Stressful life events, symptomatic outcome,

and the role of mediating variables

in mothers of one-year-olds

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STRESSFUL LIFE EVENTS, SYMPTOMATIC OUTCOME,

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Abstract

The present research explored the relationship between life events experienced by a group of women over the period of a year and the degree to which they subsequently displayed symptoms of stress. Of particular importance were the roles played by selected variables in mediating this relationship. A volunteer group of 38 mothers who had given birth for the first time approximately twelve months prior to the study were subjects. The data were collected by Saulnier (1983) for a doctoral dissertation on the normative transition to parenthood. Two measures of life events and four outcome measures were used in the current study. Correlation techniques revealed a moderate and consistent relationship between stress and outcome. Evidence of the mediating effects of three dimensions of life events -- desirability, control, and expectancy -- were found, using correlation and analysis of variance techniques. The dimensions of control and expectancy were also shown to produce interaction effects upon outcome. Three characteristics of the individual, one baby-related variable, and four network variables were tested as potential mediators of the stress-distress relationship. Results indicated that age of mother, presence of a colicky baby, and level of satisfaction with network help all interacted with level of stress to produce statistically significant interaction effects.

Stressful Life Events, Symptomatic Outcome,

and the Role of Mediating Variables

in Mothers of One-Year-Olds

Everyone has heard about the straw that broke the camel's back. It is a shared bit of folk wisdom that everyone, camels and people alike, has a breaking point. Recently what scientists have been pursuing is (1) whether or not all straws are capable of breaking the camel's back, (2) if such straws are capable of breaking other parts of the camel's anatomy, and (3) if this holds true for all camels.

This research explored all of the above points. The subjects were a group of 38 mothers who had given birth for the first time approximately twelve months prior to the study. The data had been collected by Saulnier (1983) for a doctoral dissertation on the normative transition to parenthood. What the present research has probed is the relationship between stressful life events experienced by the mothers over a period of a year and the degree to which they subsequently displayed symptoms of stress. The relative stressfulness of life events experienced, their relative impact on a number of outcomes, and the variations in degree of distress attributable to different subgroups of the sample population were all explored.

The literature review to follow includes a discussion of stressful life events, first-time motherhood as a particular

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event, and three classes of potential mediating variables --
dimensions of the event, characteristics of the individual,
and social support.

LITERATURE REVIEW

Stressful Life Events

Stressful life events may be defined as events that, for
better or for worse, bring about interruptions or changes in
an individual's usual activities (Dohrenwend, 1974). Examples
might be events affecting occupation, health, living arrange-
ments, relationships with family or friends, and personal
values or beliefs. Researchers have been interested both in
the effects of any one particular event or source of stress
and in the accumulated effects of a number of stressful life
events. Most researchers in the latter area have used a
checklist composed of fairly common life change situations,
such as marriage, change in job, and serious illness to self.
The life change score for any particular individual becomes
some measure of the summation of life events which s/he has
identified from the list.

The original scale developed by Holmes and Rahe (1967)
employed ratings by judges of the relative stressfulness of
the items it contained. However, Lazarus (1974), Hinkle (1974),
and Thurlow (1971) were among those who argued in favor of the
person's own appraisal of the situation. In contrast, Brown
(1974) developed an elaborate scheme for evaluating the
stressfulness of events on the basis of the biographical

context of those events. Thirty scales were completed for each event, and they examined three main areas: prior experience and preparation, immediate reaction, and the consequences and implications of the event.

Researchers have compared results using the Holmes and Rahe scale with measures of subjective weightings and found very little difference in results. For the most part, it seems to have been demonstrated that there is no one superior method of assessing total stressfulness scores: objective weightings, subjective evaluations, and simple counts of the number of events seem to be equally effective measures (Gersten et al., 1974; McFarlane et al., 1980; Mueller et al., 1977; Ross & Mirowsky, 1979; Thoits, 1982).

Not everyone considers the issue to be resolved, however. A recent notable exception to the above finding has been Williams et al. (1981), who found that a model with regression-weighted life-events scores best predicted outcome. While Johnson and Sarason (1978) still advocate the use of idiosyncratic, subjective weights, Kobasa et al. (1981) included themselves among those who "disagree strongly, feeling that subjective weights represent a combination of environmental input, the stressed individual's personality, and other predispositions, and his or her evaluation of the consequences of the events" (Kobasa et al., 1981: 371).

Generally, researchers have modified the Holmes and Rahe scale in minor ways, usually removing or adding a few items to the list or grouping them into subsections of related items.

A study by Tausig (1982) used an expanded scale comprised of 118 items, which took into account criticisms of the scope of items in the original scale. Tausig concluded that "although additional items may produce a statistically significant improvement in correlations with a dependent variable, the actual numerical improvement in the correlation coefficient is small. This suggests that debates about the scope of item coverage are overdrawn" (Tausig, 1982: 57).

For the most part, researchers have been concerned with what might be labelled "recent" life events in the lives of individuals. There is considerable acceptance among researchers of the suggestion that "accumulating life events measured over a six-month period have their maximum impact in the subsequent six months and a diminishing effect thereafter" (McFarlane et al., 1983: 160). Among other findings, Andrews et al. (1978) have reported that "events occurring two to seven months prior were less strongly associated with impairment than events occurring eight to thirteen months prior to the survey" (Andrews et al., 1978: 309). Kobasa et al. (1981) found that analyses with a two-year interval produced evidence of a significant main effect. Their original time frame had extended to four years, but they admitted that "this may be too long an interval for the demonstration of a strong prospective effect of stressful life events" (Kobasa et al., 1981: 377).

It is the effect of cumulative life stresses, as measured by discrete events, upon the timing of an undesirable outcome that is of import (Rabkin & Struening, 1976). The type of

outcome may vary and is influenced by other, symptom-formation factors to be found within the individual and his/her circumstances. Indeed, a considerable body of literature now exists that consistently links the clustering of stressful life events with a variety of undesirable outcomes, both physiological and psychological, as well as social in nature. Lin et al. (1979) remarked upon the relationships found by others between high life change scores and psychiatric symptoms, physical indices of undifferentiated psychiatric illness, depression, and suicide attempts, as well as heart disease, leukemia, and other physiological symptoms and illnesses.

Exactly how life events result in undesirable outcomes remains something of a dilemma. Consideration of the process leads to what has been called "the most stubborn issue of all: the meaning and measurement of stress itself" (Pearlin et al., 1981: 341). Ground-breaking work by Selye was influential in promoting a "nonspecific response of the body to any demand" (Selye, 1978: 55) as a concept of stress. The notion of a nonspecific response to any demand later was adapted from Selye's biophysiological model to psychosocial models of stress. Many of the first of these attempted to explain the process in terms of mind-body connections. For example, Rahe proposed that "a subject's physiological reactions to his recent life change events occur only when these events 'penetrate' his psychological defenses," and result in "physiological activation in many body systems" (Dohrenwend, 1974: 74). The individual's coping abilities are then brought to bear upon the physiological

activation, and continuing activation may then be perceived
as body symptoms. In most cases, psychosocial models of stress
assumed that life events were stressful because the changes
engendered by them created disequilibrium and a demand for
readjustment on the part of the individual. Constant or
heavy demand for readjustment was thought to deplete the
adaptational resources of the individual, leaving him/her
vulnerable to the effects of physical and psychological wear-
and-tear. A nonspecific response in the form of an actual or
perceived imbalance between demand and capability maintains
some current theoretical crcdibility (McCubbin & Figley, 1983).

Current researchers have largely ignored the need for a
nonspecific response to stressors within their models of the
stress process. Instead, they have concerned themselves
solely with specific manifestations or outcomes that are
symptomatic of stress. Pearlin et al. (1981) have been typical
in their treatment of stress concepts and in their delineation
of a model of stress which is not considered to be a definitive
model. According to their model, the occurrence of life events
can lead to role strains which in turn can lead to diminished
self-concepts; diminished self-concepts can then result in
depression, which is an indicator of stress. The occurrence
of "stress" has been assumed. In this way, the concept of
stress has been currently accorded validity primarily through
concensus: it does not relate to anything that is measurable.
An attempt by Pearlin et al. (1981) to define stress was
commendable: "Stress refers to a response of the organism

to conditions that, either consciously or unconsciously, are experienced as noxious" (Pearlin et al., 1981: 341). However, the definition is inadequate because "response" takes no discernable form and is defined largely in terms of what causes it.

The current research did not propose to resolve the difficulties surrounding the conceptualization of stress. For the purposes of the thesis, stressful life events were considered to be stressors or sources of stress, and outcomes were considered to be symptoms of stress. The current author followed common narrative style in the use of the term "measure of stress" (See, for example, McFarlane et al., 1983), despite the fact that the use of the term more accurately reflected a measure of the stressor(s) than a measure of response. That is, "measure of stress" was the independent variable, not the dependent variable.

Motherhood as a Stressful Life Event

The birth of a first child may be viewed as a stressful occurrence from several theoretical perspectives. It is an event which certainly results in a change in usual activities for new mothers and fathers alike, and hence it usually appears as an item on life event scales. By comparison with other stressful life events, it has been considered to be one of moderate severity. An average weight assigned to it in terms of degree of subsequent adjustment required has been approximately 40 on a scale of zero to 100. (See, for example, Lin et al., 1979).

The literature describing this event has tended to support the view that it is stressful for most women and very stressful for some. For example, "As we have seen at every point in the study...pregnancy and early parenthood are indeed a crisis of considerable proportions" (Grossman et al., 1980: 251). Shereshefsky and Yarrow (1973) judged around one third of the women in their sample to be having special difficulty post-partum, including such feelings as excessive anxiety or depressive feelings about their abilities to mother, overreaction to realistic problems, and hostile or punitive attitudes toward the infant.

Crisis theory has provided a useful framework for the study of this event. Caplan (1974) has described a crisis as a situation in which "the individual is faced by novel problems that he is not able to solve quickly with his usual problem-solving mechanisms" (Caplan, 1974: 24). A study by Leifer assessed the extent to which motherhood was experienced as a period of psychological crisis by a sample of 19 new mothers and concluded that "for most women, the early phases of parent-hood were experienced as a period of crisis" (Leifer, 1977: 89). Feelings of depression, isolation, dissatisfaction, and boredom were prevalent at two months postpartum, and a negative mood tone persisted for a majority of the new mothers at seven months postpartum. Leifer suggested that adapting to changes in life style necessitated by motherhood in our society was particularly stressful for these mothers.

Several studies which have described the transition to

motherhood in terms of a crisis model have attempted to measure

the degree of crisis felt. LeMasters (1957) reported that 83

per cent of his sample of 46 middle-class couples experienced

"extensive" or "severe" crisis in adjusting to the birth of

the first child. A follow-up study by Dyer (1963) or 32 couples

largely supported these findings.

In switching from the interview techniques of LeMasters

and Dyer to the use of a paper and pencil test in measuring

degree of crisis, Hobbs (1965) found that 86.8 per cent of his

couples experienced only slight crisis, while 13.2 per cent

experienced moderate crisis. Additional studies which have

used Hobbs' measure of crisis (Hobbs, 1968; Hobbs & Cole, 1976;

Russel, 1974; Uhlenberg, 1970; Beauchamp, 1968) have produced

similar results.

Beyond the crisis model, another major way of examining

the impact of new motherhood has been in terms of a syndrome

known as postpartum depression. Postpartum depression has been

defined by Parlee as

> depression of varying degrees of severity beginning
> shortly after [child] birth and lasting for as long as a
> year or more....It is a type of depression that is neither
> transient (like the "blues") nor sufficiently acute (like
> the psychoses) to come invariably to the attention of
> physicians (Parlee, 1976: 485).

Whereas estimates of the incidence of moderate degrees

of depression have varied, two studies (Pitt, 1968; Cutrona,

1981) have found that approximately 60 to 65 per cent of new

mothers experienced transitory "blues." At the other extreme,

psychotic reactions have been found to occur at the rate of

one or two per one thousand births (Kaij and Nilsson, 1972),
while major depression, as defined by DSM-III criteria, has
been found to occur at the rate of 3.5 to 4.7 per cent, depend-
ing upon the time of measurement (Cutrona, 1981).

Often overlooked in the study of new motherhood is the
new baby him/herself. Traditionally, the infant has been seen
as the innocent recipient of behavior, a more or less passive
participant in any social interaction with his/her mother.
Rapoport (1977) quoted Lewis and Rosenblum as follows:

> There have been few voices stressing the necessity of
> observing both partners in this dyadic bond -- it is
> important that we now focus attention on the impact of
> the infant as a source of the formation, regulation and
> indeed even the malevolent distortion of the caregiver's
> behavior (Rapoport, 1977: 170).

Kitzinger (1978) suggested that there may be a group of
children who are vulnerable to abuse as a result of their
behavior.

In the present research, life change scores for a group
of first-time mothers were computed for the twelve-month period
prior to the study. Relationships among life change scores
and several outcome variables were examined. Outcome variables
included two different ways of measuring psychosocial or
psychiatric symptoms and a measure of marital adjustment.
Because the total sample was composed of women who had recently
become mothers, a measure of difficulty in adjusting to parent-
hood was also appropriate as an outcome variable. It was
expected that those with a higher life change score would
tend to have less favorable outcomes. It was assumed that

the sample as a whole would be more at risk than the general
population as a result of the shared experience of recently
becoming mothers.

In the course of examining the events-outcome relationship,
the present study also examined the differing effects of
subjective versus objective measurement of life events. As
well, considerable attention was given to the scope and content
of the items forming the life events checklist.

Since the earliest studies in this area by Holmes and
Rahe (1967), much progress in research has been made on both
conceptual and methodological fronts. Researchers have recog-
nized that the clustering of life events may account for a very
small percentage of the variance in symptoms and that not
everyone exposed to the same stressors or level of life-change
score may experience the same level of distress (Dohrenwend
& Dohrenwend, 1974; Rabkin & Struening, 1976). As a result,
the role of mediating factors thought to influence the relation-
ship between life events and outcome has more recently been
pursued (Lin et al., 1979; McFarlane et al., 1983; Pearlin
et al., 1981). Mediating variables are those which act to
inhibit the emergence of symptoms of stress by interacting
with the stressor(s). Variables which have been tested as
mediators in life-events research will be discussed in the
section below.

Mediating Variables

Variables believed to mediate the relationship between

stressful life events and outcome generally fall into one of the following three broad categories: dimensions of the event, characteristics of the individual, and level of social support available to the individual. Each of these will be discussed in turn.

Dimensions of the Event

Rabkin and Struening's review of the literature revealed that magnitude of the event, as well as "speed of change, prolonged exposure, lack of preparedness, and lack of prior experience have each been found to heighten the impact of stressful events" (Rabkin & Struening, 1976: 1018). Brown and associates (1974,1978) determined that events with a long-term threat are more stressful than those with short-term implications. Findings have supported the mediating role of desirability of events (Gersten et al., 1974; Mueller et al., 1977; Ross & Mirowsky, 1979; Thoits, 1981; Vinokur & Selzer, 1975), the mediating role of degree of control over event (Fairbank & Hough, 1979), and the mediating dimension of whether or not the event was anticipated (Pearlin & Lieberman, 1979; Pearlin, 1980). As well, McFarlane et al. (1980) have determined that the interaction of two or more dimensions may produce significant results: "In particular, the person's perception of not being in control appears to fortify the impact of undesirable events, and the absence of either control or anticipation appears to strengthen the disruptive influence of desirable events"(McFarlane et al., 1980: 131).

The present study asked the participants to describe the recent life events to which they had been party in terms of anticipation, desirability, and degree of control. It was expected that these variables would mediate the events-outcome relationship and that some interaction effects among the dimensions would be found.

Characteristics of the Individual

The literature describing this variable is a mixture of speculation, clinical observation, and hard data, and the characteristics under consideration cover a broad range of potential mediators. For example, Rabkin and Struening (1976) listed the following factors which have been thought to mediate the perception of stressful life events: biological and psychological threshold sensitivities, intelligence, verbal skills, morale, personality type, psychological defenses, past experience, and a sense of mastery over one's fate. In general, characteristics of the individual may be grouped into four categories: personality, constitutional predisposition, coping abilities, and demographic variables.

Personality. Kobasa et al. (1981) have described a hypothetical relationship between personality and outcome in terms of coping responses, and they described the process in this way:

> In general, both aspects of coping -- the cognitive appraisal of events, and actions directed toward those events -- are influenced by personality. Therefore, which personality characteristics should be most useful in decreasing the otherwise debilitating effects of stressful

life events? The answer would seem to be those that encourage optimistic cognitive appraisal...and decisive interaction with the events (Kobasa et al., 1981: 368).

Kobasa et al. (1981) assumed that there is a conceptually distinct style of coping which incorporates both optimistic cognitive appraisal and decisive interaction, and they termed it the "hardy personality style." "A hardy person's attempt to influence the course of some event (control) includes curiosity about how it happened and interest in what it is (commitment), plus an attempt to learn from it whatever will enhance personal growth" (Kobasa et al., 1981: 369). Results of their research indicated that this concept had validity as such, and that it had a direct effect on illness. However, it did not interact with stressful events to reduce their impact on the outcome of illness.

Wheaton (1983) also saw personality as a factor affecting the coping efforts of individuals. Two facets of personality which he explored were fatalism and inflexibility, and he reported that they had a strong moderating influence on the impact of stress. However, those effects depended both on whether the stressor source was chronic or acute stress and on which symptom outcome -- schizophrenic, depressive, or anxiety symptom clusters -- was being considered.

The theme of individual control and mastery underlying Wheaton's concept of fatalism is also found elsewhere in the research. Reporting on a study by Pearlin and Schooler, Billings and Moos (1981) pointed to a result that "psychological resources such as self-esteem and a sense of environmental

mastery attenuated the impact of strain on functioning"
(Billings & Moos, 1981: 142). On the other hand, McFarlane
et al. (1983) found no independent effect of locus of control
or interaction of this variable with stressful events in
reducing symptoms of distress or illness.

Constitutional predisposition. Constitutional predispo-
sition has long been suspected as a contributing factor to
the incidence of a number of physical illnesses. Hinkle (1974)
described the emotional insulation of some individuals as a
protective factor against stressful effects, and he also
described a predisposing susceptibility to illness which may
contribute to a significant change in health in the face of
exposure to change.

Kobasa et al. (1981) have summed the research findings
in this area as follows:

> Among the disorders in which the evidence is strongest
> are peptic ulcer, essential hypertension, and various
> allergic reactions, such as bronchial asthma. These
> disorders appear to run in families, and to occur to
> persons whose blood relations have extensive histories
> of various illnesses and early death (Kobasa et al.,
> 1981: 370).

Kobasa et al. (1981) have also found notable the suggestive
evidence for predisposition provided by genetic markers, such
as body build and blood type.

Coping abilities. The concept of coping takes on many
meanings and is often difficult to separate from other charac-
teristics of the individual. However, Menaghan (1982) has
provided a conceptually reasonable way of defining three

manifestations of coping. Coping resources are "generalized
attitudes and skills that are considered advantageous when
dealing with any sort of activity" (Menaghan, 1982: 220).
Various aspects of personality mentioned in the previous section
may be considered to be coping resources. Menaghan also
included such skills as intellectual and interpersonal skills.
Coping styles are "typical or habitual preferences about ways
of approaching problems" (Menaghan, 1982: 221). Because they
are assumed to be relatively stable tendencies, they are also
often closely related to aspects of personality, as was demon-
strated earlier. Coping efforts, on the other hand, are not
based on such assumptions, and are defined as "behavior or
intra-psychic actions taken in specific situations that are
aimed at reducing a particular problem or strain" (Menaghan,
1982: 221). According to Pearlin et al. (1981), such efforts
are directed toward either the modification of the situations
giving rise to stressful problems, or the modification of the
meaning of problems, in order to reduce a sense of threat to
the individual.

Billings and Moos (1981) tested two classification
schemes for coping responses which were derived from the
literature. Results suggested that coping efforts do have
an impact on well-being. Coping was found to predict symptom
and mood levels and was also found to attenuate the impact of
stressful life events on personal functioning, as determined
by measures of depression, anxiety, and physical symptoms.
Another major finding was that in general "more reliance on

attempts to deal with an event and fewer attempts to avoid
dealing with it were associated with less stress" (Billings
& Moos, 1981: 155).

Demographic and other individual variables. In comparison
with coping abilities, personality characteristics, and
constitutional predisposition, variables reflecting individual
differences such as age, gender and level of education are
more amenable to precise definition and measurement. In spite
of this, they have been studied infrequently as mediators of
the events-outcome relationship. One exception is research
done by Brown and Harris (1978). Brown and associates related
four vulnerability factors -- age and number of children at
home, employment status, the availability of social intimacy,
and the loss of a mother before the age of eleven -- and the
presence of a provoking agent to the onset of psychiatric
disturbance in a sample of urban women.

More frequently, demographic and other individual variables
have been studied in terms of their relationship with outcome
irrespective of the occurrence of life events. Makosky's
review of the literature (1980) indicated that in one study
or another, the direction of the following is related to one's
mental health and/or physical well-being: age, sex, marital
status, race, work status, social class, parental status,
residential location and minority status. Gove and Tudor
(1973) analysed data from numerous studies and concluded that
more women than men became mentally ill. However, among the

unmarried, men had higher rates of mental illness than did women. Pearlin and Johnson (1977) explained the greater tendency toward depression among unmarried persons of undifferentiated gender in terms of greater exposure to hardship and life strains and a lack of protection from their detrimental consequences.

With respect to new mothers, Cutrona (1981) found no lasting relationship between depression and age, length of marriage, education, race or occupation. Middle-class subjects have been found to fare both better (Grossman, 1980) and more poorly (LeMasters, 1957) than their lower-class counterparts in adapting to motherhood.

From the data gathered by Saulnier (1983), four individual characteristics were chosen for the current study to be tested as potential mediators of the relationship between stressful life events and outcome. Three of the variables chosen -- level of family income, age of mother, and whether or not the baby was colicky -- had been found by Saulnier to be significant predictors of difficulty in adjusting to motherhood at one year postpartum. The fourth variable to be included as a potential mediator in the current study was work status of the mother. A number of studies have found that this variable has played a significant role in the lives of women. For example, the Post Partum Counselling Service in Vancouver, Canada, found that among their clients, those who had recently stopped working outside the home were vulnerable to depression (Rosenberg, 1981). In addition, Brown et al. (1975) found

that for women who were both under stress and without a confidente, work played an important role in reducing psychiatric symptoms.

Because this portion of the research was considered to be exploratory, no predictions as to the mediating capabilities of the variables were made.

Social Support

As a concept, social support is much like the concept of happiness. Everyone knows when s/he has or does not have it, but everyone describes it in a different manner. Perhaps Cobb (1976) has defined it in its broadest and purest sense. He conceived it as information leading an individual to believe that s/he is cared for and loved, esteemed and valued, and a member of a network of communication and mutual obligation.

More recent conceptualizations have attempted to reflect the multidimensional nature of the concept (Kahn & Antonucci, 1980; Gottlieb, 1978). House, for example, has defined social support as

> an interpersonal transaction involving one or more of
> the following: (1) emotional concern (liking, love,
> empathy), (2) instrumental aid (goods and services),
> (3) information (about the environment), or (4) appraisal
> (information relevant to self-evaluation)(Thoits, 1982:147).

A great deal of face validity has accrued to the hypothesis that social support mediates the relationship between stress and outcome. "A friend in need is a friend indeed" is a well-known axiom. However, research to date has not been conclusive.

Many researchers have claimed to have found evidence of a buffering effect of social support (Brown et al., 1975; Brown & Harris, 1978; Cobb & Kasl, 1977; Dean et al., 1980; de Araujo et al., 1973; Eaton, 1978; Gore, 1978; House, 1981; House & Wells, 1978; LaRocco et al., 1980; Lin et al., 1979; Lowenthal & Haven, 1968; Myers et al., 1975; Nuckolls et al., 1972; Pearlin et al., 1981; Thoits, 1978, 1982; Turner, 1981; Turner & Noh, 1982; Walker et al., 1977; Wilcox, 1981). Perhaps the most dramatic results yet produced have been those of Nuckolls et al. (1972). In this study of 170 pregnant women, 91 per cent of those with high life change scores and low "psychosocial assets" experienced one or more complications during labor and deliver, whereas only 33 per cent of those with similarly high life change scores but high assets experienced complications. The results are the more dramatic in that significant relationships were not found between complications and either life change score by itself or psychosocial assets considered alone.

Other researchers who have tested for a buffering effect have failed to find one (Andrews et al., 1978; Billings and Moos, 1981; Frydman, 1981; Liem & Liem, 1976; McFarlane et al., 1983; Tennant & Bebbington, 1978; Thoits, 1982). Main effects of social support upon outcome have been established in some of the above studies (Andrews et al., 1978; Liem & Liem, 1976; Lin et al., 1979) and by other studies which have examined the relationship without reference to stressful life events (Berkman & Syme, 1979; Brown et al., 1977; Henderson et al.,

1978; Miller & Ingham, 1976; Morawaki, 1973).

On the strength of the body of research that has supported the mediating potential of social support, and on the strength of the face validity of the hypothesis, the current study predicted that social support would mediate the stress-distress relationship.

It is important to note that researchers have met with limited success in moving from a concept of social support to a scientific measure of the broad range of feelings and activities which it implies. Indeed, researchers have often been criticized for their lack of rigor in this area. Thoits has remarked:

> Most investigators have not attempted to formulate a precise conceptual definition of social support, and few have attempted to develop valid or reliable indicators of the concept....[Some] extract items from available data (e.g., presence or absence of spouse/confidente, live alone or with others), term these items social support or social integration, and then proceed with analysis. No conceptual definitions are attempted (Thoits, 1982; 146).

Because the essence of support has not been sufficiently grasped in order to be precisely measured, the reliance on social ties as indicators of social support is understandable. However, not all ties are necessarily supportive ones, as Wellman (1981), Pearlin (1981), and Thoits (1982) have pointed out. "If one possesses family, friends, and a circle of associates, one is not necessarily the automatic beneficiary of support in times of trouble" (Pearlin et al., 1981: 340). "A large, interconnected network such as an extended family can be mobilized for support, but also for condemnation and

ostracism" (Leavy, 1983: 5).

Thoits (1982) has also suggested that there is at least some evidence that not all sources or types of social support are equally effective in reducing distress, citing Dean et al., Eaton, 1978; House, 1981; Thoits, 1978; and Wells et al., 1976. Other examples may be found as well: the importance of an intimate tie or confiding relationship has been well documented by Brown and associates with respect to a sample of women from the general population. A study by Cutrona (1981) of nonpsychotic postpartum depression in new mothers pointed to the relative importance of family and guidance figures. It seems likely that the efficacy of any particular type or source of support will depend upon the specific situation at issue.

In the absence of a valid and reliable measure of social support which would be appropriate to the population under study, the current author chose to use four social network variables as potential mediators of the stress-distress relationship. Although these variables were not equated by the author with support per se, their use was expected to help identify the source of support, should results prove to be significant. The four network variables chosen were (1) satisfaction with help received from the network, (2) disruption in the usual pattern of social relationships following the birth of the baby, (3) number of other parents in the network and (4) number of other mothers in the network with whom the subject could discuss child-rearing concerns. Because all of the subjects in the study had shared the common event of recent

parenthood, those network variables most directly connected with the birth of the child were expected to be the most salient for this sample. The particular network variables chosen had been found to be the most significantly related to outcome in the original study (Saulnier, 1983).

The current research explored the effects of stressful life events upon outcome, as mediated by the four chosen network variables. Individuals with high life event scores and favorable network dimensions were expected to have a tendency toward more favorable outcomes than those with similarly high life event scores but unfavorable network dimensions.

In summary, the foregoing review suggested the following predictions and areas of exploration:

(1) High life change scores were expected to be associated with less favorable outcomes. Two different measures of life events and four different outcome measures were used in the study. In addition, the scope and content of the items forming the life event checklist were examined.

(2) The relationship between life change scores and outcome was expected to be mediated by three dimensions of the life events -- desirability, anticipation, and degree of control. A finding of some interaction effects among the three dimensions was expected.

(3) The mediating effect of three individual characteristics and one baby-related variable were explored.

(4) Social support, as reflected by four network variables,

was expected to mediate the relationship between
life events and outcome, such that individuals with
high life event scores and favorable networks were
predicted to show a tendency to have more favorable
outcomes than those with similarly high life event
scores but unfavorable networks.

METHOD

Design

This study used secondary analysis in the examination of
some of the data collected by Saulnier for a doctoral disser-
tation on the transition to parenthood (1983). Although the
original study was longitudinal in nature, this study was
essentially cross-sectional in scope, using only data gathered
at the final time point in 1983. Mothers who had participated
in the previous set of interviews had been contacted by
telephone, and those able to continue with the study had been
interviewed in their homes.

Subjects

All potential subjects had been recruited for the original
study on a volunteer basis from seven prepared-childbirth
classes throughout the city of Winnipeg, Manitoba, Canada.
All were first-time mothers who were married or living with a
mate. While the 55 subjects of the original sample were not
representative of all new mothers, they were drawn from seven
different groups, with a 90 per cent response rate from those
contacted. Furthermore, it would appear that a high percentage
of all new mothers in Winnipeg do attend pre-natal classes
(Saulnier, 1983).

Measures

Measures used in this study are contained in Appendices A to G of this thesis.

Independent Variables

Recent Life Change Questionnaire. The Recent Life Change Questionnaire (RLCQ), as developed by Holmes and Rahe and colleagues (Rahe, 1974), and as modified by McFarlane et al. (1980), was used to measure stressful life events. The scale consists of 75 items divided into five areas: health, work, home and family, personal and social, and financial areas. However, three inappropriate items -- child leaving home, birth of a grandchild, and retirement -- were removed, and three other items were changed to relate to "self" rather than "wife", to maintain relevance to the population being studied. Birth of a child was also removed as it had been a recent universal event for this population.

Subjects were first asked to identify all events that had occurred within the past twelve months. Although the reliability of individual recall over such a period of time has been questioned, the current author felt that in this study memory would be considerably abetted by the marker event of birth of first child. Subjects were then asked to assign to each event which had occurred a score which reflected the amount of adjustment required by it. Scores were to be made on a scale of zero to 100, with zero reflecting no adjustment required and 100 reflecting the maximum adjustment required.

Because an attempt was made to replicate the findings of McFarlane et al. (1980) with regard to three specific dimensions of life events, subjects were also questioned as to how they would score each event experienced along each of the three dimensions. Consequently, each event experienced was identified as either a change for the better, a neutral event, or a change for the worse; each was identified as an event over which they had total control, some control, or no control; and each was acknowledged as an event which was either expected or not expected by the subjects.

Characteristics of the individual. While many variables were of interest as potential mediators of the events-outcome relationship, the number actually tested was limited to four, due to sample size. Three characteristics of the individual and one baby-related variable were chosen because of their relative importance in the original study. Age of mother, level of family income, whether the subject was working outside the home or not, and whether or not the baby was colicky were used as independent variables in this study.

Network variables. The four network variables chosen for use in this study were as follows: satisfaction with help received from network, disruption in social relationships attributed to having a baby, number of female friends available to discuss child-rearing concerns, and number of network members who were also parents. While events experienced by these women were expected to run the whole gamut of life events,

it was not unreasonable to expect that variables which might
have an impact on the one event known to be universal (i.e.,
birth of first child) might affect the events-outcome relation-
ship. Satisfaction with network support was a composite score
reflecting the sum of subscores obtained on five other measures.
Satisfaction with husband's help with baby, satisfaction with
husband's help in other areas of life, satisfaction with
family's help, with in-laws' help, and with friends' help with
baby were each rated on a seven-point Likert-type scale and
summed. Lower total scores indicated greater satisfaction.
Disruption in social relationships was measured by response
on a seven-point Likert scale to the following question: "To
what extent did having a baby lead to a disruption in your
pattern of social relationships?" A score of one indicated
"not at all", and a score of seven indicated "caused a major
change in social relationships."

Dependent Variables

Langner's Screening Scale. A measure developed by
Langner (1962) and used by McFarlane et al. (1980) was used
in this study. The measure provides "a rough indication of
where people lie on a continuum of impairment in life function-
ing due to very common types of psychiatric symptoms" (Langner,
1962: 269). Developed during the course of the Midtown Mental
Health Study, it is composed of 22 items which were found to
discriminate between "known well" and "known ill" groups at
the .01 confidence level or better. The items were designed

to reflect the approximate frequency of symptoms such as acid stomach, nervousness and sleep difficulties. The Screening Score consists of the sum of responses indicated and generally those experienced with high frequency. When average scores were calculated for a group of current out-patients, a group of ex-patients, and a group of non-patients, their mean scores were 4.78, 4.20, and 2.60 respectively. Overall average score was 2.83. Individuals were also grouped into categories of Well, Mild Symptoms, Moderate Symptoms, and Impaired, according to symptoms and functioning abilities. A cutting point of a score of four or more was found to be useful, as it identified only one per cent of the Wells but 74 per cent of the Impaired group. However, it also selected 11 per cent of the Milds and 45 per cent of the Moderates. A cutting point of seven or more most clearly differentiated the Impaired from the Unimpaired. This score included no Wells, virtually no Milds, and only 9 per cent of the Moderates. Furthermore, 83 per cent of those with scores of seven or more were likely to be in the Impaired group.

Modified Langner Scale. The original score on the Langner Screening Scale reflected the occurrence of symptoms at high levels of frequency and severity. The current author explored the sensitivity of the Langner Scale scored in a manner that also allowed for less frequent occurrences or reduced severity of the same symptoms. Consequently, the Modified Langner Scale included the sum of all items, such as that of being bothered by your heart beating hard, scored as "sometimes"

in addition to those items scored as "often." Appendix E
identifies the responses included in this score as well as
those included in the original score.

Hobbs' Difficulty Checklist. The Checklist used in this
study was the modified version used by Saulnier (1983),
consisting of 22 original items, and five additional items
developed by Saulnier. The total number of 27 items represent
difficulties commonly experienced by new parents, and each
new mother in this study was asked to indicate the degree to
which she had been "bothered" by each item. A score of one
indicated "not at all", two indicated "somewhat", and three
indicated "very much." A moderate degree of validity for the
modified scale was established by Saulnier (1983).

Spanier Dyadic Adjustment Scale. This measure of marital
adjustment was composed of 11 items from the various subscales
of the original measure designed by Spanier (1976), and was
used in its shortened form by Saulnier (1983). The scale
has established high scale reliability and good content,
criterion-related, and construct validity (Spanier, 1976).
Higher scores reflect poorer marital adjustment.

All analyses were completed using the Statistical
Analysis System (SAS User's Guide: Basics, 1982; SAS User's
Guide: Statistics, 1982).

RESULTS

Results presented below are based on data gathered by
Saulnier (1983) with respect to a sample of 38 new mothers.
All measurements used in the current research were made at
the one-year postpartum measurement time.

Description of the Sample

In order to facilitate the presentation of descriptive
data reported for the sample, the current author has organized
the findings under appropriate subheadings. Descriptive data
is reported for all independent and dependent variables used
in the research.

Independent Variables

Demographic variables. The average age of the sample of
38 mothers was 27.18 years ($\underline{SD}$ = 2.72), and the range was from
22 to 33 years of age. All were married or in a stable
cohabitation relationship. The average length of time of the
mother-partner relationship was 4.54 years ($\underline{SD}$ = 2.51), and
the range was from one to 11 years. Median joint income of
mother and partner was within the category of $25,000 - $30,000
per year, and the range was from a low of $5,000 - $10,000
per year to a high of over $35,000 per year. Ten families
established the mode as the "over $35,00 per year" category.
Appendix J enables the reader to compare the income levels of

this sample with those of larger populations in Canada. Average incomes may be seen to fall slightly below other population averages. Highest level of schooling attained ranged from a low of "some high school" to a high of "graduate school." The most frequently attained level was "high school graduate." Ten of the mothers were not working outside the home at the time of the interview, while 28, including one student, were considered to be working either part- or full-time. The babies ranged in age from 12 to 16 months, the mean age being 13.8 months (SD = .95). Of the 38 babies, ten were colicky, while 28 were not colicky, as determined by their mothers.

Network measures. The sample of mothers reported a range of five to 25 on the composite variable "satisfaction with network support", which had a potential range of five to 35. Lower scores reflected higher satisfaction. The average score on this variable was 11.61 (SD = 4.33). The median was 11, and the mode was ten. Scanning the subscores of the composite variable reveals that as a group, the mothers were more likely to be satisfied with help from family, and less likely to be satisfied with help from in-laws than from other parts of the network. However, the differences were not tested using statistical methods. Table 1 describes the composite variable of network satisfaction.

Insert Table 1 about here

Table 1

Network Satisfaction of Thirty-Eight New Mothers in Winnipeg

By Source of Satisfaction

Source of Satisfaction	X	SD	Med.	Mode	Range	Possible Range
Husband -baby	2.08	1.36	2	1	1 - 7	1 - 7
Husband -life	2.47	1.33	2	2	1 - 7	1 - 7
Family	1.95	1.06	2	1	1 - 5	1 - 7
In-laws	3.11	1.00	2	2	1 - 7	1 - 7
Friends	2.18	.95	2	2	1 - 4	1 - 7
Total Satisfaction	11.16	4.33	11	10	5 - 22	5 - 35

Note. Lower scores reflect higher satisfaction.

In answer to the question, "To what extent did having a baby lead to a disruption in your pattern of social relationships?", the greatest number chose four on a scale of one to seven. The number one reflected "not at all", while seven reflected "caused a major change in social relationships." Scores for the sample ranged from one to six, and the median was three.

The average number of close women friends who were also mothers with whom the mothers in the sample could discuss child-rearing concerns was 2.95 (SD = 1.84). The median was two, and the number of mother-friends most frequently scored was also two. The number of such friends ranged from zero to seven.

Stressful life events. The average total number of events experienced by this sample of mothers over a twelve-month period was 12.79 events (SD = 5.50). The median number was 12, as was the mode. The range reported was three to 25 events, using a standardized list of 75 items. The upper boundary of the range was not fixed, however, as participants in the study could add other appropriate events which had also occurred during the previous year.

Each item on the list which had occurred was given a score between zero and 100, reflecting the amount of adjustment made subsequent to the event's occurrence. Higher scores reflected greater amounts of adjustment. The average adjustment score was 586 (SD = 349), and the median and mode were

both 460. Scores ranged from a low of 65 to a high of 1480.

Scope and content of events experienced. On average the
women in this study experienced somewhat greater numbers of
events seen to be changes for the better than changes for the
worse, and greater numbers of events were expected than were
unexpected. Table 2 shows the average number of events
according to level of desirability, control, and expectancy.
Examination of the scoring for individual items reveals that
the same item can be viewed differently, depending upon
individual perception or the particular consequences of that
event for the individual. For example, having a relative
move in was considered to be a change for the better by some
respondents but a change for the worse by others. Even events
that might normally be seen as a change for the worse, such
as a miscarriage, were sometimes seen as a neutral event or
a change for the better. Events normally seen as a change
for the better, such as a vacation, were experienced by some
as a change for the worse.

Insert Table 2 about here

One half of all the mothers experienced the same five
events: change in recreation, change in sleeping habits,
major decision regarding the future, change in eating habits,
and change in social activities. The same 19 events, includ-
ing the above, were experienced by at least 25 per cent of

Table 2

Events Experienced over Twelve Months by Thirty-Eight New

Mothers: Average Number of Events According to Level of

Desirability, Control, and Expectancy

Type of Event	$\bar{X}$	SD	Range
Changes for the better	6.11	3.79	0 - 16
Neutral changes	2.87	2.00	0 - 9
Changes for the worse	3.79	3.20	0 - 12
Total control	4.16	2.74	0 - 11
Some control	4.92	3.29	0 - 14
No control	3.68	2.82	0 - 13
Expected	8.00	3.53	1 - 16
Not expected	4.76	3.35	0 - 15

the women. Table 3 provides the number of study participants for each of the 19 events and as well provides the mean degree of subjectively reported adjustment for each item.

_____

Insert Table 3 about here

_____

From Table 3 it may be observed that the most frequently occurring events were not the most stressful, in terms of individual ratings of adjustment. The 19 most frequently occurring events were seen to be moderately stressful, with all average scores within a range of 30 to 69. Table 4 shows the number of most frequent events according to degree of difficulty.

_____

Insert Table 4 about here

_____

Of the 19 most frequent events, only four were among the 20 most stressful. Table 5 ranks the 20 most stressful events according to subjective measure of adjustment. For comparison purposes it also provides the rank and normatively weighted score for each of those items on the original Holmes and Rahe Scale (1967). It may be seen that the participants in this study generally rated events as more stressful than the norm, although a wide range of mean scores was noted when all events were considered. The bottom of the range was represented

Table 3

Events Experienced over Twelve Months by Thirty-Eight New

Mothers: Events in Descending Order, According to Frequency

of Occurrence

Event	N	Mean Adjustment [a]
1. Change in recreation	26	35.6
2. Change in sleeping habits	21	49.5
3. Major decision re the future	20	68.5
4. Change in eating habits	19	45.3
5. Change in social activities	19	40.8
6. Change in family member	18	53.6
7. Change in personal habits	17	45.9
8. Change in family get-togethers	16	30.0
9. Change in work hours/conditions	16	52.5
10. Moderate purchase	16	34.1
11. In-law problems	15	38.7
12. Change in arguments with spouse	14	40.7
13. Begin/cease work	13	60.8
14. Vacation	13	44.2
15. Major purchase	12	60.4
16. New relationship	12	40.0
17. More work responsibilities	11	61.8
18. Change in living conditions	11	43.2
19. Major personal achievement	11	57.2

[a] Scores fall within a range of zero to 100. Zero
reflects no adjustment.

Table 4

Events Experienced over Twelve

Months by Thirty-Eight New Mothers:

Nineteen Most Frequent Events

According to Degree of Adjustment

Rating [a]	No. of Events
30 - 39	4
40 - 49	8
50 - 59	3
60 - 69	4

[a] Rating is contained within a range of zero to 100. Zero reflects no adjustment.

both in terms of mean scores and in terms of individual scores on the items. Mean scores for many items were sometimes quite divergent from the normative weighting, as in "death of a close friend", with a mean score of 85 compared with a weighted score of 37, or "change to a new type of work", given an average rating of 64 in this study compared with the 36 assigned by Holmes and Rahe. However, in terms of the ranking of items according to stressfulness, ten of the top 20 most stressful events in this study were among the 20 most stressful events in the Holmes and Rahe ranking.

Insert Table 5 about here

Dependent Variables

Langner Screening Scale. The average score on the Langner Screening Scale was 2.40 symptoms ($\underline{SD}$ = 2.16). Although the range was from zero to 11, the median and the mode were at the lower end of the range, as would be expected, at two for each. Eight mothers (or 21 per cent) scored four or more symptoms, and two mothers (or 5 per cent) had scores of seven or more. The most frequently checked items were being "the worrying type" (53 per cent), having "periods of such great restlessness" (26 per cent), feeling "I couldn't get going" (21 per cent), having sleep troubles (16 per cent), experiencing a fullness in the head (16 per cent), and having

Table 5

Events Experienced over Twelve Months by Thirty-Eight New
Mothers: Events in Descending Order, According to Degree
of Adjustment

Event	Mean Adjustment[a]	N	Holmes & Rahe	
			Wt.	Rank
1. Separation from spouse	95.0	1	65	3
2. Other home/family event	88.3	3	--	--
3. Reconciliation with spouse	85.0	1	45	9
4. Death of close friend	85.0	2	37	17
5. Falling out of relationship	75.0	6	--	--
6. Death of parent	70.0	1	63	5
7. Major decision re the future	68.5	20	--	--
8. Job transfer	68.3	3	--	--
9. Decreased income	65.7	7	38	16
10. New type of work	63.8	13	36	18
11. Begin/cease school	62.5	2	26	26
12. More work responsibilities	61.8	11	29	21
13. Serious illness or injury	61.7	6	53	6
14. Begin/cease work	60.8	13	26[b]	25
15. Major purchase	60.4	12	31[c]	20
16. Business readjustment	58.3	3	39	15
17. Other personal/social event	57.5	2	--	--
18. Other health event	57.5	2	--	--
19. Major personal achievement	57.2	11	28	24
20. Pregnancy	56.4	7	40	12

[a] Scores fall within a range of zero to 100. Zero reflects
no adjustment.

[b] Wife begins or stops work.

[c] Mortgage over $10,000.

"personal worries that get me down physically" (16 per cent).

Modified Langner Scale. The average score on the Modified Langner Scale was 5.47 symptoms (SD = 2.84), within a range of one to 13. The median was five and the mode was two. The most common items on this scale were being "bothered by nervousness" (74 per cent), having sleep troubles (47 per cent), having an appetite that is other than "good" (29 per cent), being "bothered by shortness of breath" (24 per cent), and being "bothered by your heart beating hard" (21 per cent).

Hobbs' Difficulty Scale. Out of a possible range of 27 to 81, the mean score on the Hobbs' Difficulty Scale was 41.63 (SD = 4.85). The actual range was from a low of 30 to a high of 56. Higher scores reflected greater difficulty in adjusting to motherhood. The median score was 41, and the mode was 39. Items identified as being those which affected the new mothers the most, and the mean score for each item out of a possible total of three, were as follows: "physical tiredness and fatigue" ($\bar{X}$ = 2.18), "additional amount of work" ($\bar{X}$ = 2.03), "housekeeping not as neat as it should be" ($\bar{X}$ = 1.95), "interruption of routine habits" ($\bar{X}$ = 1.92), and "feeling 'edgy' or emotionally upset" ($\bar{X}$ = 1.84).

Spanier Dyadic Adjustment Scale. Scores on the Spanier Dyadic Adjustment Scale were derived from a possible range of 11 to 57. Higher scores reflected poorer marital adjustment. The mothers in this study produced a range of scores from 14

to 37. The mean was 22.97 ($\underline{SD}$ = 4.79), the median was 24,
and the mode was 24.

Results of Predictions

Stressful Life Events and Outcome Measures

Event count. As predicted, a significant relationship
was found between stressful life events and outcome. Moderate
correlations were found between a count of events over the
past year and the Langner Screening Scale ($\underline{r}$ = .34, $\underline{p}$ = .03),
between number of events and the Modified Langner Scale
($\underline{r}$ = .41, $\underline{p}$ = .01), and between number of events and the Hobbs'
Difficulty Scale ($\underline{r}$ = .43, $\underline{p}$ = .008). A significant relation-
ship was not found between a count of events and the Spanier
Dyadic Adjustment Scale.

Subjective ratings. When the subjective measure of
total amount of adjustment demanded by the occurrence of events
was used as the independent variable, stronger relationships
between stressful life events and outcome were found. Signi-
ficant correlations were found between the subjective measure
and the Langner Screening Scale ($\underline{r}$ = .45, $\underline{p}$ = .005), between
the subjective measure and the Modified Langner Scale ($\underline{r}$ = .45,
$\underline{p}$ = .004), and between the subjective measure and the Hobbs'
Difficulty Scale ($\underline{r}$ = .50, $\underline{p}$ = .002). The correlation between
total amount of subjectively-perceived adjustment to events
and the Spanier Dyadic Adjustment Scale did not reach signifi-
cance. Table 6 summarizes the correlations among the two

measures of life events and the four outcome measures.

Insert Table 6 about here

Dimensions of the Event as Mediators

Mediating effects of three dimensions of stressful life
events -- desirability, anticipation, and degree of control --
in the relationship between events and outcome were produced
by this study. Two procedures were used to examine the
mediating effects of the three dimensions: correlation
techniques to examine the relationship between various subscores
of the dimensions and the outcome measures, and analysis of
variance techniques to examine the interaction effects of the
three dimensions.

Correlations with outcome measures. Separate scores
were developed reflecting total number of events that were a
change for the better, a neutral change, and a change for the
worse. Of the three scores, only change for the worse scores
were significantly correlated with outcome. Change for the
worse scores were positively correlated with the Langner
Screening Scale (r = .52, p = .0007), with the Modified
Langner Scale (r = .52, p = .0009), with the Hobbs' Difficulty
Scale (r = .50, p = .002), and with the Spanier Dyadic Adjust-
ment Scale (r = .35, p = .04).

In a similar manner separate scores for events over

Table 6

Correlations among Objective and Subjective Measures of

Events and Four Measures of Outcome for Thirty-Eight New

Mothers

Measure of Events	Original Langner	Modified Langner	Hobbs	Spanier
Total number of events				
$\underline{r}$	.34	.41	.43	N.S.
$\underline{p}$	.03	.01	.008	
Degree of adjustment				
$\underline{r}$	.45	.45	.50	N.S.
$\underline{p}$	.005	.004	.002	

Note. Pearson's product-moment correlations were used
to determine associations among variables.

which the subject had total control, some control, or no
control were correlated with the outcome measures. Results
for this dimension were more complex. Number of events for
which the respondent reported total control correlated only
with the Spanier Scale, and in a negative direction (r = -.38,
p = .02), suggesting that as the amount of control over events
increased, marital happiness increased. Total control was
not associated with either of the Langner Scales or with the
Hobbs Scale. Some control was significantly correlated with
the Langner Screening Scale (r = .32, p = .05) and with the
Hobbs' Difficulty Scale (r = .49, p = .002), but neither with
the Modified Langner Scale nor with the Spanier Scale. As one
would expect, having no control over events experienced was
significantly correlated with three of the outcome measures,
and it approached significance with the fourth: relationships
were examined with the Langner Screening Scale (r = .31, p = .06),
with the Modified Langner Scale (r = .42, p = .008), with the
Hobbs' Difficulty Scale (r = .36, p = .03), and with the
Spanier Dyadic Adjustment Scale (r = .48, p = .003).

The third dimension relating to events, expectancy, was
treated in a similar fashion to desirability and control.
None of the correlations between scores reflecting expected
events and the outcome measures were significant. However,
all correlations between scores reflecting events that were
not expected and the outcome measures attained significance:
relationships were examined with the Langner Screening Score
(r = .36, p = .03), with the Modified Langner Scale (r = .36,

p = .03), with the Hobbs' Difficulty Scale (r = .50, p = .002), and with the Spanier Dyadic Adjustment Scale (r = .33, p = .05). The correlations among dimensions of events and the outcome variables are shown in Table 7.

Insert Table 7 about here

Interaction of dimensions. In order to examine whether the interaction among the three dimensions produced effects of statistical significance, a total amount of change score was first determined. Changes for the better were given a weight of one, and changes for the worse were given a weight of three. Because of the small sample size and likelihood of producing empty cells in the statistical analysis, and because at least one study in the literature (McFarlane et al., 1980) determined that neutral events behaved much as changes for the better, neutral events were assigned the same value as changes for the better. This decision was supported by the fact that in this study both neutral events and changes for the better were found to have very similar correlations with the subjective measure of stress (r = .45, p = .005 and r = .47, p = .003 respectively), and by the fact that neither was significantly related to any of the outcome measures. The total amount of change score was the sum of all the weights assigned for those events said to have occurred.

Scores were also developed for total amount of control,

Table 7

Correlations among Three Dimensions of Events and Four

Outcome Measures for Thirty-Eight New Mothers

Dimension of Event	Original Langner	Modified Langner	Hobbs	Spanier
Changes for the better	N.S.	N.S.	N.S.	N.S.
Neutral changes	N.S.	N.S.	N.S.	N.S.
Changes for the worse				
r	.52	.52	.50	.35
p	.0007	.0009	.002	.04
Total control				
r	N.S.	N.S.	N.S.	-.38
p				.02
Some control				
r	.32	N.S.	.49	N.S.
p	.05		.002	
No control				
r	.31	.42	.36	.48
p	.06	.008	.03	.003
Expected	N.S.	N.S.	N.S.	N.S.
Not expected				
r	.36	.36	.50	.33
p	.03	.03	.002	.05

Note. Pearson's product-moment correlations were used to determine associations among variables.

assigning total control a value of one, some control a value of two, and no control a value of three. Finally, scores were determined for expectancy, giving events that were expected a weight of one and events that were unexpected a weight of three. Analyses of variance were then performed, with each new variable divided at the median, and in succession using first the Langner Screening Scale and then the Hobbs' Difficulty Scale as the dependent variable. Because of the unbalanced design of the data, Type IV sum of squares under a general linear procedure model (GLM) were chosen for examination of results (SAS User's Guide: Statistics, 1982: 165).

All three dimensions could not be examined simultaneously for interaction effects due to the presence of empty cells in the two-by-two-by-two tables. Therefore, three separate analyses were performed examining the interaction of each combination of two dimensions. The only significant interaction effect found was for control and expectancy, with the Langner Screening Scale as the dependent variable ($\underline{F}(3,34) = 5.71$, $\underline{p} = .02$). In addition, main effects were found for change score on the Langner Screening Scale ($\underline{F}(3,34) = 4.91$, $\underline{p} = .03$), and for control score on both the Langner and Hobbs' Difficulty Scales ($\underline{F}(3,34) = 3.99$, $\underline{p} = .05$ and $\underline{F}(3,34) = 4,83$, $\underline{p} = .03$ respectively).

The differences among mean scores on the Langner Screening Scale were examined for the significant interaction effect of control with expectancy. Control was divided at the median into high and low levels, and expectancy remained in its

dichotomous form. Comparisons were made using the Tukey statistical test, which controls for the Type I experimentwise error rate (SAS User's Guide: Statistics, 1982: 172). Two comparisons produced significant results. It was found that under similar conditions of very little or no control over events, those women experiencing events which were also expected to happen reported significantly more symptoms on average on the Langner Screening Scale than those experiencing events which also had not been anticipated ($\overline{X}$ = 7.0 and $\overline{X}$ = 2.53, $\underline{p}<$ .05). In addition, when events that had been experienced had also been expected, those who felt they had little or no control over those events had significantly more symptoms on average than those who had high levels of control ($\overline{X}$ = 7.0 and $\overline{X}$ = 1.72, $\underline{p}<$ .01). The significant results of the analysis of interaction effects are contained in Tables 8 and 9.

Insert Table 8 about here

Insert Table 9 about here

All further analyses were completed using number of events that were a change for the worse as the measure of stress (i.e., independent variable). This measure was chosen because in this study it had correlated more significantly than any other

Table 8

Analysis of Variance Summary Table: Interaction of Control

over Events with Expectancy[a] in a Sample of Thirty-Eight

New Mothers

Source	df	Type IV Sum of Sq.	F	p
Control	1	14.3	3.99	.05
Expectancy	1	6.3	1.76	.19
Control x expectancy	1	20.5	5.71	.02

[a] Independent variable: Langner Screening Scale

Table 9

Comparison of Mean Scores on Langner Screening Scale[a]

Showing Interaction of Level of Control over Events with

Degree of Expectancy in a Sample of Thirty-Eight Mothers

	Degree of Expectancy	
Level of Control	Expected	Not Expected
High	1.72	3.0
Low	7.0	2.53

[a] Scores reflect average number of psychiatric symptoms reported.

measure of life events with the two outcome measures chosen for these analyses -- the Langner Screening Scale and the Hobbs' Difficulty Scale.

Individual Characteristics as Mediators

The mediating effect between stress and outcome of the three individual and one baby-related variables was explored using analysis of variance techniques. Where results were significant, comparisons among mean scores of high and low levels of stress combined with high and low levels of the interacting variable were made. Type I experimentwise error rate was controlled using the Tukey statistic, and median splits were used in each case.

Langner Screening Scale as dependent variable. Using the Langner Screening Scale as the dependent variable, two variables were found to interact with stressful life events. Age of mother was shown to interact with level of stress to affect the number of reported symptoms ($\underline{F}(3,34) = 6.06$, $\underline{p} = .02$). Results indicated that age of mother did not mediate the relationship between stress and symptoms, whether stress was considered at relatively high or relatively low levels. However, when the age of mother was held constant, level of stress did mediate the relationship between age of mother and symptoms, but only for younger mothers. Younger mothers with high levels of stress had significantly higher average scores ($\overline{X} = 4.33$) on the Langner Screening Scale than did younger mothers with low levels of stress ($\overline{X} = 1.45$). This difference

was significant at the .05 level, but not at the .01 level.
Older mothers were unaffected to a significant degree by level
of stress.

The second variable to produce an interaction effect with
stressful life events was having a colicky baby ($\underline{F}(3,34)$ = 3.93,
$\underline{p}$ = .05). Under conditions of high stress, having a colicky
baby produced a significantly higher mean score ($\bar{\bar{X}}$ = 4.86) on
the Langner Screening Scale than having a baby who was not
colicky ($\bar{\bar{X}}$ = 2.0). Again, this difference in means was signi-
ficant at the .05 level but not at the .01 level. Under
conditions of low stress, having a colicky infant had no effect
on outcome. No other significant interaction effects were
found among levels of stress and the behavior of the baby.

Neither work status of the mother nor level of family
income were seen to interact with stress to produce an effect
on the Langner Screening Scale scores. In addition, some main
effects for stress (i.e., scores on total number of changes
for the worse) were found: in examining interaction effects
for behavior of baby ($\underline{F}(3,34)$ = 5.20, $\underline{p}$ = .03), in examining
age of mother ($\underline{F}(3,34)$ = 4.43, $\underline{p}$ = .04), and in examining
work status of mother ($\underline{F}(3,34)$ = 7.63, $\underline{p}$ = .009). This finding
would suggest that stressful life events have a unique
contribution to make to the stress-outcome relationship,
irrespective of any interaction effects. Analyses of the
interaction effects between stressful events and age of mother
are contained in Tables 10 and 11. Interaction effects between
stressful events and behavior of baby are described in Tables
12 and 13.

Insert Table 10 about here

Insert Table 11 about here

Insert Table 12 about here

Insert Table 13 about here

Hobbs' Difficulty Scale as the dependent variable. The
same analyses of variance were done using the Hobbs' Difficulty
Scale as the dependent variable, and comparisons among means
were completed where significant interaction effects were
found.

No significant interaction effects were found between
three of the variables -- age of mother, work status of mother,
and level of family income -- and number of changes for the
worse.

A significant interaction effect was found between stress
and behavior of the baby in producing varying effects upon
difficulty in adjusting to motherhood ($F(3,34) = 7.75$, $p = .009$).

Table 10

Analysis of Variance Summary Table: Interaction of Age of

Mother with Number of Life Events [a] in a Sample of

Thirty-Eight New Mothers

Source	df	Type IV Sum of Sq.	F	p
Life events	1	16.49	4.43	.04
Age of mother	1	7.70	2.07	.16
Life events x age of mother	1	22.56	6.06	.02

[a] Independent variable: Langner Screening Scale.

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Table 11

Comparison of Mean Scores on Langner Screening Scale[a]

Showing Interaction of Age of Mother with Number of Life

Events in a Sample of Thirty-Eight New Mothers

Number of Events	Age of Mother	
	Younger Mothers	Older Mothers
High	4.33	1.88
Low	1.45	2.10

[a] Scores reflect average number of psychiatric symptoms reported.

Table 12

Analysis of Variance Summary Table: Interaction of Behavior

of Baby with Number of Life Events[a] in a Sample of

Thirty-Eight New Mothers

Source	df	Type IV Sum of Sq.	F	p
Life events	1	18.4	5.20	.03
Behavior of baby	1	11.9	3.36	.08
Life events x baby	1	13.9	3.93	.05

[a] Independent variable: Langner Screening Scale

Table 13

Comparison of Mean Scores on Langner Screening Scale[a]

Showing Interaction of Behavior of Baby with Number of Life

Events in a Sample of Thirty-Eight New Mothers

| | Behavior of Baby | |
Number of Events	Colicky	Not Colicky
High	4.86	2.0
Low	1.67	1.78

[a] Scores reflect average number of psychiatric symptoms reported.

Comparisons among means on the Hobbs Scale for high and low levels of stress combined with colicky/not colicky baby revealed two significant differences of interest. Under conditions of high stress, those mothers with colicky babies had significantly higher mean scores ($\bar{X}$ = 47.3) on the Hobbs' Difficulty Scale than those who had babies who were not colicky ($\bar{X}$ = 41.0). The difference was significant at the .05 level. Given the fact of having a colicky baby, those mothers also experiencing high numbers of negative events scored significantly higher on difficulty in adjusting to motherhood ($\bar{X}$ = 47.3) than those also experiencing low levels of negative events ($\bar{X}$ = 37.7). This difference was significant at the .01 level. For those mothers with a baby who was not colicky, level of stress had no significant impact on outcome. Tables 14 and 15 demonstrate the interaction effects of stressful life events with behavior of baby.

Insert Table 14 about here

Insert Table 15 about here

Significant main effects for stress were also found: in examining interaction effects for age of mother (F(3,34) = 5.36, p = .03), in examining interaction effects for behavior of

Table 14

Analysis of Variance Summary Table: Interaction of Behavior of Baby with Number of Life Events[a] in a Sample of Thirty-Eight New Mothers (Hobbs' Scale)

Source	df	Type IV Sum of Sq.	F	p
Life events	1	163.9	9.77	.004
Behavior of baby	1	19.5	1.16	.29
Life events x baby	1	130.0	7.75	.009

[a] Independent variable: Hobbs' Difficulty Scale

Table 15

Comparison of Mean Scores on Hobbs' Difficulty Scale[a]

Showing Interaction of Behavior of Baby with Number of Life

Events in a Sample of Thirty-Eight New Mothers

	Behavior of Baby	
Number of Events	Colicky	Not Colicky
High	47.29	41.0
Low	37.67	40.44

[a] Scores reflect average score on adjustment to motherhood scale. Higher scores represent greater difficulty.

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baby ($F(3,34) = 9.77$, $p = .004$), in examining interaction
effects for work status ($F(3,34) = 4.27$, $p = .05$), and in
examining level of income ($F(3,34) = 5.96$, $p = .02$).

Network Variables as Mediators

Langner Screening Scale as dependent variable. The
mediating role of the four chosen network variables was deter-
mined in a similar fashion, using analysis of variance and
comparison of group means. With the Langner Screening Scale
as the dependent variable, none of the network variables --
satisfaction with network support, number of friends who are
mothers, number of network members with children, and degree
of disruption of social network -- were significant as mediators
of the relationship between events and symptoms.

Hobbs' Difficulty Scale as dependent variable. Using the
Hobbs' Difficulty Scale as the dependent variable, interaction
effects were significant for the interaction of stress with
satisfaction with network support ($F(3,34) = 4.09$, $p = .05$).
The analysis of variance also revealed a main effect for
satisfaction ($F(3,34) = 5.17$, $p = .03$) and a main effect for
stress ($F(3,34) = 4.30$, $p = .05$). Further examination of the
interaction effects indicated that under similarly high levels
of stress, those who were more highly satisfied with their
network support were also more likely to have less difficulty
in adapting to motherhood ($\bar{X} = 46.1$ compared with $\bar{X} = 40.0$).
Satisfaction did not interact with low levels of stress to

produce effects on the outcome. In addition, it was noted
that dissatisfaction with support may have made a mother more
vulnerable to the effects of stress. Given a similar level
of low satisfaction with network support, those with high
levels of stress experienced significantly greater difficulty
on the Hobbs' Difficulty Scale ($\bar{X}$ = 46.1) than those with low
levels of stress ($\bar{X}$ = 40.3). Given a similar level of high
satisfaction, those with high levels of stress had virtually
the same mean score as those with low levels of stress ($\bar{X}$ = 40.0).
Results of the analysis of interaction effects are contained
in Tables 16 and 17.

Insert Table 16 about here

Insert Table 17 about here

In summary, some of the predictions tested in this thesis
held, while others met with qualified or limited verification.
High life change scores were associated with less favorable
outcomes, with the exception of a lack of significant correla-
tion between events and marital adjustment. Subjective measure
of total amount of adjustment demanded by the occurrence of
events was a slightly more sensitive predictor of unfavorable
outcome than a simple count of all events.

Table 16

Analysis of Variance Summary Table: Interaction of Level of

Network Satisfaction with Number of Life Events[a] in a Sample

of Thirty-Eight New Mothers

Source	df	Type IV Sum of Sq.	F	p
Life events	1	75.8	4.30	.05
Network satisfaction	1	91.2	5.17	.03
Life events x satisfaction	1	72.1	4.09	.05

[a] Independent variable: Hobbs' Difficulty Scale

Table 17

Comparison of Mean Scores on Hobbs' Difficulty Scale[a]

Showing Interaction of Level of Network Satisfaction with

Number of Life Events in a Sample of Thirty-Eight New Mothers

Number of Events	Level of Network Satisfaction	
	Low	High
High	46.1	40.0
Low	40.3	40.0

[a] Scores reflect average score on admustment to mother-hood scale. Higher scores represent greater difficulty.

Not all events were associated with negative outcomes. The three dimensions of events examined in this study -- desirability, degree of control, and anticipation -- produced results that varied with different values for each dimension. Less favorable outcomes were associated only with increases in changes for the worse, increases in number of events over which there is no control, and increases in number of unexpected events. Events over which some control was exercised were related to two of the four outcome measures. When all measures of life events used in this study were considered, total number of changes for the worse proved to be the best predictor of an unfavorable outcome.

Examination of possible interaction effects among the three dimensions of events revealed one significant finding: low control over events and positive expectancy of the events interacted to produce significant increases in the average number of symptoms on the Langner Screening Scale.

Of the four individual and baby-related characteristics used to test for interaction effects in explaining outcome, two were found to be significant with respect to the Langner Screening Scale, and one with respect to the Hobbs' Difficulty Scale. Both age of mother and behavior of baby interacted with level of stress to increase number of psychiatric symptoms. Behavior of baby interacted with level of stress to increase difficulty in adjusting to motherhood, as well.

None of the network variables were seen to mediate the relationship between stressful life events and scores on the

Langner Screening Scale. However, using the Hobbs' Difficulty Scale as the dependent variable, satisfaction with network support was seen to interact with stress to produce varying effects on difficulty in adjusting to motherhood.

These results will be discussed further and their implications examined in the following section. Weaknesses of the current research will be brought into the discussion where appropriate.

DISCUSSION

The present study found a significant relationship
between the clustering of recent life events and an unfavorable
outcome in a group of women who had recently become mothers.
Correlations between stress and outcome tended to be of a
greater magnitude than those generally reported in the litera-
ture. However, the strength of the relationship must be
viewed with some caution. As with other cross-sectional
research, this study could not control for previous levels
of stress or scores on the outcome measures. This may have
somewhat distorted the real relationship between stressful
life events and outcome. For example, part of the strength
of the relationship between events and scores on the Langner
Screening Scale may be explained by a subgroup of individuals
who always experience both a high level of stress and a high
rate of symptomatology.

It seems evident from this and previous research that
stressful life events cannot account for a large proportion
of the explained variance in the stress equation. Nevertheless,
one must not lose sight of the importance of recognizing that
the clustering of stressful life events indeed does have some
impact upon well-being. That the impact is fairly limited is
not surprising to this author: given the complexity of human
behavior and the myriad of variables likely to influence the
final outcome, one would not expect to find overwhelming support

for the influence of life events alone.

Interestingly, a significant relationship was not found between stress, as measured either by number of events or by subjective degree of adjustment required, and scores on the marital adjustment measure. One might have assumed from this that no relationship between events and marital adjustment existed. However, when differing values of the three dimensions of events -- desirability, control, and expectancy -- were taken into account, some significant relationships were found. Events which were deemed a change for the worse, events over which there was no control, and events which were unexpected tended to be associated with marital unhappiness. This result suggested to the current author that the finding of a relation- ship between events and outcome may depend on the sensitivity of the events measure used: sensitivity may require the matching of a specific class of events with a specific outcome. Results of the current research indicated that number of events over which there was no control was the most sensitive measure of events when the outcome was marital happiness.

One might suspect from the current findings that life events may have a pervasive effect upon an individual. Although the range of outcome measures was necessarily limited in this study, it was shown that an increase in life event score was associated with an increase in both more severe and less severe psychiatric symptoms, with an increase in difficulty in adjusting to parenthood, and with an increase in marital unhappiness. One could speculate that, to a greater or lesser

degree, life events may affect many other areas of life functioning. A relationship between events and decline in work and academic performance remarked upon by Makosky (1980) suggests that impaired social functioning may be an appropriate area to consider.

The role seemingly played by individual perception in the stress-distress relationship deserves careful consideration. Perceptions of the amount of adjustment demanded by events and perceptions of the desirability, control, and expectancy dimensions of events were important factors in the events-outcome relationship. Although subjective appraisals raise the spectre of confounding variables (i.e., measure of life events confounded with outcome measures) (Mueller at al., 1977: 308), the current author believes that variability in such perceptions are themselves a valuable source of information. Whether or not events are inherently undesirable, for example, may not be as useful to know as whether or not they are perceived in that way.

The variable of desirability was given further consideration in this study. Observations of consistent patterns in the data led to the hypothesis that desirability of events could partly be explained by the other two dimensions, control and expectancy. Analysis of the data using correlational techniques gave some support to this idea. "Changes for the better" were more likely to be associated with"expected" and "total control" events, whereas "changes for the worse" were more likely to be associated with "not expected" and

"no control" events. "Neutral changes" occupied approximately the middle ground. Appendix H contains the exact correlations. A more precise determination of what is desirable about a change for the better or of what is undesirable about a change for the worse might lead to a fuller understanding of the mediation effects of these and additional variables.

Because changes for the worse had a moderately strong association with unfavorable outcome and because no significant relationship was found between changes for the better and outcome, the hypothesis that positive events mediate the effects of negative events seemed plausible. However, testing of this hypothesis using analysis of variance techniques and the Langner Screening Scale as the dependent variable did not produce significant results. Although on average the subjects experienced more positive events than negative events, these positive events were not powerful enough to ameliorate the effects of distress arising from the experiencing of negative events. Perhaps a closer fit between measure of life events and measure of outcome would produce significant results.

Although the interaction effects among dimensions differed in this study from those found in the McFarlane et al. (1980) study, they did reinforce the importance of considering such effects. In the current study, there was no significant correlation between events that were expected and scores on the Langner Screening Scale, but there was a significant relationship between events that were not expected and the same outcome. Nevertheless, the interaction effects found

between control and expectancy were found not for unexpected
events but for expected events. Under conditions of low control
and positive expectancy, subjects experienced significantly
more symptoms than did subjects under conditions of low control
and negative expectancy. With conditions of positive expectancy
held constant, those with low control had significantly more
symptoms than those with high control.

One would assume from this that an event such as a death
of a parent, which is usually outside one's control, would be
more stressful if its occurrence were anticipated than if it
happened very suddenly. In this study, some women rated a
change in the health or behavior of a family member, a change
in sleeping habits, and the presence of work troubles among
the events which reflected a combination of no control-positive
expectancy or some control-positive expectancy. It appears
that those women who experienced a larger number of such events
also experienced greater distress than they would have had
such events reflected only one of the two dimensions.

Several interesting findings emerged from an examination
of the particular life events experienced by the new mothers
in the study. The fact that the same five events were
experienced by at least half the women leads one to speculate
that these five events may have been consequences of their
having become parents, the one common thread among them. If
so, then it would support previous findings that life events
beget additional life events that create their own stresses

in turn. McCubbin and Paterson (1983) have described such secondary events as "hardships", and they have suggested that hardships also contribute to a "pile-up" of stressors for both individuals and families.

One of the five most frequently experienced events -- a major decision regarding the future -- was regarded as particularly intriguing by the author. No information was provided about the content of the decision, but of the 20 subjects who made such a decision, 15 saw it as a change for the better, 13 had total control over it, and 12 had expected to make the decision. In spite of this, it was found to be one of the most stressful events, in terms of subjective ratings of adjustment (seventh most stressful item; average score = 69). Perhaps this item taps a dimension other than desirability, control, and expectancy that is critical to the stress model. The uncertainty of outcome associated with decision-making (Paolucci et al., 1983) may offer some insight into the meaning of this event. Paolucci et al. (1983) have also pointed to the integration of values, goals, standards, and resources required by the making of a decision; one may speculate that the integration of these factors may also effect a stressful re-evaluation of and change in said values, goals, and standards.

It is perhaps worth noting that all of the six most stressful events were associated with close interpersonal relationships and that five of them involved a direct loss of that relationship. "Other" home and family events described

by the respondents included "sister moved away", "sister-in-law separated", and "death of pet." Although the concept of loss has often been associated with an outcome of depression, this study suggests that it may also be an important ingredient within a cumulative stress score that is related to a variety of outcomes. In addition, the tie with interpersonal relationships should not be overlooked: this finding suggests that one's relationships with others have considerable power over one's own well-being.

Another finding relating to content of life event items is also worth noting. Given the opportunity to add to the list of events, six of the mothers included items relating to husband's employment. Three items were related to periods of unemployment, and three to changes in work hours. These items were considered to be fairly stressful, with a mean adjustment score of 78. The range of responses was from 45 to 100. Two thoughts are prompted by these findings. One is that events which happen in the lives of others can be quite stressful to those close to them. Whether women are more vulnerable than men to this type of stress could only be learned from studies which include both sexes in the sample.

The second thought arising from these findings is that it may be wise to tailor the life-event list to the sample in question. Variables relating to the employment of husbands may be important when studying a sample of recent first-time mothers but not when other samples are being considered. As well, the stressful-life-event list should always allow for

additions to be made by the respondents. When all 24 "other" events were considered together in the current study, their mean score was 60. This suggests to the author that the idiosyncratic events that happen in people's lives have considerable impact.

Some of the mothers sampled for this study displayed a level of symptomatology that might be cause for concern. The 21 per cent who scored four or greater on the Langner Screening Scale were not likely to be counted among a group of "wells", if Langner's (1962) cutoff point is valid; however, they could have been among the "milds" and "moderates" as well as among those considered by varying degrees to be impaired. The two (5.3 per cent) who scored seven or greater were likely to be among the "impaired."

Compared with Langner's sample of non-patients, however, the new mothers as a group fared slightly better than did the non-patients as a group. A score of four or more was made by 28 per cent of the non-patients, and 9.3 per cent of that group scored seven or more symptoms. Compared with the non-patient average score of 2.6 symptoms, the sample of new mothers scored an average number of 2.4 symptoms. Part of this difference may be attributed to the relative youth and better education of those in the current study compared with a wider population. Markush and Favero (1974) have reported that symptoms increase with age and decrease with education.

What cannot be surmised from the current study is whether or not those with higher numbers of symptoms exhibited such

symptoms before the birth of the baby, and/or whether such symptoms developed as a result of new motherhood or the total load of stress with which they were coping. Such findings were beyond the scope and design of this study. However, the significant correlations between life event scores and difficulty in adjustment to motherhood suggest that adjustment to the effects of one event might be affected by how many other events with which the individual is dealing at the same time. On the other hand, it is also possible that difficulty in adjusting to motherhood heightens the difficulty perceived in adjusting to other events in the mother's life.

The results of this study showed that an increase in life events was associated with an increase in less severe as well as more severe psychiatric symptoms. Examples of less severe symptoms might be "sometimes" being bothered by nervousness or trouble in getting to sleep as opposed to "often" being bothered by these symptoms. Correlations between life event scores and scores on the Langner scale as modified by the current author were significant and of a strength comparable to or slightly better than correlations found for the original scale. If the major purpose in using the instrument is not one of screening for mental illness but one of determining the variable effects of life events, then measuring the presence of the symptoms by any degree of frequency or severity would be as fruitful as measuring only those symptoms present by more extreme degrees. The original measure is a measure of the arbitrary judgments of psychiatrists as much as it is a

measure of life functioning. The significant correlations
with life event scores for both versions of the Langner scale
are presented in Appendix I.

According to this study, individual characteristics can
be important in studying the stress-distress relationship, but
not all individual characteristics are necessarily relevant.
Two of the four variables produced significant interaction
results, each depending upon the outcome measure under consid-
eration. For the younger half of the sample, level of stress
made a difference in the number of psychiatric symptoms which
they experienced: those with higher life event scores had
greater numbers of symptoms. The older half of the sample
were not affected by level of stress. This would seem to
suggest that older individuals are better able to cope with a
relatively higher amount of stress, although the methodological
limitations of the study must be taken into account before
generalizations to other populations are made. This finding
is particularly interesting because of the relatively narrow
age range (22 to 33 years) represented by the sample. It may
be explained by the possibility that an individual benefits
from even a few years of adult experience in dealing with
stress. Education may be a contributing factor also, as level
of education rose with mother's age (x^2= 3.80, $\underline{df}$ = 1, $\underline{p}$ = .05).

A colicky baby made adjustment to motherhood much more
difficult when the mother was also coping with a high level
of stress. Level of stress also mediated the relationship
between having a colicky baby and adjustment to motherhood.

Given a smaller number of life events, a colicky baby made no difference, and given a baby that was not colicky, number of events made no difference. These findings suggest that the interrelationships of variables may be quite complex and that outcomes may be quite different when they combine in different ways.

The combination of high stress and a colicky baby would seem to be a particularly threatening one in terms of its effects on a new mother. In addition to effects on adjustment to motherhood, effects on level of psychiatric symptoms were also found. One can speculate that the unrelenting demands of a baby with colic and the feelings of helplessness, anger, guilt, and rage aroused by such a child would undermine the physical and mental health of anyone charged with his/her care. An examination of the precise means by which distress is increased by a colicky baby might add to the body of knowledge about the stress model as a whole.

Although work status was not found to mediate the relationship between events and outcome, it is interesting to note that the highest number of symptoms for any subgroup was for those subjects who were under high stress and not working outside the home. The mean score for these women was 5.0 symptoms on the Langner Screening Scale. Future research may be able to detect mediating effects, as it seems reasonable to expect that the many benefits to be derived from outside employment, such as social contact, resources, adult conversation and intellectual stimulation, and feedback on self-worth,

would have a considerable impact on many measures of functioning.

It was somewhat surprising that level of income did not play a part in determining outcome, considering the pervasive effects of socioeconomic status on personal well-being. Having a higher or lower income did not mediate between any level of stress and outcome. However, the fact that the sample was not totally representative of larger populations may have influenced the results. Although the sample possessed median and mean scores below population scores, and the higher end of the range was not over-represented, there were fewer individuals at the very lowest levels of family income than are found in larger populations. A more representative sample might have produced different results. Appendix J provides figures for comparison of income levels.

Two issues might be seen to emerge from a consideration of the mediation effects obtained for network variables in this study. The first concerns the importance of seeking an appropriate match between choice of network variable and choice of outcome measure. In the current study, satisfaction with network help with the baby did interact with number of events to produce varying effects on difficulty in adjusting to motherhood. However, network satisfaction produced no mediating effects when the Langner Screening Score was used as the outcome measure, and the remaining three network variables produced no interaction effects upon either outcome measure. One can speculate from the results of this study that specific network or social support variables are needed when considering

a more specific outcome measure.

The second issue concerns an underscoring of the importance of individual perception which was discussed earlier in this section, and it is suggested by the particular variable shown to produce interaction effects -- satisfaction with network help. Perceptions would seem to be very much intertwined with expectations, as satisfaction is largely a measure of the gap between expectations of help to be received and perceptions of what has been given. Satisfaction with network support in general could prove useful in examining the stress-distress relationship. The author agrees with Leavy when he says that perhaps

> there needs to be a fit between one's expectations and experiences of support in order for support to assist in the coping process....Future work might fruitfully assess the degree to which the structure and the content of support diverges from the individual's ideal. Real-ideal differences may predict and account for psychological distress better than measures of actual support alone (Leavy, 1983: 16).

Future work might also take into account the influence of social and cultural norms in the development of an individual's expectations. This most certainly could be applied to women adjusting to motherhood. The data revealed that many mothers experienced difficulties with their in-laws, and that many of these had anticipated having problems. To what extent having problems reflected an expectation-gap and to what extent dissatisfaction was attributed to the same gap would be of interest to researchers and social service workers alike.

Implications and Future Directions

A number of directions for future research were suggested by the results of this study. The pursuit of various dimensions of events would be fruitful to explore further. A search for new dimensions might begin with a more in-depth study of the dimension of desirability. Other clues might be afforded by a closer examination of what is so stressful about an event like making a major decision for the future or about having a baby who is colicky. Care should be taken to explore for interaction effects among variables, in order not to exclude a valuable source of additional information.

Future research which focusses on or includes aspects of individual perception might be profitable, as the theme of individual perception recurred throughout this study. In particular, satisfaction with network support should be tested elsewhere as a mediating variable, in order to determine if it is the gap between expectations of support and subsequent perceptions of what support has been given that is salient, rather than some other measure of support.

The path from stressful life event or events to an unfavorable outcome contains an unknown quantity of variables, and news of the variables which inhabit that path is welcome. The search for significant individual variables should continue, and the results of this study suggested that age is one such important variable. A study which compares outcomes for individuals across the life span would be informative.

That network support plays a part in the stress model

was evident from the importance attached to level of satisfaction with support. However, conventional measures of numbers of people within the network did not by themselves tap the concept of social support. In this study, number of parents in network and number of mother-friends with whom child-rearing could be discussed had no effect as mediators between stress and difficulty in adjusting to motherhood. In addition, no main effects for these variables were found. If anything is greatly needed in life event research, it is the continuing development of both widely-applicable and specifically-tailored measures of social support. Without such measures, future research will continue to be ad hoc, and results will not be comparable.

In terms of practical applications, many researchers have believed that if it can be shown that social support ameliorates some of the effects of stress, then augmenting the social support system would be a way of helping those under great loads of stress. Findings from this study suggest that altering the social support network to be more supportive may require much more than adding numbers to it. Network members might need to be counselled on how to be more supportive, for example, or individuals might be required to alter their expectations of support. Undertaking studies which compare outcomes before and after such interventions might prove to be a useful approach to take.

In recent years the study of the stress-distress relationship has expanded to include a great many variables which have

sought to explain more fully the nature of the relationship. Currently, the concept of stressful life conditions has been added to the equation. Makosky has reported that "psychological well-being is more strongly related to life conditions than to life events" (Makosky, 1982: 47). In fact, she sees a connection between the two: "It may well be that events affect mental health only when they change the enduring conditions of one's life" (Makosky, 1982: 47). Future research should explore the connection between the two concepts, with the goal of gaining greater insight into what is a stressful stimulus.

In terms of women who have become mothers for the first time, it may be important for the benefit of those having difficulty in adjusting to parenthood to consider their total load of stress. Difficulty in adjusting to motherhood might well be affected by other events occurring in the mother's life and should not be overlooked by those from whom any new mother seeks help. The results in this study of a combination of high stress and a colicky baby suggest that an at-risk group may readily be identified. The at-risk population could be identified by a number of sources, including the mother's physician, pediatricians, public health nurses, and other health service professionals. As well, mothers-to-be could be alerted to potential future difficulties through prenatal classes. The importance of identifying an at-risk group is underlined by the fact that more women are hospitalized for psychiatric problems following the birth of the first child

than at any other time of life (Dean & Kendell, 1981: 128).

Regrettably, all findings and implications arising from this study are jeopardized to some extent by methodological weaknesses which could not be avoided here. Future research should employ a larger, more representative sample, and the studies should be longitudinal in nature. The stress model is a complex one, and cross-sectional research cannot examine the many potential reciprocal relationships among variables. A prospective design would also allow for the testing of other theories at the same time, such as the "role strain" theories of Pearlin et al. (1981). Using the same measures as those employed in this study, path analysis could be used to determine whether or not "marital" role strain or "mother" role strain are useful in explaining the relationship between stressful life events and psychiatric outcomes. Finally, a wide range of outcome measures should be encouraged, in order to confirm the pervasive effects of stressful life events into many areas of functioning.

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Appendix A: Stressful Life Events

This part of the questionnaire consists of a number of life events which may or not have happened to you. Place a check in the box to the left of each event that has happened to you in the last 12 months.

A   HEALTH
   Within the last 12 months have you experienced:

1. an illness or injury which:
   a) kept you in bed a week
      or more or took you to   0   100
      the hospital?

   b) was less serious than   0   100
      described above?

2. a major change in eating   0   100
   habits?

3. a major change in sleeping   0   100
   habits?

4. a change in your usual type   0   100
   and/or amount of recreation?

5. major dental work?   0   100

6. other health-related event?   0   100
   _____

   (Please describe)

B <u>WORK</u>

Within the last 12 months have you:

7. changed to a new type of work? 0   100
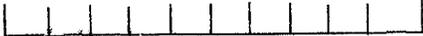
8. changed your work hours or   0   100
    conditions?
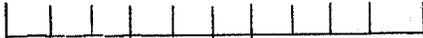
9. had a change in your
    responsibilities at work: 0   100
    a) more responsibilities?
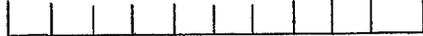
    b) fewer responsibilities?   0   100

    c) promotion?   0   100

    d) demotion?   0   100

    e) transfer?   0   100

10. experienced troubles at work: 0   100
    a) with your boss?

    b) with co-workers?   0   100

c) with persons under your
   supervision?

0   100

d) other work troubles?

0   100

11. experienced a major business
    readjustment?

0   100

12. experienced being:
    a) fired from work?

0   100

    b) laid off from work?

0   100

13. taken courses by mail or
    studies at home to help you
    in your work?

0   100

14. experienced another work-
    related event?

0   100

_____
(Please describe)

C HOME AND FAMILY
   Within the last 12 months have you experienced:

15. a change in residence:
    a) a move within the same
       town or city?

0   100

b) a move to a different town,   0   100
   city or state? |_|_|_|_|_|_|_|_|_|_|

16. a change in family "get   0   100
    togethers"? |_|_|_|_|_|_|_|_|_|_|
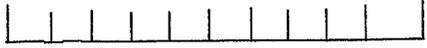
17. a major change in the health
    or behaviour of a family
    member (illness, accidents,   0   100
    drug or disciplinary |_|_|_|_|_|_|_|_|_|_|
    problems)?
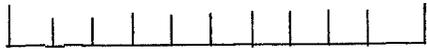
18. a major change in your living
    conditions (home improvements
    or a decline in your home or   0   100
    neighbourhood)? |_|_|_|_|_|_|_|_|_|_|
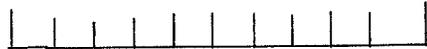
19. death of a spouse?   0   100
                                      |_|_|_|_|_|_|_|_|_|_|
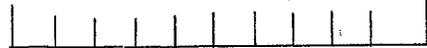
20. the death of a: 0   100
    a) child? |_|_|_|_|_|_|_|_|_|_|

    b) brother or sister?   0   100
                                      |_|_|_|_|_|_|_|_|_|_|
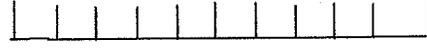
    c) parent?   0   100
                                      |_|_|_|_|_|_|_|_|_|_|

    d) other family member?   0   100
                                      |_|_|_|_|_|_|_|_|_|_|

21. the death of a close friend? 0   100
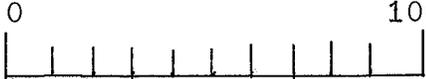
22. a change in the marital status
    of your parents: 0   100
    a) divorce?

    b) remarriage?   0   100

23. marriage?   0   100

24. a change in arguments   0   100
    with your spouse?

25. in-law problems?   0   100

26. a separation from spouse: 0   100
    a) due to work?

    b) due to marital problems? 0   100
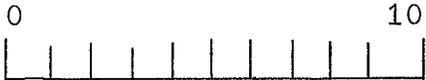
27. a reconciliation with   0   100
    spouse?

28. a divorce?   0   100
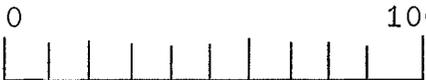
29. a) adoption of a child?

      0   100
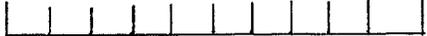
    b) a relative moving in
      with you?

      0   100
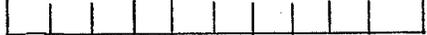
30. beginning or ceasing work
   outside the home?

      0   100
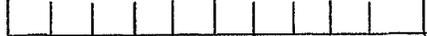
31. becoming pregnant?

      0   100

32. having a miscarriage or
   abortion?

      0   100
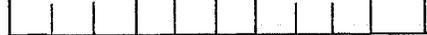
33. other home and family
   event?

      0   100

   _____

   (Please describe)

D PERSONAL AND SOCIAL
  Within the last 12 months have you experienced:

34. a major personal acheive-
   ment?
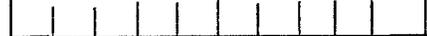
      0   100

35. a change in your personal
   habits (dress, friends,
   lifestyle, etc.)?

      0   100

36. sexual difficulties?

0   100

37. beginning or ceasing school or college?

0   100

38. a change of school or college?
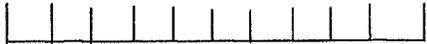
0   100

39. a vacation?

0   100

40. a change in your religious beliefs?

0   100

41. a change in your social activities (clubs, movies, visiting)?

0   100
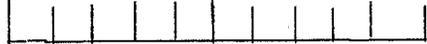
42. a minor violation of the law?

0   100

43. legal troubles resulting in your being held in jail?

0   100

44. a change in your political beliefs?

0   100

45. a new, close, personal relationship?

0   100

46. an engagement to marry?

0   100

|_|_|_|_|_|_|_|_|_|_|_|

47. a "falling out" of a close
    personal relationship?

0   100

|_|_|_|_|_|_|_|_|_|_|_|

48. girlfriend or boyfriend
    problems?

0   100

|_|_|_|_|_|_|_|_|_|_|_|

49. a loss or damage of personal
    property?

0   100

|_|_|_|_|_|_|_|_|_|_|_|

50. an accident?

0   100

|_|_|_|_|_|_|_|_|_|_|_|

51. a major decision regarding
    your immediate future?

0   100

|_|_|_|_|_|_|_|_|_|_|_|

52. other personal and social
    events?

0   100

|_|_|_|_|_|_|_|_|_|_|_|

_____

(Please describe)

E FINANCIAL
   Within the last 12 months have you:

53. taken on a moderate purchase
    such as a T.V., car, freezer?

0   100

|_|_|_|_|_|_|_|_|_|_|_|

54. taken on a major purchase or
a mortgage loan, such as a   0   100
home, business, property, etc.? |__|__|__|__|__|__|__|__|__|__|__|

55. experienced a foreclosure on   0   100
a mortgage or loan? |__|__|__|__|__|__|__|__|__|__|__|

56. experienced a major change
in finances: 0   100
a) increased income? |__|__|__|__|__|__|__|__|__|__|__|

b) decreased income?   0   100
                              |__|__|__|__|__|__|__|__|__|__|__|

c) credit rating difficulties?   0   100
                              |__|__|__|__|__|__|__|__|__|__|__|

57. experienced another   0   100
financially-related event? |__|__|__|__|__|__|__|__|__|__|__|

_____

(Please describe)

F   OTHER LIFE EVENTS
Within the last 12 months, have you experienced any other
life events not described above? (Please describe below.)

58. _____   0   100
_____ |__|__|__|__|__|__|__|__|__|__|__|

59. _____   0   100
_____ |__|__|__|__|__|__|__|__|__|__|__|

60. _____   0   100

     _____   _____

61. _____   0   100

     _____   _____

     Some of the events you experienced from the section above may have required a great deal of adjustment on your part, whereas other events may have required very little adjustment.

     Please indicate, by putting a cross on the line, the amount of adjustment you feel was necessary for each event you checked.

     From the example below, you can see that "0" means no adjustment was necessary ("None") and that "100" means the most or maximum adjustment you could imagine was necessary ("Max").

0   100
⌊__|__|__|__|__|__|__|__|__|__|__⌋
None   Max
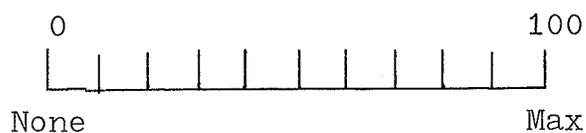
     Now go back to the first event you checked off and indicate your response on the scale to the right. Make sure you have a response for every event you checked.

     Let me know when you are finished.

Appendix B: Dimensions of Events

Now I would like to get a little more information about the
life events you have experienced over the past year. The same
three questions will be applied to each event you have checked.

1. For you, was this a change for the better or for the worse
    at the time the event happened?
    Change for better = 1   Neutral = 2   Change for worse = 3

2. How much control over this did you have at the time the
    event happened: total control, some control, or no control?
    Total control = 1   Some control = 2   No control = 3

3. At the time, did you expect this to happen: yes or no?
    Yes = 1   No = 2

No. _____   Change_____   Control_____   Expected_____

No. _____   Change_____   Control_____   Expected_____

No. _____   Change_____   Control_____   Expected_____

No. _____   Change_____   Control_____   Expected_____

No. _____   Change_____   Control_____   Expected_____

No. _____   Change_____   Control_____   Expected_____

No. _____   Change_____   Control_____   Expected_____

No. _____   Change_____   Control_____   Expected_____

No. _____   Change_____   Control_____   Expected_____

No. _____   Change_____   Control_____   Expected_____

No. _____   Change_____   Control_____   Expected_____

Appendix C: Demographic and Baby-Related Questions

1. In what year were you born? _____

2. Baby's date of birth _____

3. Date of marriage _____

4. Education: 1. grades 1 - 8

               2. some high school

               3. high school graduate

               4. technical training (i.e., community college)

               5. some university

               6. university degree

               7. graduate school

5. Are you currently employed outside the home?

        1 = Yes, full-time ⎫   If yes, at what?

        2 = Yes, part-time ⎬   _____

                      (Please specify)

        3 = No

        4 = Student

6. Joint income: (annual, before tax deductions)

        1. less than $5,000

        2. between $5,000 and $10,000

        3. between $10,000 and $15,000

        4. between $15,000 and $20,000

        5. between $20,000 and $25,000

        6. between $25,000 and $30,000

        7. between $30,000 and $35,000

        8. over $35,000

7. Has your baby been colicky? 1 = Yes   2 = No

Appendix D: Social Network-Related Questions

1. How many, if any, close women friends who are also mothers
    do you have with whom you can discuss child rearing
    concerns? _____

2. To what extent did having a baby lead to a disruption in
    your pattern of social relationships?

    1   2   3   4   5   6   7
    not at all   caused a major
                                                    change in social
                                                    relationships

3. How many people in your social network have children? _____

4. How satisfied are you with the help you receive from your
    husband? (with regard to the baby)

    1   2   3   4   5   6   7
    completely   not at all
    satisfied   satisfied

5. How satisfied are you with the help you receive from your
    husband in other areas of your life?

    1   2   3   4   5   6   7
    completely   not at all
    satisfied   satisfied

6. How satisfied are you with the help you receive from your
    family?

    1   2   3   4   5   6   7

7. How satisfied are you with the help you receive from your
    in-laws?

    1   2   3   4   5   6   7

8. How satisfied are you with the help you receive from your
    friends?

    1   2   3   4   5   6   7
    completely   not at all
    satisfied   satisfied

Appendix E: Langner's Screening Scale

Now I will read you a list that describes some of the ways people feel at different times. Could you tell me whether or not these statements apply to you.

Read response categories after each item. Use emphasis (word underlined) only if you have to repeat the item.

1. I feel weak all over <u>much</u> of the time. YES/NO
    Yes[a]_____   No _____

2. I have had periods of days, weeks, <u>or</u> months when I couldn't take care of things because I couldn't "get going". YES/NO
    Yes[a]_____   No _____

3. In general, would you say that <u>most</u> of the time you are in high (very good) spirits, good spirits, low spirits, or very low spirits?
    High _____   Good _____   Low[a]_____   Very Low[a]_____

4. <u>Every so often</u> I suddenly feel hot all over. YES/NO
    Yes[a]_____   No _____

5. Have you <u>ever</u> been bothered by your heart beating hard?
    Would you say: often, sometimes, or never?
    Often[a]_____   Sometimes[b]_____   Never _____

6. Would you say your appetite is poor, fair, good, or too good?
    Poor[a]_____   Fair[b]_____   Good _____   Too Good[b]_____

7. I have periods of such great restlessness that I cannot sit long in a chair (cannot sit still very long). YES/NO
    Yes[a]_____   No _____

8. Are you the worrying type (a worrier)? YES/NO
    Yes[a]_____   No _____

9. Have you _ever_ been bothered by shortness of breath when you were _not_ exercising or working hard? Would you say: often, sometimes, or never?
    Often^a_____   Sometimes^b_____   Never _____

10. Are you _ever_ bothered by nervousness (irritable, fidgety, tense)? Would you say: often, sometimes, or never?
    Often^a_____   Sometimes^b_____   Never _____

11. Have you _ever_ had any fainting spells (lost consciousness)?
    Would you say: never, a few times, or more than a few times?
    Never _____ A few times^b_____   More than a few times^a_____

12. Do you _ever_ have any trouble in getting to sleep or staying asleep? Would you say: often, sometimes, or never?
    Often^a_____   Sometimes^b_____   Never _____

13. I am bothered by acid (sour) stomach _several_ times a week.
    Yes^a_____   No _____

14. My memory seems to be all right (good).   YES/NO
    Yes _____   No^a_____

15. Have you _ever_ been bothered by "cold sweats"? Would you say often, sometimes, or never?
    Often^a_____   Sometimes^b_____   Never _____

16. Do your hands _ever_ tremble enough to bother you?
    Would you say: often, sometimes, or never?
    Often^a_____   Sometimes^b_____   Never _____

17. There seems to be a fullness (clogging) in my head or nose _much_ of the time.   YES/NO
    Yes^a_____   No _____

18. I have personal worries that get me down physically (make me physically ill).   YES/NO
    Yes^a_____   No _____

19. Do you feel somewhat apart even among friends (apart, isolated, alone)?   YES/NO
    Yes^a_____   No _____

20. Nothing _ever_ turns out for me the way I want it to (turns
    out, happens, comes about, i.e., my wishes aren't fulfilled).
    YES/No
    Yes^a_____   No _____

21. Are you _ever_ troubled with headaches or pains in the head?
    Would you say: often, sometimes, or never?
    Often^a_____   Sometimes^b_____   Never _____

22. You _sometimes_ can't help wondering if anything is worthwhile
    anymore. YES/NO
    Yes^a_____   No _____

[a] Items summed to complete original Langner Screening Score.

[b] Items added to original Langner Screening Scale score to
form score on Modified Langner Screening Scale.

Appendix F: Hobbs' Difficulty Checklist

To what degree have you been "bothered" by each of these items?

		not at all	some- what	very much
1.	increased money problems	1	2	3
2.	feeling "edgy" or emotionally upset	1	2	3
3.	additional amount of work	1	2	3
4.	physical tiredness and fatigue	1	2	3
5.	having to change plans we had before the bab's birth	1	2	3
6.	interruption of routine habits of sleeping, going places, etc.	1	2	3
7.	housekeeping not as neat as it should be	1	2	3
8.	decreased contact with friends	1	2	3
9.	decreased sexual responsiveness of self	1	2	3
10.	interference from in-laws	1	2	3
11.	decreased contact with persons at work	1	2	3
12.	worry about personal appearance in general	1	2	3
13.	worry about "loss of figure"	1	2	3
14.	doubting my worth as a parent	1	2	3
15.	feeling more "distant" from my husband	1	2	3
16.	meals being off schedule	1	2	3
17.	reduced feelings of privacy	1	2	3
18.	disturbed about feelings I have towards the baby	1	2	3
19.	my husband showing too much attention to the baby	1	2	3
20.	my husband showing too little attention to the baby	1	2	3
21.	my husband showing too little attention to me and too much to the baby	1	2	3
22.	being unable to sleep after going to bed	1	2	3
23.	feeling I am stagnating as a person	1	2	3
24.	concerned about slipping behind in my career	1	2	3
25.	feeling out of touch with old friends even when we do get together	1	2	3
26.	feeling tied down or burdened	1	2	3
27.	concerned about increased arguments with my husband	1	2	3

Appendix G: Spanier Dyadic Adjustment Scale

We would like you to complete this part of the survey privately.
Please read each question and mark your answer. When you are
done, put your completed form in the attached envelope and return
it to the interviewer.
The interviewer will not see the answers you give.

Most persons have disagreements in their relationships. Please
indicate below (with a check mark) the approximate extent of
agreement or disagreement between you and your marital partner
for each item on the following list.

1. Demonstrations of affection.

　　　_____1) always agree

　　　_____2) almost always agree

　　　_____3) occasionally disagree

　　　_____4) frequently disagree

　　　_____5) almost always disagree

　　　_____6) always disagree

2. Aims, goals and things believed important.

　　　_____1) always agree

　　　_____2) almost always agree

　　　_____3) occasionally disagree

　　　_____4) frequently disagree

　　　_____5) almost always disagree

　　　_____6) always disagree

3. Amount of time spent together.

　　　_____1) always agree

　　　_____2) almost always agree

　　　_____3) occasionally disagree

　　　_____4) frequently disagree

　　　_____5) almost always disagree

　　　_____6) always disagree

4. In general, how often do you think that things between you and your partner are going well?

_____ 1) all the time
_____ 2) most of the time
_____ 3) more often than not
_____ 4) occasionally
_____ 5) rarely
_____ 6) never

5. Do you ever regret that you married?

_____ 1) all the time
_____ 2) most of the time
_____ 3) more often than not
_____ 4) occasionally
_____ 5) rarely
_____ 6) never

6. The numbers 1 to 7 below represent the degrees of happiness in your relationship. The middle number, 4 = Happy, represents the degree of happiness of most relationships. Please circle the number which best describes the degree of happiness, all things considered, of your relationship.

1	2	3	4	5	6	7
Perfect	Extremely Happy	Very Happy	Happy	A Little Unhappy	Fairly Unhappy	Extremely Unhappy

How often would you say the following events occur between you and your mate?

7. Laugh together:

1	2	3	4	5	6
more than once a day	once a day	once or twice a week	once or twice a month	less than once a month	never

8. Have a stimulating exchange of ideas:

1	2	3	4	5	6
more than once a day	once a day	once or twice a week	once or twice a month	less than once a month	never

There are some things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks (Circle yes or no).

9. Being too tired for sex.   1 = No   2 = Yes

10. Not showing love.   1 = No   2 = Yes

11. Which of the following statements best describes how you feel about the future of your relationship?

_____1) I want desperately for my relationship to succeed, and would go to almost any length to see that it does.

_____2) I want very much for my relationship to succeed, and will do all I can to see that it does.

_____3) I want very much for my relationship to succeed, and will do my fair share to see that it does.

_____4) It would be nice if my relationship succeeded, but I can't do much more than I am doing now to help it succeed.

_____5) It would be nic if it succeeded, but I refuse to do any more than I am doing now to keep the relationship going.

_____6) My relationship can never succeed, and there is no more that I can do to keep the relationship going.

Appendix H: Correlations among Values of Desirability

and Values of Expected and Control with Respect to Life Events

Experienced by Thirty-Eight New Mothers

	Desirability		
Dimension	Changes for the Better	Neutral Changes	Changes for the Worse
Expected			
r	.70	.40	N.S.
p	.0001	.01	
Not expected			
r	N.S.	.46	.74
p		.004	.0001
Total control			
r	.64	N.S.	N.S.
p	.0001		
Some control			
r	.34	.45	.47
p	.04	.005	.003
No control			
r	N.S.	.43	.77
p		.007	.0001

Appendix I: Correlations between Events and Two Methods of

Scoring the Langner Screening Scale for a Sample of

Thirty-Eight New Mothers

Life Event Score	Modified Langner Scale	Original Langner Scale
Total number of events		
r	.41	.34
p	.01	.03
Degree of adjustment		
r	.45	.45
p	.004	.005
Total change for the worse		
r	.52	.52
p	.0009	.0007
Total events - no control		
r	.42	.31
p	.008	.06
Total events - not expected		
r	.36	.36
p	.03	.03

Appendix J: Comparison of Income Levels of Thirty-Eight New Mothers in Winnipeg with Those of Larger Populations in Canada

Income Level	% of Sample (1983)	% for Prairie Provs. (1983)	% for Canada by age of head (25-34) (1983)	% for Winnipeg (1981)
Less than 5,000	---	2.4	1.7	4.5
5,000 - 10,000	5.4	5.1	7.4	8.0
10,000 - 15,000	2.7	10.8	8.7	11.2
15,000 - 20,000	18.9	9.4	9.1	12.3
20,000 - 25,000	16.2	9.2	10.4	15.2
25,000 - 30,000	8.1	9.4	11.8	14.4
30,000 - 35,000	21.6	10.3	12.8 ⎫	33.7
Over 35,000	27.1	43.6	38.1 ⎭	
Average	20,000 - 25,000	35,253	31,445	26,715
Median	25,000 - 30,000	31,735	30,337	24,373
Standard error		546	429	99
% 30,000 & over	48.8	53.9	50.9	33.7
% under 15,000	8.1	18.3	17.8	23.7

Note. Population figures for use in comparisons are taken from Family Incomes, Census Families 1983, Statistics Canada, April 1985.