaptation, and (3) social support has a buffering effect on the relationship between perceived stress and adaptation. The first hypothesis was not

supported, while the second one was. The buffering effect of social support could not be tested, since perceived adequacy of social support was found in combination with length of hospitalization and risk to account for 43% of the variance in multiple regression analyses. Adaptation decreased as the number of days in hospital increased, with a stabilization effect at 7 to 8 days. The strengths of this study lie in its research design to test the hypotheses and the use of advanced statistical procedures.

The aim of the Mackey and Coster-Schulz study (1992) was to identify how women describe, interpret and manage preterm labor and subsequent preterm or term delivery. Using a naturalistic approach, twenty women hospitalized for preterm labor were documented with semi-structured, tape-recorded, in-depth interviews. Women took one of two different paths to seeking care for the symptoms experienced and interpreting the experience in terms of its possible causes and outcomes: either waiting for a period of time before seeking care or sought care immediately for the symptoms they were experiencing. A third group was accidentally found to have preterm labor. Women living with a diagnosis of preterm labor managed their preterm labor at home by continuing the rest that began in the hospital. Eleven of the 20 women experienced major changes in their lives: some women were fired or quit working and school because of the need to rest. They worried about the baby being born too soon, yet they felt stressed from waiting for the baby to be born. Women who delivered early tended to have little support both at home and in other social situations; women with more nurturing tended to deliver at term. Spending time talking with a nurse about preterm labor allowed certain women to open doors of communication with their partners and discuss the impact of the preterm labor experience on both of them. This is the second study to focus on women experiencing preterm labor (Waldron & Asayama, 1985) and expands the knowledge base pertaining to this group of women.

The two purposes of the Clauson (1996) study were to describe how 58 hospitalized pregnant women perceived the uncertainties and stress of their situations both on admission and at the time of discharge, and to investigate the relationships between

uncertainty, stress, and factors such as length of hospital stay, parity, maternal age, and gestational age. The most frequently reported reasons for hospitalization were bleeding, preterm labor, premature rupture of the membranes and hypertension. The Uncertainty Stress Scale-High-Risk Pregnancy Version (USS-HRPV) was used to measure perceived uncertainty. Uncertainty scores at 48 hours after admission were found to be low or moderate for 86% of the women, with 14% of them reporting high uncertainty scores. At the time of discharge, 91% of the subjects had low uncertainty levels, but 9% still reported high uncertainty. Women who stayed longer in the hospital reported higher levels of uncertainty. The items which caused the greatest uncertainty 48 hours after admission were what caused the women's condition, the baby's chances to be healthy, and how long the symptoms would last. The same three items were found at discharge, though the ordering was different. The findings reported in this study are similar to those reported elsewhere (Merkatz, 1978; Mackey & Coster-Schulz, 1992), yet further psychometric assessment of the USS-HRPV is needed.

In China, a study (Chuang, Hsia & Chou, 1997) with 10 pregnant women hospitalized for preterm labor explored their experience during the first week of hospitalization and their care needs. In-depth interviews were used to collect data, and were tape-recorded and transcribed as process recordings. The women reported a sense of uncertainty, fear of fetal loss, physical discomfort, ambivalence, feeling of boredom, carelessness during the early stage, compliance with physician's instructions, lack of privacy and worries. Uncertainty was noted throughout the entire hospitalization. This is the third study focusing on women experiencing preterm labor, and all of these findings are congruent (Mackey & Coster-Schulz, 1992; Waldron & Asayama, 1985).

2.5.3 Antenatal Hospitalization: Women's and Men's Perspectives

In this section, one study involving both women and men experiencing at-risk and normal pregnancies is featured (Mercer, Ferketich, May, & DeJoseph, 1987). This is followed by an article published by the same research group reporting on a subset of the

data from the larger study, focusing more on partner relationships (Mercer, Ferketich & DeJoseph, 1993). The last study focuses on women's and men's retrospective evaluation of hospitalization for preterm labor.

The Mercer et al. study (1987) focused on antepartum stress and its impact on family health and functioning, using a causal comparative longitudinal design. Specifically, the study was designed to test the effect of antepartal stress on infant, maternal and paternal health, dyadic relationships (mother-father, mother-infant, father-infant), and family functioning among four groups: women hospitalized for a high-risk pregnancy, their partners, women experiencing a low-risk pregnancy, and their partners. Groups were also compared to determine risk status and gender differences, and whether change occurred from pregnancy through 8 months postpartum. The predictor variables included in the theoretical models were stress from negative life events and pregnancy risk, perceived and received social support, self-esteem, mastery, parental competence, anxiety, and depression. The outcome variables were health status, mate relationships, parent-infant relationships, and family functioning. The four inclusion criteria for the high-risk group (women and men) were: (1) maternal hospitalization for a high-risk pregnancy between 24 and 34 weeks gestation, (2) maternal age of 18 or older, (3) ability to speak, read, and write English, and (4) couple married or living together and will continue to do after the child's birth. For the low-risk pregnant group, the criteria inclusion were: (1) absence of a chronic disease, (2) any symptoms of pregnancy-induced disease were mild and responsive to routine management, (3) maternal age of 18 or older, (4) ability to speak, read, and write English, and (5) couple married or living together and will continue to do after the child's birth. A total of 593 expectant parents were recruited: 153 hospitalized pregnant women, 75 male partners of the hospitalized group, 218 non-hospitalized low-risk pregnant women, and 147 male partners of the non-hospitalized group. Data collection methods included interviews during pregnancy and early postpartum, and self-administered standardized instruments at five test periods: between 24 and 34 weeks of pregnancy, early postpartum following birth, 1, 4, and 8 months.

The groups did not differ in demographic variables such as race, marital or socioeconomic status. Couples from the high-risk group were more worried and frightened than the couples from the low-risk one. Although the groups did not differ in trait anxiety, there were no significant risk-status differences in state anxiety and depression beyond the initial test period, yet women reported greater depression than men through the first postpartum month. Women from the high-risk group reported significantly more received support than other groups during pregnancy, while both groups of women reported more received support than the men. Women viewed family functioning as less optimal than the men at four and eight months. Stress from hospitalization had direct negative effects on the health status of women and men from the high-risk group at eight months after birth. Negative life events during pregnancy and pregnancy risk also had indirect negative effects. Partners of women hospitalized during pregnancy experienced a significant increase in stability of self-esteem at eight months postpartum, indicating personal growth in the resolution of the stress from the risk situation. The subjects in this study were mostly well-educated and middle-class, so the findings can only be generalized to this subpopulation. Expectant parents were part of the study if they were 24 weeks pregnant or more, compared with other studies where the inclusion criteria involved pregnancies starting at 20 weeks (Clauson, 1996; Curry, 1987; Ford & Hodnett, 1990; White & Ritchie, 1984). Women and men were affected by at-risk pregnancy and antenatal hospitalization.

Mercer et al. (1993) reported a subset of the above data focusing on predictors of partner relationships during pregnancy and infancy. The same sample (N=593) was used as well as the same instruments. A theoretical causal model predicting partner relationships was tested, followed by model respecification to derive the best explanatory model for each group (hospitalized pregnant women, their partners, nonhospitalized pregnant women and their partners). All partner relationships reported by the four groups were significantly higher during pregnancy and postpartum hospitalization than at 4 and 8 months postpartum. The greater the risk, the less optimal was the mate relationship. There was a significant difference between the women and men for partner relationships, with

the women from the high-risk group having higher scores than their partners during the postpartum hospitalization test period. The men from the low-risk group scored significantly higher than the men from the high-risk one except at one month postpartum. Unique to the men was readiness for pregnancy as a predictor of their mate relationships during pregnancy. Also, among the men from the high-risk group, weeks of gestation also have negative effects on the partner relationship. Perceived support had direct effects on the mate relationships for all four groups during pregnancy.

McCain and Deatrick (1994) explored the experience of at-risk pregnancy from the perspectives of women and men. A convenience sample of 21 parents (12 women and 9 men) were interviewed 10 to 66 days after the preterm births. Women were hospitalized for premature labor, eclampsia, incompetent cervix, and vaginal bleedings. The length of hospitalizations ranged from 7 to 24 days, while the number of hospitalizations ranged from 1 to 4. The study design relied on a naturalistic inquiry approach using selected grounded-theory techniques. Data were obtained retrospectively about the pregnancy through 1-1 1/2 hour interviews. The basic social-psychological problem identified by the subjects was their emotional response to the high-risk pregnancy event, related to the progression of events occurring during the pregnancy and managed with a variety of strategies. Three transitional stages emerged from the data: (1) *vulnerability*-the realization that pregnancy outcome was at risk, (2) *heightened anxiety*-as normal activities were restricted because of medical symptoms, and (3) *inevitability*-the realization that preterm labor and delivery were imminent. Family and friends provided assistance with child care, housekeeping, and meal preparation as well as emotional support. This qualitative study is important since it is the second study to include both women and men, despite its focus only at-risk pregnancy, and examines the trajectory of the experience. It does not use a comparative design as in the Mercer et al. study (1987). Two limitations of this study include sample bias due to the participation of only white, middle-class couples, and the retrospective data collection approach which may have influenced the subjects' recall of the events.

2.5.4 Summary of Empirical Support

In summary, the first set of studies in chronological order (Rosen, 1975; Merkatz, 1978; White & Ritchie, 1984; Waldron & Asaayma, 1985; Kramer et al., 1986; Loos & Julius, 1989; Kirk, 1989) focused on comprehending women's concerns, feelings and needs in regard to antenatal hospitalization as well as identifying the stressors associated with the experience. On the other hand, Curry (1987) presents an analysis of maternal behavior, while the Richardson study (1987) examines women's important relationships during the preterm labor experience. The study of relationships between variables identified as important to our understanding of the antenatal hospitalization started to be examined with the Ford and Hodnett study (1990), especially perceived and social support. There started to be shift in the research with a focus on particular at-risk conditions such as preterm labor (Mackey & Coster-Schulz, 1992) and how women perceived their situation during their hospital stay over three test periods (Clauson, 1996). Studies were been replicating internationally (Chuang et al., 1997), reporting similar results.

The following trends were occurring overtime: the goals of the study were becoming more precise, conceptual frameworks were starting to be used, explanatory models were being put forth, the inclusion criteria were becoming more specific, a broad range of research methods were being used including quantitative and qualitative approaches, sample sizes were increasing, comparison groups were being used, and more advanced statistical procedures were being applied.

The studies originally focusing on the women's perspective shifted gradually, leaning more towards the men, the conjugal relationship, the family and the rest of the social network. These were obtained indirectly through the women's reports. A new and major emergence occurred with the study conducted by Mercer et al. (1987) in which a very large sample size and a complex research design were used, multiple models with a longitudinal approach were produced, and men were included for the first time. With an

offshoot of that study, an article was published focusing on partner relationships (Mercer et al., 1993).

Based on the studies cited above, at-risk pregnancy and antenatal hospitalization are identified as negative stressors affecting pregnant women and their partners, with a subsequent impact on the conjugal relationship. Not only does the literature highlight some differences between women and men, but something is happening to the conjugal relationship under such circumstances. The women's viewpoint of the two stressors has been well documented, however, more research is needed to comprehend the men's viewpoint. There is a dearth of studies using the conjugal dyad as the unit of analysis: this orientation may provide some understanding as to why some couples feel a sense of closeness after such an experience, while others deteriorate potentially leading to separation and divorce. Boss (1987) suggests that the most powerful variable to determine a family's response to stress is their perception of the event. In order to achieve this, an approach based on interpersonal perception involving combinations of self-perceptions and metaperceptions should be utilized. A better grasp of the internal dynamics pertaining to the conjugal relationship under stress may advance our understanding and knowledge of the two stressors. There are also differences from the studies cited above regarding the impact of support from the social network on women and men experiencing at-risk pregnancy and antenatal hospitalization, and the role that it may play in the conjugal relationship. Using a specific theoretical model to study this phenomenon, simultaneous individual and collective perspectives can be obtained to understand how the conjugal dyad deals with the stressors of at-risk pregnancy and antenatal hospitalization.

2.6 HYPOTHESES

Kenny and Acitelli (1994) indicate that interpersonal perceptions are the building blocks through which partners construct shared understandings of their experiences, however, "we need to focus on the various context and content areas in which these perceptions occur" (p. 429). The stressors of at-risk pregnancy and antenatal

hospitalization are the focus of the present study. Two sets of hypotheses were formulated regarding the population under study based on the conceptions and findings presented in this chapter.

Set #1:

Though partners forge a shared reality of their relationship with time (Berger & Kellner, 1964), gender differences may erupt during at-risk pregnancy and antenatal hospitalization:

H1: There is a significant difference in the perceived similarity of global stress appraisal between women and men.

H2: There is a significant difference in understanding of global stress appraisal between women and men.

Set#2:

Perceptual differences are minimized within the conjugal relationship (Berger & Kellner, 1964), yet congruence between different combinations of similarities may be affected by the two stressors:

H3: There is congruence between women's and men's perceived similarity and actual similarity for global stress appraisal.

H4: There is congruence between women's and men's understanding and actual similarity for global stress appraisal.

H5: There is congruence between women's and men's understanding and women's and men's perceived similarity for global stress appraisal.

CHAPTER 3

METHODOLOGICAL CONSIDERATIONS

In this chapter, the following methodological considerations are presented: the design, the settings, the recruitment of subjects, and the data collection procedures. The instruments that were used to operationalize the research variables are described as well as the data analysis procedures and ethical considerations.

3.1 DESIGN AND SETTINGS

This study used a model-testing research design (Burns & Grove, 1988) in order to determine first-time parenting couples' global stress associated with at-risk pregnancy and antenatal hospitalization by testing the accuracy of a hypothesized causal model including the following variables: the stressor, the resources (the conjugal relationship and support from others in the social network), and their perception of the stressor. Twelve hospitals from the francophone and anglophone health care networks in the Greater Montreal region, including those on the South and North Shores participated in this study: Cité de la Santé, Hôpital Maisonneuve-Rosemont, Hôpital Sacré-Coeur, Hôpital Notre-Dame, Hôpital St. Luc, Hôpital Sainte-Justine, Hôpital Général Juif, Centre Hospitalier St. Mary's, Hôpital Royal Victoria, Hôpital Charles-Lemoyne, Centre Hospitalier Anna Laberge, and Centre Hospitalier Pierre-Boucher. See Appendix 1 for the ethics clearances from the 12 hospitals.

3.2 SAMPLING CONSIDERATIONS

A non-probabilistic sampling strategy was chosen in order to include all subjects who had agreed to participate (Burns & Grove, 1993; Woods & Catanzaro, 1988). See the articles in chapters 4 and 5 for the inclusion criteria. The subjects were excluded from the study if a chronic condition already existed before the pregnancy (example: chronic diabetes, chronic hypertension). The parameter under study, global stress associated with at-risk pregnancy and antenatal hospitalization, was expected to demonstrate a large

amount of variation. The following calculation was used originally (Cohen, 1969) to determine the sample size: $\alpha = .05$, $\beta = .80$, and $d = .30$, $d = d_3' \sqrt{2} \rightarrow .20 \sqrt{2} \rightarrow .28 \approx .30$). The required sample size would have been 138 couples. This was later revised, recalculating the sample size based on having small, medium and large effects (Cohen, 1988). Since a moderate effect size was continued to be predicted, an ability to detect moderate to large correlations was desired, requiring a moderate sample size. According to Cohen (1988), a sample size of 70 couples is needed for a two-tailed test $a_1 = 0.05$ and $a_2 = 0.10$, a 10% probability for type II error (β), and an effect size of $d_3 = 0.3$ where $d = d_3' \sqrt{2}$. One hundred-eighty couples agreed to participate in this study; the final sample consisted of 109 couples, producing a power of 92.5%.

Despite the large sample size of 109 couples and conducting the study in 12 hospitals in the greater region including the South Shore, Montreal Island and the City of Laval, recruitment was very difficult. Of the 656 women who were eligible to participate in the study, 17 had to be eliminated because their partner had a child(ren) and 409 others refused to participate producing a refusal rate of 61%: 289 of them said they were too stressed, sick or not interested; 91 partners refused to participate; and 29 other partners did not want their female partners to participate believing them to be too stressed or sick. Of the remaining 247 eligible women, 26 delivered before the questionnaires could be given to them, 10 others left the hospital before questionnaire distribution, while 31 women and their partners refused to continue due to a change in the women's health status. One hundred eighty (180) pairs of envelopes were finally distributed: 71 pairs were never returned, producing a final sample of 109 couples.

3.3 INSTRUMENTS

Four instruments were used for data collection purposes: (1) The Personal and Pregnancy Information Guide (PPIG), (2) The Dyadic Adjustment (DAS) Scale, (3) The Support Behaviors Inventory (SBI), and (4) The Stress Appraisal Measure (SAM).

3.3.1 The Personal and Pregnancy Information Guide (PPIG) (see Appendix 2)

The stressor (Variable A) was measured with the "Inventaire d'information obstétricale et personnelle" (The Personal and Pregnancy Information Guide), an adaptation originally developed by Goulet (1989). Sociodemographic, pregnancy, hospitalization and relational data were collected in the PPIG. Two versions of the PPIG were developed, one for the women and the other for the men. This 13-item self-administered questionnaire is divided into three parts: the first part collects obstetrical (pregnancy and hospitalization) information, the second part seeks personal (sociodemographic) information, and the last part obtains conjugal (relational) information. The first part contains eight questions on at-risk pregnancy and antenatal hospitalization: the gestation period, the number of pregnancies, if the pregnancy was planned, the expected data of delivery, the reason for the present hospitalization and the length of hospital stay, previous hospital experiences, physical activities and their restrictions, and prenatal class attendance. The second part contains six questions on sociodemographic data such as the respondent's age, level of education, marital status, employment and family revenue. The last section contains two questions on the conjugal relationship, including the length of the relationship and the amount of time that the couple has lived together. The form of the questions varies, depending on the type of information being sought. Certain questions are dichotomic requiring yes/no answers, while others present choices. The second type includes open-ended questions, requiring a short answer on the respondent's part, by either adding a date or explaining the reason for hospitalization.

3.3.2 The Dyadic Adjustment Scale (DAS) (see Appendix 3)

L'Échelle d'ajustement dyadique (Baillargeon, Dubois & Marineau 1986) is a French translation of the Dyadic Adjustment Scale produced by Spanier (1976), measuring one of two resources in Boss' model, namely, the conjugal relationship (Variable B). Spanier developed the instrument from his conceptualization of dyadic

adjustment, defined as a process that evolves on a continuum (Baillargeon et al., 1986, p. 26). This 32-item self-administered questionnaire contains 4 subscales producing *total conjugal adjustment*: *consensus, cohesion, satisfaction,* and *affection* (these definitions are presented in the second article of the fourth chapter). The total score can vary from 0 to 151 points for the total instrument. A couple is usually considered in difficulty when the total score of one of the conjugal partners is less than 100.

The English version of the instrument was developed in several stages. Spanier first gathered 300 items from various instruments. Content validity was established by a panel of three experts who decided to keep 200 of the 300 items. Discriminant validity was demonstrated by administering the 200 items to two groups of couples, either married or divorced; only 40 items were able to discriminate between the two groups. During factorial analysis, only 32 items were retained and four dimensions were determined: consensus, cohesion, satisfaction and affection. The instrument entitled "Short Marital Adjustment Test" of Locke and Wallace (1959) was used to establish concomitant validity. The correlation between the total scores of the two instruments for the married couples was .86, while the correlation for the divorced couples was .88. Cronbach's alpha was used to determine internal reliability for the total instrument and for each of the four dimensions: total instrument, .96; dyadic consensus, .90; dyadic cohesion, .86; dyadic satisfaction, .94; and affection, .73.

Baillargeon et al. (1986) translated the instrument into French and conducted psychometric analyses on it. Factorial analysis using principal component analysis based on procedures presented in Spanier's study (1976) were conducted. The results reveal that the factorial structure of the instrument is similar to the observed one with the American samples. The authors conclude that the French version of the Dyadic Adjustment Scale is psychometrically sound and adequate to measure conjugal adjustment. For the study, internal consistencies using Cronbach's alpha for the total sample (N=109) were: the total instrument, .86; consensus, .85; cohesion, .70; satisfaction, .63; and affection, .51.

3.3.3 Support Behaviors Inventory (SBI) (see Appendix 4)

The "Inventaire des comportements de soutien" is a French translation (Goulet, Polomeno & Harel, 1995) of the Support Behaviors Inventory developed by Brown (1986b). This instrument was chosen in order to measure satisfaction with support from the social network, the second resource as part Variable B in Boss' model. This is the only existing instrument measuring satisfaction received from the male partner separately from satisfaction with social support received from others. Only the subscale measuring satisfaction with social support from the other members of the network was retained for this study. The respondent is asked to indicate on a 6-point Likert type scale the degree of satisfaction with each of 42 items representing the types of support behaviors from 1 "dissatisfied" to 6 "very satisfied". If a support behavior does not apply, then the respondent encircles 7 for "not applicable". This part of the instrument gives a score for satisfaction with support from other, a higher score represents a higher degree of satisfaction.

Brown and other investigators have conducted several psychometric evaluations on this instrument. Four types of validity have been confirmed: content, construct, criterium and predictive. Internal reliability using Cronbach alpha for the total instrument and for each of the two subscales vary from .90 to .96. The two subscales can be considered distinct since the correlation coefficients between them are very low, ranging from .1 to .4. The multidimensionality proposed by the construct is being questioned since factorial analysis using principal component analysis with varimax rotation suggests one factor. Vallerand's (1989) cultural validation methodology was used for the French translation of this instrument (Goulet et al., 1995). Psychometric evaluation was conducted on a sample of 271 pregnant women: 99 francophone pregnant women experiencing normal pregnancy, 89 francophone women experiencing at-risk pregnancy, 38 anglophone women experiencing normal pregnancy, and 45 anglophone women experiencing at-risk pregnancy. Fifty-four of these women participated in the retest. The results of the French version are similar to those of the English version. The Cronbach

alphas for each of the two subscales, the total instrument, for the 4 groups and for the test-retest range from .96 to .98. Factorial analysis using principal component analysis with varimax rotation confirmed that the two subscales are distinct. For the present study, Cronbach's alpha values for the total sample (n=109), and the women's and the men's groups were.98, .97, and .98. These values are close to the ones published for the original version (Brown, 1986a), and the French one (Goulet et al., 1995).

3.3.4 The Stress Appraisal Measure (SAM) (see Appendix 5)

L'Échelle d'évaluation du stress is a French translation (Pelchat, Ricard, Lévesque, Perreault & Polomeno, 1994) of the Stress Appraisal Measure developed by Peacock and Wong (1990). This instrument was chosen because it measures the perception of the stressor event (Variable C) and global stress (Variable X), and can be applied to conjugal dyads (personal communication with Dr. Wong, 1992). By using cognitive relational theory, Peacock and Wong developed this instrument in order to differentiate the perception of appraisal of the stressful event from coping. This 28-item self-administered questionnaire contains three parts: primary stress appraisal, secondary stress appraisal, and global stress appraisal (see the definitions for the subscales in the second and third articles of the fourth and fifth chapter). Primary and secondary stress appraisal were used to represent the perception of the stressor or "Variable C", while global stress appraisal represented "Variable X". This is a seven subscale instrument, with 4 items in each subscale. Subjects must indicate their degree of stress on a 5-point Likert type scale from 1 "not at all" to 5 "extremely"; a mean is obtained for each subscale. A higher score indicates a greater stress level.

The psychometric assessment of the Stress Appraisal Measure was conducted in three studies by Peacock and Wong. Cronbach's alpha was used for internal reliability, ranging from .51 to .90 for each of the six dimensions and .80 for the total instrument. Factorial analysis using principal component analysis with varimax rotation confirmed the seven dimensions of the instrument. The Stress Appraisal Measure is a reliable and

valid instrument containing seven independent dimensions: the stressfulness subscale measuring global stress appraisal is independent of the other 6 subscales. For this study, the correlations between the stressfulness subscale and the other six subscales are low, varying from -.2100 to .2882. Obtaining permission from Peacock and Wong, a team of professors from the Faculty of Nursing of Université de Montréal translated the Stress Appraisal Measure into French and conducted psychometric analyses on the French version (Pelchat et al., 1994). Vallerand's (1989) cultural validation methodolgy was used. The French version was found to be psychometrically sound. Cronbach's alpha for the present study for the total sample (n=109) range from .52 to .75. These values are close to the ones published for the original version (Peacock & Wong, 1990) and the French one (Pelchat et al., 1994).

3.4 DATA COLLECTION PROCEDURES

Data were collected from the subjects over a period of 22 months, from May 1993 to March, 1995. Following study approval from hospital research and ethics committees, the doctoral candidate communicated by telephone with the head nurse or the assistant head nurse on the antepartum ward where the pregnant women were hospitalized. She solicited the nurse's cooperation by the identification of potential subjects. A poster summarizing the nature of the research project as well as the inclusion and exclusion criteria and the investigator's telephone number were available on each unit (see Appendix 6). In certain settings, the candidate presented herself directly to the ward, and could consult with the nursing personnel and/or the nursing kardex. In other settings, the head nurse, the assistant head nurse or the unit nurse approached the potential subject about participating in the study, who was then asked for permission to introduce her to the candidate. If the subject agreed to speak with the doctoral candidate, then the nurse referred her to the candidate.

Following the identification of potential subjects, the pregnant woman was approached by either the nursing personnel or by the investigator. A sheet explaining the

research project was distributed to each potential subject (see Appendix 7). The pregnant woman was encouraged to speak with her partner and to share the information with him. In order for certain men to participate in the study, a more personal contact was required, either in a face-to-face interview or on the telephone. Any questions or issues were discussed with him. Once the couple agreed to participate in the study, they signed a consent form (see Appendix 8).

3.5 DATA ANALYSIS PROCEDURES

Data from the women and the men were coded independently and entered into the SPSS for Unix (Release 6.14) statistical program. A random sample of 10 couples' records were selected for cross-validation purposes (9.2%). All tests were performed with an overall significance level of 5% ($p < .05$). All pregnancy, hospital, personal and relational data as well as the study variables were analyzed using descriptive statistics: frequency distributions, central tendency (mode, median and mean), dispersion measures (standard deviation and variance). Student's t-test and the Chi-square test were used to compare means for continuous and dichotomic/proportions variables respectively. Internal reliability using Cronbach's alpha was obtained for the first three instruments (DAS, SBI and SAM): for the total instrument and for the respective subscales. Validity was verified using factorial analysis in principal component analysis with varimax rotation (Burns & Grove, 1988). For the data analyses used in the second and third articles, see their respective sections in chapters 4 and 5.

3.6 ETHICAL CONSIDERATIONS

This research study was submitted to the research and/or ethics committee(s) in each of the 12 hospitals, and to the directors of the department of obstetrics and of nursing. Following the granting of approval by the committees and the various directors, a meeting was held with the head nurse of each of the departments as well as the respective nursing personnel. The objective of these meetings was to present the research

project, solicit their cooperation and answer any of their questions. It was most important that the nurses understood the criteria for inclusion within the study. Subjects were advised that their participation was voluntary, that they could withdraw at any time, and that they could refuse to answer any question. This information was provided on the information sheet and repeated on the consent form. The consent form was signed by both conjugal partners, the investigator, and in certain settings, a witness (usually the nurse). Their names did not appear on any questionnaire. All of the data that were collected were confidential. The research instruments were coded to insure confidentiality and are to be destroyed at the end of the study.

CHAPTER 4

Second Article:

The Stressful Impact of At-Risk Pregnancy and Antenatal Hospitalization on First-Time Parenting Couples

Submitted to The International Journal of Nursing Studies

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Background to this article:

In this article, the explanatory model developed from Boss' model (1988) *The Contextual Model of Family Stress* and presented in the first chapter is tested here. Five explanatory models are tested: the first two models pertain to women's and men's stress, while the other three models involve couples' stress and represent the three types of similarity (actual similarity, perceived similarity and understanding). This orientation permits the simultaneous study of stress from the individual perspective of the conjugal partners and from the collective one of the conjugal dyad.

The findings from this article can assist nurses to develop interventions using the actual similarity, perceived similarity and understanding concepts, and to promote communication within the conjugal relationship, potentially countering the impact of at-risk pregnancy and antenatal hospitalization on the conjugal partners and the conjugal dyad.

The Stressful Impact of At-Risk Pregnancy and Antenatal Hospitalization

On First-Time Parenting Couples

by

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ABSTRACT

The purpose of the study was to determine the relative contributions of the stressors (at-risk pregnancy and antenatal hospitalization), the resources (conjugal adjustment and social support satisfaction from others), and the stressor perception (primary and secondary appraisal) to first-time parenting couples' global stress (n=109 couples). Fifty-two percent of the women's global stress was explained by primary stress appraisal, while 60% of the men's global stress was explained by the stressor, and primary stress appraisal. For the couples' models, primary stress appraisal accounted for 33% of actual similarity, while for perceived similarity, primary and secondary stress appraisal explained 32% of the variance. The resources and primary stress appraisal accounted for 32% of the variance for understanding.

Keywords: at-risk pregnancy, antenatal hospitalization, first-time parenthood, global stress appraisal.

INTRODUCTION

Nurses have always been concerned with families experiencing stress associated with life transitions. When the transition to parenthood is fraught with complications such as at-risk pregnancy and antenatal hospitalization, the woman, her partner, and their relationship may be adversely affected. How the conjugal dyad, a family subsystem, is affected by these two stressors necessitates the study of the partners as well as the conjugal unit itself. Boss (1987, 1988) suggests that the family's stress level is influenced by the stressor itself, but also by their perception of the stressor event and their resources. She also proposes that the stress level of the whole is different from the sum of the individual stress levels of the family members. There is a dearth of studies in the family domain considering individual and dyadic stress levels in the context of at-risk pregnancy and antenatal hospitalization. Thus, three stress levels are examined in this study: women's, men's and couples'. In the evaluation of couples' global stress, three types of similarities are considered which are produced from combinations of self-perceptions and metaperceptions: actual similarity, perceived similarity and understanding. Thus, the purpose of this study was to determine the contributions of the stressor, the resources, and the perception of the stressor event to first-time parenting couples' global stress associated with at-risk pregnancy and antenatal hospitalization.

a. Literature review

Stress during pregnancy is inevitable (Niven, 1992), affecting the conjugal partners and their relationship (Sherwen, 1987). Couples expecting their first child may be more stressed than the ones who have children (Broom, 1984; Cowan & Cowan, 1988). This is

often the first time that they must deal with and adjust to so many concurrent changes (Polomeno, 2000). When complications arise during pregnancy, the stress is further aggravated (Jones, 1986; Kemp & Hatmaker, 1989; Kemp & Page, 1986; Mackey & Coster-Schulz, 1992; Oakley *et al.*, 1990; Wadhwa *et al.*, 1996), as well as if hospitalization and/or bedrest are required (Heaman, 1992; Kramer *et al.*, 1986; Loos & Julius, 1989; Maloni *et al.*, 1993; Mercer, 1990; Schroeder, 1996). Between 10% and 20% (Jones, 1986; Kemp & Page, 1986; Penticuff, 1982) of pregnancies are labeled at-risk, and from 12% to 25% (Haas *et al.*, 1996; Philippe *et al.*, 1982; White, 1989) of pregnant women are hospitalized. Consequently, the marriage may become strained (Johnson & Murphy, 1986; Penticuff, 1982; Waldron & Asayama, 1985; Weil, 1981), potentially leading to separation and divorce (Gilbert & Harmon, 1993; Gyves, 1985; Johnson & Murphy, 1985; Murphy & Robbins, 1993; Penticuff, 1982).

Several authors report that pregnant, hospitalized women may become anxious, depressed, withdrawn, angry, lonely, powerless, and bored (Chuang *et al.*, 1997; Dore & Davies, 1979; Heaman, 1992; Heaman *et al.*, 1992; Loos & Julius, 1989). Separation from home and the family is their major concern (Curry & Snell, 1985; Jones, 1986; Kirk, 1989; Waldron & Asayama, 1985; White & Ritchie, 1984). The women denounce the lack of intimate privacy within the hospital setting (Chuang *et al.*, 1997; Loos & Julius, 1989). When the women are treated at home, men often feel overwhelmed, and maintaining a close relationship with their partner who is on activity restriction, is a challenge for them (May, 1994). The partners often deal with their feelings separately, causing emotional distress (Johnson & Murphy, 1986), often persisting after birth (Jones, 1986). Couples have reported

changes in their sexual relationship, since without sexual intercourse, they have lost an important source of support for each other (Weil, 1981). In the Mercer, Ferketich and DeJoseph study (1993), men from the at-risk pregnancy group reported less optimal partner relationships than those from the low-risk pregnancy group, while the women in the at-risk group reported more optimal mate relationships than their partners.

Obtaining and using help appears to be one of the effective ways for couples to deal with the stressors (Burke & Weir, 1982; Penticuff, 1982). Partners can adapt to at-risk pregnancy if they have adequate support from significant others (Gilbert & Harmon, 1993). With adequate support, the partners can achieve a sense of accomplishment in the face of adversity; without adequate support, there is a risk of separation and divorce (Gilbert & Harmon, 1993). Nuclear and extended family and friends may provide close and supportive relationships. Yet, they can increase the stress and conflicts of hospitalized pregnant women, if they fail to perceive that the women truly have a health problem illness or that the fetus is at-risk, resulting in a lack of emotional support from them (Merkatz, 1976; Gyves, 1985). These significant others may be experiencing stress themselves due to the situation (Gyves, 1985). In the Monahan and DeJoseph study (1991), couples who experienced at-risk pregnancy perceived lower support than those from the low-risk pregnancy group.

The greater the threat to the pregnancy as perceived by the family, the greater the stress they will experience (Kemp & Page, 1986). Gilbert and Harmon (1993) also stipulate that partners can adapt to at-risk pregnancy if they have a realistic perception of the event. Partners can maintain positive patterns of interaction during times of stress through the

similarity of their perceptions (Deal *et al.*, 1992). Indeed, functional couples and families are usually characterized by high similarity between members' perceptions. Similarity or congruence in perceptions (Ahrons & Bowman, 1981; Glass & Polisar, 1987; Ransom, 1992) between spouses, often called the glue of marriage (Scanzoni & Scanzoni, 1976), is a crucial dimension of the family system (Deal *et al.*, 1992; Kenny & Acitelli, 1994). Several scholars have noted the importance of congruence in developing a shared reality in conjugal relationships, which potentially leads to understanding between the partners, thereby enhancing increased levels of similarity and marital satisfaction (Berger & Kellnar, 1964; Deal *et al.*, 1992; Duck & Santo, 1993; Duck, 1994). How partners develop and share meaning from stressful events through their perceptions is part of the stress process (Patterson, 1988). No matter how threatening a stressor might be, it will only evoke a stress reaction if the partners perceive the stressor as threatening. There is a paucity of studies examining the internal environment of the conjugal relationship (Gottlieb, 1985) by using interpersonal perception methodology (Laing *et al.*, 1966) within the context of at-risk pregnancy and antenatal hospitalization.

b. Theoretical model

The middle-range theory (Murphy, 1986) underlying this study is Boss' model (1987, 1988), "The Contextual Model of Family Stress". Boss' model originates from Hill's model (1958). She theorizes (see Figure 1) that the stress level (X Variable) felt by the family is based on the stressor (A Variable), their resources (B Variable) and their perception of the event (C Variable). The ultimate outcome is family adaptation or crisis. Events affect the family directly and indirectly and can result in family stress, defined as tension in the family

system.

- place Figure 1 here -

The stressor, "*A Variable*", is an event of significant magnitude to provoke change in the family system. It is also a stimulus that threatens the status quo and holds the potential for beginning the process of change or stress (Boss, 1988). In this research, the stressors are at-risk pregnancy and antenatal hospitalization. The "*B Variable*" represents the family resources, or its economic, physical and psychological assets, upon which family members can draw on in response to the stressor. The family psychological resources in this study are represented by the conjugal relationship and support from others in the social network. The "*C Variable*" is the meaning that the family gives to a stressor, also called the family's perception. Boss (1987) posits that the family's perception of the stressor is the most powerful variable in explaining how the family defines and reacts to it. Both family perception and individual perceptions are needed to get the full picture of the family's stress level, "*Variable X*". When perceptions from different family members are congruent, a collective or family perception can be obtained.

We expanded three parts of Boss' model (1987): the definitions of the conjugal relationship, stress evaluation and perceptions. For the first part, Spanier and Lewis (1980) define *conjugal adjustment* as the subjective evaluation of a couple's relationship on a number of dimensions and evaluations. Conjugal adjustment contains 4 dimensions producing *total conjugal adjustment*: *consensus* refers to the degree a couple agrees on

matters of importance to the relationship; *cohesion* refers to the degree to which a couple engages in activities together; *satisfaction* refers to the degree to which a couple is satisfied with the present state of the relationship and is committed to its continuance; and *affection* refers to the degree to which a couple is satisfied with the expression of affection and sex in the relationship (Spanier, 1976). For the second part regarding stress evaluation, Peacock and Wong (1990) divided stress appraisal into three types: *primary*, *secondary*, and *global appraisals*. Primary appraisal relates to threat, challenge, and centrality. *Threat* refers to the potential for loss or damage from the event, whereas *challenge* refers to the potential for personal growth. *Centrality* involves the perceived importance of the event by a person regarding his or her well-being. Secondary appraisal relates to the perception of control regarding the stressful event: the extent to which the situation is *controllable-by-self*, *controllable-by-others*, and *uncontrollable-by-others*. The *global appraisal* of stress relates to the total degree of stress perceived by the person regarding the stressful event. The *Variable C* is represented by the primary and secondary stress appraisals, while the Variable X is represented by the global stress appraisal.

For the third part, the perception (see Figure 2) that a person has of the situation is called a direct perception or *self-perception*, while a person's perception of another person's perception is referred to as a *metaperception* (Allen & Thompson, 1984; Bochner *et al.*, 1982). Combinations of self-perceptions and metaperceptions are referred to as "perceptual congruence variables". When both partners' self-perceptions are compared and found to be congruent, there is *actual similarity*; when one partner's self-perception is compared with his or her own metaperception and found to be congruent, there is *perceived similarity*; and

when a partner's metaperception is compared with the other partner's self-perception and found to be congruent, there is *understanding* (Acitelli, 1993; Acitelli *et al.*, 1993, 1997). Three levels of similarity or congruence are to be considered in the study of couples' global stress, namely, actual similarity, perceived similarity, and understanding. These types of similarity represent progressive levels of conjugal communication.

- place Figure 2 here -

METHOD

a. *Participants*

Subjects were recruited from 12 hospitals (Levels II and III) in the Montréal region, Canada. Inclusion criteria were: 1) diagnosis of at-risk pregnancy, 2) hospitalization ≥ 5 days, 3) gestation between 20 and 34 weeks, 4) both conjugal partners expecting their first child, 5) maternal and paternal age ≥ 18 years, 6) cohabitation for at least one year, and 7) born in the Province of Québec. Exclusion criteria included an at-risk pregnancy due to a chronic condition. All hospital ethics committees gave approval for this study. Since they prohibited access to refusers' charts, data were not collected on them. The final sample consisted of 109 couples from 180 couples who agreed to participate. This produced a power of 92.5%, based on Cohen's (1988) statistical power with a significance level α of 0.05, a β of 0.80, a medium- effect of 0.30, using a two-tailed test.

b. *Data collection procedures*

The study was described to potential subjects and an information sheet was distributed to them. Women were then encouraged to speak with the partner regarding his participation. Some men required an interview or a telephone contact. Once the partners agreed to participate, they both signed the consent form. Each partner received an envelope with the questionnaires. They were then instructed to: 1) fill in the questionnaires separately, and as much as possible, at the same time, 2), not to consult with each other, and 3) to put the completed questionnaires into their respective envelopes and to seal them. The Dyadic Adjustment Scale and the Stress Appraisal Measure were answered twice: the participant

first had to fill in the questionnaire from his/her own viewpoint (self-perception); then, to adopt the partner's viewpoint and to answer as he/she would (metaperception).

c. *Instruments*

Four instruments were used: the Personal and Pregnancy Information Guide (PPIF), the Dyadic Adjustment Measure (DAS), the Social Behaviors Inventory (SBI), and the Stress Appraisal Measure (SAM). Data from the PPIF were used to represent the stressor (Variable A) in Boss' model, while the DAS and the SBI was used to represent the resources (Variable B). The primary (threat, challenge and centrality) and secondary (control-by-self, control-by-others and uncontrollability) appraisal subscales were used for the perception of the event (Variable C), while global appraisal (stressfulness subscale) represented the stress level (Variable X).

The PPIF contains three parts seeking pregnancy, personal and relational information. The DAS (Spanier, 1976) is a 32-item self-administered questionnaire containing 4 subscales: consensus, cohesion, satisfaction and affection. Two items contain dichotomic responses, while the other 30 items are evaluated on 5, 6 or 7-point Likert-type scales. The total score varies from 0 to 151 points, with a higher score representing higher conjugal adjustment. The DAS was translated into French (Baillargeon *et al.*, 1986) and is psychometrically sound. For the present study, internal consistencies for the total sample (n=109) were: total adjustment, .86; consensus, .85; cohesion, .70; satisfaction, .63; and affection, .51. These values are close to the ones published for the original one (Spanier, 1976) and the French one (Baillargeon, *et al.*, 1986).

The SBI (Brown, 1986) was used to measure satisfaction from two sources of social support, "partner", and "others". Only the "others" subscale was retained for the present study since data was being sought about support from the social network. The SBI is a 45-item scale: half of the items is specific to pregnancy, while the other half pertains to general support. The respondent rates his/her degree of satisfaction with each support behavior on a 6-point scale, a high score indicating a high degree of satisfaction. A French version (Goulet *et al.*, 1995) was produced using cross-validation methodology (Vallerand, 1989). For the present study, Cronbach's alpha values for the total sample, the men's and the women's groups were .98, .98, and .97 respectively. These values are close to the ones published for the original version (Brown, 1986) and for the French one (Goulet *et al.*, 1995).

The SAM (Peacock & Wong, 1990) is a three-part self-administered stress appraisal questionnaire containing 28 items (7 subscales). The first part, primary appraisal, contains three subscales of threat, challenge and centrality, while the second part, secondary evaluation, includes three subscales of control-by-self, control-by-others, and uncontrollability. The last part, stressfulness, measures global stress. The respondent indicates his/her degree of stress on a 5-point Likert type scale from 1 "not at all" to 5 "extremely". A mean is obtained for each subscale, a higher mean represents a greater stress level. The SAM has adequate internal consistency and convergent validity, and all subscales are independent. A French version (Pelchat *et al.*, 1993) of the SAM was produced using Vallerand's (1989) cross-validation methodology. Cronbach's alpha values for the present study for the total sample (n=109) range from .52 to.75 for the six subscales and .64 for the stressfulness scale. These values are close to the ones published for the English one (Peacock

& Wong, 1990) and the French ones (Pelchat *et al.*, 1993).

d. ***Data analyses***

All pregnancy, personal and relational data as well as the study variables were analyzed using descriptive statistics. Student's t-test and the Chi-square test were used to compare means for continuous and dichotomic/proportions variables respectively. Intercorrelations matrices were examined to identify multicollinearity among the independent variables. Multiple regression procedures were performed to determine the relative contributions of the predictor variables including the stressor, the resources (conjugal adjustment and social support satisfaction), and the perception of the event (primary and secondary stress appraisal) to first-time parenting couples' global stress (criterion variable).

Five regression models were produced: two models, the women's and the men's, used only self-perceptions, while the other three models pertaining to the couples were based on the three types of similarity (actual similarity, perceived similarity and understanding). Each independent variable was analyzed in sequence in the model so that the first independent variable was analyzed alone with the dependent variable; the second independent variable was added to the equation that already included the first variable; and the third one was added to the equation that already included the first and second independent variables. In order to determine which variables from the pregnancy, personal and relational data were to represent the stressor, those having significant correlations with the dependent variable (global stress) were included in the regression analyses. For the women, these variables were gestation, gravidity and physical activities restriction. For the men, the variables were

gestation, gravidity, prenatal class attendance, paternal age, education, and marital status. For the couples' model, only those variables that were common to both groups were retained: gestation and gravidity. Predictors were considered effective if they resulted in an R^2 change that was statistically significant at the .05 level. Data analysis was carried out using the SPSS for Unix (Release 6.14) statistical program.

RESULTS

a. Sample

Table 1 presents the sociodemographic and relational characteristics for the participants. Fifty-five couples (50.5%) were married. The duration mean for the conjugal relationship was 6.2 years (S.D.=3.71), ranging from 1 to 18 years. The duration mean for cohabitation was 4.19 years (S.D. = 2.88), ranging from 1 to 15 years. The family income was less than 19,000 dollars for 11% of couples (n = 11) and greater than $60,000 for 30% (n=30). The only disparity between the two groups was in the reporting of family revenue (X^2 = .262, df = 98, p = .037), with the men reporting higher family income than the women. There were no significant differences (Table 2) for pregnancy-related and hospitalization characteristics when hospital care was dichotomized as either Level II or Level III.

b. Summary statistics

Table 3 presents the means and standard deviations of the study variables for the women and the men as well as the self-perceptions and metaperceptions: conjugal adjustment (satisfaction, cohesion, consensus, affection, total adjustment), satisfaction with social support (others), stress appraisal (primary: threat, challenge, centrality; secondary: control-by-self, control-by-others, uncontrollable) and global stress.

c. Regression analyses for the women and the men

Tables 4 present the results of the regression analyses for the women, while Table 5 presents the results for the men. The three predictors pertaining to primary stress appraisal -

threat, challenge, and centrality - account for 52% (44% adjusted) of the variance in women's global stress. Women in the sample were more likely to have a higher global stress level when they used primary stress appraisal in their evaluation of at-risk pregnancy and antenatal hospitalization. For the men's model, three predictors pertaining to the stressor (gestation, prenatal classes and education) and two others pertaining to primary stress appraisal (threat and centrality) account for 60% (53% adjusted) of the variance. Men in this sample who experienced an earlier gestation (between 20 and 28 weeks of pregnancy), no prenatal classes, lower level of education, and perceived the stressors as a threat and centrality were more likely to have a higher global stress level. Threat accounts for the greatest proportion of the variance in the women's (21%) and men's global stress (17%).

d. Regression analyses for the couples

Three couples' models were produced, representing the three levels of similarity: actual similarity, perceived similarity and comprehension (see Table 6). The similarities are produced by the various combinations of self-perceptions and metaperceptions as described above.

The explained variances for the three couples' models are lower than those for the women or the men. Regarding actual similarity, two predictors of primary stress appraisal (threat and centrality) explain 33% (19% adjusted) of the variance in couples' global stress. Concerning perceived similarity, four predictors of primary stress appraisal (threat and centrality) and secondary stress appraisal (control-by-self and control-by others) account for 32% (24% adjusted) of the explained variance for couples' global stress. Lastly, for

understanding, one predictor of the resources (conjugal cohesion) and two predictors of primary stress appraisal (threat and centrality) explain 32% (19% adjusted) of the variance in couples' global stress. Threat explains the greatest proportion of the variance for couples' actual similarity of global stress, while control-by-others and centrality explained the greater variance proportion for perceived similarity and understanding respectively.

DISCUSSION

The aim of this study was to determine the relative contributions of the stressor, the resources and the perception of the stressor to global stress associated with at-risk pregnancy and antenatal hospitalization for first-time parenting couples. The women's global stress is attributed to the perception of the stressor, while the men's global stress is associated with both the stressor and its perception. For two of the three couples' models (actual similarity and perceived similarity), the perception of the stressor contributes to explaining couples' global stress. In the third model involving understanding, the couples' global stress is attributed to dyadic cohesion of the resources and the perception of the stressor. These findings support Boss' postulate that the most powerful variable to explain the family's stress is their perception or the meaning given to the stressor by the family.

Primary stress appraisal, accounting for 52 % of the explained variance for women's global stress, involves the assessment of the importance of a transaction for one's well-being (Peacock & Wong, 1990). Threat appraisals involve the potential for harm/loss in the future, while challenge appraisals reflect the anticipation of gain or growth from the experience. Centrality refers to the perceived importance of an event for one's well-being: conceptually, centrality is similar to the idea of stakes. Threat was the most significant predictor, followed equally by challenge and centrality. Women experiencing at-risk pregnancy and antenatal hospitalization perceive these two stressors as a threat. In the Gupton *et al*., (1997) study, the women explain how they spent much time thinking about the fetus and being concerned

about his/her health. The women in the Wood-Warner's study (1998) of couples' cognitive appraisals of amniocentesis perceived the procedure as more threatening than the men. All these findings are comprehensible since the women are directly affected by either threat to their pregnancy or to their babies: they are the ones who are pregnant and give birth, implicating all aspects of their personhood in these experiences.

For the men, the stressor and the perception of the stressor explained 60% of their global stress. The stressor as a significant predictor was an unexpected finding. Boss (1987) states that the degree of stress caused by the event depends not only on the actual magnitude of the event, but also on the family's perception. It appears that men's global stress is higher in the presence of an earlier gestation, occurring before 28 weeks. The men in the McCain and Deatrick study (1993) expressed their vulnerability due to the difficult course and unsure outcome of the pregnancy. In the May (1994) study, the men experienced much worry until the achievement of a sufficient gestational age. Two other predictors representing the stressor were significant: the absence of prenatal classes and having a lower educational level. For the men in this sample, it appears that being informed through perinatal education lowers their stress level. Prenatal classes which discuss at-risk pregnancy usually include information on the different risk conditions and how to cope with such events (Polomeno, 1997). Men with a lower educational level seem to experience a higher level of stress. They may have never been exposed to such a situation, and are not always accompanying their partner to medical visits while considering such outings as more women-focused. Their educational level may also have affected their occupational status, limiting access to better employment and better paying jobs, and producing more financial burdens and worries (Aumann & Baird, 1993;

Huddleston *et al.*, 1993). Their situation may be compounded by the fact that the hospitalized women have to withdraw from work, thus lowering the family income earlier than expected.

Primary stress appraisal (threat and centrality) contributed significantly to the men's global stress, with threat being the more significant predictor. Threat involves loss that has not yet occurred but is anticipated (Lazarus & Folkman, 1984). Whereas the women only focus on the fetus, the men are concerned by both the partner and the fetus. The expectant fathers in the May (1994) study described the at-risk pregnancy condition as coming as a complete surprise, because their expectations had been for a natural event. They also expressed their emotional distress and constant worry regarding the perceived threat to their partners and their unborn children. Centrality, the extent to which important goals, beliefs, and commitments are engaged, was the lesser significant predictor (Peacock & Wong, 1989). Gruen *et al.*, (1988) indicate that problems with personal needs and expectations of others and interpersonal skills (centrality) are related to emotional control. In the May study, the men were interviewed 1 to 2 years after their experiences: although it had been stressful, they reported that it had been worthwhile since their partners and infants had come through the at-risk pregnancy healthy. Peacock *et al.*, (1993) explain that threat and centrality are correlated, since across a variety of stressors, they were the only appraisals that predicted stressfulness or global stress (Peacock & Wong, 1989).

The explained variances for the three similarities from the couples' regression models are almost the same, but lower than those for the women's and men's models. For the couples' model pertaining to actual similarity, only the perception of the stressor, namely

threat and centrality, contributes to explain couples' global stress level. Threat is the more significant predictor of the two. These findings are comparable to the men's model in which threat and centrality are also significant predictors. Thus, when comparing women's and men's self-perceptions of global stress associated with at-risk pregnancy and antenatal hospitalization, couples perceive these stressors as both a threat and having some importance for their well-being. Despite the fact that social support from others (resources) is not a significant predictor, it does approach significance (p=.0615).

Regarding perceived similarity, four of the six SAM dimensions account for a greater proportion of the variance of couples' global stress: threat, centrality, control-self, and control-others. Since threat and centrality are the significant predictors for primary stress appraisal in perceived similarity, these findings are similar to the men's model and the couples' model for actual similarity. However, for the first time, secondary stress appraisal becomes a significant predictor. When the self-perceptions are compared with the metaperceptions for couples' global stress associated with at-risk pregnancy and antenatal hospitalization, then both levels of stress appraisal become important. Primary stress appraisal in this context involves the assessment of the importance of the stressors for the couple's well being, while secondary appraisal focuses on perceptions of control to determine the appropriate patterns of coping with the situation (Peacock & Wong, 1990). It appears that as a couple experiences the two stressors, they go into more progressive dyadic communication, with a shift from a more emotion-based evaluation or appraisal to a more action-focused appraisal. According to Allen and Thompson (1984), if a couple communicates to create shared meaning, the partners will allow one another to know how

they directly perceive particular issues; each will know what the other thinks concerning the issues and also be aware of what the other thinks he/she thinks. If discrepancies or differences emerge at this level, then the partners can try to explain them to each other. Perceived similarity implies the existence of some kind of perceptual process that acts as the basis for the perception (Monsour, 1994). This level of similarity appears to be an important intermediate between actual similarity and understanding.

Concerning understanding, the significant predictors of couples' global stress are the perception of the stressor and the resources. For the first time, centrality rather than threat explains the greatest proportion of the variance for couples' global stress. At this level of dyadic communication, the couples perceive the stressors in terms of what is at stake for their unborn child, their relationship, and their future. Penticuff (1982) explains that the feared loss of the desired child, the emotional turmoil of grieving and hoping, and the possible escape into apathy all interplay uniquely for each partner. According to Dixson and Duck (1993), partners do not automatically comprehend one another right away nor give the same weights and meaning to phenomena that they experience and interpret. The competency level of each partner also influences their capacity for understanding. The more adequately a partner is able to understand the different layers of the other partner's mind, the more the relationship is differentiated and the easier the communication becomes, leading to fuller understanding.

It is noteworthy that the perception of the event through primary stress appraisal, namely threat (also called 'threatening personal meaning' by Lazarus (1993)), diminishes

with progressive layers of similarity from actual similarity to understanding. It appears that as couples share their perceptions of the stressful events and that there is congruence between the perceptions, the threat associated with the stressors is lessened. The impact of this finding is two-fold. Firstly, threatening personal meanings are the most important aspects of psychological stress with which the person or couple must cope, and direct the choice of subsequent coping strategies (Lazarus, 1993). Secondly, the lesser the threat, the more problem-focused forms of coping are used rather than the emotion-focused ones (Lazarus & Folkman, 1984). The third significant predictor at the level of understanding is dyadic cohesion or the degree to which a couple engages in activities together. For the first time, resources via cohesion in the conjugal relationship contributes to explain couples' global stress level at this level. The resources appear to become important as threatening personal meaning diminishes. In our study, the greater the couples' global stress, the less time they spend doing activities together, such as preparation for the child's arrival. The desire to spend time together and to be close is part of an intimate close relationship (Cox, 1999), yet the hospital setting does not promote a couple's intimacy (Chuang *et al.*, 1997; Loos & Julius, 1989). Richardson (1983) found that some degree of cohesion in the relationship was a necessary component to withstand the process of reorganization during pregnancy. All of these findings support Duck's (1994) tenet that understanding is of the utmost importance since it enhances increased levels of similarity and marital satisfaction, and decreases marital conflict.

These findings have implications for the nursing profession. Since Boss (1987) asserts that understanding families' perceptions of stressful events (as a whole and

individually) is basic to understanding their stress level, then nurses need to plan interventions that simultaneously consider the partners' perceptions as well as relational ones. Nurses who have contact with couples immediately following antenatal hospitalization are in a position to help couples consider the different factors that influence partners' stress appraisals of at-risk pregnancy and antenatal hospitalization with the subsequent impact on their conjugal relationship. This is similar to Teichman's (1988) analogy of 'his, hers and their pregnancy': the partners may be in the same physical relationship, yet they have different psychological realities (Acitelli, 1993). However, the shared reality of the partners' perceptions is important for their relationship; this similarity changes continuously for one or the other, or for both partners (Crosby, 1991).

Evidence from the literature proposes a curvilinear relationship for marital satisfaction with the arrival of children (Cowan & Cowan, 1988). Findings from the couples' models by using three types of similarity provide some explanations as to why couples are adversely affected by the children's arrival: misperceptions appear to influence partners' interpretation of the stressors, which could have an impact on the intimacy component of the conjugal relationship. Developing nursing interventions using the actual similarity, perceived similarity and understanding concepts may counter some of the impact of the stressors, potentially reducing the risk of separation and divorce on the family unit. These progressive levels of conjugal communication knowledge can be used by nurses to promote communication within couples' relationships, helping the partners to gain greater understanding of each other and of the situation and as a way for them to reconnect. The personal meanings that the partners attach to these stressors are products of intra-,

interpersonal and situational contexts (Pierce *et al.*, 1990). Lastly, nurses should experiment by modifying the hospital environment so that they are promoting couples' intimacy. Stress and free-flowing intimacy are basically incompatible: couples should be encouraged to make a concerted effort to nurture and sustain at least a minimal level of closeness during times of stress (Page, 1994), even within the hospital setting.

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TABLE 1

Sociodemographic and Relational Characteristics (n=109 couples)

Characteristic	Women	Men
Sociodemographic:	**Mean (SD)**	**Mean (SD)**
Age (years)	28.50 (4.63)	30.35 (5.06)
Range	(19.0-42.0)	(20.0-49.0)
	n (%)	**n (%)**
Education		
High school	23 (21.1)	24 (22.0)
College	43 (39.4)	37 (33.9)
University	43 (39.4)	48 (44.0)
Employment		
Yes	79 (72.5)	102 (93.6)
No	30 (27.5)	7 (6.4)
Employment type[1]		
Management/professional	37 (50.0)	46 (48.4)
White Collar/technical	34 (45.9)	41 (43.2)
Semi-skilled	3 (4.1)	8 (8.4)
Employment time[2]		
Full-time	69 (88.5)	98 (98.0)
Part-time	7 (9.0)	2 (2.0)
Occasional	2 (2.5)	0 (0)

1 nw=74, nm=95
2 nw=78, nm=100

TABLE 2

Pregnancy and Hospitalization Characteristics (n=109 couples)

Characteristic	Mean (SD)
At data collection:	
Gestation age (weeks)	29.97 (.30)
Range	(22.0 – 34.0)
Hospital stay duration (days)	9.75 (.47)
Range	(5.0 – 35.0)
	n (%)
Gravity	
1 pregnancy	75 (68.8)
2 pregnancies	19 (17.4)
3 pregnancies	13 (11.9)
≥4 pregnancies	2 (1.8)
Pregnancy planned (n=105)	
Yes	81 (77.1)
No	24 (22.9)
Prenatal class attendance	
Yes	61 (56.0)
No	48 (44.0)
Diagnosis	
Premature labor	51 (46.8)
Spontaneous rupture of membranes	19 (17.4)
Hypertension	16 (14.7)
Placental complications	13 (11.9)
Gestational diabetes	5 (4.6)
Bleeding	3 (2.8)
Intrauterine growth retardation	1 (.9)
Infection	1 (.9)
Hospital stay duration at data collection	
5-10 days	77 (70.6)
11-15 days	24 (22.1)
>15 days	8 (7.3)
Physical activities limitations	
Yes	99 (90.8)
No	10 (9.2)
Type of limitations (n=108)	
Complete bedrest	64 (59.3)
Bedrest with bathroom privileges	30 (27.8)
Partial bedrest (chair or wheelchair)	4 (3.7)
No restrictions	10 (9.3)

Table 3

Summary Statistics for the Study Variables (n=109 couples)

Variable	Women Mean	Women sd[1]	Men Mean	Men sd[1]	Theoretical Range
Independent Variables:					
Conjugal adjustment: Self-perceptions					
Satisfaction	43.10	3.15	43.05	3.49	0-50
Cohesion	18.73	2.83	18.61	2.90	0-24
Consensus	54.00	5.85	53.44	5.75	0-65
Affection	10.09	1.45	9.84	1.44	0-12
Total Adjustment	125.93	9.94	124.93	10.49	0-151
Conjugal adjustment: Metaperceptions					
Satisfaction	42.62	3.64	43.05	3.73	0-50
Cohesion	18.70	3.03	18.39	3.09	0-24
Consensus	53.20	6.75	52.39	5.96	0-65
Affection	9.76	1.56	9.38	1.56	0-12
Total Adjustment	124.28	11.42	123.95	10.95	0-151
Satisfaction with social support					
"Others"	5.09	.68	5.07	.74	1-6
Stress appraisal: self-perceptions					
Threat	2.29	.75	1.97	.70	1-4
Challenge	3.63	.57	3.56	.62	1-4
Centrality	3.13	.73	3.02	.75	1-4
Control-Self	3.72	.54	3.81	.57	1-4
Control-Others	3.38	.68	3.28	.72	1-4
Uncontrollable	2.15	.78	1.99	.71	1-4
Stress appraisal: metaperceptions					
Threat	2.24	.76	2.17	.72	1-4
Challenge	3.61	.57	3.68	.63	1-4
Centrality	3.08	.74	3.11	.77	1-4
Control-Self	3.74	.51	3.77	.58	1-4
Control-Others	3.29	.73	3.34	.65	1-4
Uncontrollable	2.12	.81	2.08	.77	1-4
Dependent Variable:					
Global stress: self-perception	3.06	.68	2.73	.71	1-4
Global stress: meta-perception	3.04	.67	3.06	.67	1-4

Table 4

Regression of the Stressor, Conjugal Adjustment, Social Support Satisfaction, and Primary and Secondary Stress Appraisal on Global Stress Women's Model

Women's Full Model

Variable entered	**β**	**p**	**R^2**	**Adj. R^2**	**F**	**df**	**p**	**R^2 Change 3 vs. 2 & 1**	**p**
Block 1. Stressor:			51.59	44.30	7.08	(14,93)	.0000	39.68	.0000
Gestation	-0.04	.6453							
Gravidity	0.10	.1985							
Physical restriction	0.0005	.9952							
Block 2. Resources:									
Satisfaction	-0.004	.9674							
Cohesion	0.070	.3967							
Consensus	-0.140	.1510							
Affection	-0.050	.6027							
Social support satisfaction-others	-0.030	.6866							
Block 3. Perception of the Stressor Event:									
Threat	0.55	.0000							
Challenge	0.18	.0453							
Centrality	0.18	.0335							
Control-Self	-0.08	.3654							
Control-Others	-0.06	.4701							
Uncontrollable	0.11	.2141							

Table 5

Regression of the Stressor, Conjugal Adjustment, Social Support Satisfaction, and Primary and Secondary Stress Appraisal on Global Stress Men's Model

								R^2 Change 3 vs. 2 & 1	
			Men's Full Model						
Variable entered	**β**	**p**	**R^2**	**Adj. R^2**	**F**	**df**	**p**	**R^2 Change 3 vs. 2 & 1**	**p**
Block 1. Stressor:			60.21	52.78	8.10	(17,91)	.0000	47.75	.0000
Gestation	-0.12	.0255							
Gravidity	-0.03	.7164							
Prenatal Classes	0.17	.0220							
Age	0.01	.8751							
Education	0.17	.0236							
Marital Status	0.04	.6024							
Block 2. Resources:									
Satisfaction	-0.01	.9432							
Cohesion	-0.02	.8169							
Consensus	0.05	.5772							
Affection	0.06	.5627							
Social support satisfaction-others	-0.05	.5820							
Block 3. Perception of the Stressor Event:									
Threat	0.59	.0000							
Challenge	0.03	.7570							
Centrality	0.18	.0328							
Control-Self	-0.11	.1963							
Control-Others	0.16	.0691							
Uncontrollable	0.12	.1412							

Table 6

Regression of the Stressor, Conjugal Adjustment, Social Support Satisfaction, and Primary and Secondary Stress Appraisal on Global Stress Couples' Models

Couples - Actual Similarity (Full Model)

Variable entered	β	p	R^2	Adj. R^2	F	df	p	R^2 Change 3 vs. 2 & 1	p
Block 1. Stressor:			33.32	24.09	3.61	(13,94)	.0001	18.99	.0005
Gestation	.05	.5644							
Gravidity	.15	.0926							
Block 2. Resources:									
Satisfaction	0.004	.9629							
Cohesion	-.11	.2437							
Consensus	-0.06	.5407							
Affection	-0.02	.8104							
Social support satisfaction-others	.21	.0615							
Block 3. Perception of the Stressor Event:									
Threat	0.30	.0014							
Challenge	0.004	.9656							
Centrality	0.26	.0108							
Control-Self	0.07	.4505							
Control-Others	0.008	.9348							
Uncontrollable	0.01	.9130							

Couples - Perceived Similarity (Full Model)

Variable entered	β	p	R^2	Adj. R^2	F	df	p	R^2 Change 3 vs. 2 & 1	p
Block 1. Stressor:			31.82	22.39	3.38	(13,94)	.0003	24.16	.0001
Gestation	0.02	.8635							
Gravidity	0.0	.9950							
Block 2. Resources:									
Satisfaction	0.02	.8689							
Cohesion	0.18	.0675							
Consensus	0.02	.8396							
Affection	-0.02	.8767							
Social support satisfaction-others	0.15	.1211							
Block 3. Perception of the Stressor Event:									
Threat	0.24	.0168							
Challenge	-0.20	.0618							
Centrality	0.27	.0079							
Control-Self	0.23	.0262							
Control-Others	-0.30	.0041							
Uncontrollable	0.04	.6817							

Couples – Understanding (Full Model)

Variable entered	β	p	R^2	Adj. R^2	F	df	p	R^2 Change 3 vs. 2 & 1	p
Block 1. Stressor:			31.79	22.36	3.37	(13,94)	.0003	18.79	.0007
Gestation	-0.01	.9237							
Gravidity	0.04	.6489							
Block 2. Resources:									
Satisfaction	-0.12	.2116							
Cohesion	0.21	.0236							
Consensus	0.02	.8112							
Affection	0.07	.4732							
Social support satisfaction-others	0.17	.0746							
Block 3. Perception of the Stressor Event:									
Threat	0.23	.0245							
Challenge	0.04	.6964							
Centrality	0.26	.0140							
Control-Self	0.04	.6433							
Control-Others	0.07	.4513							
Uncontrollable	0.07	.4410							

Figure 1

Explanatory Model of First-Time Parenting Couples' Stress Associated with At-Risk Pregnancy and Antenantal Hospitalization

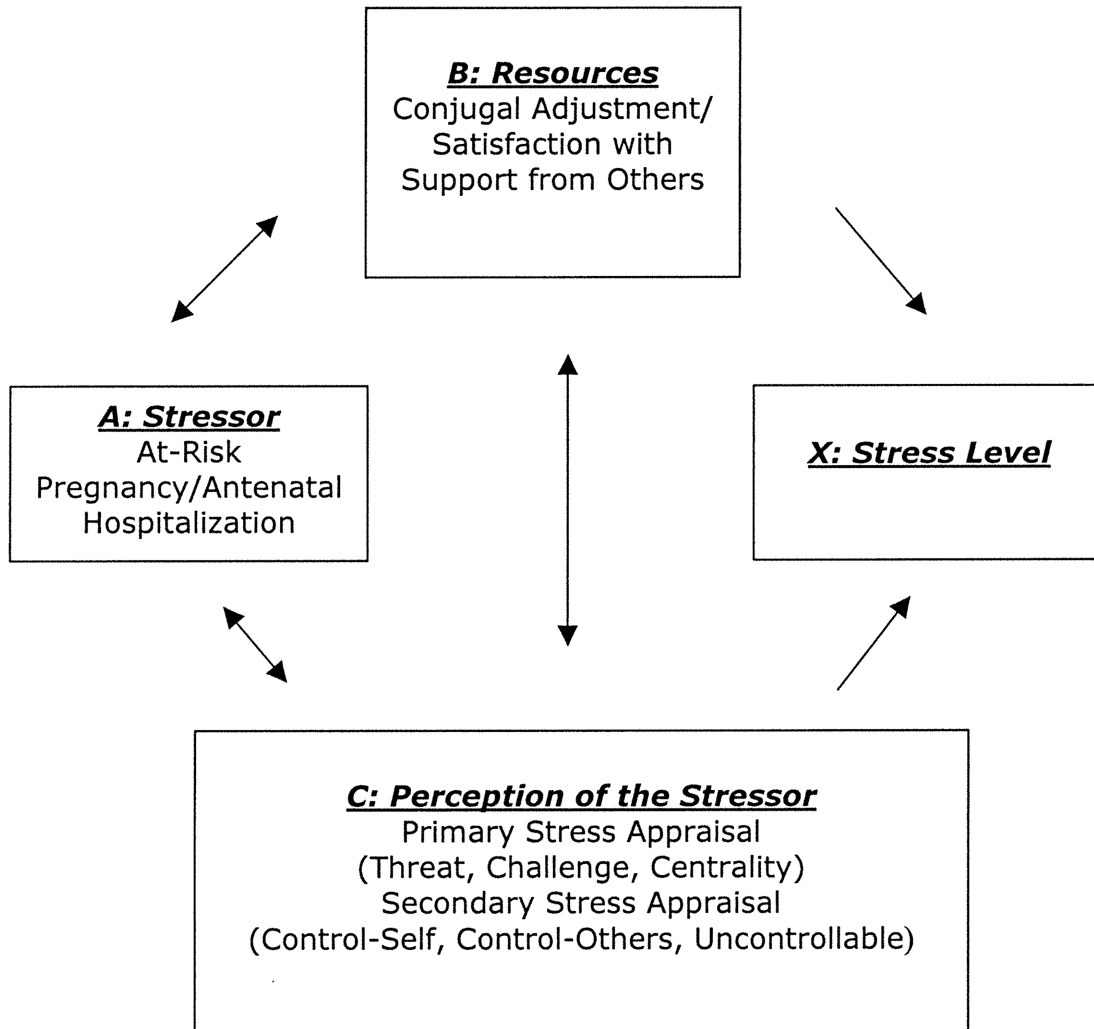
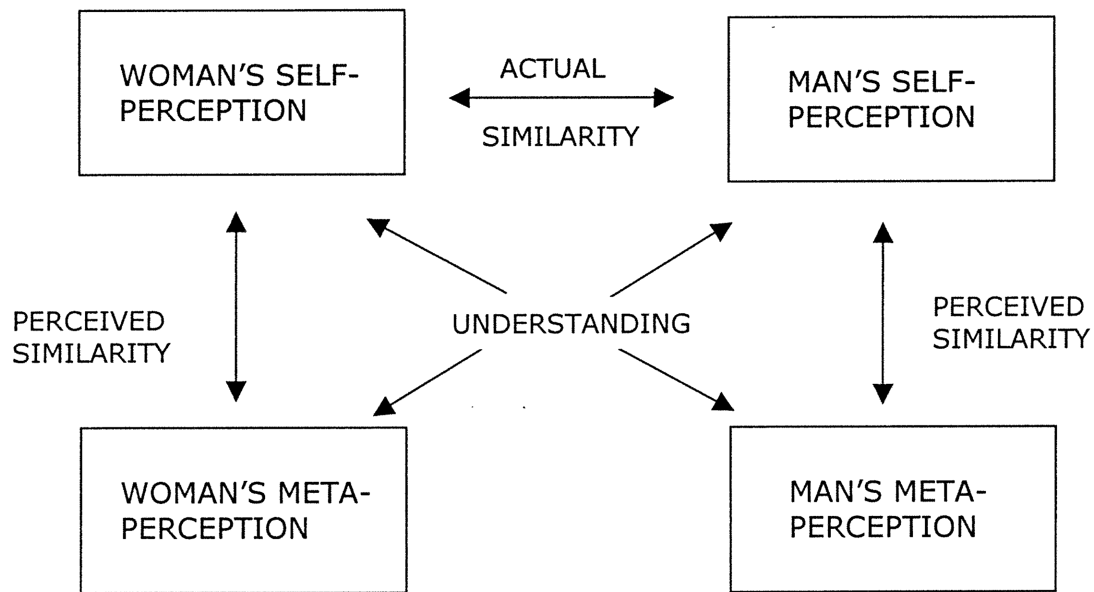


FIGURE 2

Perceptual Congruence Variables



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CHAPTER 5

Third Article:

First-Time Parenting Couples' Stress Appraisal of At-Risk Pregnancy and Antenatal Hospitalization

Submitted to Stress Medicine

Third Article:

First-Time Parenting Couples' Stress Appraisal of

At-Risk Pregnancy and Antenatal Hospitalization

Submitted to Stress Medicine

Background to the article:

In this article, first-time parenting couples' perceptions of stress associated with at-risk pregnancy and antenatal hospitalization are examined: primary stress appraisal (threat, challenge and centrality), secondary stress appraisal, and global stress appraisal. These stress perceptions are explored from three perspectives: women's, men's and couples'. For the couples' perspective, three levels of similarity are considered: actual similarity, perceived similarity, and understanding. Also, five hypotheses are tested which are included in the article.

This is the first study to use perceptions in the context of stress associated with at-risk pregnancy and antenatal hospitalization. Nurses in perinatal health care can benefit from these findings in gaining more understanding about first-time parenting couples' stress in relation to the two stressors, thereby planning interventions to assist couples in their coping and adaptation to the stressful situation.

First-time parenting couples' stress appraisal of

at-risk pregnancy and antenatal hospitalization

by

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SUMMARY

This study examines first-time parenting couples' perceptions of stress concerning at-risk pregnancy and antenatal hospitalization. The purposes of the study were: to examine partners' primary (threat, challenge, centrality), secondary (control-by-self, control-by-others, uncontrollability), and global stress; to explore three levels of similarity (actual similarity, perceived similarity and understanding); and, to compare congruence between them in relation to the two stressors. One hundred and nine couples completed the Personal and Pregnancy Information Guide (PPIF) and the Stress Appraisal Measure (SAM).

Despite the couples' moderate stress appraisal, women perceive at-risk pregnancy and antenatal hospitalization as a threat, and their global perception of stress is significantly higher than that of the men. Men perceive the same stressors as a challenge and being in control of the situation. The couples are congruent in actual similarity except for challenge and self-control; and there are gender differences in perceived similarity and understanding. There is congruence between men's perceived similarity and actual similarity, between men's understanding and actual similarity, between men's understanding and men's perceived similarity, and between women's understanding and women's perceived similarity. We can conclude that the women had more difficulty with perceptions at all levels with a subsequent impact at the level of understanding.

Keywords: at-risk pregnancy, antenatal hospitalization, first-time parenthood, stress appraisal, actual similarity, perceived similarity, understanding

INTRODUCTION

Similarity of perceptions between conjugal partners is important for the maintenance of positive patterns of interaction within the family during periods of stress.[1] How they develop and share meaning from stressful events through their perceptions is part of the stress process.[2] No matter how threatening a stressor might be, it will only evoke stress reactions if the partners perceive the stressor as threatening.[3] What is important is how they perceive stressful situations, and how their perceptions influence each other.[4] Congruency between these perceptions can become the family collective perception.[5] It is also essential to take into account the context of the stressful situation and its impact on the family perception.[3,5] There is a paucity of studies focusing on couples' appraisal of stress in the context of at-risk pregnancy and antenatal hospitalization, therefore, our study contributes to our understanding of these issues. These data are a subset of a larger one focusing on these two stressors and the quality of the conjugal relationship.

a. Literature review: at-risk pregnancy and antenatal hospitalization

Stress during pregnancy is inevitable.[6-8] It affects the conjugal partners independently, and influences their relationship.[9] Couples expecting their first child may be more stressed than the ones who have children[10-12]. This is often the first time that they must deal with and adjust to so many concurrent changes.[13] When complications arise during pregnancy[7,14-18] and if hospitalization is required, the

stress is further aggravated.[19-22] Between 10%[15] and 20%[7,23] of pregnancies are labeled at-risk, and from 12%[24] up to 25%[25] of at-risk pregnant women are hospitalized.[24] These two stressors may put a strain on the marriage,[23,26-28] potentially leading to separation and divorce.[23,26,29-31]

In the literature focusing on pregnancy, the women's viewpoint has been greatly represented, while the men's and relational viewpoints have been inferred through the women, or through more recent, conjugal studies. Several authors report that pregnant, hospitalized women may become anxious, depressed, withdrawn, angry, lonely, powerless and bored as they try to deal with the stressors,[19,21,32-33] often resulting in a roller coaster pattern of emotional response.[34] Separation from home and the family is the major concern of hospitalized women,[7,27,34-36] even with a liberal visiting policy.[37] They are also frustrated at not being able to fulfill their marital and social roles,[38] and denounce the lack of intimacy within the hospital setting.[21] The women's ability to adapt[8,27] may be jeopardized by their stress level.[39] Stress seems to be greater as the length of hospitalization increases,[36,38,40-42] with gradual adaptation at 7 to 8 days.[27,43]

Through women's reports, the men are distressed[38] about finding themselves as outsiders of an experience which they consider important,[27] and about their sudden increase in household responsibilities.[25,44] The women become more stressed when they feel their partners are anxious and stressed,[38] yet their partners can be a positive influence by reducing the women's stress. The partner can be both

a source and a mediator of stress.[44] Only one study[45] reported directly on men's reactions to maternal physical restriction for preterm labor: they found that maintaining a close and mutually satisfying relationship with their partner was a challenge, even when she was at home.

From the relational viewpoint, women are uncertain about the partner's love for her and has fears of his desertion[46]. The partner's unpredictable moods and lack of concern[46] can result in the couples having increased arguments.[16,46] The partners often deal with their feelings separately causing emotional distress[26], which could persist after birth.[7] For certain couples, this may be their first separation since their wedding.[27] In a retrospective study,[47] 21 men and women directly express their vulnerability and anxiety at the beginning of the at-risk pregnancy experience. In the Mercer, Ferketich and DeJoseph study,[48] men from the at-risk group report a less optimal partner relationship than low-risk men during pregnancy. While the hospital setting may be stressful for some women and their partners, it can also reduce their stress,[30,49] even for those on bedrest[50], since their sense of security is increased by receiving care from the health care team.

b. Conceptual background on family stress and perceptions

The middle-range theory[51] underlying this study is Boss' model[5,52], "The Contextual Model of Family Stress". Events affect the family directly and indirectly and can result in family stress[5], defined as a tension in the family system. She

theorizes that the level of stress felt by the family is based on the stressful event, their resources and their perception of the event. Boss[5] also posits that the perception of the event is the most powerful variable in explaining how the family defines and reacts to a stressful event. Perceptions among members may differ, but when individual perceptions are congruent, a collective or family perception can be obtained.

We expanded two parts of Boss' model[5]: the definitions of stress evaluation and perceptions. For stress evaluation, Peacock and Wong[53] divided stress appraisal into three types: *primary*, *secondary*, and *global appraisals*. Primary appraisal relates to threat, challenge and centrality. *Threat* refers to the potential for loss or damage from the event, whereas *challenge* refers to the potential for personal growth. *Centrality* involves the perceived importance of the event by a person regarding his or her well being. Secondary appraisal relates to the perception of control regarding the stressful event: the extent to which the situation is controllable-by-self, controllable-by-others, or uncontrollable-by-anyone. The *global appraisal* of stress relates to the total degree of stress perceived by the person regarding the stressful event.

The perception that a person has of the situation is called a direct perception or *self-perception*, while a person's perception of another person's perception is referred to as a *metaperception*.[54-55] Combinations of self-perceptions and metaperceptions are referred to as "perceptual congruence variables". When both

partners' self-perceptions are compared and found to be congruent, there is *actual similarity*; when one partner's self-perception is compared with his/her own metaperception and found to be congruent, there is *perceived similarity*; and when a partner's metaperception is compared with the other's self-perception and found to be congruent, there is *understanding*.[56,57] Thus, three levels of similarity or congruence as part of dyadic communication are to be considered in this study: actual similarity, perceived similarity, and understanding. These types of similarity represent progressive levels of dyadic communication.

- place Figure 1 here -

Examining the internal environment of the conjugal relationship[58] can be attained through the study of perceptions.[59] Congruence in conjugal perceptions[60-62] is a crucial dimension of the family system,[1,63] often called the glue of marriage[64]. Functional families are characterized by high similarity between partners' perceptions[1]. Several scholars underline the importance of congruence in developing a shared reality in relationships, which potentially leads to understanding between the partners.[1,65-66] What one partner thinks the other is thinking is at the heart of all relationships.[55] Understanding is of the utmost importance, enhancing increased levels of similarity and marital satisfaction, and decreasing marital conflict.[66] Quality conjugal communication is reflected by congruence of perceptions; therefore, congruence among the three levels of dyadic communication will be explored in this study.

Kenny and Acitelli[63] indicate that interpersonal perceptions are the building blocks through which partners construct shared understandings of their experiences; however, "we need to focus on the various context and content areas in which these perceptions occur" (p. 429). The stressors of at-risk pregnancy and antenatal hospitalization are the focus of the current study. Based on these conceptions and on findings from the literature on intimate relationships,[54-57,67] two sets of hypotheses were formulated regarding the studied population:

Though partners forge a shared reality of their relationship with time,[65] gender differences may erupt during at-risk pregnancy and hospitalization:

Set #1: H1: There is a significant difference between women and men in the perceived similarity of global stress appraisal.

H2: There is a significant difference between women and men in understanding of global stress appraisal.

Perceptual differences are minimized within the conjugal relationship,[65] yet congruence between different combinations of similarities may be affected by the two stressors:

Set #2: H3: There is congruence between women's and men's perceived similarity and actual similarity for global stress appraisal.

H4: There is congruence between women's and men's understanding and actual similarity for the global stress appraisal.

H5: There is congruence between women's and men's understanding and women's and men's perceived similarity for global stress appraisal.

METHOD

a. Participants

Subjects were recruited from 12 hospitals (Levels II and III) in the Montréal region. Inclusion criteria were: 1) diagnosis of at-risk pregnancy, 2) hospitalization ≥5 days, 3) gestation between 20 and 34 weeks, 4) both partners expecting their first child, 5) maternal and paternal age ≥18 years, 6) cohabitation for at least one year, 7) born in Québec, and 8) speak and write French. Exclusion criteria included an at-risk pregnancy due to a chronic condition. All hospital ethics committees gave approval for this study. Data were not collected on refusers since the ethics committees prohibited access to the women's charts. The final sample consisted of 109 couples from 180 couples who agreed to participate. This produced a power of 92.5%, based on Cohen's[68] statistical power with a significance level of 0.05, a power of 0.80, a medium-effect of 0.30, using a two-tailed test.

b. Data collection procedures

The study was described and an information sheet was distributed to potential subjects. Women were then encouraged to speak with their partner regarding his participation. Some men required an interview or a telephone contact. Once they agreed to participate, they both signed the consent form. Then they received the questionnaires and were instructed to: 1) fill in the questionnaires

separately, and as much as possible, at the same time, 2), not to consult with each other, and 3) to put their questionnaires into the envelopes and to seal them. The Stress Appraisal Measure (SAM) was answered twice: the participant first had to fill in the questionnaire from his/her viewpoint (self-perception); then, to adopt the partner's viewpoint and to answer as he/she would (metaperception).

c. *Instruments*

The Stress Appraisal Measure (SAM) and the Personal and Pregnancy Information Guide (PPIF) were used for data collection. The SAM (Peacock and Wong[53]) is a three-part self-administered questionnaire containing 28 items (7 subscales). The first part, primary appraisal, contains three subscales: threat, challenge and centrality. The second part, secondary appraisal, measures the perception of control regarding the event with three subscales: self-control, control-by-others, and uncontrollable. The last part measures the degree of global stress (stressfulness). Subjects indicate their degree of stress on a 5-point Likert type scale. A mean is obtained for each subscale, a higher mean represents a greater stress level. The SAM has adequate internal consistency and convergent validity, and all subscales are independent. A French version[69] of the SAM was produced by using cross-validation methodology[70]. Cronbach's alpha values for the present study for the total sample range from .52 to.75 for the six subscales and .64 for the stressfulness scale. When internal consistency is analyzed by gender, the results are similar. These values are similar to the ones for the original English version[53] and

the French one[69]. The PPIF contains three parts seeking pregnancy, personal and relational information

d. Data analysis

All pregnancy, personal and relational data as well as the study variables were analyzed using descriptive statistics.[71] Student's t-test and the Chi-square test were used to compare means for continuous and dichotomic/proportions variables. The intraclass coefficient[72-73] was used in the comparison between the women and men for non-independence testing. Paired t-tests were applied on the mean differences between the two groups.[71] The Pearson correlation coefficient[74] was used for the perceptual congruence variables and the Pearson-Filon test with Steiger modification[75-76] for correlated correlations. All tests were performed with an overall significance level of 5% ($p < .05$). A random sample of 10 couple records were selected for cross-validation purposes (9.2%). Data analysis was carried out using the SPSS for Unix (Release 6.14) statistical program.

RESULTS

a. *Sample*

Table 1 presents the sociodemographic and relational characteristics for the participants. Fifty-five couples (50.5%) were married. The duration mean for the conjugal relationship was 6.2 years (S.D.=3.71), ranging from 1 to 18 years. The duration mean for cohabitation was 4.19 years (S.D. = 2.88), ranging from 1 to 15 years. The family income was less than 19,000 dollars for 11% of couples (n = 11) and greater than $60,000 for 30% (n = 30). The only disparity between the women and the men was in the reporting of family revenue ($\chi^2 = .262$, df = 98, p = .037), men reported higher family income than women. There were no significant differences for pregnancy-related and hospitalization characteristics (see Table 2) when hospital care was dichotomized as either Level II or Level III .

b. *Test of non-independence and descriptive statistics*

When the couple is the unit of analysis, the first consideration is to determine if women and men are to be treated as independent samples. According to Table 3, the only intraclass correlation coefficient,[72-73,75,77] which was not significant, was the challenge subscale of self-perceptions. Thus, the two groups should be considered as non-independent. Table 4 presents the descriptive statistics of the SAM subscales for both partners' self-perceptions.

c. Actual similarity

Actual similarity is the comparison between women's and men's self-perceptions. Tests of discrepancy and association were conducted. Paired t-tests[74,78-79] were carried out to determine if the differences between the means of each subscale for the two groups were statistically significant (see Table 5). There were significant differences between the means for threat and global stress. The women perceive at-risk pregnancy and antenatal hospitalization as a threat, and their global stress is significantly higher than the men. The Pearson correlation coefficient,[75] assessed the strength of the association (see Table 6) between the seven subscales of the self-perceptions. There were significant positive relationships except for challenge and self-control: partners within the couple did not agree on their perceptions concerning at-risk pregnancy and antenatal hospitalization as a challenge and being in control of the situation.

d. Perceived similarity

Two types of perceived similarity are obtained when one's self-perception is compared with one's meta-perception: women's and men's perceived similarity. There were no significant differences for the women's perceived similarity (see Table 5). There were significant discrepancies between the means of threat and stressfulness for the men. Thus, when comparing the men's perception of the stressors with how they thought their female partners perceived them, they

underestimated or lacked to metaperceive threat and global stress from the women's viewpoint. There were significant positive relationships for all of subscales for women and men's perceived similarities (see Table 6). When the Pearson-Filon test with Steiger modification[75,76] was applied, men exhibited the stronger, reliable correlation for control-by-others ($z = 2.43$, $p = .01$, two-tailed), while the women exhibited stronger, reliable correlation for uncontrollability ($z = 2.16$, $p = .02$, two-tailed).

The means of global stress for women's perceived similarity was significantly higher than the means of global stress for men's perceived similarity. The discrepancy between the means for women's and men's perceived similarity is significant, then the first hypothesis was supported (see Difference #1 in Table 7).

e. *Understanding*

Two types of understanding are obtained when one partner's meta-perception (how that partner thinks the other partner will perceive the situation) is compared with the other partner's self-perception: women's understanding and men's understanding. For the women, there were significant discrepancies between the means for threat and stressfulness, yet there were no significant discrepancies for the men (see Table 5). The men had more complete understanding when compared to the women: there were no significant differences between the means of how the men thought their partners would perceive the two stressors, and how the women actually

perceived the stressors.

The means of global stress for women's understanding was significantly lower than the means of global stress for men's understanding (see Table 6). When the Pearson-Filon test with Steiger modification[75,76] was applied, the sizes of women's and men's correlations for understanding did not statistically differ. The means of global stress for women's and men's understanding are presented in Table 7. The discrepancy between the means is significant, then the second hypothesis was supported (see Difference #2 in Table 7).

f. Hypothesis-testing on dyadic communication

Regarding the hypotheses (see set #2) associated with congruence of different levels of similarity, the three hypotheses were only partially supported when Paired t-tests were conducted. The means of global stress for actual similarity, women's and men's perceived similarity, and women's and men's understanding are presented in Table 7. There was congruence between men's perceived similarity and actual similarity (see Differences #3 and #4), between men's understanding and actual similarity (see Differences #5 and #6), between men's understanding and men's perceived similarity, and between women's understanding and women's perceived similarity (see Differences #7, #8, #9, and #10). Since there were a greater lack of consensus between the different levels of similarity for the women (Differences #3, #6 and # 8) than for the men (Difference # 7), we can conclude that

the women had more difficulty with perceptions at all levels. This had a subsequent impact for the women at the level of understanding (Differences #6, #7, #8).

DISCUSSION

Dyadic evaluations by using various combinations of self-perceptions and metaperceptions have never been conducted in the context of at-risk pregnancy and antenatal hospitalization. This study contributes to our understanding of these dyadic evaluations in times of stress and how a couple's internal dynamics can be grasped through the combinations of perceptions. How the family perceives an event or situation that is happening to them is critical in determining their degree of stress.[5]

The women and the men are perceiving only moderate stress from the two stressors. We expected higher stress levels based on previous studies.[80] However, the couples who participated were not too debilitated by the experience. The participants in both arms of a randomized clinical trial on home care vs. hospital care management for preterm labor, also manifested moderate stress[41]. These findings and ours do not support those from previous studies.[36,80]

Women perceive at-risk pregnancy and antenatal hospitalization as a threat, and their global stress is significantly higher than their partners. This finding is understandable since the women perceive the potential for loss or harm, as they are the ones who are pregnant and directly experiencing hospitalization.[80] This also confirms Lowery's[3] tenet that if a stressor is perceived as a threat, then a family member will manifest a stress reaction. The men perceive the same stressors as a

challenge and being in control of the situation. Challenge means that there is potential for personal growth from the experience, and feeling in control means that there is enough personal coping resources to meet the situational demands of the two stressors[53]. The women's moderate stress level can be partially explained by the men's positive perception , which appears to counterbalance the women's negative one. It is plausible that the men help to calm the women through their sense of control over the situation. Both partners' perceptions can have an impact on the quality of their relationship. In a study[82] of couples' cognitive appraisals for amniocentesis both partners' ratings of challenge were higher than their ratings of threat, yet the women perceived amniocentesis as more threatening than the men. Certain families tend to manage more successfully stressful situations when they are able to define these situations optimistically (as a challenge) and proactively[81]. Thus, the difference in conjugal perceptions of the two stressors appears to offer some benefits and opportunities to reduce the couple's stress.

There were two major findings from hypothesis testing associated with congruence of the three types of similarity for global stress appraisal. For the first finding, the women did not demonstrate congruence in global stress appraisal between perceived similarity and actual similarity, and between understanding and actual similarity. Although women are more versatile in different levels of intimacy,[83] reflecting their greater abilities in communication as compared to the men, in times of stress, they may have more difficulty to perceive the stress of their male partners and to cross-compare these viewpoints with their own. Also, men

usually do less of the emotional and interactional work that intimacy requires, and often impose intimacy limits in their relationships[83]. In such times of stress, men can develop intimacy through greater sensitivity to the women's situation, and through better communication by becoming more aware of her emotional state. Broom[84] explains that a new mother who is concerned with her baby may be less attentive to her husband and less accurate in assessing her spouse's point of view.

The second finding is that the most significant changes occurred at the level of understanding, which is of the utmost importance in communication since it enhances increased levels of similarity and marital satisfaction[66]. Despite the fact that data were collected at 5 days of hospital admission, the couples were just beginning to adapt, to expend energy on exchanging their viewpoints, and to try to understand each other. Some couples will expend much effort and energy at the beginning of the stressful situation in order to have the relationship return to normalcy as soon as possible[81]. The strategy of couples to share feelings concerning a life experience allows them to be more aware of each other's situations[85]. Accurate understanding between partners lays the foundation for building intimacy,[63,86] which is the most affected by pregnancy.[87] Many first-time parenting couples encounter the first major test of their relationship when they deal with at-risk pregnancy and antenatal hospitalization. How they handle the stress during this time period could potentially establish a pattern of stress response for future stressful situations. While Broom's[84] study focused on consensus about the marital relationship during the transition to parenthood, she suggests that couples who had

increased understanding of each other's views would also be able to more efficiently define problems (i.e., appraise stress) and provide needed support for their partners.

When comparing the men's perception of at-risk pregnancy and antenatal hospitalization with how they thought their female partners perceived the same stressors (H1), they underestimated or failed to metaperceive threat and global stress from the women's viewpoint. The women were able to metaperceive all aspects of stress appraisal. The men may have been trying to keep in control of the stressful situation and reduce their own stress by being optimistic and raising the women's spirit or morale, consequently, negating the women's perceptions. While listening is part of metaperceiving, women are more responsive and attentive listeners than men.[83,88-89] Women are usually the emotional nurturers in the relationship and more skilled in intimacy.[66,88] They are used to self-disclosure, seeking the other's viewpoint, and the continuous movement between both. Men are not raised nor socialized to this aspect of relationships.[90] The men in this study are of a certain age and have been in the relationship for a certain amount of time, accounting for their potential need to continue to learn to metaperceive by better listening and being more attentive.

The men had more understanding of their partners' stress experience than the women of theirs, since the comparison between the men's metaperception was fully congruent with the women's self-perception (H2). The men have acquired this aspect of relational maturity. Emotion work involving the efforts that partners make to

understand each other, to empathize with the other's situation, and to make a partner's feelings part of one's own[91] require time, energy, effort, and skill.[83] Men evolve intimacy maturity within a committed relationship and with time.[88]

On the other hand, since the women perceive the situation as a threat and are more stressed than the men, this may have an impact on their capacity for understanding. It is difficult to be an understanding partner when one is experiencing stress, especially during childbearing. However, the couples in this study appear to easily share their feelings and thoughts about the stress associated with the two stressors. Under such circumstances, there is potential for the male partners to be more supportive through their understanding capacity and help reduce the women's stress. These findings confirm Levant's proposition[90] that there is a connection crisis amongst contemporary men which requires them to foster closeness and connectedness with their partners. The men must foster these qualities in ways they have never learned to do and were never required to do before.

According to Kenny and Acitelli,[63] if similarity between conjugal partners promotes stability and reduces conflict, the assessment of similarity between them becomes a matter of importance to the entire family. How couples evaluate and determine the meaning of these stressors, and the similarities[66] that may result from the comparisons of perceptions could, in the long-term, affect childrearing and the parent-child bond. Health care providers must direct more effort to working with couples to facilitate family communication, especially those couples who are

experiencing difficulties during the transition to parenthood.[84] Clinicians have always been interested in the use of perceptions to study families.[1] This approach, also pertinent for conjugal and family stress research,[92-93] can be considered as an alternative to the traditional one in which insider or subjective means are combined with outsider or objective ones.[94-95] Thus, this approach is recommended for research with couples and families experiencing stress, since multiple research methods may be too taxing for them.

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TABLE 1

Sociodemographic and Relational Characteristics (n=109 couples)

Characteristic	Women	Men
Sociodemographic:	**Mean (SD)**	**Mean (SD)**
Age (years)	28.50 (4.63)	30.35 (5.06)
Range	(19.0.-42.0)	(20.0-49.0)
	n (%)	**n (%)**
Education		
High school	23 (21.1)	24 (22.0)
College	43 (39.4)	37 (33.9)
University	43 (39.4)	48 (44.0)
Employment		
Yes	79 (72.5)	102 (93.6)
No	30 (27.5)	7 (6.4)
Employment type[1]		
Management/professional	37 (50.0)	46 (48.4)
White Collar/technical	34 (45.9)	41 (43.2)
Semi-skilled	3 (4.1)	8 (8.4)
Employment time[2]		
Full-time	69 (88.5)	98 (98.0)
Part-time	7 (9.0)	2 (2.0)
Occasional	2 (2.5)	0 (0)

1 nw=74, nm=95
2 nw=78, nm=100

TABLE 2

Pregnancy and Hospitalization Characteristics (n=109 couples)

Characteristic	**Mean (SD)**
At data collection:	
Gestation age (weeks)	29.97 (.30)
Range	(22.0 - 34.0)
Hospital stay duration (days)	9.75 (.47)
Range	(5.0 - 35.0)
	n (%)
Gravity	
1 pregnancy	75 (68.8)
2 pregnancies	19 (17.4)
3 pregnancies	13 (11.9)
≥4 pregnancies	2 (1.8)
Pregnancy planned (n=105)	
Yes	81 (77.1)
No	24 (22.9)
Prenatal class attendance	
Yes	61 (56.0)
No	48 (44.0)
Diagnosis	
Premature labor	51 (46.8)
Spontaneous rupture of membranes	19 (17.4)
Hypertension	16 (14.7)
Placental complications	13 (11.9)
Gestational diabetes	5 (4.6)
Bleeding	3 (2.8)
Intrauterine growth retardation	1 (.9)
Infection	1 (.9)
Hospital stay duration at data collection	
5-10 days	77 (70.6)
11-15 days	24 (22.1)
>15 days	8 (7.3)
Physical activities limitations	
Yes	99 (90.8)
No	10 (9.2)
Type of limitations (n=108)	
Complete bedrest	64 (59.3)
Bedrest with bathroom privileges	30 (27.8)
Partial bedrest (chair or wheelchair)	4 (3.7)
No restrictions	10 (9.3)

Table 3

Intraclass Correlation Coefficients for SAM (n=109 couples)

Subscale	Self-Perceptions Intraclass Correlation Coefficient	F Statistic[a]	p-value
Primary Appraisal:			
Threat	.23	1.66	.0045
Challenge	.14	1.31	.0805
Centrality	.35	2.09	.0001
Secondary Appraisal:			
Self-control	.17	1.40	.0402
Control-others	.20	1.51	.0162
Uncontrollable	.31	1.93	.0004
Global Appraisal:			
Stressfulness	.24	1.74	.0022
Subscale	**Meta-Perceptions Intraclass Correlation Coefficient**	**F Statistic[a]**	**p-value**
Primary Appraisal:			
Threat	.33	1.98	.0002
Challenge	.26	1.71	.0028
Centrality	.34	2.03	.0001
Secondary Appraisal:			
Self-control	.40	2.33	.0000
Control-others	.41	2.37	.0000
Uncontrollable	.27	1.75	.0020
Global Appraisal:			
Stressfulness	.35	2.06	.0001

[a]df=108

Table 4

Means and Standard Deviations for the Subscales of SAM (n=109 couples)

Subscale	Self-Perceptions		Meta-Perceptions	
	Women Mean, (SD)	Men Mean, (SD)	Women Mean, (SD)	Men Mean, (SD)
Primary Appraisal:				
Threat	2.29 (.75)	1.97 (.70)	2.24 (.76)	2.17 (.72)
Challenge	3.63 (.57)	3.56 (.62)	3.61 (.57)	3.68 (.63)
Centrality	3.13 (.73)	3.02 (.75)	3.08 (.74)	3.11 (.77)
Secondary Appraisal:				
Self-control	3.72 (.54)	3.81 (.57)	3.74 (.51)	3.77 (.58)
Control-others	3.38 (.68)	3.28 (.72)	3.29 (.73)	3.34 (.65)
Uncontrollable	2.15 (.78)	1.99 (.71)	2.12 (.81)	2.08 (.77)
Global Appraisal:				
Stressfulness	3.06 (.68)	2.73 (.71)	3.04 (.67)	3.06 (.67)

Table 5

Paired t-tests on Perceptual Congruence Variables (n=109 couples)

Subscale	Self-Perceptions (1) Women Mean, (SD)	Self-Perceptions (2) Men Mean, (SD)	Meta-Perceptions (3) Women Mean, (SD)	Meta-Perceptions (4) Men Mean, (SD)
Primary Appraisal:				
Threat	2.29 (.75)	1.97 (.70)	2.24 (.76)	2.17 (.72)
Challenge	3.63 (.57)	3.56 (.63)	3.61 (.57)	3.68 (.63)
Centrality	3.13 (.73)	3.02 (.76)	3.08 (.74)	3.11 (.77)
Secondary Appraisal:				
Self-control	3.72 (.54)	3.81 (.57)	3.74 (.51)	3.77 (.58)
Control-others	3.38 (.69)	3.28 (.72)	3.29 (.73)	3.34 (.65)
Uncontrollable	2.15 (.79)	1.99 (.72)	2.12 (.81)	2.08 (.77)
Global Appraisal:				
Stressfulness	3.06 (.68)	2.73 (.72)	3.04 (.67)	3.06 (.67)

p-values of differences

Subscale	Actual Similarity 1 & 2 t value (p)	Perceived Similarity Women 1 & 3 t value (p)	Perceived Similarity Men 2 & 4 t value (p)	Understanding Women 3 & 2 t value (p)	Understanding Men 4 & 1 t value (p)
Primary Appraisal:					
Threat	3.75 (.000)	.76 (.449)	-2.99 (.003)	-3.26 (.002)	1.51 (.134)
Challenge	.95 (3.44)	.24 (.811)	-2.13 (.035)	-.79 (.431)	-.85 (.397)
Centrality	1.37 (.174)	.80 (.427)	-1.30 (.196)	-.70 (.482)	.25 (.807)
Secondary Appraisal:					
Self-control	1.30 (.198)	-.32 (.747)	.64 (.520)	1.18 (.241)	-.75 (.455)
Control-others	1.15 (.255)	1.37 (.173)	-1.16 (2.50)	-.14 (.889)	.60 (.522)
Uncontrollable	1.85 (.067)	.47 (.639)	-1.43 (.155)	-1.54 (.126)	.70 (.486)
Global Appraisal:					
Stressfulness	4.10 (.000)	.39 (.696)	-4.81 (.000)	-3.78 (.000)	-.03 (.974)

Table 6

Results of Perceived Congruence Variables (n=109 couples)

Subscale	Self-Perceptions (1) Women (Mean, SD)	Self-Perceptions (2) Men (Mean, SD)	Meta-Perceptions (3) Women (Mean, SD)	Meta-Perceptions (4) Men (Mean, SD)
Primary Appraisal:				
Threat	2.29 (.75)	1.97 (.70)	2.24 (.76)	2.17 (.72)
Challenge	3.63 (.57)	3.56 (.62)	3.61 (.57)	3.68 (.63)
Centrality	3.13 (.73)	3.02 (.75)	3.08 (.74)	3.11 (.77)
Secondary Appraisal:				
Self-control	3.72 (.54)	3.81 (.57)	3.74 (.51)	3.77 (.58)
Control-others	3.38 (.68)	3.28 (.72)	3.29 (.73)	3.34 (.65)
Uncontrollable	2.15 (.78)	1.99 (.71)	2.12 (.81)	2.08 (.77)
Global Appraisal:				
Stressfulness	3.06 (.68)	2.73 (.71)	3.04 (.67)	3.06 (.67)

Subscale	Actual Similarity 1 & 2 r	Actual Similarity 1 & 2 p-value	Perceived Similarity Women 1 & 3 r	Perceived Similarity Women 1 & 3 p-value	Perceived Similarity Men 2 & 4 r	Perceived Similarity Men 2 & 4 p-value
Primary Appraisal:						
Threat	.25	.009	.58	.000	.50	.000
Challenge	.14	.161	.45	.000	.49	.000
Centrality	.35	.000	.59	.000	.53	.000
Secondary Appraisal:						
Self-control	.17	.081	.37	.000	.40	.000
Control-others	.20	.033	.58	.000	.76	.000
Uncontrollable	.32	.001	.75	.000	.59	.000
Global Appraisal:						
Stressfulness	.27	.004	.50	.000	.46	.000

Subscale	Understanding Men 4 & 1 r	Understanding Men 4 & 1 p-value	Understanding Women 3 & 2 r	Understanding Women 3 & 2 p-value
Primary Appraisal:				
Threat	.40	.000	.30	.001
Challenge	.31	.001	.19	.048
Centrality	.45	.000	.29	.002
Secondary Appraisal:				
Self-control	.22	.021	.33	.001
Control-others	.34	.000	.29	.002
Uncontrollable	.23	.015	.33	.001
Global Appraisal:				
Stressfulness	.43	.000	.26	.006

Table 7

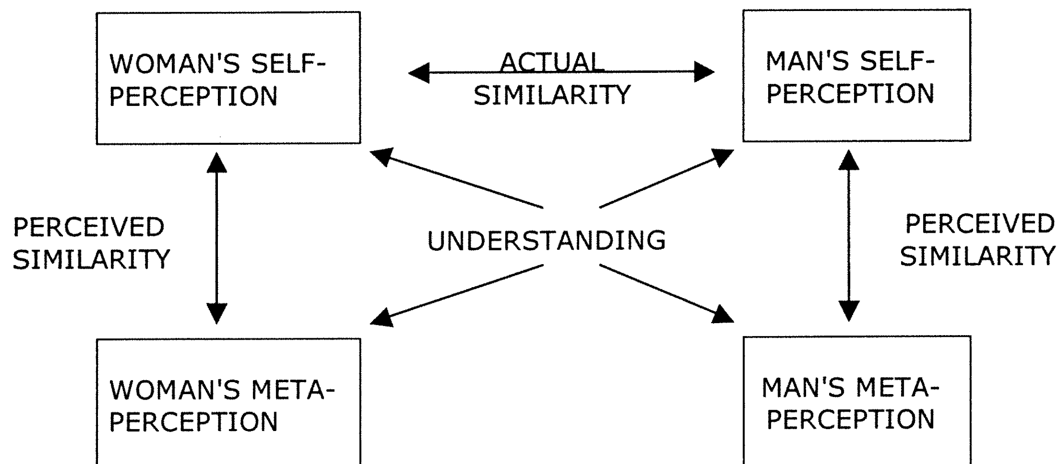
Hypothesis Testing on the Perceptual Congruence Variables for Global Stress (n=109 couples)

Perceptual Congruence	Mean	Standard Deviation
Actual Similarity (AS)	2.90	.56
Perceived Similarity-Women (PSW)	3.05	.58
Perceived Similarity-Men (PSM)	2.90	.59
Understanding-Women (UW)	2.88	.55
Understanding-Men (UM)	3.06	.57

Difference between		Difference	t-value	p-value
H_1:				
1.	PSW - PSM	.15	2.54	.013
H_2:				
2.	UM - UW	.18	-3.67	.000
H_3:				
3.	PSW - AS	.15	-3.78	.000
4.	PSM - AS	.0	-.03	.974
H_4:				
5.	UM - AS	.02	.39	.696
6.	UW – AS	.16	-4.81	.000
H_5:				
7.	UM – PSW	.17	4.10	.000
8.	UW – PSM	.16	-4.10	.000
9.	UM – PSM	.02	.37	.708
10.	UW – PSW	.01	-.37	.708

FIGURE 1

PERCEPTUAL CONGRUENCE VARIABLES



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CHAPTER 6

DISCUSSION AND CONCLUSION

In this last chapter, the findings from the articles presented in the previous chapters are discussed in relation to women's, men's and couples' stress associated with at-risk pregnancy and antenatal hospitalization. This will be followed by the strengths and limitations of the study, directions for future research, and implications for the nursing profession and perinatal education. In the conclusion, certain reflections regarding this study are featured.

6.1 COUPLES' STRESS

In order to understand couples' stress associated with at-risk pregnancy and antenatal hospitalization, both the stress of the conjugal unit and the stress of each partner has to be considered to get the full picture of couples' stress (Boss, 1987). Couples' stress is discussed in relation to the three types of similarity produced from combinations of self-perceptions and metaperceptions: actual similarity, perceived similarity, and understanding.

6.1.1 Actual Similarity

Actual similarity involves the comparison of women's and men's self-perceptions regarding at-risk pregnancy and antenatal hospitalization. In order to compare these self-preceptions, each gender is first considered individually followed by the collective comparison. The three predictors of women's global stress are contained within primary stress appraisal: threat, challenge and centrality. As explained by Peacock and Wong (1990), primary stress appraisal involves the assessment of the importance of a transaction for one's well-being. Threat appraisal involves the potential for harm/loss in the future, while challenge appraisal reflects the anticipation of gain or growth from the experience. Centrality refers to the perceived importance of an event for one's well-being; conceptually, this is similar to the idea of stakes. These findings support those from

previous studies in which women were concerned and feared for the health of the baby, their health status and the outcome of pregnancy (Chuang et al., 1997; Clauson, 1996; Kirk; 1989; Kramer et al., 1986; Mackey & Coster-Schulz, 1992; Merkatz, 1978; White & Ritchie, 1984). According to Martell (2001), for the majority of families, childbearing is a physically healthy experience, yet for other families, health during childbearing is threatened since concern for the physical health of the mother and the fetus tends to outweigh other aspects of pregnancy.

The stressor and the resources were not significant predictors of the women's global stress. The women are not only experiencing the normative stress associated with expecting a first baby, but also the situational stress associated with at-risk pregnancy and antenatal hospitalization (Murphy & Robbins, 1993; Zwelling, 1997). All of the women's physical and psychological efforts are directed to adapting to the threat associated with their situation and coping with it (Ford & Hodnett, 1990). For certain women, this may be their first hospitalization, so there may be some adjustment to an unfamiliar environment and the accompanying role of dependency based on the sickness paradigm. Also, although women in certain studies (Ford & Hodnett, 1990; Kirk, 1989; McCain & Deatrick, 1993) expressed how helpful was the support from the partner and the rest of the family, women in other studies reported that the husband was less supportive (Waldron & Asayama, 1985), and that they had more problematic relationships with the husband and the family than women experiencing low-risk pregnancy (Richardson, 1987). Loos and Julius (1988) indicate that at-risk pregnant women have unmet psychosocial needs. These findings confirm Boss' (1988) postulate that the most powerful variable to explain the perceived level of stress is the perception of the stressor, as described in the previous paragraph.

The five significant predictors of men's global stress pertain to primary stress appraisal (threat and centrality) and to the stressor (gestation, prenatal classes and education). Men in this sample who experience a lesser gestation, no prenatal classes, a lower level of education, and perceive the two stressors as a threat and centrality are more

likely to have higher global stress. As for the women, primary stress appraisal is also a significant predictor of men's global stress. The women and the men have two of three predictors in common, namely, threat and centrality. This finding is understandable since the men perceive the potential for harm or loss in the situation as well as the importance of the two stressors for their well-being, their partner's well-being and that of their baby's. According to the theoretical assumptions, what happens to one family member will be felt by the other (Boss, 1987, 1988). Since the women and the men live together, the men's perceptions of the two stressors could be influenced by the women's perceptions. Pearlin (1989), as cited in the first article of this thesis, explains that stressors experienced by one individual often become problems (e.g., threatened pregnancy) for others who share the same role sets. Women and men in this sample share in the situation together, therefore, the problem of one (e.g., threatened pregnancy) becomes the problem or concern of the other or both.

Challenge is not a significant predictor of men's global stress. First-time expectant fathers experiencing normal pregnancy experience a range of positive and negative emotions in relation to the pregnancy (Nichols & Zwelling, 1997) and become attuned to the pregnancy (May, 1980), but in their own way. Most men look forward to becoming fathers and sharing in the pregnancy and birthing experiences with their partner (Jordan, 1990). There is an aspect of challenge in normal pregnancy in relation to the anticipation of personal growth. On the other hand, men experiencing at-risk pregnancy and antenatal hospitalization cannot view the situation as a challenge since so much is at stake, especially that the health of his partner or that of his baby or both are potentially being threatened. In the May study, first-time fathers expressed how the diagnosis of increased perinatal risk was emotionally upsetting. One aspect of their emotional distress was the element of constant worry: their worries were not necessarily related to any specific threat, rather the worry was more general. An encouraging situation emerged amongst the men in the focus group interviews 1 to 2 years after the experience of their partners' activity-restricted pregnancies. Although the situation had been stressful, they consider the whole experience worthwhile since the outcome for their partners and babies was

positive. So with time and in the presence of a healthy mother and a healthy baby, the men used humor by putting their experiences into perspective with other life events that were challenging but eventually had good outcomes. In the Mercer et al. study (1987), the fathers in the high-risk group feared leaving the hospital alone after the loss of a partner, yet they reported an increase in self-esteem and personal growth at 8 months postpartum. Thus, the challenge appears to come not during the pregnancy, but further down the road, within the child's first year.

It is noteworthy that the explained variance is higher for the men's model than for the women's model, indicating that the men's model better explains their global stress than the model for the women's global stress. This finding can be partially attributed to the stressor which is a significant predictor of the men's global stress, while it is not for the women. The first predictor concerning a lesser gestation is an understandable finding. The outcome of survival for a fetus born before 28 weeks is less favorable than for one born after this time (Aumann & Baird, 1993). The consequence for the men is that their stress is increased when their partner is hospitalized at an earlier moment of the pregnancy than at a later one. On the one hand, the women are always concerned about their baby, thus they have only one 'person' to be worried about. On the other hand, the men are concerned with two people, namely, the partner and the baby. However, the men in the May (1994) study reported being more concerned with their partner's well-being than for the well-being of the fetus. Indeed, they were less worried once the fetus was of a sufficient gestational age. The second significant predictor regarding the stressor is prenatal classes. In the sample under study, the men's global stress is affected by their lack of attendance or participation in prenatal classes: men attending prenatal classes have access to information about pregnancy and birth, and may feel more involved, in control and more informed, thereby lowering their global stress. Prenatal classes appear to be emerging as an important source of information for men during normal and at-risk pregnancy (Barclay et al., 1996; Beger & Beaman, 1996; Galloway, Svensson & Clune, 1997; Malnory, 1996; Peterson & Walls, 1991; Polomeno, 1998c, 1998d). The third significant predictor pertains to the men's educational level. It appears that men with only

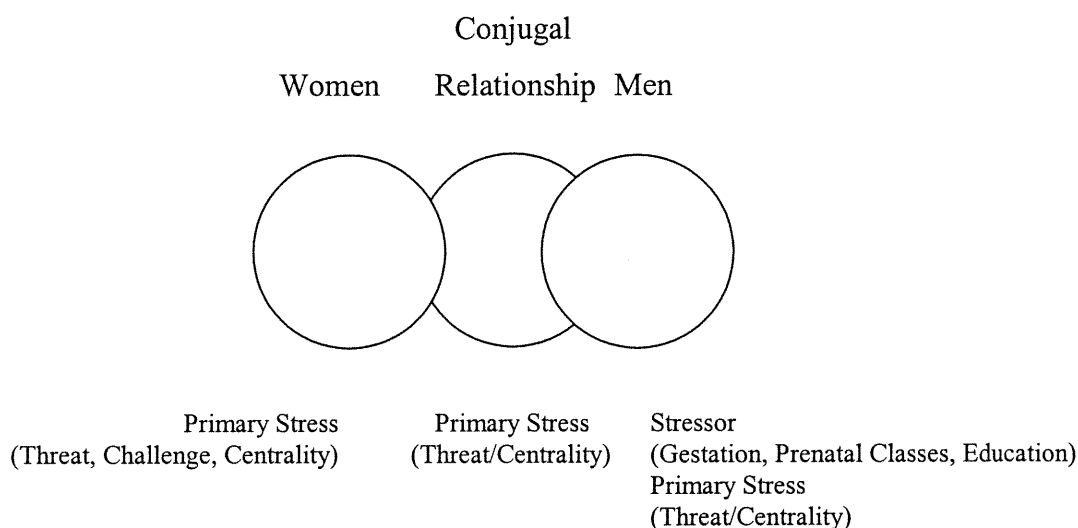
a high school education have greater stress than those with collegial or university education. Men with only a high school level of education may be limited by the income that they earn and the type of employment available to them. Also, there could be an unanticipated loss of income from the partner due to her at-risk pregnancy and antenatal hospitalization. Men with a lower income may worry more: they may be worried that if the baby arrives too early, he or she may require special care or may have special needs, which may require additional money to meet these needs. Some men may find themselves working at two or more jobs to be able to deal with the increased financial demands. This may also influence men's stress.

The findings from the regression analyses (chapter 4) on actual similarity reveal that the two significant predictors (threat and centrality) of couples' global stress involve primary stress appraisal. These two predictors were also present in the individual models. A different picture emerges when these findings are compared with those pertaining to the stress appraisal of actual similarity as presented in the third article (chapter 5): there are significant differences between the means for threat and global stress. The women perceive at-risk pregnancy and antenatal hospitalization as more threatening and their global stress is significantly higher than that of the men (see Figure 4). How does one interpret these findings? On the one hand, the regression analyses are testing a particular theoretical model in which global stress is regressed on the stressor, the resources and the perception of the stressor. The analyses were conducted in this fashion in order to understand what was happening collectively. On the other hand, the comparison of the self-perceptions involves only the perception of the stressor and global stress, namely, comparing the primary, secondary and global stress appraisals of the women with the primary, secondary and global stress appraisals of the men. This is an attempt to comprehend what is happening both collectively and individually. Boss (1987) stipulates that both the family perception and individual perceptions are needed to get the full picture regarding the family's stress, since the family and individual perceptions frequently are not the same. When considering the self-perceptions, the couple's global stress is explained by they perceiving at-risk pregnancy and antenatal hospitalization as

threatening and being important for their well-being. At the same time, there are significant differences in the self-perceptions between the women and the men: women perceive the stressors as more threatening and their global stress is being significantly higher than the men.

Figure 4

Actual Similarity[1]



[1] In Figure 4 as well as in Figures 5 and 6, these three circles represent the three perspectives of women, men and their relationship. The relationship circle is in the middle of the women and the men. When one of the two circles (women or men) presents complete congruence or more positive results, that circle is closer to the relationship. When the results are more negative or lack congruence, then the circle is further away from the relationship circle.

6.1.2 Perceived Similarity

The findings from the regression analyses (chapter 4) focusing on perceived similarity reveal four significant predictors of couples' global stress, representing primary stress appraisal (threat and centrality) and secondary stress appraisal (control-by-self and control-by-others). The findings for primary stress appraisal at the level of perceived

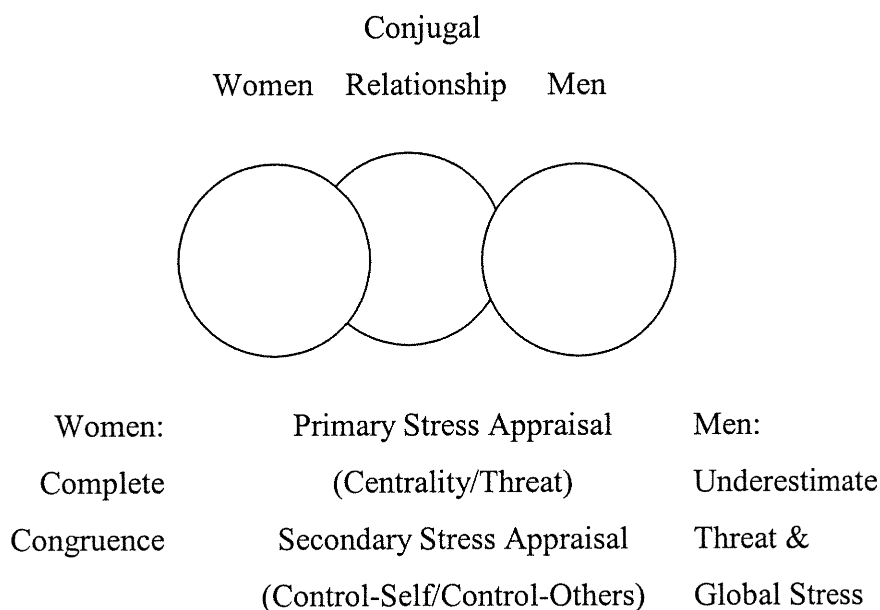
similarity continue to be similar to those for actual similarity and for the men's model, but close to the women' model. The women had one more significant predictor regarding primary stress appraisal, namely, challenge. It is noteworthy that, although threat is a significant predictor for couples' global stress at the level of perceived similarity, the greatest proportion of the variance is explained by centrality rather than by threat. There is starting to be a shift in the predictors of couples' global stress as one moves from the level of actual similarity to the level of perceived similarity (see Figure 5). Thus, as the metaperceptions are added to the self-perceptions, two trends are occurring: 1) couples' global stress can be attributed more to the perceived importance of at-risk pregnancy and antenatal hospitalization for their well-being (centrality) rather than perceiving the stressors as threatening; and 2) secondary stress appraisal becomes important at the level of perceived similarity. The aspect regarding control that is essential to grasp here is that couples do not perceive the two stressors as uncontrollable. Couples perceive a certain part of their situation as controlled by them, while another part is controlled by others such as the perinatal health care team.

There are no significant differences for the women's perceived similarity (chapter 5), meaning that the women's self-perception is fully congruent with their metaperception. However, for the men's perceived similarity, there are significant differences for threat and global stress: the men underestimate or fail to metaperceive how threatening the two stressors are for the women and the women's global stress. Even the first hypothesis as presented in the third article (chapter 5) is supported: there is a significant gender difference in perceived similarity for global stress. When considering perceived similarity, couples' global stress is attributed to four predictors: two predictors pertain to primary stress appraisal, while two others pertain to secondary stress appraisal. Although threat and centrality continue to be significant predictors, control-by-self and control-by-others also become important predictors. However, while there is complete congruence between the women's self-perception and their metaperception, there is a lack of congruence between the men's self-perception and their metaperception for threat and global stress. Boss (1987) believes that understanding

the family's perception of stressful events (as a whole and individually) is basic to understanding their stress level, influencing not only their vulnerability, but how the family and its members will act and react to what is happening to them.

Figure 5

Perceived Similarity



6.1.3 Understanding

The three significant predictors of couples' global stress at the level of understanding pertain to primary stress appraisal (threat and centrality) and to the resources (conjugal cohesion). These findings for primary stress appraisal are similar to those for couples' actual and perceived similarities, and for the men's and women's model, except that challenge is also a significant predictor for the women. As for perceived similarity, centrality is the more significant predictor of primary stress appraisal rather than threat (see Figure 6). The shift in primary stress appraisal predictors

previously described at the level of perceived similarity continues at the level of understanding: there is a shift in which couples perceiving at-risk pregnancy and antenatal hospitalization as threatening has given way to their perceiving the situation as being important for their well-being.

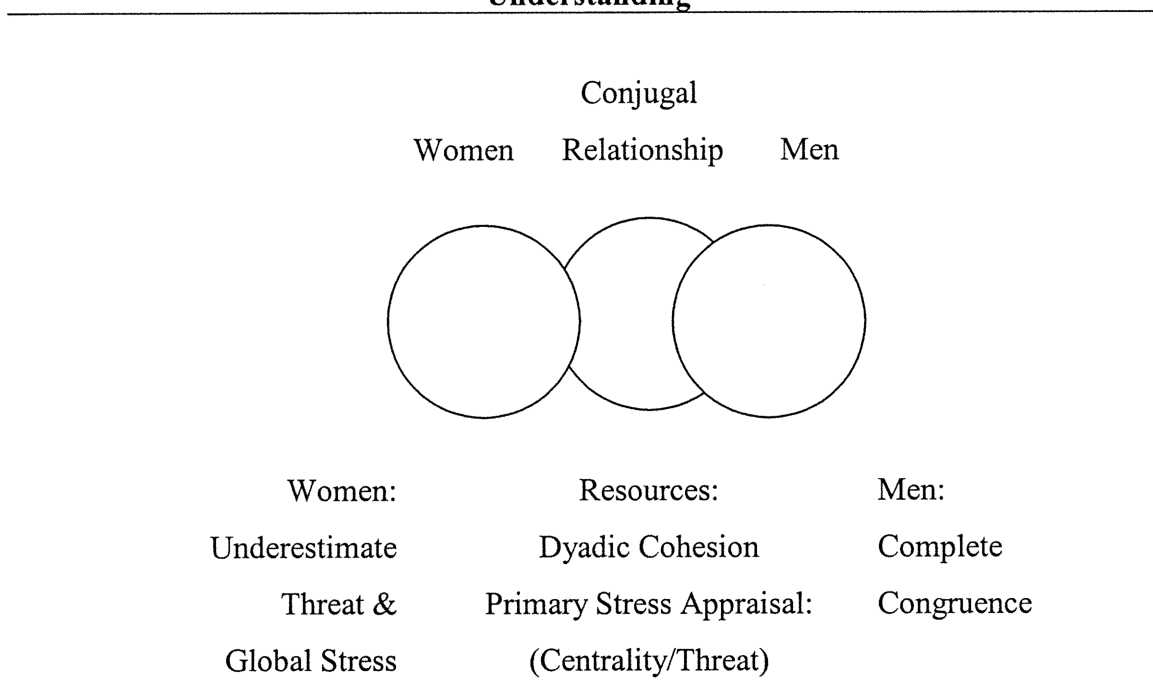
The resources become important in explaining couples' global stress at this level. For the first time, the conjugal relationship as a resource is a significant predictor of couples' global stress. The only dimension within this variable which is a significant predictor is dyadic cohesion, namely, that couples' global stress is increased with less cohesion. Spanier (1976) defines cohesion as the degree to which a couple engages in activities together. During normal pregnancy, a couple spends their time by going to health visits and prenatal classes, learning about the pregnancy and the impeding birth, and preparing for the baby's arrival by obtaining furniture, painting the baby's room, and buying baby clothes (Malnory, 1996). However, when the pregnancy is threatened necessitating increased medical surveillance and hospitalization, there is increased concern for the health of the maternal-fetal unit. Certain couples feel a greater sense of closeness due to their stressful situation, while others feel distant by each partner living in his or her own world. Engaging less in activities together during the hospitalization of the pregnant woman appears to increase couples' global stress. As proposed in Table 26-2 of the first article (chapter 2), Burr and Klein (1994) suggest that increasing cohesion or togetherness is a useful strategy for a couple's relationship in times of family stress.

Regarding the two types of understanding (Chapter 5), there is complete congruence for men's understanding, namely, that when his perception of how he thinks his partner perceives the two stressors is compared with her own perception of the two stressors, then they are both fully congruent. However, when the woman's perception of how she thinks her partner perceives the two stressors is compared with his own perception of the two stressors, there is a lack of congruence for threat and global stress. Also, the second hypothesis as presented in the third article (chapter 5) is supported: there is a significant gender difference in understanding for global stress. When considering

understanding, couples' global stress is attributed to three predictors: two predictors pertain to primary stress appraisal, while one predictor pertains to the resources. Although threat and centrality continue to be significant predictors, dyadic cohesion also becomes important. However, while there is complete congruence for men's understanding, the women underestimate threat and global stress when their metaperception is compared with the men's self-perception.

Figure 6

Understanding



Regarding the other three hypotheses as presented in the third article (chapter 5), they are only partially supported. There is a greater lack of congruence between the different levels of similarity for the women than for the men, thus the women had more difficulty with perceptions at all levels. This means that women experiencing at-risk pregnancy and antenatal hospitalization are more stressed, and that they have more difficulty with dyadic communication. This can have an impact on their contribution to the conjugal relationship, perhaps partially explaining how conjugal intimacy can be subtly affected by the two stressors. On the other hand, although the men are stressed,

they may be more important in helping to establish or maintaining intimacy in the relationship, and perhaps contributing to future family intimacy. Different findings at different levels of similarity; so what do we do? As Walker (1985) states: "If we focused on change across multiple levels of analysis, it would be evident that the complexity of the stress process cannot be handled with predictable responses, universal stages, and identical points of resolution" (p. 832).

6.2 EMERGING ISSUES FROM THE DISCUSSION

The following issues emerge from the discussion of the findings as presented above. The objective of this section is to demonstrate how these findings contribute to further theoretical knowledge regarding stress within the transition to parenthood. The theoretical issues featured here will follow the concepts contained within Boss' model, namely, the stressor, the resources, the perception of the stressor and global stress.

The *first* issue pertains to the nature of the stressor itself. This study reinforces the realization that antenatal hospitalization is an accumulation of three life events: the normative life event of normal pregnancy as well as two situational ones in relation to at-risk pregnancy and antenatal hospitalization. Werner and Frost (2000) explain how an accumulation of life changes or of stressors is associated with subsequent probability of disease or negative health consequences. This includes the health of the conjugal unit itself (Polomeno, 1999d, 1999e, 2000a). For many couples, the particular life event of antenatal hospitalization includes first-time parenthood, first-time threatened health experience, and first-time hospitalization.

Antenatal hospitalization can be classified as a short, acute but very intense stressor (Werner & Frost, 2000), with the potential to become a temporary chronic stressor, depending on the timing of its occurrence as well as the subsequent involved treatment (medication for gestational diabetes or premature labor, or complete bedrest for placenta previa). Martell (2000) explains how some threats to childbearing health may

vacillate between acute and chronic. For example, preterm labor can be acute and result in a preterm birth. However, if preterm labor contractions are suppressed, they become chronic because of the regimens to keep contractions from recurring. McCubbin and Patterson (1983) refer to this series of events as stressor pileup. The impact of a stressor can be considered intense or severe depending on its force or influence on the person(s) (Werner & Frost). Hobnoll, Freedy, Green and Solomon (1996) explain that intense stressors have the following characteristics: (1) they attack people's most basic values, (2) they make excessive demands, (3) they are outside the realm for which resource utilization strategies have been practiced and developed, (4) they occur without warning, and (5) they leave a powerful mental image that is evoked by cues associated with the event.

The *second* issue pertains to the resources themselves. It is noteworthy that dyadic cohesion represented in the variable of the conjugal relationship only emerged as a significant predictor of couples' stress at the level of understanding. Spanier's (1976) definition of dyadic cohesion is presented in chapter 4 of this thesis. Carlson, Sperry and Dinkmeyer (1992) explain how a regular part of the conjugal relationship, including the marriage relationship, involves planned time for activities that both partners enjoy. This is one skill necessary for a strong, effective and healthy marriage. There is a shift in this aspect with pregnancy, but the couple continues to share in activities together (Clulow, 1991; Niven, 1992). The findings from this study suggest that the cohesion in a couple's relationship is perturbed by at-risk pregnancy and antenatal hospitalization. The lack of sharing in activities together may have an impact on the couple's intimacy and their feeling of closeness and togetherness. Intimacy must be recreated daily and renewed in each stage of conjugal life (Polomeno, 2000a). Also, intimacy is the dimension that is the most affected in the transition to parenthood (Polomeno, 1997a). A couple builds up the intimacy in their relationship with time. Physical and sexual intimacies help to maintain the relationship through daily verbal expressions of love and nonsexual and sexual touching. Psychological and emotional intimacies, although the most difficult of all intimacies to experience, can take the relationship to another level. The hospital

environment does not appear to be conducive to a couple' intimacy: how can this setting and interventions from the perinatal health care team be modified so that the integrity of a couple's intimacy is protected and maintained warrants further examination.

The *third* issue pertains to the perception of the stressor. Primary and secondary stress appraisals are important in determining couples' stress associated with at-risk pregnancy and antenatal hospitalization. Threat contained within primary stress appraisal is common to all five models (women's, men's and three couples' models) and the more significant predictor especially for couples' global stress at the level of actual similarity. Werner and Frost (2000) indicate that the appraisal of threat appears to be influenced by several subjective components such as goals or ideas of expected states (e.g.; normal unthreatened pregnancy), the importance of these goals, and the degree of threat engendered by goals not attained.

However, centrality is the more significant predictor of couples' global stress rather than threat at the levels of perceived similarity and understanding. It is noteworthy that as the metaperceptions are added to the self-perceptions, primary stress appraisal changes to one implicating the well-being of the perinatal couple. Lazarus (2001) explains that appraisal under these circumstances connotes an evaluation of the significance to the individual of what is happening for well-being. On the one hand, he stands by the widely acknowledged principle that if there is no goal commitment, there is nothing of adaptational importance at stake in an encounter to activate a reaction. If the transaction or the encounter is not relevant to a person's well-being, then there is nothing further to consider since nothing is at stake. On the other hand, what individuals consider important or unimportant to their well-being influences how emotionally devastating any loss will be and what coping choices must be made to manage it.

By adding metaperceptions to the self-perceptions, the appraisal of threat yields to one having importance for the couples' well-being. There appears to be a shift from an emphasis on the individual to one directed towards the couple. This shift or

transformation can be likened to what Lazarus (2001) refers to as the short-circuiting of threat. "The metaphor is the electrical short circuit of the wire in which the original route to the end of the wire is shortened by something that cuts the circuit at a much earlier point" (p. 208). By asking a conjugal partner to answer for himself or herself (self-perception) is one process, but asking the same person to put himself or herself in the place of the other in order to determine the other's perception (metaperception) is another process. Being able to metaperceive or being able to estimate the other's perception is a deliberate way of short-circuiting threat in the context of at-risk pregnancy and antenatal hospitalization. Lazarus also refers to this as making the contents of cognitive unconscious conscious, especially through the process of reappraisal. Lyon (2001) defines reappraisal as the process of continually evaluating, changing, or relabeling earlier primary or secondary appraisals as the situation evolves. Reappraisal results in the cognitive elimination of perceived threat. Indeed, Lazarus reminds us that primary appraising never operates independently of secondary appraising since there is an active interplay of both. "The distinctly different contents of each type of appraisal justify treating them separately, but each should be regarded as integral meaning components of a more complex process" (Lazarus, 2001, p. 202).

The metaperception is combined with the self-perception to produce either perceived similarity or understanding. An underlying issue of the metaperception is its accuracy (Allen & Thomspon, 1984; Bochner et al., 1982; Laing et al., 1966), labeled as meta-accuracy by Kenny (1994). Meta-accuracy may be difficult to achieve: a conjugal partner has to be highly motivated to discern the other's meaning. He or she may have to resort to nonverbal cues to be fully attuned to the partner: heightened meta-accuracy develops through verbal and nonverbal feedback. The paradox of this statement is that when relationships develop, partners may actually become less attuned to each other's feedback, because they think they already know what that feedback will be. Taking each other for granted in this way may be threatening to the relationship. However, heightened meta-accuracy may be useful to the couple during times of stress, especially during at-risk pregnancy and antenatal hospitalization.

The findings from this study, both from the regression analyses and hypothesis-testing, suggest the importance of perceived similarity as an intermediate between actual similarity and understanding. According to Allen and Thompson (1984), if a couple communicates to create shared meaning, the partners will allow one another to know how they directly perceive particular situations; each will know what the other thinks concerning the situation and also be aware of what the other thinks he/she thinks. If discrepancies emerge at this level, then the partners can try to explain them to each other, create bridges between them that expand, limit and transform these discrepancies, and may decide that their different views can co-exist (Duck, 1994). Couples do not have to be similar at all of the levels all of the time, rather it is the feeling of overall congruence that predominates (Duck, 1994). The partners feel that they are quite alike with a respect for differences.

The nature of a partner's relationship with the other partner is defined in terms of the extent to which that person understands the way the other thinks (Duck, 1994). However, the degree of understanding of one person by another is not necessarily equivalent in both directions. The partners may neither understand each other completely nor wish to. Understanding may be greater on certain issues than in others. It is not automatic that the partners are able to comprehend one another right away nor give the same weights and meaning to phenomena that they interpret (Dixson & Duck, 1993). The competency level of each conjugal partner influences their capacity for understanding. The more adequately a partner is able to understand the different layers of the other partner's mind, the more the relationship is differentiated and the easier the communication becomes, leading to fuller understanding. According to Monsour (1994), there is a broad range of effects on the level of understanding, namely other levels of similarity, just as the degree of understanding might influence which similarities are communicated.

The *last* issue pertains to global stress. For many couples, this is the first time that their relationship is being tested in a period of stress, especially stress associated with at-

risk pregnancy and antenatal hospitalization. The partners become more aware of how each copes with stress individually and how they are going to organize themselves as a unit to adapt to it. Some couples appear to do well while others do not. Some couples become closer because of the experience while others experience a slowly emerging emotional distance within their relationship. The couples in the latter category could react in one of two ways: they could take the situation in their stride and not let it influence the quality of their love for each other, or the schism becomes so great to the point that it is unrepairable. Page (1994) explains that when a large part of one partner's energy is given over to dealing with some stress in his or her life, then he or she will not be able to give the kind of attention to the other partner. This means being attentive toward him or her, to be aware of how he or she is affecting the partner, to listen fully, and to engage in an interaction. If a couple doesn't realize that it is the stress that is causing their diminished intimacy, they may exacerbate an already strained situation by blaming each other, and by doubting their whole relationship. Couples who have perspective have learned to have confidence, even though it is hard to feel close when they are stressed out. "Whenever they find themselves in unavoidable stressful circumstances, they know that their problem is stress and not the relationship. They are well aware that this is a passing episode, and they either deliberately take care of the relationship in the meantime, or simply get out of each other's way until the episode is over" (p. 105). Continuing in the same vein, Page found that couples whose relationships were not thriving were creating stress instead of managing or eliminating it, and were using stress as a way to maintain distance since they had resigned themselves to it. They did not have a plan for changing their lives so they could manage the stress. "A relationship that is in a period of stress can be compared to fallow land (land that is not being cultivated for a season or more). It just lies there, quietly nourishing itself and waiting. The soil is rich and fertile, but no one has planted anything new" (p. 109). The perinatal health care team cannot underestimate the impact of first-time antenatal hospitalization on the health of the conjugal unit and more long-term consequences involving couples preventing future pregnancies. The greater societal impact involves potential separation and divorce resulting from the stress associated at-risk pregnancy and antenatal hospitalization.

The unfolding of perceptions within the stress process can be helped in another way with shared meaning being the end product. Steve Duck (1994) has developed "A General Model of Serial Construction of Meaning" (see the first article in chapter 2). There are four stages of commonality, mutuality, equivalence, and shared meaning. In the *first* stage of *commonality*, a couple independently has the same attitude towards a topic, but is not aware that they have this in common. This can be likened to the self-perceptions of the women and the men regarding at-risk pregnancy and antenatal hospitalization. In the *second* stage of *mutuality*, through talk, the couple comes to realize they each have developed feelings about the topic. Mutuality can be attained when the self-perceptions of the women and the men are compared, producing actual similarity. In the *third* stage, *equivalence*, each partner interprets to the other feelings about the common topic and realizes to what extent the same feelings are shared. In the case of at-risk pregnancy and antenatal hospitalization, when a metaperception is compared with the self-perceptions of the same person, perceived similarity is obtained. Thus, equivalence can be likened to perceived similarity. In the *last* stage of *shared meaning*, a collective perception has developed and is integrated into the existing core of shared meaning. Continuing in the same vein, when the metaperception of one partner is compared with the self-perception of the other partner, understanding is obtained. Understanding can be interpreted as equivalent to shared meaning.

Duck explains that the couple can achieve psychological similarity as the partners construe and give fully organized personal meaning to events, and comprehending such organization and depth takes time and social action between relational partners. He also indicates that a couple increases its likelihood for understanding and integrating differences in perspectives if the partners feel that they have many levels of similarity: "...it is the flashing perception of that similarity and the actions of common acknowledgement of it that have a social and relational significance" (Duck, 1994, p. 119). A couple may have many layers of psychological similarity leading to shared meaning and understanding, but the layers of similarity must harmonize with each other. The doctoral candidate has defined this process as *harmonizing* within her perinatal

education practice (Polomeno, 2000a). Couples 'feel' the harmonizing: it produces a feeling that the partners are in tune with each other, in 'sync' with each other, and on the 'same wavelength'. The end result is a sense of partnership and team spirit. When there is a perturbation within harmonizing, meaning that there are differences between the layers of similarities, the partners feel that they are not on the same wavelength and feel 'out of sync'. The partners can either accept this temporary state or try to reestablish the partnership feeling by discussing the discrepancies.

When conjugal partners are thinking about interaction patterns, comparisons, or contrasts between themselves in the relationship, they are conducting what Acitelli (1993) calls 'relationship awareness'. Relationship awareness may contribute to satisfaction with the relationship by the partners, increasing their commitment to it, and deepening the intimacy aspect of the relationship, especially important in times of stress such as at-risk pregnancy antenatal hospitalization. Acitelli explains that the similarity between the partners may be more important than absolute levels of relationship awareness. Steil (1997) specifies that relationship intimacy "must be continually affirmed through shared experiences in which partners feel understood and valued. Under these conditions, intimacy benefits both partners, enriching their relationship and promoting psychological and emotional growth" (p. 76). Promoting conjugal intimacy becomes more important during at-risk pregnancy and antenatal hospitalization. Conjugal intimacy lays the foundation for future family intimacy which is the heart of the family's safe haven for love, security and well-being.

6.3 STUDY'S STRENGTHS AND LIMITATIONS AND FUTURE RESEARCH

In this section, the study's strengths are first discussed followed by its limitations. The last section contains avenues for future research.

6.3.1 Strengths

This study has several strengths. Its *first* strength lies with this being the first study to consider first-time parenting couples' stress associated with at-risk pregnancy and antenatal hospitalization from three simultaneous perspectives: women's, men's and couples'. The *second* strength involves Boss' model which was used as the conceptual foundation. The choice of the model was based on its heuristic quality by permitting its adaptation to a study involving a situation of temporary but intense stress. Only the main variables of the model were used for the interrelationships between the research variables, namely the organization of the Variables A, B, C, and X. Its *third* strength lies with the use of self-perceptions and metaperceptions and their various combinations to produce three types of similarity: actual similarity, perceived similarity, and understanding. This permitted the creation of three regression models for the examination of couples' global stress (chapter 4) and the couples' stress appraisal of at-risk pregnancy and antenatal hospitalization (chapter 5). Its *fourth* strength involves the creativity that was required in the area of the data analysis procedures to produce the couples' regression couples' models and the congruence comparisons of the couples' stress appraisals based on the three types of similarities. Although this was a challenge, this study contributes to the advancement of conjugal data analysis procedures. The *fifth* strength lies with the use of self-report measures which facilitated the organization of this large scale study involving 12 hospitals and the data collection of a large sample size. Certain women and men only agreed to participate once they realized how the data were to be collected finding the questionnaires convenient and practical. They appreciated having the flexibility in choosing the moment to complete the questionnaires. For certain men, this form of data collection was practical, especially for the taxi, bus and truck drivers. Several men only agreed to participate once they understood that they could fill in questionnaires, preferring this method over interviews. The *last* strength pertains to the use of psychometrically sound instruments in another language other than English. Although this study was conducted in a specific cultural environment, it supports findings from other studies. It also helps to advance research with French-speaking groups, particularly with perinatal

families experiencing stress associated with at-risk pregnancy and antenatal hospitalization in Québec.

6.3.2 Limitations

This study also has several limitations. Its *first* limitation involves the difficulty in recruiting subjects, producing a high attrition rate. From the outset, many women were not interested in the study, being already too stressed to participate as were their partners. Certain men refused their female partners to participate, explaining how the women were too stressed and that the study would increase their stress even more. Ethical principles must be respected and override the purpose of the research. It is obvious that conducing research with adults who are stressed is very difficult, yet understanding their stressful situation would be helpful for health care professionals. The *second* limitation involves the consent of both partners. A study oriented towards couples requires the consent of both partners. If one of them refuses to participate, then the couple cannot participate. Also, one or both partners can refuse to continue at any point in the data collection phase, which also influenced the participation rate. The *third* limitation pertains to the self-report measures. Although they were practical, they could have acted as a barrier to recruitment. Other methods involving interviews and diaries may facilitate the participation of certain couples. The *fourth* limitation involved the data on the refusers. Data could not be collected on refusers due to restrictions imposed by the hospital ethics committees. Analyzing their characteristics would be helpful to understanding their reasons for not participating: it is plausible that certain couples were having problems with their relationship since this was a study aimed at couples. Other couples were in the midst of a separation and/or a divorce.

6.3.3 Future Research

In this study, only those couples experiencing at-risk pregnancy and antenatal hospitalization were considered. In order to separate the effects of at-risk pregnancy from

antenatal hospitalization, the following future studies still using the interpersonal perceptual approach should be considered: first, couples experiencing at-risk pregnancy and antenatal hospitalization are compared to those couples experiencing at-risk pregnancy and maintained in the home environment; second, couples experiencing at-risk pregnancy and not hospitalized nor receiving home care services are compared to those couples experiencing at-risk pregnancy and antenatal hospitalization. Also, since the stress level was found to be moderate, supporting findings from previous studies, another study should be considered in which couples experiencing normal pregnancy are compared to those couples experiencing at-risk pregnancy and antenatal hospitalization, and to those couples experiencing at-risk pregnancy but maintained in the home environment. This finding may also be due to the measure of stress which was not sensitive enough to capture the differences, thus other measures of stress should be considered as well as the addition of physiological measures of stress.

Only couples expecting their first baby were considered in this study. In the future, it would noteworthy to replicate this same study with couples who have one or more children but experiencing the two stressors for the first-time, and with couples where one of the two partners is already a parent. Only one test period was included in the design of the study since it was important to begin to understand couples' stress associated with at-risk pregnancy and antenatal hospitalization. Future studies should include a postnatal testing period and conduct a comparison of couples' stress between the prenatal and postnatal test periods. A future study using a qualitative approach is suggested to explore couples' perceptions of their experiences regarding the two stressors.

Other parts of Boss' model should be implicated in future studies: her model contains external and internal contexts which were not included in this study. The external context or the environment in which the family is embedded is made up of components over which the family has no control: heredity, development, economy, history, and culture. However, the internal context contains components that the family

can change and control, namely, its structural, psychological and philosophical dimensions. Since the explained variance in the couples' models was lower than for the women's or men's models, other variables to increase the explained variance should be considered in future studies: the various components of the external and internal contexts can provide these additional variables such as family boundaries, role assignments and family values and beliefs. The metametaperception should be considered in the future, producing two other types of similarity called realization of understanding and feeling understood (Allen & Thompson, 1984). The metametaperception pertains to how one partner thinks that his or her partner thinks how he or she thinks. Realization of understanding is obtained by comparing one partner's metametaperception with the other partner's metaperception, while feeling understood involves the comparison between one partner's metametaperception with his or her own self-perception.

6.4 IMPLICATIONS FOR THE NURSING PROFESSION

Several theoretical and clinical implications emerge from this study on couples' stress. From a *theoretical* viewpoint, perceptions are important in the study of couple' stress associated with at-risk pregnancy and antenatal hospitalization. The findings from this study support Boss' postulate (1988) that the family' perception of the stressor is the most powerful variable in determining the family's stress level. How the family members perceive the stressors will determine their reactions to them. They may decide not to react, or else, they may be so overwhelmed and stressed that their adaptation and coping could be affected. They could potentially find themselves in a crisis rather than in a situation of stress.

The global evaluation of stress involves not only the individual perceptions but also the collective ones. Boss explains that family and individual perceptions are not the same, and that understanding a family's perception of the stressful situation as a whole and individually is basic to understanding their stress level. How the family reacts to the situation is just as important as the reactions of the individual family members. The

findings from this study reveal that women and men do not perceive the stressors in the same way, just as the couple's collective perception is different from the partners' perceptions. Teichman (1988) wrote of 'his, hers and their pregnancy'. This implies the simultaneous consideration of women's, men's and couples' perceptions in the global stress appraisal of at-risk pregnancy and antenatal hospitalization.

The use of similarities through the interpersonal perception approach (Laing et al., 1966) revealed different findings at the various levels of similarity (actual similarity, perceived similarity and understanding). This could be compared theoretically to the unraveling of the layers of an onion. This approach is a very powerful one penetrating deep into the conjugal relationship. Family and conjugal/marital therapists often allude to the 'mystery' of relationships, that part that is not open to scrutiny and analysis (Kingma, 1998). These professionals are aware of this theoretical facet of conjugal relationships. This approach helps to render the unconscious or mysterious part of the relationship more conscious, meaning theoretically, bringing the deep to the surface or unraveling the layers of the onion.

From a *clinical* viewpoint, it is important for nurses working on antepartum wards to assess the stress of each conjugal partner and that of the conjugal dyad and their perceptions of at-risk pregnancy and antenatal hospitalization. Nurses will require some training through professional workshops in the interpersonal perception approach which is at the heart of this assessment. The training session could include circular-type questions that nurses could ask the conjugal partners. Nurses could also offer each partner to rate their stress level and that of their relationship on a rating scale such as a visual analogue scale. Nurses can help the couple to understand these ratings and their situation.

Stress affecting childbearing families needs to be recognized and, if possible, dealt with promptly (Martell, 2000). Wright and Leahey (2000) explain how nurses must recognize that there are as many realities as there are members of a given family and offer the family another, more comprehensive view of their situation. Within this approach,

nurses can use the techniques of reappraisal or reframing (Lazarus, 2001; Lyon, 2001; Werner & Frost, 2001) in their interventions to help couples change their perceptions of the stressors. Reappraisal is an extremely effective way of coping with a stressful situation and one of the most durable and powerful ways of controlling destructive emotions (Lazarus, 2001). Nurses can facilitate change in the conjugal dyad by creating the context for change, but they should understand that change does not occur equally in the conjugal partners. Alterations in family goals, beliefs and behaviors are also required (Wright & Leahey). The focus should be on what is being done instead of searching answers for the why of the situation. Understanding the situation is usually the first step, but this is not enough. Postpartum nurses and those in CLSCs can reinforce the teaching that was started on the antepartum ward in order to help the couple preserve their relationship.

Couples can be taught stress management techniques (see the first article of this thesis) to mitigate the stress stemming from the stressors and the stress process. Although this could be the first major stress encounter for many couples, nurses can help them identify their individual stress patterns and responses, teach the partners how to become aware of each other' reactions to stress, and maximize their learning from their situation. Couples can be encouraged to develop a stress plan (Page, 1994) outlining how they should individually and collectively cope with their stressful situation, by not only considering past experiences but also the actual one. This can also help couples lay the foundation for successful coping with future difficult situations, both expected and unexpected.

The findings revealed that cohesion in the relationship or the couple's engaging in activities together was affected by their stress associated with the two stressors. There is great potential for couples to experience emotional withdrawal due to them and for their developing dissatisfaction with the relationship. Instead of putting the onus on their stressful situation, couples can easily blame each another. Spending time doing things that are mutually enjoyable is part of a healthy balanced relationship (Carlson, Speery &

Dinkmeyer, 1992), even in times of stress. Nurses can promote couples' intimacy within the hospital setting by helping couples identify ways of engaging in activities together and exploring their love during this time (Polomeno, 2000c). Creating a support group that is oriented towards couples' coping with their situation may be one such activity. Other ways could involve couples responding to questions presented in Boxes 26-5 and 26-6 contained within the first article of the thesis, or adapting the questions presented in Box 26-5 to couples rather than perinatal educators.

Normal pregnant couples assisting regular childbirth education classes can expand their knowledge about stress associated with the transition to parenthood, both normal and at-risk. Their classes can include content on at-risk pregnancy, its various conditions and treatments, the emotions that accompany the experiences, and strategies for coping with it and recovery in the postpartum (Polomeno, 1997b; also see Box 26-10 contained in the first article of this thesis). The teaching approach used in these classes relies on anticipatory guidance which is an educational modality aimed at strengthening family systems in the transition to parenthood (Goldberg & Michaels, 1988). Through education, couples learn to create optimal conditions to more successfully negotiate the potential pitfalls of the transition, and to implement new skills acquired through the classes.

6.5 CONCLUSION

This study examined first-time parenting couples' stress associated with at-risk pregnancy and antenatal hospitalization. Despite the moderate level of stress, women and men do not perceive the stressors in the same way. Women perceive these stressors as a threat, whereas the men perceive them as a challenge and being in control. However, as a unit, as the metaperceptions are added to the self-perceptions, there is a gradual shift from perceiving the stressors as threatening to perceiving them as being important for the couples' well-being. Also, secondary stress appraisal and the resources further explain couples' global stress. Women demonstrate less congruence between the different types of similarities compared to the men, suggesting that pregnant, hospitalized women are

less able to devote time to the conjugal relationship. However, the men were more understanding and their optimism appears to alter women's and couples' perceptions of stress. Understanding appears to enhance the various levels of similarity in dyadic communication during times of such stress. How couples evaluate and determine the meaning of theses stressors and the similarities that may result from the comparison of perceptions, could in the long-term, affect childbearing and the parent-child bond. This study supports Boss' postulate that the family's perception of the stressor is the most powerful variable in determining the family's stress level.

The health threat to a member of the childbearing family affects the other members. The functioning and structure of the family that keeps the system stable, or in homeostasis is upset, and the family strives to regain balance, which is stressful on all the components of the family system (Martell, 2000). This study contributes to our beginning understanding of how couples' intimacy is affected by at-risk pregnancy and antenatal hospitalization. The different levels of dyadic communication are affected by these stressors. Couples can reconnect as they gain greater understanding of each other and of their situation. They should be encouraged to make a concerted effort to nurture and sustain at least a minimal level of closeness during times of stress, even within the hospital setting, in order to protect their intimacy. The greatest gifts that parents can give their children, both unborn and born, are an intact relationship and the security of their love.

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Appendix 1

Ethics Clearances

CENTRE
HOSPITALIER
ANNA-LABERGE

Le 9 juillet 1993

Madame Viola Polomeno, inf., M.Sc.(A.)
Université de Montréal
Faculté des sciences infirmières
2375, Côte Ste-Catherine
Montréal (Québec)
H3T 1A8

Madame,

À la suite de votre lettre du 8 juin 1993 et à vos conversations téléphoniques avec madame France Lainey, je désire vous confirmer que votre demande d'effectuer un projet de recherche dans notre centre hospitalier a été acceptée.

Veuillez communiquer avec madame Ginette Toupin, chef d'unité du pavillon de la naissance, afin de prendre arrangement avec elle.

Je vous souhaite bonne chance dans votre démarche et je vous prie d'agréer, Madame, mes salutations les meilleures.

La directrice des soins infirmiers,

Marie Yardely Kavanagh

MYK/fl

c.c. Madame Ginette Toupin

200, boulevard Brisebois, Châteauguay (Québec) J6K 4W8 • (514) 699-2425
CHÂTEAUGUAY — DELSON — LÉRY — MERCIER — STE-CATHERINE — ST-CONSTANT — ST-ISIDORE
STE-MARTINE — ST-MATHIEU - ST-PAUL DE CHÂTEAUGUAY — ST-RÉMI — ST-URBAIN

CENTRE HOSPITALIER de ST. MARY

ST. MARY'S HOSPITAL CENTER

3830 AVENUE LACOMBE, MONTRÉAL, QUÉBEC, H3T - 1M5

Le 5 juillet 1993

Mme V. Polomeno
Faculté des Sciences infirmières
Université de Montréal
C.P. 6128 Succursale A
Montréal, Québec
H3C 3J7

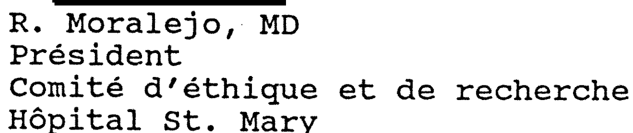
Madame,

Le comité d'éthique et de recherche, formé des membres suivants: Dr. J. Bradwejn, Dr. P.H. Gruner, Dr. F. Primeau, Dr. M. Yaffe, Dr. H. Zackon, Père Peter Laviolette, Mlle H. McCormack et moi-même, a examiné le protocole intitulé:

> La qualité de la relation conjugale comme médiatrice du stress familiale relié à l'expérience de l'hospitalisation anténatale chez les couples sans enfants.

Le comité a trouvé ce protocole et les formules de consentement qui l'accompagnent en bonne et due forme; correspondant aux normes exigées par notre établissement. Par conséquent, le comité a donné son autorisation pour procéder à l'étude.

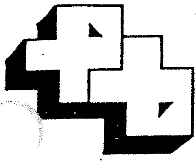
Veuillez agréer l'expression de nos salutations distinguées.



R. Moralejo, MD
Président
Comité d'éthique et de recherche
Hôpital St. Mary

c.c. Dr. J. Glay, Président, Comité exécutif CMDP
Dr. J. Bradwejn, Président, Comité de recherche
Dr. A. Joshi, Chef du département d'Obst/Gynécologie.
Dr. B. Stripp, Université McGill

/vt


CENTRE HOSPITALIER
PIERRE-BOUCHER
1333, boulevard Jacques-Cartier Est
Longueuil (Québec) J4M 2A5
(514) 468-8111

xx

Longueuil, le 27 septembre 1993

Dr. Jean René Fréchette,
Directeur des services professionnels,
Centre hospitalier Pierre-Boucher,

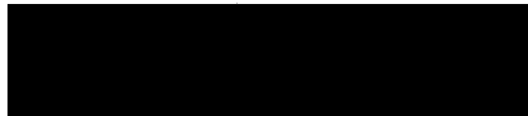
Objet : Qualité de la relation conjugale.

Docteur Fréchette,

Nous avons évalué le projet ci-haut mentionné au courant de l'été avec Mme Jocelyne Mailhot, chef du Service de la natalité et Mme Francine Nazaire, coordonnatrice à la Direction des soins infirmiers.

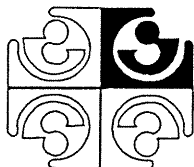
Notre comité de bioéthique vient par la présente le recommander.

Veuillez agréer, Docteur Fréchette, l'expression de nos sentiments les meilleurs.



Roland Roy
Président du comité de bioéthique
Centre hospitalier Pierre-Boucher

cc. Mme Viola Palomeno,
Faculté des Sciences Infirmières,
Université de Montréal.



CITÉ DE LA SANTÉ DE LAVAL
COMITÉ EXÉCUTIF DU C.M.D.P. - LOCAL 1.34
1755, BOUL. RENÉ LAENNEC
VIMONT, LAVAL (QUÉBEC)
H7M 3L9 (514) 668-1010 POSTE 2143

Laval, le 30 juillet 1993

Madame Viola Polomeno (Madame Céline Goulet, professeure agrégée)
Université de Montréal
Faculté des sciences infirmières
C.P. 6128 - Succursale A
Montréal QC
H3C 3J7

SUJET: *Projet de recherche*

Docteur,

Suite à la recommandation du comité de recherche, le comité exécutif du Conseil des médecins, dentistes et pharmaciens, à sa réunion du 29 juillet 1993, a accepté votre demande et est favorable à la poursuite du projet de recherche intitulé: "La qualité de la relation conjugale comme médiatrice du stress familial relié à l'expérience de l'hospitalisation anténatale chez les couples sans enfant".

Nous vous souhaitons un franc succès dans votre travail.

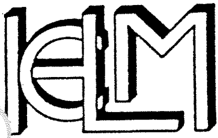
Veuillez accepter l'expression de nos sentiments distingués.

COMITÉ EXÉCUTIF DU C.M.D.P.

Wilhelm B. Pellemans, m.d.
Président

/cg

c.c.: *M. Daniel Adam, directeur général*
Dr Alban Perrier, directeur des services professionnels
Dr Rémi Guibert, président du comité de recherche
Madame Louise Cossette, coordonnatrice, secteur mère-enfant, marraine du projet



Affilié à l'Université de Sherbrooke

Le 27 septembre

Madame Dominique Tremblay
Infirmière clinicienne spécialisée
Secteur périnatalité
Hôpital Charles LeMoyne

OBJET : **Projet de recherche - La qualité de la relation conjugale comme médiatrice du stress familial relié à l'expérience de l'hospitalisation anténatale chez les couples sans enfant**

Madame,

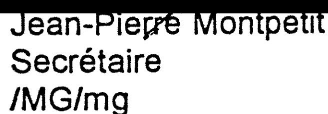
Il me fait plaisir de vous informer qu'à sa réunion régulière publique du 22 septembre 1994, le conseil d'administration a accepté que le projet de recherche mentionné ci-dessus se réalise, et que vous en assumiez la responsabilité.

Cette acceptation fait suite aux recommandations du comité d'éthique à la recherche du comité d'éthique central.

Il doit être convenu que l'Hôpital n'assume aucun des frais encourus dans le cadre de ce projet.

Vous remerciant à l'avance de votre implication, entre autres dans ce dossier, je vous prie de recevoir l'expression de ma considération distinguée.

Au nom du conseil d'administration



Jean-Pierre Montpetit
Secrétaire
/MG/mg

c.c. : Présidente, comité d'éthique central
Présidente, comité d'éthique à la recherche
Directeur des services professionnels et hospitaliers
Directrice des soins infirmiers

PROJET DE RECHERCHE

TITRE: La qualité de la relation conjugale comme médiatrice du stress familial relié à l'expérience de l'hospitalisation anténatale chez les couples sans enfant

LIEU: Hôpital du Sacré-Coeur de Montréal

CHERCHEUR: Mme Viola Polomeno, inf. MSc. (A.)

COORDONNATEUR DU PROJET: Mme Viola Polomeno, inf. MSc. (A.)

PROBLÉMATIQUE ET OBJECTIFS DE L'ÉTUDE: Déterminer la nature de la relation entre la qualité de la relation conjugale (similarité actuelle et perçue), la satisfaction du soutien social perçu des autres membres du réseau et le niveau de stress perçu par les couples sans enfant lors de l'hospitalisation anténatale.

TYPE DE RECHERCHE: Infirmière utilisant un devis corrélatif.

ÉLIGIBILITÉ DES SUJETS: Les sujets seront sélectionnés à partir de la population des femmes enceintes et de leur partenaire.

LES CONSIDÉRATIONS ÉTHIQUES:

- Liberté de participer: oui
- Confidentialité: oui
- Consentement éclairé: oui
- Liberté d'en sortir sans contrainte: oui

FORMULE DE CONSENTEMENT:

	oui		non	
requise:	oui	X	non	___
approuvée:	oui	X	non	___

DATE DE RÉCEPTION: 17 juin 1993

COMITÉ D'ÉTHIQUE: No de code: C.E.93=06-44
Année: 1993

DATE DE L'ÉTUDE PAR LE COMITÉ: 30 juin 1993

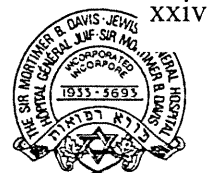
MEMBRES DU COMITÉ D'ÉTHIQUE DE LA RECHERCHE
Hôpital du Sacré-Coeur de Montréal

AVIS:
FAVORABLE

Me André Morel, président
Dr André Lebrun, secrétaire
M. Jean Bernatchez, chef du département de pharmacie
Dr Daniel Bichet, directeur associé à la recherche clinique
Dr Jean-Marc Chauny, coord. int./ Service d'urgence
M. Guy Durand, éthicien
Mme Suzanne Frappier-Nadeau, adjointe DG - DSH
Dr Sylvain Gagnon, représentant du CMDP
Dr Chantal Lambert, représentante de l'Université de Montréal
Dr Jean-Paul Lussier, représentant du Conseil d'administration
Mme Suzanne Michaud, adjointe ens. & rech. - DSI

André Lebrun, M.D.
Secrétaire

HÔPITAL GÉNÉRAL JUIF - SIR MORTIMER B. DAVIS
THE SIR MORTIMER B. DAVIS - JEWISH GENERAL HOSPITAL



October 12, 1993

Ms. Viola Polomeno
Research Centre
Faculty of Nursing
University of Montreal
2375 Cote Ste. Catherine
Montreal, Quebec
H3T 1A8

RE: "La qualité de la relation conjugale comme médiatrice du stress familial relié à l'expérience de l'hospitalisation anténatale chez les couples sans enfant"

Dear Ms. Polomeno:

Please be advised that the above noted protocol is approved by the Research and Ethics Committee.

Jack Mendelson, M. D., FRCPC
Chairman, Research and Ethics Committee

JM:ma

HÔPITAL D'ENSEIGNEMENT DE L'UNIVERSITÉ MCGILL – A MCGILL UNIVERSITY TEACHING HOSPITAL

3755 CHEMIN DE LA CÔTE-STE-CATHERINE, MONTRÉAL (QUÉBEC) H3T 1E2
TÉL. : (514) 340-8222 FAX : (514) 340-7510

HMR Hôpital Maisonneuve-Rosemont
Centre hospitalier affilié à l'Université de Montréal

Le 5 juillet 1993

Madame Viola Polomeno
Faculté des sciences infirmières
Université de Montéral

OBJET: La qualité de la relation conjugale comme médiatrice du stress familial relié à l'expérience de l'hospitalisation anténatale chez les couples sans enfant

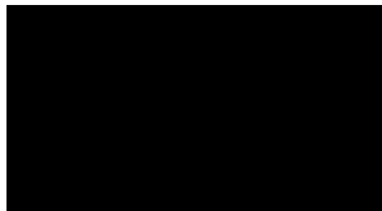
Docteur,

En assemblée tenue le 23 juin 1993, les membres du Comité d'éthique de la recherche ont pris connaissance du projet de recherche cité en rubrique.

Ce projet de recherche est accepté.

Nous vous prions d'agréer, Docteur, l'expression de nos meilleurs sentiments.

Le président du comité d'éthique de la recherche,



Marc Houde, m.d.

/sd

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Hôpital Notre-Dame
Montréal

CENTRE DE REHERCHE
LOUIS-CHARLES SIMARD
Téléphone : (514) 876-6670
Télécopieur : (514) 876-6630

1560 est, rue Sherbrooke
Montréal, Québec H2L 4M1

Le 27 septembre, 1993.

Madame Viola Polomeno
Faculté des Sciences Infirmières
Université de Montréal
2375 chemin de la Côte Ste-Catherine
Montréal (Québec)
H3T 1A8

Projet : **"La qualité de la relation conjugale comme médiatrice du stress familial relié à l'expérience de l'hospitalisation anténatale chez les couples sans enfant." (Dossier 93.48)**

Chère Madame Polomeno,

J'ai le plaisir de vous informer que lors de leur réunion du 16 septembre dernier, les membres du comité de la recherche ont approuvé votre projet.

On vous suggère cependant de ne pas détruire immédiatement vos données, et plutôt de les garder quelques années. Votre projet devra être signé par le chef du département de gynécologie.

Il sera transmis au comité d'éthique pour approbation.

Je vous prie d'agréer, chère Madame Polomeno, l'expression de mes sentiments les meilleurs.

Omar Serri
Président
Comité de la Recherche

OS:nl

Hôpital Royal Victoria — Royal Victoria Hospital

DEPARTEMENT DES SOINS INFIRMIERS / DEPARTMENT OF NURSING

CERTIFICATION DEONTOLOGIE EN RECHERCHE EN SOINS INFIRMIERS / NURSING RESEARCH ETHICAL REVIEW CERTIFICATION

Postulant/Applicant VIOLA POLOMENO

Adresse/Address [redacted]

Téléphone/Telephone [redacted] 343-6111 ext. 2735(W)

Titre du projet/Project Title: La qualité de la relation conjugale comme médiatrice du stress familial relié à l'expérience de l'hospitalisation anténatale chez les couples sans enfant

Le comité de déontologie de la recherche en soins infirmiers a revisé cette proposition et a trouvé qu'elle est:/ The Nursing Research Ethical Review Committee has reviewed this proposal and found that it is:

1. Faisable au département de soins infirmiers de l'hôpital Royal Victoria/Feasible within the RVH Nursing Department. x
2. Solide deontologiquement, selon: / Ethically sound based on :
   - 2.1 Le mérite scientifique / Scientific merit x
   - 2.2 La protection des droits de la personne / Protection of human rights x
   - 2.3 La pertinence clinique / Clinical relevance x

Le comité recommande que le project soit approuvé. / The committee recommends that the above project be approved.

Les membres du comité / Committee Members

Carol Bohme	Nurse - AMI -NII
Luisa Ciofani	NCT - Women's Pavilion
Dr. Sylvia Cruess	Director of Professional Services
Guylaine Duquette	Asst. Director of Nursing, Mtl Chest Hosp.
Carmelita McNeil	Nurse - Home Care - Palliative Care Service
Pat O'Rourke	Patient Representative
Dr. Carolyn Pepler	Consultant for Nursing Research (Chair)
Diane Sylvain	Nurse - Immunodeficiency Clinic

Date: Nov 9/93

Signature: [redacted]
Vice-président(e), soins infirmiers / Vice-President, Nursing Affairs

RAPPORT DE L'ÉTABLISSEMENT OÙ LA RECHERCHE SERA ENTREPRISE

STATEMENT FROM INSTITUTION IN WHICH THE RESEARCH WILL BE PERFORMED

Un comité d'éthique formé par

An ethics review committee established by

Membre désigné par l'Université, directeur général de l'hôpital, directeur du Centre de recherche clinique André-Viallet, directeur des services professionnels, représentant du C.M.D.P., directrice des soins infirmiers, pharmacien clinique, psychologue clinique, travailleuse sociale, porte-parole des malades.

Centre de recherche clinique André-Viallet, Hôpital Saint-Luc

(Université ou établissement où la recherche sera entreprise)
(University or Institution in which the research will be performed)

a examiné le projet intitulé:

has examined the project entitled:

La qualité de la relation conjugale comme médiatrice du stress familial relié à l'expérience de l'hospitalisation anténatale chez les couples sans enfant

présenté par

submitted by

Viola Polomeno

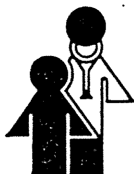
et juge la recherche faisant appel à des sujets humains acceptable au point de vue de l'éthique.

and found the proposed research involving human subjects to be ethically acceptable.

Date/Date: Le 18 janvier 1994

Pierre-Michel Hue[illegible]

Signature du représentant de l'établissement
Signature - Institution's Representative



CENTRE DE RECHERCHE
HÔPITAL SAINTE-JUSTINE
Centre hospitalier affilié à l'Université de Montréal

Le 7 juillet 1993

Mme Viola Polomeno, inf.
Faculté des sciences infirmières
Université de Montréal
C.P. 6128, Succ. A
Montréal (Québec)
H3C 3J7

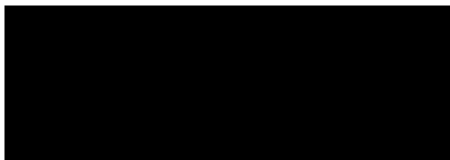
OBJET: La qualité de la relation conjugale comme médiatrice du stress familial relié à l'expérience de l'hospitalisation anténatale chez les couples sans enfant.
Responsable: Viola Polomeno, inf'.

Chère Madame,

Tel que le requiert le règlement établi par le Centre de Recherche de l'Hôpital Sainte-Justine concernant la soumission d'un projet de recherche pour approbation, à titre de directeur j'ai pris connaissance et approuve votre projet de recherche mentionné en objet.

Je vous prie d'agréer l'expression de mes sentiments distingués.

Le Directeur du Centre de Recherche,



Robert Collu, M.D., FRCPC.
RC/gl

Appendix 2

The Personal and Pregnancy Information Guide

(Inventaire d'information obstétricale et personnelle)

-Women's Version

-Men's Version

code # ________ (F)

INVENTAIRE D'INFORMATION OBSTÉTRICALE ET PERSONNELLE (FEMME)

Ce questionnaire comprend des questions qui vont permettre de connaître certaines caractéristiques obstétricales et personnelles pour nous aider à classifier les réponses que vous nous avez fournies dans les autres questionnaires.

I. INFORMATION OBSTÉTRICALE

1. A. Depuis combien de semaines êtes-vous enceinte? ________ semaines.
   B. En incluant cette grossesse, combien de fois aviez-vous été enceinte?
   a. 1 fois b. 2 fois c. 3 fois d. 4 fois ou plus

2. Avez-vous planifié cette grossesse? 1. Oui 2. Non

3. Quelle est la date prévue de votre accouchement? _____/_____/_____
   Jr Ms An

4. A. Pourquoi êtes-vous présentement hospitalisée? (S.V.P. décrire en quelques mots)
   ____

   B. Depuis combien de temps êtes-vous à l'hôpital?________________________

5. A. Avez-vous déjà été hospitalisée au cours de la présente grossesse?
   1. Oui 2. Non
   B. SI OUI, pourquoi?______________________________
   C. Quand?______________________________
   D. Combien de temps?______________________________

6. A. Est-ce que vous êtes limitée dans vos activiés physiques pendant votre séjour à l'hôpital? 1. Oui 2. Non
   B. SI OUI, comment:______________________________

7. Avez-vous déjà été hospitalisée dans votre vie (avant la grossesse) 1. Oui 2. Non

8. Est-ce que vous prenez ou avez-vous pris des cours prénatals pendant la grossesse? 1. Oui 2. Non

II. INFORMATION PERSONNELLE

9. Quel âge avez-vous?______________________________

10. Quel est votre niveau de scolarité? (S.V.P. Encerclez votre réponse).

    1. Secondaire non complété
    2. Secondaire complété
    3. Collégial non complété
    4. Collégial complété
    5. Universitaire non complété
    6. Universitaire complété

11. Quel est votre état civil: (S.V.P. Encerclez votre réponse).
    1. Mariée
    2. Union de fait (célibataire vivant en couple)
    3. Séparée/divorcée vivant en couple

12. A. Occupez-vous un emploi à l'extérieur de la maison pendant la présente grossesse? 1. Oui 2. Non
    B. SI OUI, quel est votre emploi?________________________________
    C. SI OUI, votre emploi est-il:
    1. Temps complet 2. Temps partiel 3. Occasionnel

13. Pour l'année 1992, quel était votre revenu familial brut (avant impôts)? (Votre réponse est confidentielle).
    1. Moins des 10,000
    2. Entre 10,000 et 19,000
    3. Entre 20,000 et 29,000
    4. Entre 30,000 et 39,000
    5. Entre 40,000 et 49,000
    6. Entre 50,000 et 59,000
    7. Entre 60,000 et 69,000
    8. Entre 70,000 et 79,000
    9. Entre 80,000 et 89,000
    10. 90,000 et plus

14. A. Est-ce que vous êtes-vous née ici au Québec? 1. Oui 2. Non
    B. SI NON: Où?____

III. <u>INFORMATION SUR VOTRE COUPLE</u>

15. Depuis combien de temps connaissez-vous votre partenaire?_______________
16. Depuis combien de temps habitez-vous ensemble?______________________

code # ________ (H)

INVENTAIRE D'INFORMATION OBSTÉTRICALE ET PERSONNELLE (HOMME)

Ce questionnaire comprend des questions qui vont permettre de connaître certaines caractéristiques obstétricales et personnelles pour nous aider à classifier les réponses que vous nous avez fournies dans les autres questionnaires.

IV. INFORMATION OBSTÉTRICALE

1. A. Depuis combien de semaines votre partenaire est-elle enceinte?
   ________ semaines.
   B. En incluant cette grossesse, combien de fois a-t-elle été enceinte?
   a. 1 fois   b. 2 fois   c. 3 fois   d. 4 fois ou plus

2. Avez-vous planifié cette grossesse? 1. Oui 2. Non

3. Quelle est la date prévue de son accouchement? _____/_____/_____
   Jr Ms An

4. A. Pourquoi est-elle présentement hospitalisée? (S.V.P. décrire en quelques mots)
   ____
   B. Depuis combien de temps est-elle à l'hôpital?__________________________

5. A. A-t-elle déjà été hospitalisée au cours de la présente grossesse?
   1. Oui 2. Non
   B. SI OUI, pourquoi?__________________________
   C. Quand?__________________________
   D. Combien de temps?__________________________

6. A. Est-ce qu'elle est limitée dans ses activiés physiques pendant son séjour à l'hôpital? 1. Oui 2. Non
   B. SI OUI, comment:__________________________

7. Avez-vous déjà été hospitalisé dans votre vie (avant la grossesse) 1. Oui 2. Non

8. Est-ce que vous prenez ou avez-vous pris des cours prénatals pendant la grossesse? 1. Oui 2. Non

V. INFORMATION PERSONNELLE

9. Quel âge avez-vous?__________________________

10. Quel est votre niveau de scolarité? (S.V.P. Encerclez votre réponse).

    1. Secondaire non complété
    2. Secondaire complété
    3. Collégial non complété
    4. Collégial complété
    5. Universitaire non complété
    6. Universitaire complété

11. Quel est votre état civil: (S.V.P. Encerclez votre réponse).
    1. Marié
    2. Union de fait (célibataire vivant en couple)
    3. Séparé/divorcé vivant en couple

12. A. Occupez-vous un emploi à l'extérieur de la maison pendant la présente grossesse? 1. Oui 2. Non
    B. SI OUI, quel est votre emploi?____________________
    C. SI OUI, votre emploi est-il:
    1. Temps complet 2. Temps partiel 3. Occasionnel

13. Pour l'année 1992, quel était votre revenu familial brut (avant impôts)? (Votre réponse est confidentielle).
    1. Moins des 10,000
    2. Entre 10,000 et 19,000
    3. Entre 20,000 et 29,000
    4. Entre 30,000 et 39,000
    5. Entre 40,000 et 49,000
    6. Entre 50,000 et 59,000
    7. Entre 60,000 et 69,000
    8. Entre 70,000 et 79,000
    9. Entre 80,000 et 89,000
    10. 90,000 et plus

14. A. Est-ce que vous êtes-vous né ici au Québec? 1. Oui 2. Non
    B. SI NON: Où?____________________

VI. INFORMATION SUR VOTRE COUPLE

15. Depuis combien de temps connaissez-vous votre partenaire?____________________
16. Depuis combien de temps habitez-vous ensemble?____________________

Appendix 3

The Dyadic Adjustment Scale

(Échelle d'ajustement dyadique)

-Women's Version

-Men's Version

-Permission Letter

code # ________ (F)

ÉCHELLE D'AJUSTEMENT DYADIQUE[1] (FEMMES)

DIRECTIVES:

Dans les pages suivantes, vous trouverez 32 éconcés qui se rapportent à votre relation avec votre partenaire. Dans la première partie, S.V.P., lire chaque éconcé avec soin et décider jusqu'à quel point l'éconcé décrit bien votre relation avec votre partenaire.

EXEMPLE:

La plupart des couples vivent des désaccords. Veuillez indiquer, en faisant un X dans l'espace approprié, le degré approximatif d'accord ou de désaccord entre vous et votre partenaire dans les domains suivants:

	Toujours d'accord	Presque toujours d'accord	Parfois en désaccord	Souvent en désaccord	Presque toujours en dés.	Toujours en désaccord
1. Jouer aux cartes	______	x	______	______	______	______
2. Faire l'épicerie	______	______	x	______	______	______

Dans la deuxième partie, on vous demande de répondre aux mêmes questions mais cette fois-ci, décider jusqu'à quel point l'éconcé décrit bien la réponse que votre partenaire donnerait s'il avait à répondre à l'éconcé. S.V.P., lire chaque éconcé avec soin.

	Toujours d'accord	Presque toujours d'accord	Parfois en désaccord	Souvent en désaccord	Presque toujours en dés.	Toujours en désaccord
1. Jouer aux cartes	______	x	______	______	______	______
2. Faire l'épicerie	______	______	x	______	______	______

[1] Traduction et adaptation du "Dyadic Adjustment Scale" de Graham B. Spanier, "Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads", Journal of Marriage and the Family, 1976, 38, pp. 27-28; J. Baillargeon, G. Bubois, R. Marineau, © 1986, Québec.

ÉCHELLE D'AJUSTEMENT DYADIQUE

La plupart des couples vivent des désaccords. Veuillez indiquer, en faisant un X dans l'espace approprié, le degré approximatif d'accord ou de désaccord entre vous et votre partenaire dans les domaines suivants:

S.V.P. RÉPONDRE À CHAQUE ITEM ET NE DONNER QU'UNE RÉPONSE PAR ITEM

		Toujours d'accord	Presque toujours d'accord	Parfois en désaccord	Souvent en désaccord	Presque toujours en dés.	Toujours en désaccord
1.	Le budget familial	_____	_____	_____	_____	_____	_____
2.	Les loisirs	_____	_____	_____	_____	_____	_____
3.	La religion	_____	_____	_____	_____	_____	_____
4.	Les marques d'affection	_____	_____	_____	_____	_____	_____
5.	Les amis	_____	_____	_____	_____	_____	_____
6.	Les relations sexuelles	_____	_____	_____	_____	_____	_____
7.	Les conventions sociales	_____	_____	_____	_____	_____	_____
8.	La philosophie de vie	_____	_____	_____	_____	_____	_____
9.	Les façons d'agir avec les parents ou les beaux-parents	_____	_____	_____	_____	_____	_____
10.	Les objectifs, les buts et ce que l'on trouve important dans la vie	_____	_____	_____	_____	_____	_____
11.	La quantité de temps passé ensemble	_____	_____	_____	_____	_____	_____
12.	Les prises de décision importantes	_____	_____	_____	_____	_____	_____
13.	Les tâches ménagères	_____	_____	_____	_____	_____	_____
14.	Les intérêts et les activités pendant les temps libres	_____	_____	_____	_____	_____	_____
15.	Les décisions à propos du travail	_____	_____	_____	_____	_____	_____

		Toujours	La plupart du temps	Assez souvent	À l'occasion	Rarement	Jamais
16.	À quelle fréquence avez-vous discuté ou avez-vous pensé au divorce, à la séparation ou à terminer votre relation?	_____	_____	_____	_____	_____	_____
17.	À quelle fréquence vous ou votre partenaire quittez-vous la maison après une dispute?	_____	_____	_____	_____	_____	_____
18.	En général, à quelle fréquence pensez-vous que ça va bien entre vous et votre partenaire?	_____	_____	_____	_____	_____	_____
19.	Vous confiez-vous à votre partenaire?	_____	_____	_____	_____	_____	_____
20.	Vous arrive-t-il de regretter de vous être marié(e) (ou de vivre ensemble)?	_____	_____	_____	_____	_____	_____
21.	À quelle fréquence vous disputez-vous avec votre partenaire?	_____	_____	_____	_____	_____	_____
22.	À quelle fréquence vous et votre partenaire vous "tapez-vous sur les nerfs"?	_____	_____	_____	_____	_____	_____

		À chaque jour	Presqu'à chaque jour	À l'occasion	Rarement	Jamais
23.	Embrassez-vous votre partenaire?	_____	_____	_____	_____	_____

		Tous	Presque Tous	Quelques-uns	Très peu	Aucun
24.	Avez-vous des intérêts communs à l'extérieur de la maison?	_____	_____	_____	_____	_____

D'après vous, quelle est la fréquence des situations suivantes dans votre couple?

		Jamais	Moins d'une fois par mois	Une ou deux fois par mois	Une ou deux fois par semaine	Une fois par jour	Plus d'une fois par jour
25.	Avoir un échange d'idées stimulant	_____	_____	_____	_____	_____	_____
26.	Rire ensemble	_____	_____	_____	_____	_____	_____
27.	Discuter calmement	_____	_____	_____	_____	_____	_____
28.	Travailler ensemble à un projet	_____	_____	_____	_____	_____	_____

Pour des deux situations qui suivent, indiquez si, oui ou non, ces items ont causé des différences d'opinion ou des problèmes dans votre relation pendant les dernières semaines.

		Oui	Non
29.	Être trop fatigué(e) pour avoir des relations sexuelles	_______	_______
30.	Ne pas manifester d'affection	_______	_______

31. Les points au dessus de la ligne représentant différents degrés de bonheur dans votre relation. Le point central "heureux" représente le degré de bonheur que l'on retrouve dans la plupart des relations. Veuillez encercler le point qui décrit le mieux le degré de bonheur que vous ressentez en général dans votre relation.

.	.	.	.	.	.	.
Extrêmement malheureux	Passablement malheureux	Un peu malheureux	Heureux	Très heureux	Extrêmement heureux	Parfaitement heureux

32. Laquelle des phrases suivantes décrit le mieux ce que vous ressentez en rapport avec l'avenir de votre relation (s.v.p. choisir un seul éconcé):

____ Je veux désespérément que ma relation réussisse et je ferai tout pour cela.
____ Je veux beaucoup que ma relation réussisse et je ferai tout ce que je peux pour cela.
____ Je veux beaucoup que ma relation réussisse et je ferai ma juste part pour cela.
____ Ce serait bien si ma relation réussissait et je ne peux pas faire beaucoup plus que ce que je fais actuellement pour cela.
____ Ce serait bien si ma relation réussissait, mais je refuse de faire plus que ce que je fais actuellement pour cela.
____ Ma relation ne pourra jamais réussir et je ne peux plus rien y faire.

ÉCHELLE D'AJUSTEMENT DYADIQUE

Maintenant, il faut que vous vous mettiez à la place de votre partenaire. Comment croyez-vous qu'il répondrait s'il avait à répondre aux mêmes questions? La plupart des couples vivent des désaccords. Veuillez indiquer, en faisant un X dans l'espace approprié, le degré approximatif d'accord ou de désaccord entre vous et votre partenaire dans les domaines suivants:

S.V.P. RÉPONDRE À CHAQUE ITEM ET NE DONNER QU'UNE RÉPONSE PAR ITEM

		Toujours d'accord	Presque toujours d'accord	Parfois en désaccord	Souvent en désaccord	Presque toujours en dés.	Toujours en désaccord
1.	Le budget familial	______	______	______	______	______	______
2.	Les loisirs	______	______	______	______	______	______
3.	La religion	______	______	______	______	______	______
4.	Les marques d'affection	______	______	______	______	______	______
5.	Les amis	______	______	______	______	______	______
6.	Les relations sexuelles	______	______	______	______	______	______
7.	Les conventions sociales	______	______	______	______	______	______
8.	La philosophie de vie	______	______	______	______	______	______
9.	Les façons d'agir avec les parents ou les beaux-parents	______	______	______	______	______	______
10.	Les objectifs, les buts et ce que l'on trouve important dans la vie	______	______	______	______	______	______
11.	La quantité de temps passé ensemble	______	______	______	______	______	______
12.	Les prises de décision importantes	______	______	______	______	______	______
13.	Les tâches ménagères	______	______	______	______	______	______
14.	Les intérêts et les activités pendant les temps libres	______	______	______	______	______	______
15.	Les décisions à propos du travail	______	______	______	______	______	______

		Toujours	La plupart du temps	Assez souvent	À l'occasion	Rarement	Jamais
16.	À quelle fréquence avez-vous discuté ou avez-vous pensé au divorce, à la séparation ou à terminer votre relation?	_____	_____	_____	_____	_____	_____
17.	À quelle fréquence vous ou votre partenaire quittez-vous la maison après une dispute?	_____	_____	_____	_____	_____	_____
18.	En général, à quelle fréquence pensez-vous que ça va bien entre vous et votre partenaire?	_____	_____	_____	_____	_____	_____
19.	Vous confiez-vous à votre partenaire?	_____	_____	_____	_____	_____	_____
20.	Vous arrive-t-il de regretter de vous être marié(e) (ou de vivre ensemble)?	_____	_____	_____	_____	_____	_____
21.	À quelle fréquence vous disputez-vous avec votre partenaire?	_____	_____	_____	_____	_____	_____
22.	À quelle fréquence vous et votre partenaire vous "tapez-vous sur les nerfs"?	_____	_____	_____	_____	_____	_____

		À chaque jour	Presqu'à chaque jour	À l'occasion	Rarement	Jamais
23.	Embrassez-vous votre partenaire?	_____	_____	_____	_____	_____

		Tous	Presque Tous	Quelques-uns	Très peu	Aucun
24.	Avez-vous des intérêts communs à l'extérieur de la maison?	_____	_____	_____	_____	_____

D'après vous, quelle est la fréquence des situations suivantes dans votre couple?

		Jamais	Moins d'une fois par mois	Une ou deux fois par mois	Une ou deux fois par semaine	Une fois par jour	Plus d'une fois par jour
25.	Avoir un échange d'idées stimulant	_____	_____	_____	_____	_____	_____
26.	Rire ensemble	_____	_____	_____	_____	_____	_____
27.	Discuter calmement	_____	_____	_____	_____	_____	_____
28.	Travailler ensemble à un projet	_____	_____	_____	_____	_____	_____

Pour des deux situations qui suivent, indiquez si, oui ou non, ces items ont causé des différences d'opinion ou des problèmes dans votre relation pendant les dernières semaines.

		Oui	Non
29.	Être trop fatigué(e) pour avoir des relations sexuelles	_______	_______
30.	Ne pas manifester d'affection	_______	_______

31. Les points au dessus de la ligne représentant différents degrés de bonheur dans votre relation. Le point central "heureux" représente le degré de bonheur que l'on retrouve dans la plupart des relations. Veuillez encercler le point qui décrit le mieux le degré de bonheur que vous ressentez en général dans votre relation.

.	.	.	.	.	.	.
Extrêmement malheureux	Passablement malheureux	Un peu malheureux	Heureux	Très heureux	Extrêmement heureux	Parfaitement heureux

32. Laquelle des phrases suivantes décrit le mieux ce que vous ressentez en rapport avec l'avenir de votre relation (s.v.p. choisir un seul éconcé):

____ Je veux désespérément que ma relation réussisse et je ferai tout pour cela.
____ Je veux beaucoup que ma relation réussisse et je ferai tout ce que je peux pour cela.
____ Je veux beaucoup que ma relation réussisse et je ferai ma juste part pour cela.
____ Ce serait bien si ma relation réussissait et je ne peux pas faire beaucoup plus que ce que je fais actuellement pour cela.
____ Ce serait bien si ma relation réussissait, mais je refuse de faire plus que ce que je fais actuellement pour cela.
____ Ma relation ne pourra jamais réussir et je ne peux plus rien y faire.

code # ________ (H)

ÉCHELLE D'AJUSTEMENT DYADIQUE[1] (HOMMES)

DIRECTIVES:

Dans les pages suivantes, vous trouverez 32 éconcés qui se rapportent à votre relation avec votre partenaire. Dans la première partie, S.V.P., lire chaque éconcé avec soin et décider jusqu'à quel point l'éconcé décrit bien votre relation avec votre partenaire.

EXEMPLE:

La plupart des couples vivent des désaccords. Veuillez indiquer, en faisant un X dans l'espace approprié, le degré approximatif d'accord ou de désaccord entre vous et votre partenaire dans les domains suivants:

	Toujours d'accord	Presque toujours d'accord	Parfois en désaccord	Souvent en désaccord	Presque toujours en dés.	Toujours en désaccord
1. Jouer aux cartes		x				
2. Faire l'épicerie			x			

Dans la deuxième partie, on vous demande de répondre aux mêmes questions mais cette fois-ci, décider jusqu'à quel point l'éconcé décrit bien la réponse que votre partenaire donnerait s'elle avait à répondre à l'éconcé. S.V.P., lire chaque éconcé avec soin.

	Toujours d'accord	Presque toujours d'accord	Parfois en désaccord	Souvent en désaccord	Presque toujours en dés.	Toujours en désaccord
1. Jouer aux cartes		x				
2. Faire l'épicerie			x			

[1] Traduction et adaptation du "Dyadic Adjustment Scale" de Graham B. Spanier, "Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads", Journal of Marriage and the Family, 1976, 38, pp. 27-28; J. Baillargeon, G. Bubois, R. Marineau, © 1986, Québec.

ÉCHELLE D'AJUSTEMENT DYADIQUE

La plupart des couples vivent des désaccords. Veuillez indiquer, en faisant un X dans l'espace approprié, le degré approximatif d'accord ou de désaccord entre vous et votre partenaire dans les domaines suivants:

<u>S.V.P. RÉPONDRE À CHAQUE ITEM ET NE DONNER QU'UNE RÉPONSE PAR ITEM</u>

		Toujours d'accord	Presque toujours d'accord	Parfois en désaccord	Souvent en désaccord	Presque toujours en dés.	Toujours en désaccord
1.	Le budget familial	_____	_____	_____	_____	_____	_____
2.	Les loisirs	_____	_____	_____	_____	_____	_____
3.	La religion	_____	_____	_____	_____	_____	_____
4.	Les marques d'affection	_____	_____	_____	_____	_____	_____
5.	Les amis	_____	_____	_____	_____	_____	_____
6.	Les relations sexuelles	_____	_____	_____	_____	_____	_____
7.	Les conventions sociales	_____	_____	_____	_____	_____	_____
8.	La philosophie de vie	_____	_____	_____	_____	_____	_____
9.	Les façons d'agir avec les parents ou les beaux-parents	_____	_____	_____	_____	_____	_____
10.	Les objectifs, les buts et ce que l'on trouve important dans la vie	_____	_____	_____	_____	_____	_____
11.	La quantité de temps passé ensemble	_____	_____	_____	_____	_____	_____
12.	Les prises de décision importantes	_____	_____	_____	_____	_____	_____
13.	Les tâches ménagères	_____	_____	_____	_____	_____	_____
14.	Les intérêts et les activités pendant les temps libres	_____	_____	_____	_____	_____	_____
15.	Les décisions à propos du travail	_____	_____	_____	_____	_____	_____

		Toujours	La plupart du temps	Assez souvent	À l'occasion	Rarement	Jamais
16.	À quelle fréquence avez-vous discuté ou avez-vous pensé au divorce, à la séparation ou à terminer votre relation?	_____	_____	_____	_____	_____	_____
17.	À quelle fréquence vous ou votre partenaire quittez-vous la maison après une dispute?	_____	_____	_____	_____	_____	_____
18.	En général, à quelle fréquence pensez-vous que ça va bien entre vous et votre partenaire?	_____	_____	_____	_____	_____	_____
19.	Vous confiez-vous à votre partenaire?	_____	_____	_____	_____	_____	_____
20.	Vous arrive-t-il de regretter de vous être marié(e) (ou de vivre ensemble)?	_____	_____	_____	_____	_____	_____
21.	À quelle fréquence vous disputez-vous avec votre partenaire?	_____	_____	_____	_____	_____	_____
22.	À quelle fréquence vous et votre partenaire vous "tapez-vous sur les nerfs"?	_____	_____	_____	_____	_____	_____

		À chaque jour	Presqu'à chaque jour	À l'occasion	Rarement	Jamais
23.	Embrassez-vous votre partenaire?	_____	_____	_____	_____	_____

		Tous	Presque Tous	Quelques-uns	Très peu	Aucun
24.	Avez-vous des intérêts communs à l'extérieur de la maison?	_____	_____	_____	_____	_____

D'après vous, quelle est la fréquence des situations suivantes dans votre couple?

		Jamais	Moins d'une fois par mois	Une ou deux fois par mois	Une ou deux fois par semaine	Une fois par jour	Plus d'une fois par jour
25.	Avoir un échange d'idées stimulant	_____	_____	_____	_____	_____	_____
26.	Rire ensemble	_____	_____	_____	_____	_____	_____
27.	Discuter calmement	_____	_____	_____	_____	_____	_____
28.	Travailler ensemble à un projet	_____	_____	_____	_____	_____	_____

Pour des deux situations qui suivent, indiquez si, oui ou non, ces items ont causé des différences d'opinion ou des problèmes dans votre relation pendant les dernières semaines.

		Oui	Non
29.	Être trop fatigué(e) pour avoir des relations sexuelles	_______	_______
30.	Ne pas manifester d'affection	_______	_______

31. Les points au dessus de la ligne représentant différents degrés de bonheur dans votre relation. Le point central "heureux" représente le degré de bonheur que l'on retrouve dans la plupart des relations. Veuillez encercler le point qui décrit le mieux le degré de bonheur que vous ressentez en général dans votre relation.

.	.	.	.	.	.	.
Extrêmement malheureux	Passablement malheureux	Un peu malheureux	Heureux	Très heureux	Extrêmement heureux	Parfaitement heureux

32. Laquelle des phrases suivantes décrit le mieux ce que vous ressentez en rapport avec l'avenir de votre relation (s.v.p. choisir un seul éconcé):

____ Je veux désespérément que ma relation réussisse et je ferai tout pour cela.
____ Je veux beaucoup que ma relation réussisse et je ferai tout ce que je peux pour cela.
____ Je veux beaucoup que ma relation réussisse et je ferai ma juste part pour cela.
____ Ce serait bien si ma relation réussissait et je ne peux pas faire beaucoup plus que ce que je fais actuellement pour cela.
____ Ce serait bien si ma relation réussissait, mais je refuse de faire plus que ce que je fais actuellement pour cela.
____ Ma relation ne pourra jamais réussir et je ne peux plus rien y faire.

ÉCHELLE D'AJUSTEMENT DYADIQUE

Maintenant, il faut que vous vous mettiez à la place de votre partenaire. Comment croyez-vous qu'elle répondrait s'elle avait à répondre aux mêmes questions? La plupart des couples vivent des désaccords. Veuillez indiquer, en faisant un X dans l'espace approprié, le degré approximatif d'accord ou de désaccord entre vous et votre partenaire dans les domains suivants:

S.V.P. RÉPONDRE À CHAQUE ITEM ET NE DONNER QU'UNE RÉPONSE PAR ITEM

		Toujours d'accord	Presque toujours d'accord	Parfois en désaccord	Souvent en désaccord	Presque toujours en dés.	Toujours en désaccord
1.	Le budget familial	______	______	______	______	______	______
2.	Les loisirs	______	______	______	______	______	______
3.	La religion	______	______	______	______	______	______
4.	Les marques d'affection	______	______	______	______	______	______
5.	Les amis	______	______	______	______	______	______
6.	Les relations sexuelles	______	______	______	______	______	______
7.	Les conventions sociales	______	______	______	______	______	______
8.	La philosophie de vie	______	______	______	______	______	______
9.	Les façons d'agir avec les parents ou les beaux-parents	______	______	______	______	______	______
10.	Les objectifs, les buts et ce que l'on trouve important dans la vie	______	______	______	______	______	______
11.	La quantité de temps passé ensemble	______	______	______	______	______	______
12.	Les prises de décision importantes	______	______	______	______	______	______
13.	Les tâches ménagères	______	______	______	______	______	______
14.	Les intérêts et les activités pendant les temps libres	______	______	______	______	______	______
15.	Les décisions à propos du travail	______	______	______	______	______	______

		Toujours	La plupart du temps	Assez souvent	À l'occasion	Rarement	Jamais
16.	À quelle fréquence avez-vous discuté ou avez-vous pensé au divorce, à la séparation ou à terminer votre relation?	_____	_____	_____	_____	_____	_____
17.	À quelle fréquence vous ou votre partenaire quittez-vous la maison après une dispute?	_____	_____	_____	_____	_____	_____
18.	En général, à quelle fréquence pensez-vous que ça va bien entre vous et votre partenaire?	_____	_____	_____	_____	_____	_____
19.	Vous confiez-vous à votre partenaire?	_____	_____	_____	_____	_____	_____
20.	Vous arrive-t-il de regretter de vous être marié(e) (ou de vivre ensemble)?	_____	_____	_____	_____	_____	_____
21.	À quelle fréquence vous disputez-vous avec votre partenaire?	_____	_____	_____	_____	_____	_____
22.	À quelle fréquence vous et votre partenaire vous "tapez-vous sur les nerfs"?	_____	_____	_____	_____	_____	_____

		À chaque jour	Presqu'à chaque jour	À l'occasion	Rarement	Jamais
23.	Embrassez-vous votre partenaire?	_____	_____	_____	_____	_____

		Tous	Presque Tous	Quelques-uns	Très peu	Aucun
24.	Avez-vous des intérêts communs à l'extérieur de la maison?	_____	_____	_____	_____	_____

D'après vous, quelle est la fréquence des situations suivantes dans votre couple?

		Jamais	Moins d'une fois par mois	Une ou deux fois par mois	Une ou deux fois par semaine	Une fois par jour	Plus d'une fois par jour
25.	Avoir un échange d'idées stimulant	_____	_____	_____	_____	_____	_____
26.	Rire ensemble	_____	_____	_____	_____	_____	_____
27.	Discuter calmement	_____	_____	_____	_____	_____	_____
28.	Travailler ensemble à un projet	_____	_____	_____	_____	_____	_____

Pour des deux situations qui suivent, indiquez si, oui ou non, ces items ont causé des différences d'opinion ou des problèmes dans votre relation pendant les dernières semaines.

		Oui	Non
29.	Être trop fatigué(e) pour avoir des relations sexuelles	_______	_______
30.	Ne pas manifester d'affection	_______	_______

31. Les points au dessus de la ligne représentant différents degrés de bonheur dans votre relation. Le point central "heureux" représente le degré de bonheur que l'on retrouve dans la plupart des relations. Veuillez encercler le point qui décrit le mieux le degré de bonheur que vous ressentez en général dans votre relation.

.	.	.	.	.	.	.
Extrêmement malheureux	Passablement malheureux	Un peu malheureux	Heureux	Très heureux	Extrêmement heureux	Parfaitement heureux

32. Laquelle des phrases suivantes décrit le mieux ce que vous ressentez en rapport avec l'avenir de votre relation (s.v.p. choisir un seul éconcé):

____ Je veux désespérément que ma relation réussisse et je ferai tout pour cela.
____ Je veux beaucoup que ma relation réussisse et je ferai tout ce que je peux pour cela.
____ Je veux beaucoup que ma relation réussisse et je ferai ma juste part pour cela.
____ Ce serait bien si ma relation réussissait et je ne peux pas faire beaucoup plus que ce que je fais actuellement pour cela.
____ Ce serait bien si ma relation réussissait, mais je refuse de faire plus que ce que je fais actuellement pour cela.
____ Ma relation ne pourra jamais réussir et je ne peux plus rien y faire.

Permission Letter

Date: Tue, 28 Sep 1999 14:12:17 EDT [Show full headers]
From: "Jacques Baillargeon" < >
[Add to Address Book]
To: "Viola Polomeno" < > [Add to Address Book]
Subject: Re: Échelle d'ajustment dyadique

Bonjour madame Polomeno ,

Il n'y a vraiment aucune difficulté ou restriction concernant l'utilisation de la version française de l'Échelle d'ajustement dyadique.

Il est d'ailleurs de pratique courante et acceptée d'utiliser pour fins de recherche les instruments de ce type, sans même en obtenir l'autorisation préalable. Évidemment cela fait toujours plaisir de constater que d'autres chercheur(e)s utilisent le matériel que vous avez mis au point. Je vous prierais simplement de mettre en référence notre article de 1986.

Je vous souhaite le meilleur des succès dans la poursuite de votre projet,

Jacques Baillargeon
Département de psychologie

Appendix 4

The Support Behaviors Inventory

(Inventaire de comportements de soutien)

-Women's Version

-Men's Version

-Permission Letter

Code # : _______ (F)

INVENTAIRE DE COMPORTEMENTS DE SOUTIEN [1] (FEMMES)

Je m'intéresse à déterminer des comportements qui pourraient aider les futurs parents pendant la grossesse. Ci-dessous, vous trouverez une liste de comportements que les personnes ont les unes envers les autres. Pour chaque comportement de soutien, veuillez indiquer votre degré de satisfaction en encerclant le chiffre correspondant. Vous devez indiquer votre satisfaction à l'égard des personnes (famille, amis (es)) qui vous entourent, en n'incluant pas votre conjoint/partenaire.

EXEMPLES:

Dans quelle mesure êtes-vous satisfaite du nombre de fois que les autres personnes font ceci pour vous?

	Insatisfaite	Plutot Insat-isfaite	Ni Insatisfaite/ Ni satisfaite	Plutôt Satisfaite	Satisfaite	Très Satisfaite	Ne s'applique Pas
1. Fait l'épicerie pour moi	1	2	3	4	5	6	7
2. Rapporte mes livres à la bibliothèque	1	2	3	4	5	6	7

---

[1] Traduit de "Soutien Behaviors Inventory", Marie-Annette Brown, Washington, © 1986, par Céline Goulet, inf., Ph.D., Montréal, 1992.

Dans quelle mesure êtes-vous satisfaite du nombre de fois que les autres personnes font ceci pour vous?

	Insatisfaite	Plutot Insat-isfaite	Ni Insatisfaite/ Ni satisfaite	Plutôt Satisfaite	Satisfaite	Très Satisfaite	Ne s'applique Pas
1. Fait des efforts pour faire des choses spéciales pour moi ou rendre service	1	2	3	4	5	6	7
2. Passe du temps avec quelqu'un qui vit ou a vécu une expérience semblable de grossesse	1	2	3	4	5	6	7
3. Aide à organiser la maison et à préparer les choses pour l'arrivée du bébé	1	2	3	4	5	6	7
4. Comprend mes inquiétudes au sujet des changements que le bébé apportera dans notre relation et notre façon de vivre	1	2	3	4	5	6	7
5. Me touche pour me démontrer qu'il/elle s'occupe de moi ou qu'il/elle m'aime	1	2	3	4	5	6	7
6. M'aide à garder un bon moral pendant cette grossesse	1	2	3	4	5	6	7
7. Me fait savoir combien je suis une partenaire importante pendant la grossesse	1	2	3	4	5	6	7
8. S'intéresse à la grossesse et au bébé	1	2	3	4	5	6	7
9. M'aide quand je suis à bout	1	2	3	4	5	6	7
10. Participe aux activités liées à la grossesse (visites chez le médecin, cours etc.)	1	2	3	4	5	6	7
11. S'intéresse à mes problèmes et à mes activités quotidiennes (autres que ceux se rapportant à la grossesse)	1	2	3	4	5	6	7
12. M'aide à faire face à mes peurs au sujet de la possibilité d'avoir un enfant malade ou anormal	1	2	3	4	5	6	7
13. Me laisse faire quand je veux me défouler	1	2	3	4	5	6	7

Dans quelle mesure êtes-vous satisfaite du nombre de fois que les autres personnes font ceci pour vous?

	Insatisfaite	Plutot Insat-isfaite	Ni Insatisfaite/ Ni satisfaite	Plutôt Satisfaite	Satisfaite	Très Satisfaite	Ne s'applique Pas
14. M'encourage à prendre soin de moi	1	2	3	4	5	6	7
15. M'aide à faire ce qui doit être fait	1	2	3	4	5	6	7
16. Passe du temps avec quelqu'un qui se sent bien à l'idée d'avoir un enfant	1	2	3	4	5	6	7
17. Me fait savoir que, malgré les ennuis, cette grossesse en vaut la peine	1	2	3	4	5	6	7
18. M'aide avec les tâches, les courses ou les travaux domestiques pendant la grossesse	1	2	3	4	5	6	7
19. Me renseigne sur ce à quoi je dois m'attendre pendant la grossesse ou comme parent	1	2	3	4	5	6	7
20. Me rassure en me disant que je serai un bon parent pour le bébé	1	2	3	4	5	6	7
21. Me permet de discuter de choses personnelles	1	2	3	4	5	6	7
22. Me rassure en me disant que je suis belle	1	2	3	4	5	6	7
23. M'aide à apprendre des trucs pour être en bonne santé	1	2	3	4	5	6	7
24. Me fait sentir que nous partageons cette grossesse	1	2	3	4	5	6	7
25. Me rassure en me disant qu'une fois le bébé arrivé, nous pourrons arriver financièrement	1	2	3	4	5	6	7
26. Accepte mes heures et mon horaire de travail	1	2	3	4	5	6	7

Dans quelle mesure êtes-vous satisfaite du nombre de fois que les autres personnes font ceci pour vous?

	Insatisfaite	Plutot Insat-isfaite	Ni Insatisfaite/ Ni satisfaite	Plutôt Satisfaite	Satisfaite	Très Satisfaite	Ne s'applique Pas
27. Me fait voir qu'il/elle apprécie ce que je fais pour lui/elle	1	2	3	4	5	6	7
28. Accepte mes sautes d'humeur et mes comportements inhabituels	1	2	3	4	5	6	7
29. Est patient(e) et compréhensif/ive face aux changements dans notre vie sexuelle pendant cette grossesse	1	2	3	4	5	6	7
30. M'encourage à faire ce que je prends plaisir à faire	1	2	3	4	5	6	7
31. M'aide en me permettant de comparer nos pensées et nos sentiments sur le rôle de parent	1	2	3	4	5	6	7
32. M'aide à prendre des décisions	1	2	3	4	5	6	7
33. Me fait savoir qu'il/elle a besoin de moi	1	2	3	4	5	6	7
34. M'aide à faire face à mes peurs concernant les risques physiques de la grossesse et de l'accouchement	1	2	3	4	5	6	7
35. Me prend au sérieux quand j'ai des inquiétudes	1	2	3	4	5	6	7
36. Me dit des choses qui rendent ma situation plus claire et plus facile à comprendre	1	2	3	4	5	6	7
37. Me réconforte en me démontrant de la tendresse	1	2	3	4	5	6	7
38. Me renseigne ou me conseille sur la façon de faire certaines choses	1	2	3	4	5	6	7
39. M'aide à évaluer mes attitudes et mes capacités en jouant le rôle de quelqu'un dans une situation semblable	1	2	3	4	5	6	7

Dans quelle mesure êtes-vous satisfaite du nombre de fois que les autres personnes font ceci pour vous?

	Insatisfaite	Plutot Insat-isfaite	Ni Insatisfaite/ Ni satisfaite	Plutôt Satisfaite	Satisfaite	Très Satisfaite	Ne s'applique Pas
40. Me rassure en me disant qu'il/elle sera là si j'ai besoin d'aide	1	2	3	4	5	6	7
41. Me donne ses commentaires sur la façon dont je m'adapte à la grossesse	1	2	3	4	5	6	7
42. M'explique ce à quoi je dois m'attendre des situations à venir	1	2	3	4	5	6	7
43. Est prêt(e) à m'accorder des faveurs	1	2	3	4	5	6	7
44. Me gâte si je suis fatiguée ou si je ne me sens pas bien	1	2	3	4	5	6	7
45. Me rassure en me disant qu'un accouchement est un événement naturel et que les gens "survivent"	1	2	3	4	5	6	7

Code # : _______ (H)

INVENTAIRE DE COMPORTEMENTS DE SOUTIEN [1] (HOMMES)

Je m'intéresse à déterminer des comportements qui pourraient aider les futurs parents pendant la grossesse. Ci-dessous, vous trouverez une liste de comportements que les personnes ont les unes envers les autres. Pour chaque comportement de soutien, veuillez indiquer votre degré de satisfaction en encerclant le chiffre correspondant. Vous devez indiquer votre satisfaction à l'égard des personnes (famille, amis (es)) qui vous entourent, en n'incluant pas votre conjointe/partenaire.

EXEMPLES:

Dans quelle mesure êtes-vous satisfait du nombre de fois que les autres personnes font ceci pour vous?

	Insatisfait	Plutot Insat-isfait	Ni Insatisfait/ Ni satisfait	Plutôt Satisfait	Satisfait	Très Satisfait	Ne s'applique Pas
1. Fait l'épicerie pour moi	1	2	3	4	5	6	7
2. Rapporte mes livres à la bibliothèque	1	2	3	4	5	6	7

---

[1] Traduit de "Soutien Behaviors Inventory", Marie-Annette Brown, Washington, © 1986, par Céline Goulet, inf., Ph.D., Montréal, 1992.

Dans quelle mesure êtes-vous satisfait du nombre de fois que les autres personnes font ceci pour vous?

	Insatisfait	Plutot Insat-isfait	Ni Insatisfait/ Ni satisfait	Plutôt Satisfait	Satisfait	Très Satisfait	Ne s'applique Pas
1. Fait des efforts pour faire des choses spéciales pour moi ou rendre service	1	2	3	4	5	6	7
2. Passe du temps avec quelqu'un qui vit ou a vécu une expérience semblable de grossesse	1	2	3	4	5	6	7
3. Aide à organiser la maison et à préparer les choses pour l'arrivée du bébé	1	2	3	4	5	6	7
4. Comprend mes inquiétudes au sujet des changements que le bébé apportera dans notre relation et notre façon de vivre	1	2	3	4	5	6	7
5. Me touche pour me démontrer qu'il/elle s'occupe de moi ou qu'il/elle m'aime	1	2	3	4	5	6	7
6. M'aide à garder un bon moral pendant cette grossesse	1	2	3	4	5	6	7
7. Me fait savoir combien je suis un partenaire important pendant la grossesse	1	2	3	4	5	6	7
8. S'intéresse à la grossesse et au bébé	1	2	3	4	5	6	7
9. M'aide quand je suis à bout	1	2	3	4	5	6	7
10. Participe aux activités liées à la grossesse (visites chez le médecin, cours etc.)	1	2	3	4	5	6	7
11. S'intéresse à mes problèmes et à mes activités quotidiennes (autres que ceux se rapportant à la grossesse)	1	2	3	4	5	6	7
12. M'aide à faire face à mes peurs au sujet de la possibilité d'avoir un enfant malade ou anormal	1	2	3	4	5	6	7
13. Me laisse faire quand je veux me défouler	1	2	3	4	5	6	7

Dans quelle mesure êtes-vous satisfait du nombre de fois que les autres personnes font ceci pour vous?

	Insatisfait	Plutot Insat-isfait	Ni Insatisfait/ Ni satisfait	Plutôt Satisfait	Satisfait	Très Satisfait	Ne s'applique Pas
14. M'encourage à prendre soin de moi	1	2	3	4	5	6	7
15. M'aide à faire ce qui doit être fait	1	2	3	4	5	6	7
16. Passe du temps avec quelqu'un qui se sent bien à l'idée d'avoir un enfant	1	2	3	4	5	6	7
17. Me fait savoir que, malgré les ennuis, cette grossesse en vaut la peine	1	2	3	4	5	6	7
18. M'aide avec les tâches, les courses ou les travaux domestiques pendant la grossesse	1	2	3	4	5	6	7
19. Me renseigne sur ce à quoi je dois m'attendre pendant la grossesse ou comme parent	1	2	3	4	5	6	7
20. Me rassure en me disant que je serai un bon parent pour le bébé	1	2	3	4	5	6	7
21. Me permet de discuter de choses personnelles	1	2	3	4	5	6	7
22. Me rassure en me disant que je suis beau	1	2	3	4	5	6	7
23. M'aide à apprendre des trucs pour être en bonne santé	1	2	3	4	5	6	7
24. Me fait sentir que nous partageons cette grossesse	1	2	3	4	5	6	7
25. Me rassure en me disant qu'une fois le bébé arrivé, nous pourrons arriver financièrement	1	2	3	4	5	6	7
26. Accepte mes heures et mon horaire de travail	1	2	3	4	5	6	7

Dans quelle mesure êtes-vous satisfait du nombre de fois que les autres personnes font ceci pour vous?

	Insatisfait	Plutot Insat-isfait	Ni Insatisfait/ Ni satisfait	Plutôt Satisfait	Satisfait	Très Satisfait	Ne s'applique Pas
27. Me fait voir qu'il/elle apprécie ce que je fais pour lui/elle	1	2	3	4	5	6	7
28. Accepte mes sautes d'humeur et mes comportements inhabituels	1	2	3	4	5	6	7
29. Est patient(e) et compréhensif/ive face aux changements dans notre vie sexuelle pendant cette grossesse	1	2	3	4	5	6	7
30. M'encourage à faire ce que je prends plaisir à faire	1	2	3	4	5	6	7
31. M'aide en me permettant de comparer nos pensées et nos sentiments sur le rôle de parent	1	2	3	4	5	6	7
32. M'aide à prendre des décisions	1	2	3	4	5	6	7
33. Me fait savoir qu'il/elle a besoin de moi	1	2	3	4	5	6	7
34. M'aide à faire face à mes peurs concernant les risques physiques de la grossesse et de l'accouchement	1	2	3	4	5	6	7
35. Me prend au sérieux quand j'ai des inquiétudes	1	2	3	4	5	6	7
36. Me dit des choses qui rendent ma situation plus claire et plus facile à comprendre	1	2	3	4	5	6	7
37. Me réconforte en me démontrant de la tendresse	1	2	3	4	5	6	7
38. Me renseigne ou me conseille sur la façon de faire certaines choses	1	2	3	4	5	6	7
39. M'aide à évaluer mes attitudes et mes capacités en jouant le rôle de quelqu'un dans une situation semblable	1	2	3	4	5	6	7

Dans quelle mesure êtes-vous satisfait du nombre de fois que les autres personnes font ceci pour vous?

	Insatisfait	Plutot Insat-isfait	Ni Insatisfaite/ Ni satisfait	Plutôt Satisfait	Satisfait	Très Satisfait	Ne s'applique Pas
40. Me rassure en me disant qu'il/elle sera là si j'ai besoin d'aide	1	2	3	4	5	6	7
41. Me donne ses commentaires sur la façon dont je m'adapte à la grossesse	1	2	3	4	5	6	7
42. M'explique ce à quoi je dois m'attendre des situations à venir	1	2	3	4	5	6	7
43. Est prêt(e) à m'accorder des faveurs	1	2	3	4	5	6	7
44. Me gâte si je suis fatigué ou si je ne me sens pas bien	1	2	3	4	5	6	7
45. Me rassure en me disant qu'un accouchement est un événement naturel et que les gens "survivent"	1	2	3	4	5	6	7

Permission Letter

Date: Thu, 26 Aug 1999 17:43
From: "Marie-Annette Brown" > [Add to Address Book]
Subject: Re: Fwd: Fwd: info on the support behaviors inventory
To:

Hi, I am honored you are interested in my work and am happy to give you
permission to use and modify the instrument in whatever way you choose.

Appendix 5

The Stress Appraisal Measure

(Échelle d'évaluation du stress)

-Women's Version

-Men's Version

-Permission Letter

Code # : ___________ (F)

ÉCHELLE D'ÉVALUATION DU STRESS [1] (FEMMES)

Vous vivez présentement un problème pendant votre grossesse. Ce problème imprévu vous oblige à changer certains comportements et certaines attitudes sous le conseil du médecin. Ceci entraîne beaucoup de changements dans votre vie personnelle, familiale, et sociale. Ces changements peuvent vous sembler bouleversants ou stressants.

Ce questionnaire se rapporte à vos opinions et vos attitudes concernant différents aspects de votre situation d'être enceinte et hospitalisée ou d'être le conjoint d'une femme enceinte et hospitalisée. Répondez à chacune des questions suivantes en tenant compte de vos perceptions face à cette situation. Il n'y a pas de bonne ou de mauvaise réponse.

S.V.P. Veuillez répondre à toutes les questions.

Pour toutes les questions de ce questionnaire, vous devez encercler une seule réponse.

EXEMPLE :

ENCERCLEZ LE CHIFFRE QUI CORRESPOND À CHACUNE DE VOS RÉPONSES.

		Pas du tout	Un Peu	Passablement	Beaucoup	Excessivement
1.	Est-ce que le film me rend anxieuse?	1	2	3	4	5

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[1] Traduit de "Stress Appraisal Measure", Dr. Peacock and Dr. Wong, Trent, Ontario, 1990, traduction française par D. Pelchat et al., Montréal, 1993.

ÉCHELLE D'ÉVALUATION DU STRESS

ENCERCLEZ LE CHIFFRE QUI CORRESPOND À CHACUNE DE VOS RÉPONSES.

	Pas du tout	Un Peu	Passablement	Beaucoup	Excessivement
1. Est-ce que cette situation est insurmontable?	1	2	3	4	5
2. Est-ce que cette situation me rend tendue?	1	2	3	4	5
3. Est-ce que les conséquences de cette situation sont hors du contrôle de qui que ce soit?	1	2	3	4	5
4. Est-ce qu'il y a quelqu'un ou existe-t-il une agence à qui je pourrais demander de l'aide si nécesssaire?	1	2	3	4	5
5. Est-ce que cette situation me rend angoissée?	1	2	3	4	5
6. Est-ce que cette situation a d'importantes conséquences pour moi?	1	2	3	4	5
7. Est-ce que cette situation aura un impact positif sur moi?	1	2	3	4	5
8. À quel moment suis-je empressée de m'attaquer à ce problème?	1	2	3	4	5
9. À quel point serai-je affectée par les conséquences de cette situation?	1	2	3	4	5
10. À quel point puis-je devenir une personne plus forte suite à ce problème?	1	2	3	4	5
11. Est-ce que les conséquences de cette situation seront négatives?	1	2	3	4	5
12. Suis-je capable de bien faire dans cette situation?	1	2	3	4	5
13. Est-ce que cette situation a des implications sérieuses pour moi?	1	2	3	4	5
14. Est-ce que j'ai les ressources personnelles pour réussir dans cette situation?	1	2	3	4	5

ÉCHELLE D'ÉVALUATION DU STRESS

ENCERCLEZ LE CHIFFRE QUI CORRESPOND À CHACUNE DE VOS RÉPONSES.

	Pas du Tout	Un Peu	Passablement	Beaucoup	Excessivement
15. Est-ce qu'il y a de l'aide disponible afin de me permettre de résoudre ce problème?	1	2	3	4	5
16. Est-ce que cette situation pourrait dépasser mes capacités de m'y adapter?	1	2	3	4	5
17. Est-ce qu'il y a assez de ressources disponibles pour m'aider à faire face à cette situation?	1	2	3	4	5
18. Est-ce au-delà du pouvoir de qui que ce soit de faire quelque chose face à cette situation?	1	2	3	4	5
19. À quel point cette situation me motive à trouver des solutions?	1	2	3	4	5
20. À quel point est-ce que cette situation me menace?	1	2	3	4	5
21. Est-ce que ce problème est sans solution pour qui que ce soit?	1	2	3	4	5
22. Est-ce que j'ai la capacité de surmonter ce problème?	1	2	3	4	5
23. Y a-t-il quelqu'un qui peut m'aider à faire face à ce problème?	1	2	3	4	5
24. À quel point je perçois cette situation comme stressante?	1	2	3	4	5
25. Est-ce j'ai les habiletés nécessaires pour réussir dans cette situation?	1	2	3	4	5
26. Jusqu'à quel point cet événement me demande des efforts pour y faire face?	1	2	3	4	5
27. Est-ce que cette situation a des conséquences à long terme pour moi?	1	2	3	4	5
28. Est-ce que cette situation aura un impact négatif pour moi?	1	2	3	4	5

Maintenant, il faut que vous vous mettiez à la place de votre parteanire. Comment croyez-vous qu'il répondrait s'il avait à répondre aux mêmes questions?

ENCERCLEZ LE CHIFFRE QUI CORRESPOND À CHACUNE DE VOS RÉPONSES.

		Pas du tout	Un Peu	Passablement	Beaucoup	Excessivement
1.	Est-ce que cette situation est insurmontable?	1	2	3	4	5
2.	Est-ce que cette situation me rend tendu?	1	2	3	4	5
3.	Est-ce que les conséquences de cette situation sont hors du contrôle de qui que ce soit?	1	2	3	4	5
4.	Est-ce qu'il y a quelqu'un ou existe-t-il une agence à qui je pourrais demander de l'aide si nécesssaire?	1	2	3	4	5
5.	Est-ce que cette situation me rend angoissé?	1	2	3	4	5
6.	Est-ce que cette situation a d'importantes conséquences pour moi?	1	2	3	4	5
7.	Est-ce que cette situation aura un impact positif sur moi?	1	2	3	4	5
8.	À quel moment suis-je empressé de m'attaquer à ce problème?	1	2	3	4	5
9.	À quel point serai-je affecté par les conséquences de cette situation?	1	2	3	4	5
10.	À quel point puis-je devenir une personne plus forte suite à ce problème?	1	2	3	4	5
11.	Est-ce que les conséquences de cette situation seront négatives?	1	2	3	4	5
12.	Suis-je capable de bien faire dans cette situation?	1	2	3	4	5
13.	Est-ce que cette situation a des implications sérieuses pour moi?	1	2	3	4	5
14.	Est-ce que j'ai les ressources personnelles pour réussir dans cette situation?	1	2	3	4	5

ÉCHELLE D'ÉVALUATION DU STRESS

ENCERCLEZ LE CHIFFRE QUI CORRESPOND À CHACUNE DE VOS RÉPONSES.

	Pas du Tout	Un Peu	Passablement	Beaucoup	Excessivement
15. Est-ce qu'il y a de l'aide disponible afin de me permettre de résoudre ce problème?	1	2	3	4	5
16. Est-ce que cette situation pourrait dépasser mes capacités de m'y adapter?	1	2	3	4	5
17. Est-ce qu'il y a assez de ressources disponibles pour m'aider à faire face à cette situation?	1	2	3	4	5
18. Est-ce au-delà du pouvoir de qui que ce soit de faire quelque chose face à cette situation?	1	2	3	4	5
19. À quel point cette situation me motive à trouver des solutions?	1	2	3	4	5
20. À quel point est-ce que cette situation me menace?	1	2	3	4	5
21. Est-ce que ce problème est sans solution pour qui que ce soit?	1	2	3	4	5
22. Est-ce que j'ai la capacité de surmonter ce problème?	1	2	3	4	5
23. Y a-t-il quelqu'un qui peut m'aider à faire face à ce problème?	1	2	3	4	5
24. À quel point je perçois cette situation comme stressante?	1	2	3	4	5
25. Est-ce j'ai les habiletés nécessaires pour réussir dans cette situation?	1	2	3	4	5
26. Jusqu'à quel point cet événement me demande des efforts pour y faire face?	1	2	3	4	5
27. Est-ce que cette situation a des conséquences à long terme pour moi?	1	2	3	4	5
28. Est-ce que cette situation aura un impact négatif pour moi?	1	2	3	4	5

Code # : ___________ (H)

ÉCHELLE D'ÉVALUATION DU STRESS [1] (HOMMES)

Vous vivez présentement un problème pendant votre grossesse. Ce problème imprévu vous oblige à changer certains comportements et certaines attitudes sous le conseil du médecin. Ceci entraîne beaucoup de changements dans votre vie personnelle, familiale, et sociale. Ces changements peuvent vous sembler bouleversants ou stressants.

Ce questionnaire se rapporte à vos opinions et vos attitudes concernant différents aspects de votre situation d'être le conjoint d'une femme enceinte et hospitalisée. Répondez à chacune des questions suivantes en tenant compte de vos perceptions face à cette situation. Il n'y a pas de bonne ou de mauvaise réponse.

S.V.P. Veuillez répondre à toutes les questions.

Pour toutes les questions de ce questionnaire, vous devez encercler une seule réponse.

EXEMPLE :

ENCERCLEZ LE CHIFFRE QUI CORRESPOND À CHACUNE DE VOS RÉPONSES.

	Pas du tout	Un Peu	Passablement	Beaucoup	Excessivement
1. Est-ce que le film me rend anxieux?	1	2	3	4	5

---

[1] Traduit de "Stress Appraisal Measure", Dr. Peacock and Dr. Wong, Trent, Ontario, 1990, traduction française par D. Pelchat et al., Montréal, 1993.

ÉCHELLE D'ÉVALUATION DU STRESS

ENCERCLEZ LE CHIFFRE QUI CORRESPOND À CHACUNE DE VOS RÉPONSES.

	Pas du tout	Un Peu	Passablement	Beaucoup	Excessivement
1. Est-ce que cette situation est insurmontable?	1	2	3	4	5
2. Est-ce que cette situation me rend tendu?	1	2	3	4	5
3. Est-ce que les conséquences de cette situation sont hors du contrôle de qui que ce soit?	1	2	3	4	5
4. Est-ce qu'il y a quelqu'un ou existe-t-il une agence à qui je pourrais demander de l'aide si nécesssaire?	1	2	3	4	5
5. Est-ce que cette situation me rend angoissé?	1	2	3	4	5
6. Est-ce que cette situation a d'importantes conséquences pour moi?	1	2	3	4	5
7. Est-ce que cette situation aura un impact positif sur moi?	1	2	3	4	5
8. À quel moment suis-je empressé de m'attaquer à ce problème?	1	2	3	4	5
9. À quel point serai-je affecté par les conséquences de cette situation?	1	2	3	4	5
10. À quel point puis-je devenir une personne plus forte suite à ce problème?	1	2	3	4	5
11. Est-ce que les conséquences de cette situation seront négatives?	1	2	3	4	5
12. Suis-je capable de bien faire dans cette situation?	1	2	3	4	5
13. Est-ce que cette situation a des implications sérieuses pour moi?	1	2	3	4	5
14. Est-ce que j'ai les ressources personnelles pour réussir dans cette situation?	1	2	3	4	5

ÉCHELLE D'ÉVALUATION DU STRESS

ENCERCLEZ LE CHIFFRE QUI CORRESPOND À CHACUNE DE VOS RÉPONSES.

	Pas du Tout	Un Peu	Passablement	Beaucoup	Excessivement
15. Est-ce qu'il y a de l'aide disponible afin de me permettre de résoudre ce problème?	1	2	3	4	5
16. Est-ce que cette situation pourrait dépasser mes capacités de m'y adapter?	1	2	3	4	5
17. Est-ce qu'il y a assez de ressources disponibles pour m'aider à faire face à cette situation?	1	2	3	4	5
18. Est-ce au-delà du pouvoir de qui que ce soit de faire quelque chose face à cette situation?	1	2	3	4	5
19. À quel point cette situation me motive à trouver des solutions?	1	2	3	4	5
20. À quel point est-ce que cette situation me menace?	1	2	3	4	5
21. Est-ce que ce problème est sans solution pour qui que ce soit?	1	2	3	4	5
22. Est-ce que j'ai la capacité de surmonter ce problème?	1	2	3	4	5
23. Y a-t-il quelqu'un qui peut m'aider à faire face à ce problème?	1	2	3	4	5
24. À quel point je perçois cette situation comme stressante?	1	2	3	4	5
25. Est-ce j'ai les habiletés nécessaires pour réussir dans cette situation?	1	2	3	4	5
26. Jusqu'à quel point cet événement me demande des efforts pour y faire face?	1	2	3	4	5
27. Est-ce que cette situation a des conséquences à long terme pour moi?	1	2	3	4	5
28. Est-ce que cette situation aura un impact négatif pour moi?	1	2	3	4	5

Maintenant, il faut que vous vous mettiez à la place de votre partenaire. Comment croyez-vous qu'elle répondrait s'elle avait à répondre aux mêmes questions?

ENCERCLEZ LE CHIFFRE QUI CORRESPOND À CHACUNE DE VOS RÉPONSES.

		Pas du tout	Un Peu	Passablement	Beaucoup	Excessivement
1.	Est-ce que cette situation est insurmontable?	1	2	3	4	5
2.	Est-ce que cette situation me rend tendue?	1	2	3	4	5
3.	Est-ce que les conséquences de cette situation sont hors du contrôle de qui que ce soit?	1	2	3	4	5
4.	Est-ce qu'il y a quelqu'un ou existe-t-il une agence à qui je pourrais demander de l'aide si nécesssaire?	1	2	3	4	5
5.	Est-ce que cette situation me rend angoissée?	1	2	3	4	5
6.	Est-ce que cette situation a d'importantes conséquences pour moi?	1	2	3	4	5
7.	Est-ce que cette situation aura un impact positif sur moi?	1	2	3	4	5
8.	À quel moment suis-je empressée de m'attaquer à ce problème?	1	2	3	4	5
9.	À quel point serai-je affectée par les conséquences de cette situation?	1	2	3	4	5
10.	À quel point puis-je devenir une personne plus forte suite à ce problème?	1	2	3	4	5
11.	Est-ce que les conséquences de cette situation seront négatives?	1	2	3	4	5
12.	Suis-je capable de bien faire dans cette situation?	1	2	3	4	5
13.	Est-ce que cette situation a des implications sérieuses pour moi?	1	2	3	4	5
14.	Est-ce que j'ai les ressources personnelles pour réussir dans cette situation?	1	2	3	4	5

ÉCHELLE D'ÉVALUATION DU STRESS

ENCERCLEZ LE CHIFFRE QUI CORRESPOND À CHACUNE DE VOS RÉPONSES.

	Pas du Tout	Un Peu	Passablement	Beaucoup	Excessivement
15. Est-ce qu'il y a de l'aide disponible afin de me permettre de résoudre ce problème?	1	2	3	4	5
16. Est-ce que cette situation pourrait dépasser mes capacités de m'y adapter?	1	2	3	4	5
17. Est-ce qu'il y a assez de ressources disponibles pour m'aider à faire face à cette situation?	1	2	3	4	5
18. Est-ce au-delà du pouvoir de qui que ce soit de faire quelque chose face à cette situation?	1	2	3	4	5
19. À quel point cette situation me motive à trouver des solutions?	1	2	3	4	5
20. À quel point est-ce que cette situation me menace?	1	2	3	4	5
21. Est-ce que ce problème est sans solution pour qui que ce soit?	1	2	3	4	5
22. Est-ce que j'ai la capacité de surmonter ce problème?	1	2	3	4	5
23. Y a-t-il quelqu'un qui peut m'aider à faire face à ce problème?	1	2	3	4	5
24. À quel point je perçois cette situation comme stressante?	1	2	3	4	5
25. Est-ce j'ai les habiletés nécessaires pour réussir dans cette situation?	1	2	3	4	5
26. Jusqu'à quel point cet événement me demande des efforts pour y faire face?	1	2	3	4	5
27. Est-ce que cette situation a des conséquences à long terme pour moi?	1	2	3	4	5
28. Est-ce que cette situation aura un impact négatif pour moi?	1	2	3	4	5

Permission Letter

Department of Psychology
Trent University
Peterborough, Ontario
Canada K9J 7B8

(705) 748-1535 FAX: (705) 748-1580

FAX COVER SHEET

Date: October 13, 1992

TO: Viola Polomeno

COMPANY: University of Montreal

FAX: 514-343-2306

FROM: Paul T.P. Wong

Number of pages including this page: 1

COMMENTS:

Ms. Viola Polomeno

Dear Ms. Polomeno:

The total score is not very meaningful unless you are interested in the extent of appraisal activity.

With regards to your second question, you can definitely compare the scores of husbands with those from the wives, but you need to consult an expert in statistics to control for the possible correlations between dyads.

We would be happy to see the instrument translated into French. Would like to know the psychometric properties of the Trent version.

Yours truly,

Paul T.P. Wong, Ph.D.
Professor

Appendix 6

Explanation for Nurses

(Explication aux infirmières)

Appendix 7

Information Sheet for Couples

(Explication au couple)

EXPLICATION AU COUPLE

Je me nomme Viola Polomeno. Je suis infirmière et étudiante au doctorat à la Faculté de médecine de l'Université de Montréal. J'entreprends présentement un projet de recherche dont le but est de déterminer le lien entre la qualité de la relation conjugale et le stress vécu par les couples sans enfant lors de l'hospitalisation prénatale.

Je viens solliciter votre collaboration pour participer à cette étude. Pour faire partie de ce projet, il faut remplir les conditions suivantes:

1. Une première grossesse pour chacun des partenaires.
2. L'âge de chacun des partenaires de 18 ans et plus.
3. Le couple doit vivre ensemble depuis au moins 1 an.
4. Le couple doit être francophone d'origine québécoise ou provenant d'autres provinces du Canada, et doit être capable de parler, lire et écrire le français.

Si vous acceptez de collaborer à l'étude, votre participation consistera à compléter 4 questionnaires lors d'une seule rencontre. Les conjoints répondent aux questionnaires en même temps mais séparément. Cela vous demandera environ 30 à 45 minutes de votre temps. Votre participation est volontaire.

Toutes les informations obtenues demeureront confidentielles et vos noms n'apparaîtront pas sur aucun questionnaire. Toutes les informations ne serviront qu'aux fins de l'étude et seront détruites aussitôt l'étude terminée. Vous êtes libres de vous retirer de l'étude à n'importe quel moment ou de refuser de répondre à n'importe quelle question. Votre refus de participer n'influencera pas les soins, ni les services que vous recevez ou êtes en droit de recevoir. Si les résultats des questionnaires indiquent des difficultés au niveau de votre relation conjugale, je pourrais vous référer à l'intervenant du milieu approprié selon votre situation.

Votre participation est très importante pour les futurs parents et pour les infirmières. Elle permettra une meilleure compréhension de la relation conjugale et du stress vécu par le couple lors de l'hospitalisation de la femme enceinte. Ces connaissances aideront les infirmières à planifier leurs interventions et contribueront à améliorer les soins offerts aux couples qui vivront des expériences semblables.

Je vous remercie très sincèrement de votre collaboration et demeure disponible pour répondre à vos questions.

Viola Polomeno, inf., Tél.: (514) 343-6111 poste 2735

Appendix 8

Consent Form

(Formulaire de consentement)

FORMULAIRE DE CONSENTEMENT

Nous, ______________________________ et______________________________,
consentons volontairement à participer à l'étude portant sur la qualité de la relation conjugale et le stress chez les couples sans enfant lors de l'hospitalisation prénatale. Notre participation consiste à compléter 4 questionnaires en une seule rencontre qui durera environ 30 à 45 minutes.

Il est entendu que notre anonymat et la confidentialité de nos réponses sont assurés. Nous comprenons que nos noms n'apparaîtront pas sur aucun questionnaire, ni à aucun autre endroit. Nous comprenons que nous sommes libres de retirer notre participation à n'importe quel moment et de refuser de répondre à n'importe quelle question. Cela n'influencera pas les soins, ni les services que nous recevons et sommes en droit de recevoir. Si les résultats des questionnaires indiquent que nous avons des difficultés au niveau de notre relation conjugale, l'investigatrice pourrait nous référer à l'intervenant du milieu approprié selon notre situation.

Nous comprenons que nous ne retirons aucun bénéfice direct de cette étude mais que l'information obtenue sera utile tant pour les infirmières que pour les futurs parents. Cette étude permettra une meilleure compréhension du stress familial et de la qualité de la relation conjugale lors de l'hospitalisation de la femme enceinte. Ces connaissances aideront les infirmières à planifier leurs interventions et contribueront à améliorer la qualité des expériences vécues par d'autres couples.

Nous avons lu et compris les explications de cette étude et nous nous sentons suffisamment informés pour donner notre consentement éclairé.

Date: ____________ Signature de la participante:________________________________

Date: ____________ Signature du participant: ________________________________

Date: ____________ Signature de l'investigatrice:______________________________

Appendix 9

Certificate of Honor:

Lamaze International

Lamaze™

International

October 3, 2000

Dear *Childbirth Education: Practice, Research and Theory* Author:

Lamaze International recently held it's annual Awards Ceremony during its 2000 Annual Conference in Memphis, TN. At the Awards Ceremony, individuals and organizations were honored for their contributions to the field of childbirth education. Enclosed please find a certificate issued by Lamaze International in recognition and appreciation of your contribution to *Childbirth Education: Practice, Research and Theory.* Thank you for your continued support of the Lamaze Philosophy of Birth.

Sincerely,

Teri Shilling, MS, IBCLC, LCCE, FACCE
President

education

advocacy

reform

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Formerly ASPO/Lamaze

LAMAZE™ INTERNATIONAL

WOULD LIKE TO RECOGNIZE AND HONOR

Viola Polomeno

FOR YOUR CONTRIBUTION TO THE FIELD OF CHILDBIRTH EDUCATION
THROUGH YOUR PARTICIPATION
AS AN AUTHOR FOR

CHILDBIRTH EDUCATION: PRACTICE, RESEARCH AND THEORY

A VITAL REFERENCE FOR ALL CHILDBIRTH EDUCATORS

SEPTEMBER 21, 2000

EDUCATION COUNCIL CHAIR