SOCIAL SUPPORT AND SOCIAL STRAIN
AMONG HUSBANDS AND WIVES IN STEPFAMILIES:
A MULTILEVEL ANALYSIS
by
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Abstract

In response to recent calls in the literature for a more contextual analysis of the influence of social support processes (e.g., Rook, 1997; Sarason, Sarason, & Pierce, 1992), the current study explores the relationships of spousal support, spousal strain, and well-being among husbands and wives, both within the same day and across days. In addition, the moderating roles of interpersonal and situational contexts within which support and strain are provided are examined. One hundred and sixty-six husbands and wives in stepfamilies were interviewed and then asked to complete a structured diary twice daily for a week. Participants reported their stress, supportive and problematic spousal interactions, mood, and dyadic adjustment. A multi-level hierarchical model was used to estimate average within-person relations among the daily variables, while at the same time controlling for the influence of between-person differences in these variables. Lack of daily spousal support and the presence of spousal strain were both significantly associated with increased negative affect across the same day, although the magnitude of the effect of spousal strain was greater. However, these associations were mitigated for participants who perceived their marriages to be well-adjusted. In addition, daily stressors were directly associated with increased same day negative affect, however daily stressors did not interact with support or strain to predict distress. In contrast, the pattern of the findings for the prediction of negative affect across days was quite different. Of the daily variables, only spousal support, but not spousal strain or daily hassles, was a significant direct predictor of negative affect the next morning. Furthermore, spousal support and spousal strain were found to have a multiplicative association with negative affect the next day. Specifically, the presence of spousal strain
attenuated the beneficial impact of spousal support on mood. Further, dyadic adjustment was a direct predictor of decreased negative affect the next day. The findings from this study suggest an interplay among social support, social strain, and well-being. In particular, the importance of considering differential influences over time for support and strain, as well as the moderating roles of proximal and distal relationship factors, was highlighted.
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Introduction

"It is not good that (one) be alone"

Genesis (2:18)

The concept of the importance of social relationships has a long history. In fact, social relationships have been proposed to meet a fundamental human need to belong and be emotionally attached to others (see Baumeister & Leary, 1995; Bowlby, 1969; Maslow, 1998; for discussions). The empirical study of social support and its relationship to well-being, however, is still relatively new. In 1976, two seminal papers written separately by epidemiologists, John Cassel and Sidney Cobb, were major impetuses for research into the role of social support in mediating health outcomes. This is evidenced by the over 15,000 papers with references to social support in the PSYCHinfo article base from 1976-1999. Strikingly, although social support has been operationalized in diverse ways and examined with a variety of experimental designs, social support has been consistently associated with physical and psychological well-being.

Alternatively, it has also been long recognized that social relationships can have deleterious effects on well-being (e.g., Thibault & Kelley, 1959; Sullivan, 1953). Although the bulk of the first generation of social support research focussed on the positive contribution of social relationships to well-being, a small body of literature began to appear in the 1980's demonstrating that social relationships could also have a potent negative impact on an individual's well-being (e.g., Rook, 1984). This resulted in a call in the social support literature for research that would examine both
the positive side of social interactions together with the possible detrimental effects or
down side of close relationships (e.g., Coyne & DeLongis, 1986; Heller, 1979;

The current study examines the importance of both daily spousal support and
spousal strain for the day to day emotional functioning of husbands and wives in
stepfamilies. Importantly, this research takes a within-subject approach to the study
of social support. This research strategy has seldom been applied to social support
research, although it offers many advantages to the study of psychosocial processes
(see Tennen & Affleck, 1996; Affleck, Zautra, Tennen, & Higgins, 1999, for
discussions). This approach allows a microanalysis of the within-subject
relationships between daily fluctuations in spousal support and spousal strain to well-
being on the same day as well as examining the lagged effects of these variables
across days. In addition, the research takes a contextual approach by examining
how spousal support and spousal strain may interact to influence well-being as well
as the potential moderating role of perceived marital quality. The situational context
of the co-occurrence of daily hassles is also examined. To the author’s knowledge,
this study is unique in its scope of examining the relationship of these variables
across situations and over time in an individual’s daily life.

Social Support and Well-being

There is an abundance of evidence from diverse sources illustrating the
beneficial impact of social support on emotional and physical well-being. Perceptions
of support or non-support have been associated with a wide range of indices of well-
being including depressed mood (Wethington & Kessler, 1986), negative affect (e.g.,
Peeters, Buunk, & Schaufeli, 1995a), marital satisfaction (Gray, Lovejoy, Piotrkowski,
& Bond, 1990), job satisfaction (House, 1981), better adjustment to and recovery from illness (Dunkel-Schetter, 1984; see Helgeson & Cohen, 1996, for a review of adjustment to cancer), beneficial effects on cardiovascular, endocrine and immune systems (Kors, Linden, & Gerin, 1997; see Smith & Gallo, 1994; Uchino, Cacioppo, & Kiecolt-Glaser, 1996, for reviews), and morbidity and mortality (see House, Landis, & Umberson, 1988; House, Umberson, & Landis, 1988, for reviews).

Initially, the exploration of causal or process issues in social support research was limited by the fact that many of the studies to date have utilized cross-sectional methodology (e.g., Abbey, Abrams, & Caplan, 1985; Lu, 1995; Waggener & Galassi, 1993; Antonucci, Fuhrer, & Dartigues, 1997; Burke & Weir, 1977; Cohen & Hoberman, 1983; La Rocco, House, & French, 1980; Cohen, McGowan, Fooskas, & Rose, 1984; Jackson, 1992; Leathers, Kelley, & Richman, 1997; Winefield, Winefield, & Tiggemann, 1992). As has been well established in psychological research, cross-sectional designs present a number of interpretation problems, including problems inferring direction of causality and potential for confounding variables (see Cohen & Wills, 1985; Hobfoll, 1985, for discussions). However, information gained from a growing number of longitudinal studies has supported the finding of a significant relationship between individual differences in social support and well-being. These studies have been able to establish the temporal precedence of support thereby bolstering causal arguments suggesting that social support is an important contributor to well-being. For example, in a 12 month longitudinal study, Ell and Haywood (1984) examined psychological adjustment in patients who had experienced a myocardial infarction. They found that perceived availability of social support measured directly after the infarction consistently predicted better
psychological functioning one year later. The study, however, did not control for prior psychological distress. Therefore, the negative association of support with future distress may have been due to the patient's original psychological functioning. For instance, individuals experiencing more psychological distress may have withdrawn socially or may have been less sought out by others (Holahan, Moos, Holahan, & Brennan, 1995).

Given these potential problems in interpretation, researchers in this area have recommended the use of prospective longitudinal designs to control, at least to a certain extent, stable influences on functioning (see Cohen & Wills, 1985, for a discussion). A considerable body of research has since controlled for initial symptomatology and thus has been better able to demonstrate the significant links between social support and well-being (Collins, Dunkel-Schetter, Lobel, & Scrimshaw, 1993; Dalgard, Bjork, & Tambs, 1995; Greenglass, Fiksenbaum, & Burke, 1994; Henderson, Bryne, & Duncan-Jones, 1981; Holahan et al., 1995; Kaniasty & Norris, 1993; King, Reis, Porter, & Norsen, 1993; Logsdon, McBride & Birkimer, 1994; Pearlin, Menaghan, Lieberman, & Mullan, 1981; Russell & Cutrona, 1991; Sherbourne, Hays, & Wells, 1995). For instance, Holahan et al. (1995) found that social support predicted changes in well-being. They followed 396 late middle-aged individuals with a diagnosis of cardiac illness over one year, and found that perceived social support from family, work and social network predicted subsequent depression, even when prior levels of depression were controlled.

**Daily diary studies of support and well-being.** The studies reviewed to this point have taken a nomothetic or between-person approach. That is, the studies address whether having a greater level of social support, in general, has a beneficial
impact on an individual's well-being. In contrast, the following studies use an idiographic or within-person examination of social support. This involves obtaining multiple timepoints of support and well-being, so that it can be determined whether shifts in amount of support are associated with fluctuations in day to day well-being. In other words, this approach addresses the relationship between support and well-being across situations and over time in an individual's daily life.

A literature review revealed four daily diary studies in which daily variations in support were related to changes in well-being (Cutrona, 1986; Feldman, Downey, & Schaffer-Neitz, 1999; Peeters, Buunk, & Schaufeli, 1995a,b). In contrast to the present study, which examines relationship specific social support, these studies used an aggregate score of support from an individual's social network. This was calculated by averaging reports of supportive social interactions across different people in an individual's social network. For example, Cutrona (1986) examined the relationship between support and well-being in undergraduate students who recorded the number of supportive social interactions they received on a day to day basis for 14 days. She found that on days in which participants reported receiving more support, they were less likely to experience concurrent psychological distress, controlling for previous day mood. However, daily support was not a significant predictor of next day mood.

Peeters et al. (1995a) found that daily variations in support from co-workers was negatively related to psychological distress in female office workers. Peeters et al. did not examine any lagged effects on mood. Furthermore, earlier mood was not controlled for, which raises the possibility that the relationship between support and distress was due to the impact of prior mood. For example, an individual
experiencing poor mood during the preceding time period may have been less likely to have sought or received support and may also be more likely to experience future distress.

Recently, Feldman et al. (1999) used a multilevel model to look at the lagged impact of daily support across days on negative mood among chronic pain patients. Feldman et al. examined the number of members of an individual's social network who had provided support on a given day and related this to next day negative mood, controlling for earlier mood. They found that greater social support predicted lower negative mood on the next day.

It should be noted that a positive impact of social support is not always found. In contrast to the above studies, Peeters et al. (1995b) looked at the daily variation in received support from co-workers of correctional workers and did not find evidence for a beneficial impact of support on end of day negative affect, when controlling for affect at the beginning of the day.

In conclusion, daily fluctuations in social support have been found to have a beneficial impact on current psychological functioning (Cutrona, 1986; Peeters et al., 1995a) as well as a lagged next day effect (Feldman et al., 1999).

Social support as a buffer of stress. A considerable body of research documents the negative impact of stress on well-being, including research on major life events (see Theorell, 1998, for a review) as well as daily hassles (see Stone, Neale, & Shiffman, 1993, for a review). Initial conceptualizations of social support, such as those proposed by Cassel (1976) and Cobb (1976), emphasized the role of social support as a stress buffer. Much of the early research on social support examined whether social support had a direct impact on well-being or rather acted to
moderate the negative impact of stress. In comparison, current conceptualizations note that social support can have significant beneficial effects on well-being in a variety of ways, including, but not restricted to, main and buffering effects (see Alloway & Bebbington, 1987; Barrera, 1988; Cohen & Wills, 1985; Kessler & McLeod, 1985; House, Umberson et al, 1988; Thoits, 1985; Turner, 1999; Veiel, 1988, 1992, for reviews).

Many studies that have found a beneficial impact of social support examined the adjustment of individuals undergoing particularly stressful events [e.g., caregiving of those chronically ill (Manne & Zautra, 1990), recovery from illness or surgery (Holahan et al., 1995)]. These results may reflect the potential of social support to moderate the impact of these stressful events. However, stress buffering was not addressed directly and social support may have been playing an adaptive role through other mechanisms. In an effort to clarify the relationship between support and well-being, a number of studies have directly tested for a stress buffering effect, and found that impact of social support can moderate the impact of various degrees of stress on well-being using cross sectional (e.g., Cohen & Hoberman, 1983; La Rocco et al., 1980; Okun, Melichar, & Hill, 1990; Penninx et al., 1998; Revicki & Mitchell, 1990) as well as longitudinal designs (Cohen et al., 1984; Gerin, Milner, Chawla, & Pickering, 1995; Turner, 1981). It should be noted that research in this area is inconsistent and many other studies have failed to find a buffering effect (e.g., Barrera, 1981; Russell & Cutrona, 1991; Finch, Okun, Barrera, Zautra, & Reich, 1989; Kiecolt-Glaser, Dyer, & Shuttleworth, 1988; Rhode et al., 1994). Social support

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1 Social support has also been found to impact well-being through such processes as social support deterioration (e.g., Norris & Kaniasty, 1996) and stress prevention (e.g., Russell & Cutrona, 1991).
has most often been shown to reduce the psychological and physical impacts of stress (that is, shown a buffering effect), when support was operationalized as perceived availability of support, perceived emotional support, or having at least one person in whom you can confide (see Alloway & Bebbington, 1986; Cohen & Wills, 1985; Helgeson & Cohen, 1996; Kessler & McLeod, 1985, for reviews). In contrast, there are some indications that received social support is more likely to have direct effects on well-being (e.g., Abbey, Andrews, & Halman, 1995; Abbey et al., 1985).

**Daily diary studies of stress buffering.** A considerable number of studies have found concurrent (same day) effects of daily stress on mood (e.g., Affleck, Tennen, Urrows, & Higgins, 1994; Caspi, Bolger & Eckenrode, 1987; DeLongis, Folkman, & Lazarus, 1988; Eckenrode, 1984; Marco & Suls, 1993; Stone & Neale, 1984; van Eck, Nicolson, & Berkhof, 1998; Watson, 1988). This research has also shown that, on average, these daily stressors do not appear to have a deleterious effect on mood beyond the day of their appearance (e.g., Affleck et al., 1994; Bolger, DeLongis, Kessler, & Schilling, 1989; Cutrona, 1986; DeLongis et al., 1988; Marco & Suls, 1993; Neale, Jandorf, & Stone, 1987; Stone & Neale, 1984). However, as will be discussed below, individual differences in social support have been found to moderate the impact of daily stress over time.

Only a handful of studies have used a daily diary format to examine the relationships among social support, stress, and well-being (Affleck et al., 1994; DeLongis et al., 1988; Caspi et al., 1987; Peeters et al., 1995a,b). These researchers used social support instruments that measured the average amount of support available or provided by network members. Affleck et al. (1994), Caspi et al. (1987), and DeLongis et al. (1988) examined the role of individual differences in
perceived social support in moderating the relationship between daily stress and daily well-being. In contrast, Peeters et al. (1995a,b) explored the role of day to day fluctuations in support in moderating the impact of co-occurring daily stress.

DeLongis et al. (1988) followed married couples across 6 months, and found that, in general, the negative effect of daily stress did not persist to the next day. Moreover, there was evidence for a rebound effect on mood after the termination of a stressful period of time. However, there were large individual differences in the extent that daily stress was associated with mood. In particular, participants with unsupportive relationships were significantly more likely to experience psychological symptoms on stressful days. Furthermore, there was a trend for participants to experience more distress on the following day.

Caspi et al. (1987) also found evidence for a buffering effect of support on the relations between stress and well-being. They studied women living in an urban community and found that although perceived support was not shown to buffer the immediate impact of daily stress, it did moderate the impact of stress on the next day mood. Notably, Caspi et al. found that those participants low in perceived support were more likely to experience distress the next day.

Replicating what has been found in healthy community samples, Affleck et al. (1994) found that daily stress was significantly related to same day but not to next day mood and pain among individuals with rheumatoid arthritis (RA). Furthermore, social support moderated the impact of daily stressors on the same day, but not the next day reports of mood and pain. These researchers used a meta-analytic technique to combine the information from all the participants, and found significant inter-individual variability in their responses to daily stressors. By correlating each
individual's global measure of perceived availability of social support with his/her within time series regression coefficient, these researchers found that individuals who reported higher support were significantly less likely to experience deterioration in well-being when under stress.

Although there have been calls in the literature to examine daily indicators of social interaction and their role in moderating daily stress-well-being relations (e.g., Tennen & Affleck, 1996; Cutrona, 1986), very few studies have examined the within-subject relationships among these variables. Exceptions are the studies by Peeters and colleagues (1995a,b) in which the within-subject interactions between daily fluctuations in support and stress were related to well-being. In their first study, Peeters et al. (1995a) found that the offer of instrumental help, but not other types of support (including emotional support), was found to buffer some of the negative impact of the stressful work situations on well-being within the same day. It should be noted that they did not control for previous mood, so that the relationship found could be due to associations of well-being with pre-morbid functioning. In their second study, Peeters et al. (1995b) examined daily work stress and received support from co-workers among correctional officers, but did not find evidence that support buffered the negative impact of stress on mood across the same day.

Social strain and well-being

As previously summarized, a large body of research has demonstrated the important, if not critical, role that social relationships play in the maintenance of well-being. However, it has long been recognized by researchers in various areas, such as social exchange theorists (e.g., Thibault & Kelley, 1959) and clinical researchers (e.g., Gottman, Notarius, Markman, Bank, Yoppi & Rubin, 1976), that most
relationships are characterized by both positive and negative exchanges. For instance, Thibault and Kelley (1959) characterized social relationships as involving both rewards and costs, wanted and unwanted demands, and conflict and gratification. In addition, marital researchers have found that the level of interpersonal negativity is a critical discriminator between distressed and nondistressed marriages (see Gottman, 1998; Holmes & Murray, 1996, for reviews). Therefore, the following discussion will review studies on negative social interactions, with a particular focus on those that have appeared in the research area of social support and well-being.

Social strain has been conceptualized not just as the absence of social support, but as the perception of problematic social interactions. Various terms have been used in the literature to refer to the negative aspects of interpersonal relationships, and represent very closely associated, overlapping constructs. These terms include social strain (Rook, 1992; Rook & Pietromonaco, 1987), negative social support (Antonucci, 1985; Revenson, Schiaffino, Majerovitz, & Gibofsky, 1991), social conflict (Abbey et al., 1985), social hindrance (Ruehlman & Wolchik, 1988), conflictual social exchanges (Finch, Okun, Pool, & Ruehlman, 1999), social undermining (Vinokur & van Ryn, 1993), negative interactions (Rook, 1984; Schuster, Kessler, & Aseltine, 1989), negative social ties (Okun et al., 1990), and negative

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2 Studies have found that spousal support and spousal strain are independent, basically unrelated dimensions, when averaging the reports of supportive and problematic interactions across members of their social network level (Finch et al., 1989; Fiore et al., 1983; Kiecolt-Glaser et al., 1988; Lakey, Tardiff, & Drew; Rook, 1984; Vinokur & van Ryn, 1993). Furthermore, although studies have found that reports of social support and social strain from the same person are related, they constitute empirically distinct constructs. For example, even though reports of social support and social strain within a specific relationship are highly negatively correlated [e.g. -.5 (Abbey et al., 1985); -.525 (Horwitz et al., 1997); -.53 to -.64 (Schuster et al., 1990); -.63 to -.73 (Vinokur & van Ryn, 1993)] , they have been found to have independent contributions to mental and physical health (Horwitz et al., 1997; Pasch & Bradbury, 1998; Schuster et al., 1990; Vinokur & van Ryn, 1993).
Although studies examining only the beneficial aspects of social relationships have predominated, a number of studies in the social support literature have also included negative social exchanges. Most of these studies have used social support and social strain measures that involve ratings of helpfulness or upset aggregated across an individual’s social network and are cross-sectional in design. Many of these studies illustrated that not only were negative social ties predictive of the level of mental health, they were usually more powerful predictors of concurrent psychological distress than positive network ties (e.g., Abbey et al., 1985; Barrera, 1981; Beach, Martin, Blum, & Roman, 1993; De Ruiter, de Haes, & Tempelaar, 1993; Finch et al., 1989; Finch & Zautra, 1992; Fiore, Becker, & Coppel, 1983; Ingersoll-Dayton et al., 1997; Kiecolt-Glaser et al., 1988; Manne, Taylor, & Dougherty, 1997; Rhodes, Ebert, & Myers, 1994; Rook, 1984; Ruehlman & Wolchik, 1988). For example, although Rook (1984) found positive and negative social interaction both to be predictors of well-being in older widowed women, social conflict had a more consistent and stronger relationship to well-being than did positive relations. However, this is not always the case, and sometimes supportive network interactions have been found to have an equally potent impact (e.g., Brenner, Norvell, & Limacher, 1989; Finch et al., 1999; Ray, 1992; Revenson et al., 1991). For example, Finch et al. (1999) found that the impact of satisfaction with perceived available

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3 In the literature, the term social support has been used to describe negative aspects of social relationships (e.g., negative support). For the current study, the term social support will be restricted to consideration of positive aspects of social relationships, while the term social strain will refer to negative aspects of social relationships.
support and number of negative social exchanges in the past month related similarly to reports of depression in university students.

A small number of studies have examined the impact of social support and social strain at the network level on psychological functioning using a longitudinal design, in which prior mood was controlled (e.g., Finch, 1998; Pagel, Erdly, & Becker, 1987; Lepore, 1992). Lepore (1992) compared different aspects of university students' social networks, and found that friend support, friend conflict, and roommate conflict all had independent contributions to psychological distress seven weeks later. In addition, Finch (1998) found that that social strain, but not social support, aggregated across university students' social networks predicted negative affect one week later. Similarly, Pagel et al. (1987) looked at individuals caring for spouses with Alzheimer's, and found that conflict at a network level, but not helpfulness, was predictive of depressive symptoms 10 months later.

The studies reviewed so far in this section have focused on perceptions of social support or social strain aggregated over members of an individual's social network. However, this does not necessarily illuminate the effect of supportive and problematic interactions that occur within a specific relationship, such as that between spouses. It has been observed that supportive and negative behaviour co-occur in close relationships (e.g., Abbey et al., 1985; Barrera, Chassin, & Rogosch, 1993; Ruehlman & Wolchik, 1988; Umberson, 1989), including the spousal relationship (e.g., Golding & Burman, 1990; Horwitz et al., 1997; Schuster et al., 1990). To date, most investigators who have examined the relative contribution of support and strain within the same relationship to psychological functioning have employed cross-sectional research designs (e.g., Abbey et al., 1985; Clark &
Stephens, 1996; Golding & Burman, 1990; Manne & Zautra, 1989; Manne et al., 1997; Okun & Keith, 1998; Schuster et al., 1990). Consistent with studies that have examined social support and social strain aggregated across an individual’s social network, for the most part these studies suggest that negative interactions with those close to you have a greater impact on concurrent psychological functioning than positive interactions with those same individuals. For example, Clark and Stephens (1996) looked at patient's level of depression after a stroke, and found a unique contribution of perception of unhelpful spouse's actions to depressed mood, but not a significant contribution for helpful actions. In a related study, Manne, Alfieri, Taylor, and Dougherty (1999) found that negative spousal interactions, but not positive spousal interactions, were significant predictors of psychological distress for both men and women with cancer. In addition, Schuster et al. (1990) found that although both positive and negative spousal behaviour were a significant predictor of depressive symptoms for women, only negative spousal behaviour was predictive for men in a community sample of married couples.

Nevertheless, negative interactions within a close relationship have not always been found to have a more potent impact on negative mood than positive interactions. For instance, Manne and Zautra (1989) studied women with rheumatoid arthritis and found independent contributions of both spousal support and spousal conflict, of comparable, but opposite, magnitude to psychological adjustment. Consistent with these results, Golding and Burman (1990) found that after controlling for the significant contribution of supportive interactions from spouses, Mexican-American individuals’ depression level were not significantly predicted by general perceptions of conflict with their spouses. In addition, Umberson (1989) found that
the positive content of parent's relationships with their children was a stronger predictor of parent's well-being than the negative content of the parent-child relationship (demands by children).

Few studies have examined the impact on psychological adjustment of social support and social strain within a close relationship using a longitudinal design. For instance, Vinokur, Price, and Caplan (1996) found unique effects for perceptions of spousal support and spousal strain in the prediction of current depression and depression at six month follow-up in a sample of unemployed persons. Comparison between the relative contributions of spousal support and spousal strain was not possible, because the coefficients had been constrained to be equal in the analysis. Major, Zubek, Cooper, Cozzarelli, and Richards (1997) examined perceptions of negative versus supportive exchanges with their partners in women before an abortion procedure, and related these variables to adjustment after the operation. Pre-operational conflict with their spouse, but not support, was related to increased distress post operation.

In contrast, Vinokur and van Ryn (1993) found a very different pattern when looking at the long term impact of social support and social strain. They found that perceptions of high levels of spousal strain at time one was surprisingly related to improvement in mental health two months later. They did not find a significant lagged effect for spousal support. Conversely, spousal strain at time one was significantly related to higher concurrent psychological distress, while spousal support was related to lower distress.

**Daily diary studies of social strain and well-being.** In the domain of stress and coping research, the notion of interpersonal stress can be seen in many ways to be
directly comparable to the concept of social strain. In the 1980's, researchers began to conceptualize negative interpersonal interactions, not simply as a lack of support, but as stressors (e.g., Shinn, Lehmann, & Wong, 1984; Thoits, 1985). As described by Thoits (1985), social conflict is not merely the absence or withdrawal of a coping resource (lack of support), but constitutes a direct threat and stress within itself. In fact, interpersonal tensions or unpleasant social events are often included in the measurements of daily stress, and research using these measures has demonstrated a link between daily stress and well-being (e.g., Affleck et al., 1994; Caspi et al., 1987; DeLongis et al., 1988). When comparing the deleterious impact of different types of daily stressors, interpersonal stressors have been identified as particularly potent. For example, Bolger et al. (1989) found that daily interpersonal conflicts predicted the vast majority of the explained variance in mood from daily stressors in a community sample of married subjects. Relevant to the current study, one of the interpersonal stressors that significantly predicted mood was arguments with spouse. Consistent with the majority of studies of daily stress in general, the negative effect of interpersonal stress did not persist to the next day, and in fact, there was a rebound effect after the termination of a stressful period of time. Similar to Bolger and his colleagues, Stader and Hokanson (1998) found that interpersonal conflict predicted same day depressive symptoms, but failed to be significantly related to next day symptoms.

**Social strain as a stress-amplifier.** In contrast to the hypothesized stress attenuating effect of social support, social strain has been proposed to possibly accentuate the negative impact of stress (e.g., Rhode et al., 1994; Rook, 1990; Shinn et al., 1984). Some studies have found that social strain was associated with poorer
adjustment in individuals facing such stressful situations as caring for a relative with Alzheimer's (Manne & Zautra, 1989; Pagel et al., 1987) and adjustment to illness or surgery (Manne et al., 1999). Few studies, however, have attempted to distinguish between direct and moderator effects of social strain, and the findings have been inconsistent. For example, Kiecolt-Glaser et al. (1988) found that it was only those older adults experiencing a major chronic stress (caring for a patient with Alzheimer’s disease) for whom negative social interactions was predictive of depression. They did not find any effect for positive social interactions. Similarly, Rhode et al. (1994), in their study of young African American mothers, found that social strain aggregated over participants' social networks significantly potentiated the negative impact of economic strain. Again, positive network interactions did not have a direct effect on well-being or interactive effect with financial strain. In addition, Ingersoll-Dayton et al. (1997) found a stronger relationship between negative social exchanges and negative affect in older adults who had experienced recent major life events.

On the other hand, in their daily study of stressors in a community sample of married couples, Bolger et al. (1989) did not find evidence that interpersonal conflicts potentiated the negative impact of other types of daily stressors. In addition, Finch et al. (1989) found that variations in level of disability did not significantly interact with level of social strain in participants' social networks to predict emotional functioning. Vinokur and van Ryn (1993) also found that the impact of social strain remained the same regardless of the level of financial strain the sample was experiencing. Okun et al. (1990) speculated that an interaction is not often found between social strain and stress because of the focus in the research on adjustment to particularly negative events. They argued that negative social interaction may be more likely to
exacerbate the effects of less potent negative events on psychological distress. Okun et al., however, found that the association of minor stressors (based on a one month retrospective recall) and psychological distress in the lives of older adults was not amplified by social strain at the network level.

Synergistic influence of social support and social strain. Virtually all research that has considered the influence of co-occurring support and strain has implicitly assumed that the effects are additive. That is, the effect of social support does not depend on the level of social strain (Schuster et al., 1990). However, social support and social strain might have joint or interactive effects. A number of researchers have called for a consideration of not only direct effects of positive and negative social transactions, but also how they may interact (Okun & Keith, 1998; Rook, 1992, 1997; Schuster et al., 1990; Vinokur & Ryn, 1993). It should be noted that few researchers have looked at nonadditive effects and the evidence of an interaction has been mixed.

Most of this research has used measures of social support and social strain aggregated over the social network. Although an interaction between social support and social strain is not always found (e.g., Rhodes et al., 1994: Rook, 1984), three patterns have emerged from the literature. First, highly supportive social networks have been found to moderate the immediate detrimental impact of problematic interactions with network members. For example, Revenson et al. (1991) found a multiplicative effect between supportive and problematic social network interactions among individuals recently diagnosed with rheumatoid arthritis. Specifically, the relationship between social strain and increased depressive symptoms was most apparent in those who also reported lower social support. Similarly, Rhodes and
Woods (1995) found that the association between social strain and concurrent level of depressive symptoms among pregnant minority adolescents was cushioned by positive support in the form of cognitive guidance. These results demonstrate that social support can buffer the negative impact of problematic social interactions, as it has been shown to be able to buffer other types of stressors.

Secondly, conflict in one's social network can attenuate the positive impact of positive social networks. For instance, Okun and Keith (1998) found that when older adults (over 59) were asked about positive and negative social exchanges aggregated across relatives other than spouses and friends, positive interactions were related to decreased depressive symptoms, but only when conflict was low.

A final pattern identified was that the impact of upsetting interactions with network members can be heightened in networks that are usually characterized by supportive exchanges. This was the surprising finding of Pagel et al. (1987) who found in their longitudinal study of spouses caring for patients with Alzheimer's disease that problematic interactions with network members were rated as more upsetting in those whose networks were generally supportive. These researchers interpreted this as "reverse" buffering. They hypothesized that negative social interactions are unexpected, and especially salient, when they occur in the context of a usually supportive social environment.

The studies just reviewed rely on measures of social support and social strain that have been aggregated across network members. When considering the social network as a whole, however, one is unable to ascertain whether a significant interaction is due to positive and negative interactions occurring within a single relationship or from different sources. Researchers such as Schuster et al. (1990)
and Major et al. (1997) have identified the need of nonaggregated analyses. They argue that the relationship between support and strain may look very different when assessing at a specific versus general level. Nevertheless, very few studies have taken this approach to date.

Of these studies, there are some indications that social support within a relationship can attenuate the negative impact of relationship strain on concurrent distress. For example, Okun and Keith (1998) found that for younger adults (25-59), but not for older adults (over 59), support from the spouse moderated the negative impact of negative spousal exchanges, based on retrospective reports of spousal support and spousal strain over the last month. Similarly, Abbey et al. (1985) found that support buffered the negative impact of conflict on concurrent mood when asked about the “same one person”, but not “the person closest to you”. Also, Horwitz, McLaughlin and White (1997) reported that the difference between positive and negative exchanges from young adults’ spouses predicted concurrent depression, controlling for earlier depression, above and beyond what was accounted for by the absolute levels of social support or social strain modelled separately. However, because they did not consider both main effects with the interaction term together in one model, it is difficult to interpret this interaction. In addition, using a difference term does not make it possible to discriminate between those who were high on both social support and social strain, and those who were low on both measures.

A single longitudinal study was identified that examined the interaction of support and strain in the prediction of psychological adjustment. In a prospective study of psychological adjustment after an abortion, Major et al. (1997) found that social strain in women’s relationships with their mothers or friends seemed to negate
the benefits of supportive behaviours within those same relationships. No interaction, however, was found between spousal support and strain. This finding is consistent with the conceptualization of Fisher, Nadler, and Whitcher-Alagna (1982) that the presence of conflict with an individual might erode the interpersonal context of helping transactions that allow support provisions to be perceived as genuine and non-threatening. Others have raised the related idea that the effects of supportive behaviour may be overwhelmed by the conflict existing in the recipient-support giver relationships (see Coyne & DeLongis, 1986, for a discussion).

Evidence for an interaction between social support and social strain within a relationship is not always found. For example, Schuster et al. (1990) did not find a significant interaction between supportive and negative exchanges with spouses in the prediction of concurrent psychological adjustment in a community sample of married couples. Davis, Brickman, and Baker (1991) also did not find evidence of a significant interaction between social support and social strain within relationships with their most significant other in the prediction of concurrent psychological distress for rape victims. Similarly, Manne et al. (1997) reported that perceived spousal support did not moderate the effects of negative spousal behaviour in their sample of cancer patients. In addition, Barrera et al. (1993) found little evidence of interactions between social support and social conflict from parents, siblings, and friends in the prediction of well-being among adolescents of alcoholic and non-alcoholic fathers.

**Current status in the field of social support and social strain**

Research findings began to accumulate in 1980’s indicating that negative social relations often had a stronger association with psychological outcomes than positive social interactions. This led researchers to speculate that problematic social
interactions had a more potent influence on well-being than supportive social interactions (e.g., Rook, 1992; Rook & Pietromonaco, 1987). These researchers pointed out that the strong immediate negative impact of problematic social ties is consistent with literature on the asymmetrical effect of positive and negative events in general. A number of reasons have been proposed to explain the findings that negative events often have a stronger effect than positive events (see Taylor, 1991, for a review). For instance, it has been speculated that negative events are more unexpected and thus prompt more examination (Fiske, 1980). This would apply to social relationships in which conflict is much less common than support, both in individuals' social networks in general (e.g., Rook, 1984; Pagel et al., 1987), and in specific close relationships (e.g., Manne & Zautra, 1989; Manne et al., 1997; Major et al., 1997; Schuster et al., 1990). In addition, it has been hypothesized that there may be an evolutionary press to be more reactive to negative events, because they can indicate dangerous or threatening situations that present risks to one's physical or psychological well-being (e.g., Rook & Pietromonaco, 1987). Another hypothesis that has been proposed is that negative social interactions, in particular, may be especially potent, because they are not diluted by the attributional ambiguity involved in positive social exchanges (Rook & Pietromonaco, 1987). Similarly, Suls (1982) argued that people are quick to infer malicious intent to the negative actions of others, but less rapid to infer good intentions for positive actions because positive actions are normative.

Recently, the universality of this social negativity effect has been questioned (see Finch et al., 1999; Ingersoll et al, 1997; Okun & Keith, 1998; Rook, 1997, for reviews). These researchers do not discount that negative social events can have a
potent impact on well-being, but they do warn that there may be limits in the
generalization of this effect. Consequently, there has been a call to broaden the
focus of investigation in this area. First, Rook (1997) stated that it is important to
bear in mind that strong negativity effects have been documented most often in
cross-sectional studies, and she argued that available data do not permit conclusions
to be drawn about the short term and long term effects of positive and negative social
exchanges. She raised the possibility that negative social interactions have an
intense, but short-lived effect. This suggestion is consistent with Taylor's (1991)
premise that negative life events may evoke a strong initial emotional response, but
then people actively try to seek ways to minimize or undo the impact of the events,
thus leading to a dampening of the emotion. Positive events in contrast, she argued,
may not trigger a comparative minimization process, and their long-term importance
may be greater. In a similar vein, Thoits (1995) has proposed that individuals are
psychological activists with an intrinsic motivation to protect and enhance well-being.
Therefore, there is a strong drive to counterbalance or counteract negative impact of
stressful events.

Furthermore, the relationship of spousal support and spousal strain to well-
being may be dependent on the age group that is being investigated. Okun and
Keith (1998) stressed that a substantial amount of research in this area has been on
geriatric samples (e.g., Finch et al., 1989; Rook, 1984; Fiore et al., 1983; Ingersoll-
Dayton et al., 1997; Kiecolt-Glaser et al., 1988), and considerably less is known on
support and strain processes in younger adults. Upon review of the literature, Okun
and Keith (1998) noted that the finding that negative social exchanges have a
significantly greater association with psychological well-being than positive
exchanges is more consistently found in samples of older adults. Specifically, social strain has been shown to have a significantly greater impact than social support in approximately 41% of studies that have compared the magnitude of their effects. However, when the subset of studies examining only geriatric samples was considered, social strain was a more potent predictor of well-being in approximately 80% of the studies. In this article, Okun and Keith also included analyses of data from the first wave of the Changing Lives study, where they found higher $\beta$ coefficients for social support in comparison to social strain for younger (25-59) adults, while the opposite was found for older adults (over 59) (based on visual inspection).

The need for further research to clarify other issues also has been highlighted. For example, the majority of research that has been conducted on social support and social strain to date relies on measures of social support and social strain aggregated across the social network, and there are calls in the literature to examine the significance of relationship-specific social support and social strain (e.g., Barrera et al., 1993; Okun & Keith, 1998; Major et al., 1997; Sarason, Sarason, & Pierce, 1992, 1994a,b). Research into the exploration of support and strain processes in everyday situations also has been encouraged (e.g., Okun & Keith, 1998). Many of these studies focus on adults facing major stressful life events, and the generalizability to others in less critical situations has not been fully explored.

The role of dyadic adjustment in the spousal support and spousal strain processes

Overview. It has been theorized that the interpersonal context within which supportive or problematic social interactions occur can be an important determinant of the impact of that support (e.g., Sarason et al., 1992, 1994a,b; Schuster et al.,
In fact, the success of social support efforts, as well as the impact of social strain, has been found to depend on the particular type of relationship between the provider and recipient, such as between spouses, parent-child, and employer-employee (e.g., Bolger et al., 1989; Dakof & Taylor, 1990; Metts, Geist, & Gray, 1994). In a related line of reasoning, it is possible that the nature of a specific relationship, such as the quality of the marital relationship, could moderate the impact of spousal support and spousal strain. To the best of the author’s knowledge, this has not been investigated.

**Marital relationship.** Marriage is an important context in which to examine social support (see Beach, Fincham, Katz, & Bradbury, 1996; Cutrona, 1996; Perlman & Rook, 1987, for discussions). People often rely on their spouse for support during stressful events (e.g., Dakota & Taylor, 1990). In addition, spouses can be seen to provide all types of support (Beach et al., 1993; Julien & Markman, 1991), and to play a critical role in the provision of emotional support (Reiss, 1990). A number of researchers (e.g., Beach et al., 1993; Brown & Harris, 1978; Wallston, Alagna, DeVellis, & DeVellis, 1983) have concluded that support from one’s intimate partner is uniquely beneficial. In fact, support from other sources does not entirely compensate for what is lacking in a spousal relationship (see Coyne & DeLongis, 1986, for a review). Marital status has been closely associated with well-being (e.g., Gove, Hughes, & Style, 1983; Lin, Dean, & Ensel, 1986; see Ross, Mirowsky, & Goldstein, 1990; Waite, 1995, for reviews) and the mortality rate in married individuals has been found to be lower than among the unmarried (House et al., 1982).
Marriages, however, like any close relationship, can also be a source of conflict. Interestingly, Argyle and Furnham (1983) found that one's spouse is not only the greatest source of satisfaction, but also of conflict. In addition, there is evidence that unhappily married individuals are worse off than are the unmarried in terms of physical health (see Burman & Margolin, 1992, for a review) and psychological well-being (e.g., Gove et al., 1983). Certainly, conflict with one's spouse has been found to be a powerful determinant of psychological distress (e.g., Beach et al., 1993; Fincham, Garnier, Gano-Phillips, & Osborne, 1995; Paykel et al., 1969; Schuster et al., 1990; see Beach & Fincham, 1998, for a review) and physical functioning (e.g., Kiecolt-Glaser et al., 1993; Smith & Gallo, 1999). In summary, marriage is a unique relationship because of its intensity, duration, and interdependence (Argyle & Furnham, 1983; Coyne & Fiske, 1992). In many ways then, marriage is an ideal context in which to examine the impact of social support and social strain.

**Dyadic adjustment as a moderator of spousal support or spousal strain.** As was discussed earlier, when supportive and negative spousal interactions occur close together in time in a relationship, they can influence the impact of the other. In other words, each can be thought of as providing a proximal interpersonal context for the other. Similarly, it is possible that the perceived quality of a marriage can be thought of as a more distal interpersonal context for supportive and negative spousal exchanges.

Researchers in this field have proposed some ways in which dyadic adjustment may play a role in support and strain processes. For example, Schuster et al. (1990) suggested that negative social interactions with an individual may be perceived as less serious when they occur in the context of a very supportive
relationship. Thus, similar to the stress buffering hypothesis of social support, a better quality relationship could buffer the deleterious impact on well-being of negative spousal behaviours. Although this question has not been addressed directly in the literature, there is considerable evidence in the marital literature that when a partner behaves in an unpleasant or inconsiderate way, his or her spouse’s attribution for the behaviour will likely be more benign if the relationship is characterized by trust and goodwill (see Bradbury & Fincham, 1990, 1992, for reviews). Consequently, it is reasonable to propose that the impact of lack of support or the presence of strain may have a less detrimental impact on one’s mood in the context of a generally well functioning relationship.

In contrast, other researchers have postulated that negative events could be particularly salient in relationships usually characterized by harmonious interactions and, therefore, these negative events have the capacity to cause strong emotions because they are unexpected (Rook & Pietromonaco, 1987). Using a similar argument, Cutrona (1996) proposed that support may be thought of as particularly supportive when it comes from someone who is usually more negative.

**Current study**

The primary aim of the current study is to explore and clarify the relationships among daily spousal support, spousal strain, and well-being in husbands and wives living in stepfamilies. Remarried couples are a particularly relevant population within which to study spousal support and strain. Stepfamilies are known to be at risk for dissolution because remarried couples have been found to be more likely to divorce than first married (Visher & Visher, 1985; White & Booth, 1986). Certainly, stepfamilies are confronted with a multitude of stressors during the family
reorganization process (see Bray & Kelly, 1998; Hobart, 1990; Keshet, 1990, for reviews). These include conflict surrounding differences between partners regarding expectations for the marriage or children (Visher & Visher, 1985), difficulties involving spouses' relationships with ex-partners (Messinger, 1976), and differences in attitudes regarding child-rearing and step-parenting roles (Keshet, 1990).

Despite an accumulating literature regarding psychosocial aspects of support and related variables, little is known about the day to day impact on well-being of support and strain within intimate relationships such as marriage. Further, these variables have rarely been examined within a process-oriented model. The current study used multi-level modelling which allowed for the simultaneous examination of both between-person differences and within-person differences in daily spousal support and spousal strain, thus allowing integration of these sources of influence on daily well-being in the same model. Moreover, the relationship between spousal support and spousal strain was examined as it unfolded over time, allowing for the examination of both immediate and lagged effects on negative affect. In addition, the study examined the impact of various contexts in which spousal support and strain occur, including the proximal interpersonal context of the co-occurrence of spousal support and strain in the same day and the more distal interpersonal context of the perception of general dyadic adjustment. Finally, the situational context of the co-occurrence of daily hassles was considered.
Hypotheses. Both primary and exploratory hypotheses of the current study have been grouped under the following three sets of questions.

I. Do spousal support and spousal strain have independent contributions to concurrent (same day) and lagged (next day) negative affect? In addition, do spousal support and spousal strain interact to predict well-being?

Based on the preceding review of the literature related to social support and social strain, it was expected that daily spousal support and spousal strain would have independent effects on concurrent psychological distress. Although no daily diary studies were identified in the literature that examined daily support and daily strain together in the same study, day to day fluctuations in social support (e.g., Cutrona, 1986; Peeters et al., 1995a; Feldman et al., 1999) and social strain (e.g., Bolger et al., 1989; Stader & Hokanson, 1998) have separately been found to be associated with changes in concurrent psychological distress. These findings are consistent with cross-sectional studies in the broader social support and social strain literature, in which social support and social strain have generally been found to have independent effects on concurrent psychological distress, when exploring support and strain variables aggregated over the social network (e.g., Rook, 1984) or within specific social relationships (such as the spousal relationship [Schuster et al., 1990; Vinokur & van Ryn, 1993; Vinokur et al., 1996]). Moreover, previous research has generally found that social strain has a more consistent and potent impact on concurrent mood than social support (e.g., Rook, 1984; Schuster et al., 1990; see however, Finch et al., 1999).
Spousal support is predicted to have a significant impact on next day mood. Daily fluctuations in social support have been found to have lagged effects across days on mood (Feldman et al., 1999). On the other hand, spousal strain is not expected to be a significant predictor of next day psychological distress. Research in this area suggests that social strain does not have an impact on mood across days for the average person (e.g., Bolger et al., 1989; Stader & Hokanson, 1998).

Longitudinal studies have revealed individual differences in overall levels of social support have a beneficial impact on well-being over time when examined alone (e.g., Holahan et al., 1995; Norris & Murrell, 1990) or together with social strain (e.g., Vinokur et al., 1996; see however, Major et al., 1997). On the other hand, there are some potentially meaningful inconsistencies in the literature regarding the long term impact of social strain. Although many studies have found that social strain was related to increased psychological distress over time (e.g., Major et al., 1997; Finch, 1998), one study actually found increased spousal strain was related to decreased distress over time (Vinokur & van Ryn, 1993).

These predictions are also consistent with Taylor's (1991) predictions regarding the impact of positive and negative events. She proposed that negative events have a strong immediate negative impact on well-being, while the impact of positive events may be weaker, but longer lasting. As a means of explanation, she argued that this is because the strong reactions to negative events are more likely to trigger counter processes that mitigate the potent immediate effects. Rook (1997) suggested that Taylor's proposals may be pertinent to understanding social support and social strain processes as they unfold over time.
Although there has also been calls in the literature to investigate whether social support and social strain interact to predict well-being (e.g., Schuster et al., 1990), there are very few empirical studies. The author could not identify any daily diary studies that addressed this question. A small number of cross-sectional studies examining the joint impact of relationship-specific support and strain have found evidence that support could attenuate the negative impact of strain on mood (Okun & Keith, 1998; Abbey et al., 1985; Horwitz et al., 1997). However, other studies have failed to find an interaction (e.g., Schuster et al., 1990; Davis et al., 1991; Manne et al., 1997). Only one longitudinal study was identified that examined the possible interaction of support and strain within a relationship. Major et al. (1997) found that perceived social conflict could interfere with the positive impact of perceived social support on well-being within intimate relationships.

Hypotheses addressing the first set of questions:

a) It was expected that daily spousal support and daily spousal strain would have independent contributions to concurrent negative affect, with daily spousal support being negatively related to negative affect and spousal strain being positively related to negative affect.

b) Daily spousal support was predicted to have independent contributions across days to negative affect, with spousal support being negatively related to negative affect the next morning.

Exploratory analyses:

Exploratory analyses were conducted to determine if there was a multiplicative effect of spousal support and spousal strain on negative affect, independent of their direct effects. For example, some research suggests that support may be able to
buffer the immediate negative effects of strain within a relationship on mood. In addition, strain has been found to attenuate the positive impact of support within a relationship on mood over time.

The magnitude of the effects of spousal support and spousal strain in the prediction of negative affect were also compared.

II. Do daily hassles have an independent contribution to concurrent (same day) and lagged (next day) negative affect? Do spousal support or spousal strain moderate the relations of daily hassles with concurrent and lagged negative affect?

As noted previously, a considerable number of studies have revealed concurrent (same day) effects of daily stress on mood (e.g., DeLongis et al., 1988; Affleck et al., 1994; Marco & Suls, 1993). However, research has suggested that the effects of daily stressors do not extend across days in community samples (e.g., Affleck et al., 1994; Bolger et al., 1989; DeLongis et al., 1988; Marco & Suls, 1993).

It is postulated that daily spousal support will moderate the impact of hassles on same day mood. Individual differences in social support have been found to be an important moderator of daily stress on same day mood (e.g., DeLongis et al., 1988; Affleck et al., 1994), and there is limited evidence of an interaction between daily support and daily stress (Peeters et al., 1995a; see however, Peeters et al., 1995b).

Daily spousal support may also moderate the impact of hassles on next day mood. Although no studies could be identified which examined the lagged
relationship between daily support and daily stress with next day mood, individual
differences in social support have been related to an increased probability of
experiencing psychological distress the next day (DeLongis et al., 1988; Caspi et al.,
1987; see however, Affleck et al., 1994).

It has also been proposed in the literature that social conflict may augment the
relationship between other stressors and psychological outcomes, in contrast to the
ability of social support to buffer them. For example, social strain has been
associated with increased concurrent distress in the face of stressors (e.g., Kiecolt-
Glaser et al., 1988; Rhode et al., 1994). However, in a daily diary study, Bolger et al.
(1989) did not find evidence for the ability of daily social strain to accentuate the
impact of non-interpersonal hassles on the same day or next day negative mood.
Similarly, Okun et al. (1990) did not find evidence of an interaction between
aggregate measures of daily stress over the last month and social strain by
participants’ social network. In addition, Vinokur and van Ryn (1993) did not find that
social strain and non-interpersonal stresses combined to predict changes in distress
over time.

Hypotheses addressing the second set of questions:
a) It was expected that daily hassles would have a negative relationship to
   concurrent negative affect.

b) Social support was expected to moderate the relationship between daily hassles
   and concurrent negative affect, such that those reporting the lowest level of
   support would have a stronger relationship between hassles and negative affect.
c) Social support was expected to moderate the relationship between daily hassles and negative affect the next morning, such that those reporting the lowest level of support would have a stronger relationship between hassles and negative affect.

Exploratory analyses:

The next day effects of daily hassles were also explored. In addition, analyses were conducted in order to determine if spousal strain strengthens the relationship between hassles and negative affect.

III. Does marital adjustment have an independent contribution to concurrent (same day) and lagged (next day) negative affect? Does marital adjustment moderate the relations between spousal support and spousal strain on concurrent and lagged negative affect?

Increased marital quality has consistently been found to be related to better mood (e.g., Fincham et al., 1995; Gove et al., 1983; Lin, Dean, & Ensel, 1986), although the impact of marital quality on mood has not been examined in a study which also includes the effect of daily spousal support and spousal strain.

Although no studies could be identified that examined marital quality as a moderator of social support and social strain, a large empirical literature exists relating the impact of marital quality on attribution processes in marital relationships (see Bradbury & Fincham, 1990, 1992, for reviews). Researchers have shown that marital partners make attributions that are more benign for negative behaviour of their spouse when they are in a relationship usually characterized by positive interactions. Based on this, it would be expected that the negative impact of lack of
support or the presence of strain on mood would be mitigated by the overall quality of
the relationship. Due to the lack of theoretical or empirical research in the role of
dyadic adjustment in social support and social strain processes, the following
hypotheses do not differentiate between expected concurrent and lagged effects.

Hypotheses addressing third set of questions:

a) Marital quality was predicted to be negatively related to negative affect.

b) Marital quality was expected to attenuate the negative impact of lack of daily
   spousal support and daily spousal strain on negative affect.
Method

Overview

As a means of addressing the research questions in this project, information was drawn from data collected as part of a large prospective study investigating stress, coping, and support within stepfamilies. The design included two interviews conducted approximately two years apart as well as structured daily diaries and a battery of questionnaires that were completed after the first interview. In the course of this project, numerous measures were administered to participating couples. However, only those procedures and measures that are pertinent to the present investigation will be discussed in this section.

Sample

Couples were recruited from the Lower Mainland of British Columbia by means of newspaper and radio advertisements, notices in school newsletters, posters on community bulletin boards, and solicitation at several local stepfamily groups. In the sample, 71% reported hearing of the study through the newspaper or radio, and 29% were notified through posters. The participant pool was limited to those families having at least one child from a previous relationship (of either spouse) living in the home for more than three months of the year. Further, only participants who were married or living common-law were included (participants in common-law relationships are henceforth referred to here as married). Finally, because of difficulties in advertising and interviewing in more than one language, participants were limited to those who were fluent in English. This restriction served to reduce variability among participants due to culture. Both partners were requested to participate. Eligible couples were first asked to participate in a telephone interview.
Immediately following the interview, couples were asked if they would be willing to participate in the next segment of the study which involved completing a package of self-report measures as well as structured daily diaries. For the final phase of the study, couples were contacted approximately two years after their initial interview in order to solicit their participation in a follow-up interview. For the present study, only those couples for whom both the husband and the wife completed the first interview, daily diary, and self-report measures were included in the analyses (N=166).

The mean age of the sample was 40 years, ranging in age from 20 to 59 years. Couples had spent an average of 4.60 years living together in the current union, with a range from less than a year to 12 years. The majority of the husbands and wives in our sample had been married at least once previously. Only 16% had not been married previously. Eighty-four percent had one previous marriage, 13% had two previous marriages, 2% had three previous marriages, and one person had four previous marriages. Eighty-eight percent of the sample had children from a previous union. The mean number of children in the stepfamily home was 3.14, with a range of from one to eight children. The children spent on average 7.8 months of the year in the stepfamily home under study.

The majority of participants were Canadian-born (72%), with the remainder largely from other English-speaking countries (the United States, Britain, and Europe). In terms of religious background, 62% were Protestant, 18% were Roman Catholic, and 2% were Jewish. The rest reported some other religious background (6%) or no religious background (12%). The socio-economic status of the families in the sample was quite high, with a median family income of $70,000 (CDN) per year, although it ranged from a low of $16,000 (CDN) to a high of $400,000 (CDN).
mean level of education was 13.14 years, ranging from 5 to 17 years. The majority of the participants worked outside (75%) or inside (5%) the home.

Procedure

Interested couples contacted the Stepfamilies Project by telephone and were mailed a brief summary of the project components and aims, a consent form, and an information sheet on which to record the number of children and previous marriages or unions. The summary also noted that all participant couples would be entered into a random $500 drawing. Those couples willing to participate in the study returned the information and consent forms. Due to time constraints on data collection, this information was solicited from interested couples over the telephone during the last two months. In these cases, participants did not begin the study until they had received the information sheet and consent form; the participant verbally consented to participate (the consent form was read to them over the telephone) and they were requested to return the signed consent form to the project office promptly.

During the first phase of the study, telephone interviews were conducted by trained undergraduates associated with the project. Each spouse was assigned to a different interviewer and each interviewer was blind to any information received from the other spouse. All interviewers were female. Training proceeded according to protocols and conventions outlined in the Institute of Social Research Interviewer Training Manual (Guenzel, Berckmans, & Kannell, 1983). Permission to tape-record the section containing the open-ended questions was obtained from each subject to allow for verbatim transcription of the interview. These tapes were also used to ensure that interviewers followed standardized protocol.
Following the first interview, participants were mailed a packet of self-report measures, as well as a set of structured diaries to be completed twice per day over a period of one week. Participants were asked to complete the diary entries “around lunch time or mid afternoon” and “just before going to sleep at night.” Participants recorded the time of each of their diary entries. For diary entries concerning information from earlier in the day, 17.6% were completed later than requested (i.e. entries were recorded after 5:00 PM). For diary entries concerning information from the latter part of the day, 2.2% were completed later than requested (i.e. entries were recorded the next morning). Participants were requested to complete these materials after both spouses had been interviewed and to return them in the stamped envelopes provided. In the instructions accompanying the materials, the importance of each spouse completing these materials independently was emphasized. The instructions read: “We ask you and your spouse complete all the study materials separately and that you do not discuss your responses with one another until after the material have been returned to us.” Each spouse was also provided with a number of adhesive tabs with which to seal each diary entry after completion. These measures were intended to increase confidentiality.

Interview Measures

The interview included a number of measures assessing the relationships within the individual’s family and with previous spouses, common difficulties arising within stepfamilies, and demographics. Those portions of the interview used in the present study are discussed below.

Demographics. Various participant and family demographics were assessed during the interview. Age, gender, and socio-economic status (SES) were assessed
as necessary control variables for the study. Socio-economic status will be operationalized as the estimated total family income provided by the participant as well as the years of formal education.

**Dyadic Adjustment Scale.** The Spanier Dyadic Adjustment Scale (DAS; Spanier, 1976) was included in the interview as a measure of marital satisfaction. Slight modifications were necessary to make it more appropriate for administration during a telephone interview (see Appendix 1). The modifications included minor rewording of several questions and a change in the scale options from a six option scale of *always agree* to *always disagree* in the original to a five point scale from *never disagree* to *always disagree* in the current version. This range (from 1 to 5) was used for all items. This scale alteration was made so that the DAS response scale would be consistent with the majority of other Likert scales used in the interview. Three items were also dropped. These included two out of the three items concerning recreation and leisure. In addition, an item regarding the future of the relationship, which used a complex, six part response format, was dropped. These items were not included to reduce the overall length of the interview and to avoid confusion due to inconsistencies in scale formats.

The final score on the DAS was represented by the mean of the items. Cronbach alpha for the scale showed high internal consistency ($\alpha = .91$). This is comparable to the reported reliability coefficient for the original full scale of .96 (Corcoran & Fischer, 1987). The DAS has been shown to correlate with other measures of marital adjustment (Spanier, 1976) and has been used in numerous studies of marital interaction to discriminate between distressed and non-distressed couples (e.g., Camper, Jacobson, Holtzworth-Monroe, & Schmaling, 1988; Long &
Andrews, 1990). The DAS functions to assess both event occurrences and subjective quality of the relationship which have been proposed as necessary to assess the complex nature of marital satisfaction (Fincham & Bradbury, 1990).

**Diary measures**

**Mood.** Negative affect was assessed in the morning and evening by a shortened version of the negative affect scale of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Participants were asked to report around lunch time or mid afternoon: “Circle the number that best describes how much you experienced the following emotions so far today” and just before going to sleep at night: “Circle the number that best describes how much you experienced the following emotions since your last diary entry” for the following adjectives: guilty, nervous, upset, irritable, and afraid. These descriptors include one term for each of the five content categories of the negative affect scale of the PANAS. A 3-point Likert scale was used ranging from 1 (not at all) to 3 (a lot). In the present study, Cronbach alpha for the scale showed adequate internal consistency ($\alpha = .73$). The mean autocorrelation for negative affect was .34 for AM negative affect and .36 for PM negative affect for a one-day lag.

**Daily spousal support and daily spousal strain.** As a general measure of daily perceived spousal support, participants were asked each evening: “Considering the whole day, to what extent did your spouse show affection or support towards you?” In addition, as a general measure of daily spousal strain, they were asked each evening: “Considering the whole day, to what extent did your spouse disappoint or criticize you?” For both items, a 3-point Likert scale was used ranging from 1 (not at
all) to 3 (a lot). In the present study, the mean autocorrelation was .41 for spousal support and .23 for spousal strain for a one-day lag.

**Daily stressors.** The diary included a checklist of problems in daily living. Interpersonal tensions, including tension with spouse, were not included on the checklist (see Appendix 2). This list was a shortened version of a checklist of daily events that has been used in previous research (e.g., Bolger et al., 1989; DeLongis et al., 1988). Participants were asked each evening to indicate the stresses that they had recently experienced: “Check any of the problems listed below that you have had since your last diary entry.” In the present study, the mean autocorrelation was .42 for daily hassles for a one-day lag.

**Methodological issues**

The current study uses a within-person process-oriented model of stress, social support, and social strain. The most common approach in social support research has been to examine the relations between support and well-being across persons. This approach has often used a cross-sectional design and has involved either a single assessment or an aggregate of multiple assessments of support. These studies have found that individuals who have low average levels of support are more likely to have high average levels of distress or poorer health. The present study will use an approach that examines multiple timepoints of daily support. In doing so, the effect of fluctuations in spousal support and spousal strain on well-being within persons over time will be determined. Importantly, both the immediate effects (same day) on well-being as well as the lagged effects (next day) will be explored.
This approach offers many advantages (see Affleck et al., 1999; Tennen & Affleck, 1996, for discussions). First, it allows the measurement of support and strain processes as close as possible to their "real time" occurrence, and thus helps to reduce recall bias and to clarify relationships among these variables and psychological distress (DeLongis, Hemphill, & Lehman, 1992). Further, the measurement of negative affect over time allows participants to act as their own controls and mitigates some forms of confounding. Importantly, this approach has advantages when addressing causal issues. As recommended by certain researchers (e.g., Lazarus & DeLongis, 1983; Tennen, Suls, & Affleck, 1991), the use of multiple timepoints has previously helped address a related causal issue in the study of daily stress and well-being. Using this approach, investigators have demonstrated that shifts in daily stress are associated with shifts in various indicators of well-being (e.g., Affleck et al., 1994; DeLongis et al., 1988), a result that is more persuasive than the aggregated cross-sectional evidence. In addition, multiple measurement allows for analyses where dependent variables have temporal precedence, thus further strengthening causal arguments.

**Multilevel Modelling and daily diary studies.** The analysis of repeated measure daily diaries has been complicated by the inherent dependence between observations within persons found in daily diary data, which violates the assumption of independence of observations required by standard regression techniques. Previous methods of controlling for individual differences when pooling within-persons data have included using individual person vectors in regression analysis (e.g., Cutrona, 1986; Peeters et al., 1995a,b) and using generalized least squares estimates to correct for autocorrelations (e.g., Caspi et al., 1987). The analyses in
the current study follow the recommendations of West and Hepworth (1991), Fabes and Eisenberg (1997), and Affleck et al. (1999) for repeated measures (diary) data. These investigators recommend multilevel modelling because, as will be discussed below, it is uniquely suited to the analysis of diary data. A growing number of studies have now used multilevel analyses of daily diaries and other similar data involving multiple measurements within persons (Almeida & Kessler, 1998; Fabes and Eisenberg, 1997, Feldman et al., 1999; Marco, Neale, Schwarz, Shiffman, & Stone, 1999; Newth, DeLongis, O'Brien, & Capreol, 2000; Nolen-Hoeksema & Davis, 1999; Steiger, Gauvin, Jabalpurwala, Seguin, & Scotland, 1999; van Eck et al., 1998).

This technique offers a number of advantages. First, average within-person relations among the study variables can be calculated, while simultaneously taking into account the influence of between-person differences in these relationships. In other words, multilevel modelling allows for the simultaneous exploration of (a) intra-individual variability in the degree to which individuals vary in their reports of received spousal support and spousal strain from timepoint to timepoint (i.e., the idiographic approach) as well as the (b) inter-individual variability in spousal support and spousal strain from one individual to another (i.e., the nomothetic approach). In addition, this analytic procedure allowed for the examination of relations of spousal support and spousal strain to well-being simultaneously with the influence of individual differences in dyadic adjustment. Thus in the current study, dyadic adjustment was examined as a possible moderator of the relations among spousal support, spousal strain, and well-being. To date there has been a deficiency of research that has simultaneously examined both intra-individual and inter-individual differences in the stress and support process despite calls in the literature for such an approach (Parker & Endler,
1996; Tennen & Affleck, 1996). The most obvious reason for this deficiency has been lack of statistical tools suitable for combining intra-individual and inter-individual data.
Results

Overview

The results are presented in two sections. In the first section, the bivariate analyses among the study variables are presented, along with the means and standard deviations for all the study variables. The second section describes the results of the three-level hierarchical linear modelling analyses (HLM: Bryk & Raudenbush, 1992). This is divided into two steps. The first step examined the relationships of daily spousal support, spousal strain, and hassles to negative affect in same day and next day. Secondly, the role of dyadic adjustment as a moderator of these relationships was examined.

Initial analyses of study variables

The means and standard deviations of the study variables are presented in Table 1. These values represent means of aggregated daily variables (i.e., scores were averaged for each participant over all timepoints).

Bivariate relations among study variables were also examined. The correlations between the aggregated daily variables and dyadic adjustment are presented in Table 2. The pattern of correlations suggests that significant bivariate relations exist among most of these variables. For example, spousal strain and hassles were significantly positively related to negative affect in the morning and night, while dyadic adjustment and spousal support were significantly negatively related. In addition, gender was associated with AM and PM negative affect, with wives evidencing significantly higher negative affect at both times.4 Correlations

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4 Gender was effect coded in this study (females [-1], males [1]), as recommended by Pedhazur (1982) to ease interpretation.
<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level one (time variant variables)</strong>:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spousal support</td>
<td>2.56</td>
<td>.38</td>
</tr>
<tr>
<td>Spousal strain</td>
<td>1.38</td>
<td>.33</td>
</tr>
<tr>
<td>Hassles</td>
<td>0.59</td>
<td>.55</td>
</tr>
<tr>
<td>PM negative affect</td>
<td>1.25</td>
<td>.21</td>
</tr>
<tr>
<td>Next AM negative affect</td>
<td>1.22</td>
<td>.21</td>
</tr>
<tr>
<td><strong>Level two (time invariant variable):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dyadic Adjustment</td>
<td>4.15</td>
<td>.47</td>
</tr>
</tbody>
</table>

Note. N=166, except for spousal support and spousal strain where N=165 due to missing data.

a Daily measures have been aggregated for each participant over all timepoints.
Table 2

Correlations among study variables: aggregated daily variables \(^a\), gender, and dyadic adjustment

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Next AM NA (^b)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. PM NA (^c)</td>
<td>.82***</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Spousal support</td>
<td>-.22**</td>
<td>-.26**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Spousal strain</td>
<td>.36***</td>
<td>.37***</td>
<td>-.47***</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Hassles</td>
<td>.29***</td>
<td>.40***</td>
<td>-.12</td>
<td>.23*</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Gender</td>
<td>-.19*</td>
<td>-.19*</td>
<td>.07</td>
<td>-.12</td>
<td>-.06</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>7. Dyadic adjustment</td>
<td>-.25**</td>
<td>-.24***</td>
<td>.39***</td>
<td>-.36***</td>
<td>-.07</td>
<td>-.003</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. *\(p<.05\), **\(p<.01\), ***\(p<.001\).

\(^a\) Daily variables were aggregated for each participant across all timepoints.

\(^b\) AM negative affect

\(^c\) PM negative affect
between daily variables across all timepoints are presented in Table 3. These correlations revealed significant bivariate relationships. As was predicted, PM negative affect was significantly negatively related to spousal support and positively related to spousal strain and daily hassles. None of the correlations for next day negative affect were significant, although they were in the expected directions. A comparison of these two tables revealed that correlations based on aggregate scores were consistently higher than correlations based on all the timepoints, and suggested that correlations based on the aggregate scores are more reflective of general tendencies or dispositional patterns. This pattern was most evident when comparing the correlation between PM affect and next day AM affect based on the aggregate scores for each participant (.82) and that based on each timepoint (.36).

Three Level Hierarchical Linear Models

A. Level One Modelling (Intra-individual variables). The data were analysed within the framework of hierarchical linear models, where repeated measures from the diary were nested within persons, which in turn were nested within couples. For a detailed discussion of the multilevel models used in the present study, the reader is referred to Appendix 1. At the first level, the daily relationships among the dependent variables and independent variables were examined. These analyses explored individual variability in the effects of the independent variables upon negative affect, looking separately at the association with PM negative affect as well as with next day AM negative affect. In HLM analyses, an individual regression line is essentially computed for each subject, based on the diary (repeated measures) data for that individual. Each regression line has its own intercept and slope coefficients. An intercept is then calculated that represents the grand mean or average of all
Table 3

Correlations among daily variables for each timepoint\(^a\): AM negative affect, PM negative affect, spousal support, spousal strain, and hassles

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Next AM NA(^b)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. PM NA(^c)</td>
<td>.36**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Spousal support</td>
<td>-.12</td>
<td>-.22**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Spousal strain</td>
<td>.09</td>
<td>.34**</td>
<td>-.36**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>5. Hassles</td>
<td>.15</td>
<td>.37**</td>
<td>-.12</td>
<td>.21**</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. *p<.05. ** p<.01, when conservatively assuming that the degrees of freedom equals the number of participants minus two.

\(^a\) Correlations are based upon all timepoints contributed by the 166 participants for the daily variables. The number of available timepoints used to calculate each correlation coefficient ranges from 845 to 1162 due to missing data for certain variables at some of the timepoints.

\(^b\) Next day AM negative affect

\(^c\) Same day PM negative affect
intercepts. Because the study variables have been standardized before entering the HLM analyses, the overall intercept is always expected to be zero. The slope coefficients reported are the mean of slopes of all the participants' regression lines. Due to standardization of the study variables, the slope coefficients (β's) can be interpreted as the additional degree of well-being obtained as a result of the effect of the independent variables, under average levels of any other variables included in the model.

The current study follows suggestions of Snijders and Bosker (1999) regarding the specification and interpretation of within-level or cross-level interactions: a) if a model includes an interaction effect, then the corresponding main effects are included even if the main effects are nonsignificant, b) both variables in an interaction term should have a meaningful zero value, and c) in the presence of an interaction term (XZ), the coefficients of a main effect (X) are to be interpreted as the effect of X for cases with Z=0, while the main effect coefficient of Z is to be interpreted as the effect for Z for cases X=0. As the variables in the current study are standardized, in the presence of an interaction, a coefficient for a main effect for either variable specified in an interaction is interpreted as the effect on well-being under average levels of the other variable specified in the interaction.

Before specifying models testing the research questions, demographic variables (gender, age, years of education, and family income) were added individually to the null model (model predicting daily negative affect with no explanatory variables). Only gender was found to be significantly related to daily negative affect. This is consistent with a large body of literature suggesting that women experience higher levels of psychological distress that men (e.g., Cleary &
Mechanic, 1983). Consistent with recommended multilevel model specification, the insignificant effects were dropped and only gender was retained for future analyses (Bryk & Raudenbush, 1992; Snijders & Bosker, 1999; Kreft & De Leeuw, 1998). The suggestions of these researchers are arguably the most influential ideas to date on model specification.

**Analyses addressing the first set of questions:** Do daily spousal support and spousal strain have independent contributions to concurrent (same day) and lagged (next day) negative affect? In addition, do spousal support and spousal strain interact to predict well-being?

The first model examined the relationship of daily variables: AM negative affect, spousal support and spousal strain and daily hassles to PM negative affect, controlling for gender. These analyses were conducted to test hypotheses regarding the relationship of spousal support and spousal strain to negative affect. First, a model was specified that included spousal support and spousal strain as well as the interaction between them, also controlling for gender, AM mood, and daily hassles (see Table 4). The interaction term was included to test for a synergistic effect between spousal support and spousal strain in the prediction of negative affect. The analysis revealed that the interaction between spousal support and spousal strain was not significantly related to same day PM negative affect ($\beta=-0.03$, t(972)=-1.63, p > .10) (see Table 4, model 1; Figure 1).

\footnote{All HLM models presented were also previously specified with gender modelled separately on spousal support and spousal strain. No cross level interactions were found to be significant, for both same day and next day models. Thus, gender was not a significant moderator of either the relationship of spousal support or spousal strain to negative affect. This result is consistent with epidemiological research that has found that the relationship of support and strain to distress was not significantly different for men and women (Umberson, Chen, House, Hopkins, & Slaten, 1996).}

\footnote{See appendix 3 for discussion of determination of degrees of freedom in hierarchical linear modelling.}
Because the interaction between spousal support and spousal strain was not significant, the model was then refitted without this effect (see Table 4, model 2; Figure 2). This analysis revealed that both spousal support and spousal strain were independently associated with PM negative affect, with spousal support being negatively related and spousal strain being positively related (\(\beta = -0.08, t(973) = -2.98, p < .01\) and \(\beta = 0.21, t(973) = 7.60, p < .001\), respectively). In addition, although both spousal support and spousal strain contributed significantly to PM negative affect, the absolute magnitude of the \(\beta\) for spousal strain was greater than that of spousal support (\(\chi^2(1) = 7.43, p < .01\)). AM negative affect and daily hassles were also significantly positively related to negative affect (\(t(973) = 9.39, p < .001\), \(\beta = .26, t(973) = 9.81, p < .001\), respectively). In addition, women were significantly more likely to be experiencing PM negative affect (\(\beta = -.05, t(973) = -2.03, p < .05\)).

Next the relations among daily measures of spousal support, spousal strain, hassles, AM negative affect and next day AM negative affect were examined (controlling for gender). As was done in the model predicting same day PM negative affect, a model was first fitted including an interaction term between spousal support and spousal strain (see Table 5; Figure 3). Because this term was significant, this model was retained. Previous day spousal support, but not spousal strain, was significantly related to the subsequent AM negative affect (\(\beta = -.08, t(815) = -2.56, p < .05\), \(\beta = -0.004, t(815) = -0.14, p > .36\), respectively). In addition, the magnitude of the effect on next day AM negative affect for spousal support was greater than that of

---

7 When a model was run without spousal support, spousal strain remained a nonsignificant predictor of next day AM negative affect.
### Table 4

**Hierarchical Linear Model (HLM) Analyses: Relations of daily measures of spousal support, spousal strain, and hassles to same day PM negative affect**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>SE</td>
</tr>
<tr>
<td>Gender</td>
<td>-.06*</td>
<td>.03</td>
</tr>
<tr>
<td>AM negative affect</td>
<td>.25***</td>
<td>.03</td>
</tr>
<tr>
<td>Spousal support</td>
<td>-.07*</td>
<td>.03</td>
</tr>
<tr>
<td>Spousal strain</td>
<td>.19***</td>
<td>.03</td>
</tr>
<tr>
<td>Hassles</td>
<td>.26***</td>
<td>.03</td>
</tr>
<tr>
<td>Spousal support x</td>
<td>-.03</td>
<td>.02</td>
</tr>
<tr>
<td>Spousal strain</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p<.05, **p<.01, ***p<.001

* All variables, except gender, have been standardized.
Figure 1.
Diagram of HLM analysis presented in Table 4 (Model 1): Relations of
daily measures of spousal support, spousal strain, and hassles to
same day PM negative affect, including the interaction between
spousal support and spousal strain

LEVEL TWO
(INTER-INIVIDUAL
VARIABLE)

GENDER

LEVEL ONE
(INTRA-INIVIDUAL
VARIABLES)

AM
NEGATIVE AFFECT

-.25

DAILY
SPOUSAL SUPPORT

-.07

DAILY
SPOUSAL STRAIN

.19

DAILY
HASSLES

-.26

PM
NEGATIVE AFFECT

Significant effects

Nonsignificant effects
Figure 2. Diagram of HLM analysis presented in Table 4 (Model 2): Relations of daily measures of spousal support, spousal strain, and hassles to same day PM negative affect, without the interaction between spousal support and spousal strain.
Table 5

Hierarchical Linear Model (HLM) Analysis: Relations of daily measures of spousal support, spousal strain, hassles, and AM negative affect to next day AM negative affect

<table>
<thead>
<tr>
<th>Effect</th>
<th>β</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-.08**</td>
<td>.03</td>
</tr>
<tr>
<td>AM negative affect</td>
<td>.22***</td>
<td>.03</td>
</tr>
<tr>
<td>Spousal support</td>
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<td>.04</td>
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<tr>
<td>Spousal strain</td>
<td>-.005</td>
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</tr>
<tr>
<td>Hassles</td>
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<td>.03</td>
</tr>
<tr>
<td>Spousal support x Spousal strain</td>
<td>.07**</td>
<td>.03</td>
</tr>
</tbody>
</table>

Note. *p<.05, **p<.01, ***p<.001

a All variables, except gender, have been standardized.
Figure 3. Diagram of HLM analysis presented in Table 5: Relations of daily measures of spousal support, spousal strain, and hassles to next day AM negative affect, including the interaction between spousal support and spousal strain.

LEVEL TWO
(INTER-INDIVIDUAL VARIABLE)

LEVEL ONE
(INTRA-INDIVIDUAL VARIABLES)

AM NEGATIVE AFFECT

DAILY SPOUSAL SUPPORT

DAILY SPOUSAL STRAIN

DAILY HASSLES

GENDER

-0.08

-0.22

-0.09

0.01

NEXT DAY AM NEGATIVE AFFECT

Significant effects

Nonsignificant effects
spousal strain \( (\chi^2(1) = 3.98, p<.05) \). In addition, gender and previous morning negative affect were significantly related to next day negative affect \( (\beta=-0.26, t(815)=6.94, p< .001 \) and \( \beta=-0.07, t(815)= -2.04, p<.05 \), respectively). Spousal strain and hassles were not significantly related to negative affect on the next day \( (\beta=0.04, t(815)= 1.17, p>.30) \). The interaction term between spousal support and spousal strain was a significant predictor of next day AM negative affect, \( \beta=0.07, t(815)=2.80, p<.01 \). This result suggested that spousal support and spousal strain provided an important context for the other. The interaction was broken down and plotted using procedures outlined by Aiken and West (1991) (see Figure 4). The relationship of spousal support and spousal strain to next day negative affect in the morning was analyzed using values for each variable corresponding to the mean minus one standard deviation (low), and the mean plus one standard deviation (high). The math computations for determining the appropriate error term to test for the significance of simple slopes have yet to be undertaken, so that the significance of the simple slopes could not be determined (Fabes, personal communication, December 3, 1999; Fabes & Eisenberg, 1997). As can be seen in Figure 4, the presence of spousal strain moderated the relationship of spousal support to negative affect in the next morning such that the association between spousal support and decreased negative affect was attenuated. Thus, spousal support was related to decreased negative affect the next morning primarily under conditions of low spousal strain.
Figure 4.
The relationship between daily spousal support and spousal strain to next day AM negative affect.
Analyses addressing the second set of questions: Do daily hassles have independent contributions to concurrent (same day) and lagged (next day) negative affect? Do spousal support or spousal strain moderate the relations of daily hassles with concurrent (same day) and lagged (next day) negative affect?

The previous analyses (see Table 4 & 5) revealed that, as predicted, daily hassles were a significant predictor of PM negative affect, but not next day AM negative affect. Next, models were specified in order to determine whether spousal support or spousal strain moderated the relationship of hassles and PM negative affect or next day AM negative affect. To answer this question, the effects of spousal support by hassles and spousal strain by hassles were tested separately for both the same day and next day analyses (see Table 6 [Figure 5 & 6]; Table 7 [Figure 7 & 8]). Contrary to expectations, the impact of hassles on same day PM negative affect or next day AM negative affect did not vary as a function of the level of spousal support ($\beta=-0.005$, $t(972)=0.21$, $p>.10$ and $\beta=0.03$, $t(814)=0.89$, $p>.10$, respectively). In addition, the interaction of spousal strain and hassles was not significantly associated with either same day PM negative affect and next day AM negative affect ($\beta=-0.02$, $t(972)=-1.09$, $p>.10$ and $\beta=-0.03$, $t(814)=-0.95$, $p>.10$, respectively). These interaction terms were, therefore, not included in subsequent analyses.

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8 These were modelled separately because of possible issues of multicolinearity (for general discussion on the problems of multicolinearity in multilevel modelling see Kreft and De Leeuw, 1998)
9 For the next day analyses, the spousal support by spousal strain interaction term was retained in the model as it had been found to be a significant predictor of next day AM negative affect. The same pattern of results were found when the interaction term was dropped from the model.
Table 6

Hierarchical Linear Model (HLM) Analyses: Relations of daily measures of spousal, spousal strain, hassles, AM negative affect and the interaction between support or strain and hassles to same day PM negative affect

<table>
<thead>
<tr>
<th>Effect</th>
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<th>Model 2</th>
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<td>Spousal support</td>
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<td>.03</td>
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<td>Hassles</td>
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<td>Spousal strain x Hassles</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p<.05, **p<.01, ***p<.001

a All variables, except gender, have been standardized.
Figure 5.
Diagram of HLM analysis presented in Table 6 (Model 1): Relations of daily measures of spousal support, spousal strain, and hassles to same day PM negative affect, including the interaction between spousal support and hassles.
Figure 6. Diagram of HLM analysis presented in Table 6 (Model 2): Relations of daily measures of spousal support, spousal strain, and hassles to same day PM negative affect, including the interaction between spousal strain and hassles.
Table 7

**Hierarchical Linear Model (HLM) Analyses: Relations of daily measures of spousal support, spousal strain, hassles, AM negative and the interaction between support or strain with hassles to next day AM negative affect**

<table>
<thead>
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<th>Effect</th>
<th>Model 1</th>
<th>Model 2</th>
<th></th>
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<td>.03</td>
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<td>.03</td>
<td>.22***</td>
<td>.03</td>
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<td>Spousal support</td>
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<td>.04</td>
<td>-.09*</td>
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<tr>
<td>Spousal strain</td>
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<tr>
<td>Hassles</td>
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<td>.03</td>
<td>.05</td>
<td>.03</td>
</tr>
<tr>
<td>Spousal support x</td>
<td>.07*</td>
<td>.03</td>
<td>.07*</td>
<td>.03</td>
</tr>
<tr>
<td>Spousal strain</td>
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<td></td>
</tr>
<tr>
<td>Spousal support x Hassles</td>
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<td>.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spousal strain x Hassles</td>
<td>-.03</td>
<td>.03</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *$p$<.05, **$p$<.01, ***$p$<.001

*a* Variables, except gender, have been standardized.
Figure 7.
Diagram of HLM analysis presented in Table 7 (Model 1): Relations of daily measures of spousal support, spousal strain, and hassles to next day AM negative affect, including the interaction between spousal support and hassles.

LEVEL TWO
(INTER-INDIVIDUAL VARIABLE)

LEVEL ONE
(INTRA-INDIVIDUAL VARIABLES)

GENDER

-0.08

AM NEGATIVE AFFECT

DAILY SPOUSAL SUPPORT

DAILY SPOUSAL STRAIN

DAILY HASSLES

NEXT DAY AM NEGATIVE AFFECT

-0.22

-0.09

0.97

Significant effects

Nonsignificant effects
Figure 8. Diagram of HLM analysis presented in Table 7 (Model 2): Relations of daily measures of spousal support, spousal strain, and hassles to next day AM negative affect, including the interaction between spousal strain and hassles.

LEVEL TWO (INTER-INDIVIDUAL VARIABLE)

LEVEL ONE (INTRA-INDIVIDUAL VARIABLES)

- AM NEGATIVE AFFECT
- DAILY SPOUSAL SUPPORT
- DAILY SPOUSAL STRAIN
- DAILY HASSLES

箭头表示显著效应，虚线表示非显著效应。

significant effects
nonsignificant effects
B. Level Two Modelling (Inter-individual variable)

Analyses addressing the third set of questions: Do dyadic adjustment and daily spousal support and spousal strain have independent contributions to same day PM negative affect or next day AM negative affect? Does marital adjustment moderate the relations between spousal support and spousal strain on same day and next day negative affect?

In order to test whether dyadic adjustment moderated the relations between spousal support and spousal strain to same day PM negative affect, cross-level interactions were tested separately (see Table 8; Figure 9 & 10). Dyadic adjustment was found to significantly moderate the relationships between both spousal support and spousal strain on same day PM negative affect ($\beta = .05, t (971) = 2.03, p < .05$ and $\beta = -.05, t (971) = -2.06, p < .05$, respectively). Dyadic adjustment was not found to have a main effect on negative affect in either model ($\beta = -.053, t (971) = -1.40, p > .10$ and $\beta = -.056, t (971) = -1.48, p > .10$, respectively).

Similar to the within-level interaction, the cross-level interactions were broken down and plotted using procedures outlined by Aiken and West (1991). As can be seen in Figure 11, the overall quality of the marriage influenced the relationship between spousal support and negative affect such that the association between low spousal support and increased negative affect was attenuated in participants who perceived their marriages to be well adjusted. Thus, low spousal support was related to increased negative affect primarily in participants who perceived their marriages to be less well adjusted. Under conditions of high daily spousal support, negative affect

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10 These were modelled separately because of possible issues of multicolinearity.
<table>
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<td>-.06</td>
<td>.04</td>
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<tr>
<td>AM negative affect</td>
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<td>.03</td>
<td>.24***</td>
<td>.03</td>
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<td>-.07**</td>
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<td>.19***</td>
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<td>Hassles</td>
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<td></td>
</tr>
<tr>
<td>Dyadic adjustment ×</td>
<td>-.05*</td>
<td>.02</td>
<td></td>
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</tr>
<tr>
<td>Spousal strain</td>
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</tbody>
</table>

Note. *p<.05, **p<.01, ***p<.001

Variables, except gender, have been standardized.
Figure 9.
Diagram of HLM analysis presented in Table 8 (Model 1): Relations of dyadic adjustment and daily measures of spousal support, spousal strain, and hassles to same day AM negative affect, including the interaction between dyadic adjustment and spousal support.
Figure 10. Diagram of HLM analysis presented in Table 8 (Model 2): Relations of dyadic adjustment and daily measures of spousal support, spousal strain, and hassles to same day AM negative affect, including the interaction between dyadic adjustment and spousal strain.
Figure 11.
The role of dyadic adjustment (dyadj) in the relationship between daily spousal support and PM negative affect.
Figure 12.
The role of dyadic adjustment (dyadj) in the relationship between daily spousal strain and PM negative affect.
was relatively low regardless of perceived level of dyadic adjustment. As can be seen in Figure 12, overall quality of the relationship also influenced the relationship between spousal strain and PM negative affect. In particular, the pattern suggested that the association of high spousal strain and increased negative affect was reduced in participants who perceived their marriages to be well adjusted.

Next, a model was specified to test whether dyadic adjustment moderated the relationships between spousal support and spousal strain with next day AM negative affect (see Table 9, Figures 13, 14 & 15). Contrary to expectations, the cross-level interactions of dyadic adjustment and spousal support and spousal strain were not found to be significant predictors of next day AM negative affect ($\beta=-.006, t(813)=-.017, p>.10$ and $\beta=.03, t(813)=0.87, p>.10$, respectively). The model was then respecified without the cross-level interaction terms to provide the estimates of the main effects. As predicted, these analyses revealed a main effect for dyadic adjustment on next day AM negative affect ($\beta=-.11, t(814)=-2.36, p<.05$). In addition, there were significant effects for gender and previous AM negative affect ($\beta=-.08, t(814)=-2.61, p<.01$, $\beta=.21, t(814)=6.16, p<.001$). Spousal support and the cross-level interaction between spousal support and spousal strain were significantly related to next day AM negative affect ($\beta=-.08, t(814)=-2.31, p<.05$ and $\beta=.07, t(814)=2.68, p<.01$, respectively). Spousal strain and daily hassles during the previous day did not predict the next day's AM negative affect ($\beta=-0.01, t(814)=-0.30, p>.10$ and $\beta=0.04, t(814)=1.24, p>.10$, respectively).

11 The same pattern of results was found when the interaction of spousal support by spousal strain was dropped from the models.
### Table 9

Hierarchical Linear Model (HLM) Analyses: Relations of dyadic adjustment and daily measures of spousal support, spousal strain, hassles, and AM negative affect to next day AM negative affect

<table>
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<th>Model 3</th>
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<td>-.08**</td>
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<td>-.11*</td>
</tr>
<tr>
<td>AM negative affect</td>
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<td>.21***</td>
<td>.21***</td>
</tr>
<tr>
<td>Spousal support</td>
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<td>-.08*</td>
<td>-.08*</td>
</tr>
<tr>
<td>Spousal strain</td>
<td>-.01</td>
<td>-.006</td>
<td>-.01</td>
</tr>
<tr>
<td>Hassles</td>
<td>.04</td>
<td>.03</td>
<td>.04</td>
</tr>
<tr>
<td>Spousal support X Spousal strain</td>
<td>.07*</td>
<td>.08**</td>
<td>.07**</td>
</tr>
<tr>
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<tr>
<td>Dyadic adjustment x Spousal strain</td>
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<td>.03</td>
<td></td>
</tr>
</tbody>
</table>

Note. *p<.05, **p<.01, ***p<.001  
A All variables, except gender, have been standardized.
Figure 13.
Diagram of HLM analysis presented in Table 9 (Model 1): Relations of dyadic adjustment and daily measures of spousal support, spousal strain and hassles to next day AM negative affect, including the interaction between dyadic adjustment and spousal support.
Figure 14.
Diagram of HLM analysis presented in Table 9 (Model 2): Relations of dyadic adjustment and daily measures of spousal support, spousal strain, and hassles to next day AM negative affect, including the interaction between dyadic adjustment and spousal strain.

LEVEL TWO
(INTER-INDIVIDUAL VARIABLES)

LEVEL ONE
(INTRA-INDIVIDUAL VARIABLES)

- .11
- .08

- .22
- .09
- .07

AM NEGATIVE AFFECT
DAILY SPOUSAL SUPPORT
DAILY SPOUSAL STRAIN
DAILY HASSLES

NEXT DAY AM NEGATIVE AFFECT

Significant effects
Nonsignificant effects
Figure 15.
Diagram of HLM analysis presented in Table 9 (Model 3): Relations of dyadic adjustment and daily measures of spousal support, spousal strain, and hassles to next day AM negative affect
Summary of results

As predicted, both spousal support and spousal strain were found to have independent contributions to negative affect on the same day. Specifically, spousal support was a significant predictor of decreased negative affect, while spousal strain was a significant predictor of increased negative affect. Follow-up comparisons of the magnitude of these effects revealed the impact of social strain was greater than spousal support. There was no evidence, however, of a synergistic effect of spousal support and spousal strain in the prediction of concurrent well-being. Although perceived dyadic adjustment was not associated directly with concurrent negative affect, it was found to moderate the relationship between both spousal support and spousal strain with negative affect. Specifically, the association between lack of spousal support and increased same day negative affect was attenuated in participants who perceived their marriages to be well-functioning. The association between spousal strain and increased concurrent negative affect was also mitigated by high perceived dyadic adjustment. Although hassles did not interact with spousal support or spousal strain to predict negative affect on the same day, there was a significant direct association between hassles and concurrent mood.

In contrast, when examining lagged effects onto the next day's morning negative affect, a different pattern was found. Consistent with expectations, spousal support was a significant predictor of negative affect the next morning. In addition, although spousal strain was not a direct predictor of negative affect the next morning, there was a synergistic effect of spousal strain and spousal support. The results indicate that critical or disappointing interactions with one's spouse on the previous day mitigated the positive benefits of spousal support on a participant's mood the
next day. There was no evidence of significant relations between hassles and negative affect across days. Although there was no evidence of lagged interactions between dyadic adjustment and spousal support or spousal strain, dyadic adjustment was a significant direct predictor of negative next day mood.
Discussion

The current study explores the manner in which the naturally occurring “ups and downs” of spousal relationships can influence well-being. Discussion of the findings from the current study will begin with examination of the within day and across day relationships among spousal support, spousal strain, and negative affect among husbands and wives living in stepfamilies. Secondly, the potential moderators of the relationships of spousal support and spousal strain to negative affect will be examined. The proximal relationship context of the co-occurrence of spousal support and spousal strain as well as the more distal relationship context of the perceived marital quality will be considered. Next, the situational context of the co-occurrence of daily stressors will be considered. Finally, the strengths and weaknesses of the current study and implications for future research will be discussed.

Spousal support and spousal strain

In the current study, daily spousal support and spousal strain have independent, but opposing, relationships to negative affect on the same day. Spousal support is associated with significant decreases in negative affect across the same day, while spousal strain is related to significant increases in negative affect. Although, to the author’s knowledge, spousal support and spousal strain have not been examined together using a within-subject daily repeated measures design, these findings are consistent with daily diary studies that have separately examined the associations of daily social support (Cutrona, 1986; Peeters et al., 1995a) and daily social strain (Bolger et al., 1989; Stader & Hokanson, 1998) with well-being. It should be noted that these latter studies utilized measures of support and strain
aggregated over an individual's social network (average amount of support or strain from social network members), and therefore do not address the role of social strain or social support within a specific social relationship as in the current study. As a number of researchers have argued (e.g., Major et al., 1997; Schuster et al., 1990), the relations among support, strain, and well-being may be dependent on whether these variables are examined within a single close relationship or aggregated across different social network members.

In addition, the concurrent examination of both social support and social strain within the current study allows for comparison of the magnitude of the effects associated with these variables. In the present study, spousal strain has a significantly stronger association with concurrent negative affect than spousal support. This finding is consistent with the majority of cross-sectional studies that have compared social support and social strain, both when looking at measures aggregated over the network (e.g., Barrera, 1981; Beach et al., 1993; De Ruiter et al., 1993; Finch et al., 1989; Finch & Zautra, 1992; Fiore et al., 1983; Ingersoll-Dayton et al., 1997; Kiecolt-Glaser et al., 1988; Lepore, 1992; Manne et al., 1997; Rhodes et al., 1994; Rook, 1984; Ruehlman & Wolchik, 1988) or within a specific relationship (e.g., Abbey et al., 1985; Clark & Stephens, 1996; Golding & Burman, 1990; Manne & Zautra, 1989; Manne et al., 1997; Okun & Keith, 1998; Schuster et al., 1990).

The finding in the current study concerning the relationship of daily spousal support and spousal strain with negative affect across days presents a very different picture than with negative affect on the same day. Spousal support, but not spousal strain, is a significant predictor of negative affect across days. Unlike the current study, prior research has not simultaneously examined the relationship of daily
fluctuations in social support and social strain with well-being across days. Daily fluctuations in social support, however, have been found to have a lagged effect on mood across days when examined separately (Feldman et al., 1999; see however, Cutrona, 1986). In addition, longitudinal studies have found that individual differences in general levels of social support have a beneficial impact on well-being over time in models that have included only social support (e.g., Holahan et al., 1995; Norris & Murrell, 1990), although the findings for a long term beneficial impact for social support has been more inconsistent when social strain is also included as a predictor of well-being over time (e.g., Vinokur et al., 1996; see however, Major et al., 1997).

Consistent with the current study, daily social strain has not been found to have lagged negative effects on mood for nonclinical samples in daily studies of interpersonal stress (e.g., Bolger et al., 1989; Stader & Hokanson, 1998). In contrast, individual differences in overall levels of social strain are usually related to increased psychological distress over time (e.g., Major et al., 1997; Finch, 1998). However, one study actually found that perceptions of spousal strain was related to decreased distress over time (Vinokur & van Ryn, 1993).

Recently, there has been interest in considering the immediate versus lagged impact of social support and social strain (Rook, 1997). Overall, there is a substantial evidence that negative events produce more immediate intense reactions and result in a stronger effect on concurrent psychological distress than do positive events (see Taylor, 1991, for a review). Thus, the findings of the current study in which spousal strain has a stronger relationship to concurrent negative affect than does spousal support is consistent with this more general research on positive and negative
events. Different hypotheses have been put forth to explain this phenomenon. For instance, it has been proposed that negative events have a potent impact on well-being because they are usually much less common than positive events, and therefore could be more salient (Fiske, 1980). Certainly, this was found in the current study where spousal support was more common than spousal strain, and is consistent with many other studies of support and strain when looking across a social network (e.g., Rook, 1984; Pagel et al., 1987) or within a close relationship (e.g., Manne & Zautra, 1989; Manne et al., 1997; Major et al., 1997; Schuster et al., 1990). In further support for the argument that the saliency of negative events mediates their potent impact, Pagel et al. (1987) found that the impact of upsetting interactions with social network members can be heightened in networks that are usually characterized by supportive exchanges. However, as will be discussed in more detail below, the pattern of relations among spousal support, spousal strain, and overall quality of the marital relationship in the current study do not support the argument that the potent impact of negative interactions is due to increased saliency. If this had been so, one would expect the association of spousal strain and well-being to be the strongest in relationships characterized by better adjustment, but the opposite was actually found.

Alternatively, it has been proposed that human beings may have an innate predisposition to be more vigilant to negative experiences because they represent potential threats or risks to well-being (Kanouse & Hasn, 1972; Berscheid, 1983; Rook & Pietromonaco, 1987). Another theory suggested that the differential impact of positive and negative social events on immediate mood might be due to attributional ambiguities associated with positive social exchanges (Rook &
Pietromonaco, 1987; Suls, 1982). That is to say people may be quick to infer malicious intent to the negative actions of others, but less rapid in inferring good intentions for positive actions because they are normative (Suls, 1982). In fact, there is some evidence that people incur more errors when construing the motivations behind other people’s positive behaviour towards them than other's negative behaviour (Noller, 1987). If people doubt the true intentions of others and are thus unable to take other’s positive behaviour towards them at face value, it is understandable how this may decrease the beneficial impact of positive events on well-being.

In comparison to the associations with concurrent negative affect, there is a different pattern in the relations of spousal support and spousal strain to well-being across days. This finding is consistent with several theoretical perspectives that address the impact over time of the more general categories of positive and negative events (Taylor, 1991; Thoits, 1995). Taylor suggested that negative events may have a larger yet more time limited impact on well-being than positive events. She hypothesized that the rapid, strong emotional reactions brought about by negative events could instigate countering processes in individuals. Thus, the negative emotional reaction might dissipate rapidly over time. Similarly, Thoits described individuals not as passive reactors to external events, but as active psychological agents, who will be motivated to counter strong negative psychological states. Recently, researchers have demonstrated in laboratory studies that adverse emotional conditions in individuals can elicit mood regulation strategies aimed at repairing or extinguishing adverse mood states strategies (e.g., Forgas, 1991; Erber & Erber, 1994; see Forgas, Johnson & Ciarrochi, 1998, for a review).
In contrast to the processes invoked by negative events, Taylor (1991) proposed that the milder reactions of positive events would not necessarily trigger compensatory reactions so that their impact, although smaller, might linger longer than negative events. This is consistent with Sedikides (1994) who found in a laboratory mood induction study that mood repair was only triggered when a sufficiently adverse mood was obtained. There is further evidence that mood regulation strategies can also function to maintain a desirable mood (Erber & Erber, 1994).

Particularly relevant to the current study, Rook (1997) argued that Taylor's (1991) proposals concerning the immediate versus lagged impact of positive and negative events may be pertinent to the understanding of social support and social strain processes as they unfold over time. Certainly, the theories of Taylor and others regarding the regulation of moods over time are compatible with the patterns among social strain, social support, and negative affect found in the current study in the day to day life of individuals. As Forgas et al. (1998) underscore, mood management is not an extraordinary process in response to extreme conditions, but rather a part of the automatic cognitive strategies employed by people in their daily living to calibrate, maintain, or suppress various low level mood states. Therefore, it is possible that in the current study, the effects of social support linger and effects of social strain extinguish due to routine daily mood regulation processes.

Contextual influences on support and strain processes

Proximal interpersonal context. Researchers have proposed that supportive and problematic marital interactions may interact to predict well-being (Coyne & DeLongis, 1986; Cutrona, 1986; Fisher et al., 1982; Major et al., 1997; Horwitz et al.,
For example, Cutrona (1996) suggests that neither supportive nor negative spousal behaviour can be adequately understood in isolation, as each sets the emotional stage for the other. In the current study, although spousal support and spousal strain do not interact to predict current day mood, they do interact to predict next day negative affect. This synergistic effect suggests that when daily supportive and negative spousal interactions co-occur, the presence of conflict interferes with the positive impact of spousal support on mood as time unfolds.

Prior empirical evidence for an interaction between support and strain in the prediction of well-being has been inconsistent. Although a synergistic effect between support and strain within a specific relationship has sometimes been found in the prediction of concurrent well-being in a small number of studies (Abbey et al., 1985; Horwitz et al., 1997; Okun & Keith, 1998), other studies have not found evidence of an effect (Davis et al., 1991; Manne et al., 1997; Schuster et al., 1990). A single study was identified that considered a possible interaction between social support and social strain within specific close relationships and well-being over time. Consistent with the current study, Major and her colleagues (1997) examined women's psychological adjustment after an abortion and found that perceptions of conflict within their relationships with their mother or a friend interfered with the beneficial impact of perceptions of support from these sources. However, there was no evidence of an interaction between support and conflict from spouses, where conflict, but not support, was significantly related to increased distress after the operation. Taken together with the current study, such findings suggest that there
may be highly context specific relations among social support, social strain, and
health outcomes.

The pattern of the interaction between spousal support and spousal strain is
also consistent with proposals in the literature that episodes of conflict in a
relationship may change the interpersonal context in which subsequent social
support is received, so that helping transactions may be less likely to be perceived as
genuine and nontthreatening (see Coyne & DeLongis, 1986; Cutrona, 1986; Fisher et
al., 1982; Holmes & Murray, 1996, for discussions). For example, Holmes and
Murray (1996) described what they call a "contamination process", in which conflict
creates shifts in the interpretation of subsequent behaviour, so partners’ behaviour
will be construed in the context of the individual’s increasingly suspicious framing of
the situation (i.e., ‘once hurt, twice shy’). The impact of positive behaviour may
therefore be attenuated if an individual is primed to be distrustful of the intent of the
spouse’s apparent supportive behaviour. Evidence reviewed earlier regarding
potential misconstrual of the intent of positive behaviour (Noller, 1987) is consistent
with this argument.

Nevertheless, these theoretical perspectives are not able to account for the
finding that conflict was found to interfere only with the prediction of negative affect
across days, but not on the same day. That is, the existing proposals on the
synergistic effect of support and strain within a relationship do not differentiate
between immediate versus lagged effects. Perhaps a background of conflict does
not interfere with the initial decrease in negative affect that results from support, but
attenuates the ability to maintain this effect. In other words, the demands created to
regulate the immediate negative impact of the strain interfere with the processes that
would otherwise have acted to maintain the positive impact of the support. Another possibility is that the attributional shift to a cautious style described above is not an immediate process, but one that unfolds over time (e.g., during post-event processing). In this way, perhaps when remembering and processing the previous day's events, the juxtaposition of strain and support from one's spouse does not leave one with unambiguous interpretations that your spouse was being supportive. Therefore, although the social strain reported by participants in the current study did not have a significant direct effect across days, it may have led to a lingering suspicious cognitive set. This may have hindered the formation of unambiguous positive attributions for the partner's previous day's supportive behaviour, thus explaining the significant interaction between support and strain. Further support for this interpretation lie in findings that negative events can trigger a shift to looking for attributions for spousal behaviours (Holtzworth-Munroe & Jacobson, 1985) and that positive social behaviour, in particular, may be vulnerable to misconstrual (Noller, 1987).

Further examination of the pattern of the interaction between spousal support and spousal strain reveals the initially surprising result that participants reporting low spousal support together with low spousal strain from the previous day are especially vulnerable to negative affect. This finding may be driven by spouses who are isolated and not interconnected within the spousal relationship, a status which is known to have negative impact on well-being (House, Umberson, et al., 1988). It has been speculated previously that marital relationships in which there is a low provision of support as well as a low level of negative behaviour, may be indicative of relationships characterized by neglect and apathy preceding separation and divorce
(Vinokur and van Ryn, 1993). In addition, there is recent speculation in the literature that marital conflict may have beneficial influences over time in a marriage (see Holmes & Murray, 1996; Fincham & Beach, 1999; O'Leary & Smith, 1991, for reviews). Empirical evidence is inconsistent, but some studies have found that although marital conflict has strong associations with concurrent relationship dissatisfaction, it is sometimes related to increased satisfaction over time (e.g., Gottman & Krokoff, 1989; Markman, 1991). Also, as mentioned previously, Vinokur and van Ryn (1993) have found that spousal strain was related to increased well-being over time. Holmes and Murray (1996) speculate that there may be a balance between avoiding conflict in an effort to keep the peace and engaging in necessary conflict, which can act to facilitate or trigger resolution of important issues. In the current study, perhaps the association of increased negative affect across days with low spousal support and low spousal strain is a marker of the potential costs of avoiding conflict and the resultant short-term distress.

**Distal interpersonal context.** In the previous section, the potential of supportive and negative spousal interactions to influence the impact of the each other was discussed. In other words, each of these marital processes can be thought of as providing a proximal interpersonal context for the other. Similarly, it is possible that the perceived quality of a marriage can be thought of as a more stable, distal interpersonal context for supportive and negative spousal exchanges. In the current study, dyadic adjustment moderates the relationship between both spousal support and spousal strain with same day negative affect, but not the associations between spousal support and spousal strain with next day negative affect. The relations between lack of spousal support or presence of spousal strain and increased distress
was attenuated in participants who perceived their marriages to be better adjusted. Similarly, the association of spousal strain and negative affect was moderated by increased dyadic adjustment. In other words, individuals in marriages characterized by higher dyadic adjustment were seemingly partially buffered from the immediate negative effects due to lack of support or problematic interactions with their spouses.

Although the present study is the first to examine marital quality as a moderator of spousal support and strain, the current findings are consistent with previous research. Other studies have not compared between-subject differences in quality of the same type of relationship (e.g., role of differences in perceived dyadic adjustment in married individuals as done in the current study), but some studies have found a differential impact of social strain among different types of relationships (i.e., spouses versus friends) (e.g., Bolger et al., 1989). For example, Bolger et al. (1989) found that arguments were less distressing if they occurred with a close loved one than with someone less known. The researchers proposed that negative behaviour within a relationship usually characterized by basic trust and caring may have been appraised as less likely to pose a serious threat.

The synergistic effects of relationship quality with both social support and social strain are consistent with suppositions put forth in the literature. For example, social support researchers have suggested that the effect of social support and social strain processes may depend on the nature or characteristics of the relationship in which they occur (Bolger et al., 1989; Cutrona, 1996; Sarason et al., 1992, 1994a,b; Schuster et al., 1990). To illustrate, Cutrona (1996) argued that well functioning couples have a number of skills that help them negotiate conflict in their relationships. Similarly, Jacobson and Margolin (1979) contended that happier couples have more
effective communication and better problem solving skills than their unhappy counterparts. Schuster et al. (1990) also suggested that negative social interactions might be perceived as less serious when they occur in the context of a supportive relationship. In addition to these ideas, the meaning of negative events may differ between individuals in happy and unhappy marriages. Even relatively minor negative events may be given special significance in those individuals in unhappier marriages if they are perceived to be symbolic of larger problems in the relationship.

In their work observing marital interactions during discussion tasks in the laboratory, Gottman and his colleagues have found that overall marital satisfaction moderated the impact of positive and negative marital interactions on daily ratings of relationship satisfaction (Gottman, 1998, for a review). A number of mechanisms have been proposed as explanations of this phenomenon. Notably, although these arguments have been put forward to explain the manner in which overall marital quality can moderate the impact of proximal marital interactions on daily marital satisfaction, these same processes may help explain the relations of marital interactions and negative affect in the current study.

For instance, Gottman et al. (1976) suggested a bank account model of relationships in which 'deposits' in the relationship are seen as accruing from positive acts in the past. Happy couples, therefore, may build up a high enough balance, so that they can afford the occasional negative 'withdrawal'. Weiss (1980) introduced a related concept, "sentiment override". He proposed that happy couples may build up positive experiences with their spouse and develop what he called positive sentiment override. This positive mindset or sentiment can override the specifics of a situation, so that the deleterious consequences of specific negative marital interactions on
relationship satisfaction can be mitigated within the context of a usually positive relationship. In the same manner, the building up of negative experiences can create a negative sentiment override or negative mindset.

A related line of reasoning provides indirect support for these theories. Several studies have found that satisfied couples tend to offer more benign attributions for negative marital events, thus attenuating their impact on ongoing relationship satisfaction (e.g., Baucom et al., 1989; Holtzworth-Monroe & Jacobson, 1985; see Bradbury & Fincham, 1990; Epstein & Baucom, 1993; Holmes & Murray, 1996; Weiss & Heyman, 1990, for reviews). In this light, more satisfied spouses may be more likely to lessen the consequences of occasional negative behaviour of their spouse by taking their partner’s needs or motivations into account or by providing a benign attribution for their spouse’s behaviour. Gottman (1998) also suggested that overall marital quality may influence the success or failure of the repair process after negative interactions. Lorber (1997; unpublished manuscript cited in Carrere & Gottman, 1999) has found that spouses who demonstrated a positive sentiment or positive mindset about their partners were more successful in relationship repair processes after laboratory conflict interaction tasks. Taken together, these ideas and findings offer a number of explanations of how marital quality indirectly attenuates negative affect. Similar mechanisms may account for relationship quality being an important moderator of the impact of spousal support and spousal strain on the negative affect during that day.

Consistent with predictions, dyadic adjustment is a significant predictor of negative affect across days in this study. In contrast, dyadic adjustment did not have a main effect, despite its interactive effect with spousal strain or support, for the
prediction of same day negative affect. This discovery is somewhat surprising given that marital quality has been consistently found to be related to well-being (e.g., Sandberg & Harper, 1999; Gove et al., 1983; see Beach & Fincham, 1998, for a review). For example, Fincham et al. (1995) found that marital satisfaction was correlated with concurrent levels of negative affect in married couples in a community sample. However, unlike the current study, the associations between marital quality and psychological functioning have not been examined while concurrently controlling for the effects of the more immediate relationship variables of daily spousal support and spousal strain.

In the present study, dyadic adjustment is, however, a significant predictor of next day mood, when simultaneously controlling for the impact of the prior day's daily spousal interactions. Although not directly comparable to the current study, the following study by Fincham and Linfield (1997) put forward a rationale to explain their results that also may be pertinent to the present findings. Specifically, Fincham and Linfield found that marital quality influenced the retrospective account of behaviour of spouses over the past week, but not of behaviour over an immediately preceding interaction task. Fincham and Linfield speculated that judgements that occur immediately after an interaction are influenced more by bottom-up or data driven processing, referring to the information provided by the immediately preceding marital interactions. Over time, however, they propose that the overall sentiment or global beliefs about the marital relationship begin to increasingly influence judgements. In this way, spouses' judgements of their marital partners begin to progressively reflect concept-driven or top-down processing, such as that provided by the global concepts of general marital quality. This theoretical argument could be extended to help
explain the pattern of results in the current study in which dyadic adjustment is not found to have a main effect on immediate negative affect, but is a significant predictor of negative affect the next morning. The particulars of the recent marital interactions would then primarily influence mood on the same day (bottom-up processing). By the next morning, there may have been a shift in emphasis from marital events the previous day (bottom-up processing) to a more global consideration of relationship factors (top-down or conceptual processing). Consequently, dyadic adjustment would be expected to be more strongly associated with negative affect in models specifying lagged versus immediate effects of the daily relationship variables.

Situational Context. In the current study, the role of daily stressors in the relationship between spousal support and spousal strain was also examined. In contrast to hypotheses, there is no evidence of a synergistic effect of daily spousal support with daily hassles. Although social support has been found to buffer the deleterious impact of stress on well-being (e.g., DeLongis et al., 1988), the empirical evidence has been inconsistent (see Turner, 1999; Veiel, 1992, for reviews). In current conceptualizations, investigators argue that although support can moderate the impact of stress, stress-buffering is only one pathway via which social support is beneficial to well-being (see Barrera, 1988; House, Umberson et al., 1988; Turner, 1999, for discussions). It may be premature to conclude, however, that support is not acting as a buffer of stress among participants in the current study. Although support was not buffering the impact of the daily hassles examined in the study, it may have been operating to moderate the impact of other stressors that were not examined directly.
The possibility of an interaction between social strain and daily stressors was also explored. In the current study, there is no evidence that daily hassles and spousal strain interacted to predict same day or next day negative affect. Although it has been suggested that social strain could accentuate the negative impact of other types of stressors on well-being (e.g., Rhode et al., 1994; Rook, 1990; Shinn et al., 1984), it has been infrequently examined and the findings have been inconsistent (e.g., Ingersoll-Dayton et al., 1997; Kiecolt-Glaser et al., 1988; see however Bolger et al., 1989; Finch et al., 1989; Okun et al., 1990; Vinokur & van Ryn, 1993). For instance, consistent with the current study, Bolger et al. (1989) found no evidence for a synergistic effect for daily interpersonal and non-interpersonal stress on same day and next day psychological distress.

Daily hassles, however, has a strong association with mood on the same day, but an insignificant association with mood the next day in the current study. This finding is consistent with previous research that suggests that although daily stress has a strong immediate influence on well-being, the negative effects of daily stressors do not usually persist beyond the day that they occur (e.g., Affleck et al., 1994; Bolger et al., 1989; DeLongis et al., 1988; Marco & Suls, 1993; Neale et al., 1987; Stone & Neale, 1984). In fact, daily stress is sometimes predictive of small increases in well-being across days (e.g., DeLongis et al., 1988; Bolger et al., 1989).

Taken together with existing empirical evidence, the pattern of results in the current study is consistent with the hypothesis that negative events, such as daily stress, can invoke a strong immediate reaction, but as suggested earlier, may also trigger a compensatory reaction in individuals so that the long-term impact on well-being is tempered (e.g., see Taylor, 1991). In fact, it has been suggested that mood
repair strategies can not only result in reducing adverse affect states, but occasionally can produce positive mood outcomes (see Forgas et al., 1998, for a review), helping to explain some of the findings in the literature.

Limitations of the study

Several limitations of the present study should be noted. First, the methodology relied exclusively on participant's self-reports. Given this, the recollection of previous events could be biased by a number of factors, perhaps most importantly by concurrent mood. Recall over time is known to be vulnerable to recall biases related to current level of depressive symptoms (Bower, 1981). This potential bias may be particularly problematic for the examination of the relations among variables concerning events and affect at the same time point.

However, memory distortion has been found to increase with the length of time over which the participant is asked to recall past events (Hedges, Jandorf, & Stone, 1985; Lewis & Williams, 1989). Therefore, the use of diary methodology can alleviate some of the biases inherent in relying on retrospective self-reports. Structured diary methods, such as those used in the present study, reduce the recall period to hours, rather than the period of weeks or months most typically used in standard survey research methods (see DeLongis et al., 1992, for a discussion). In the current study, participants were asked to recall events over only one day, and therefore this retrospective bias is likely minimized. Further, although negative affect can influence perceptions of interpersonal events, the extent of bias has been found to be associated with the seriousness of the stressor. That is, although we might expect memory distortions to be greatest for the relatively minor, everyday stressors examined in the present study, Forgas (1994) has found that retrospective
contamination is greater when stressors are more serious and participants are more intensely involved in the episode being recalled.

One advantage of using self-report measures is that they facilitate an assessment of unobservable, internal cognitive processes. Both theory and a large volume of empirical research has indicated that it is these internal processes that play a key role in determining the effects of stress, social support and social strain (e.g., Fincham & Bradbury, 1990; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Lazarus & Folkman, 1984). That is, how a person interprets an event or another's actions creates a phenomenological reality for that person.

Despite the importance of examining internal events, it would obviously be informative to augment self-report measures with behavioural observations of couple interactions. The added objective information would allow additional processes to be considered, such as the influence of more objective contextual factors on the perception of support or strain. Laboratory generated observations of couples, however, have their own potential limitations. One such problem is potentially low ecological validity. Researchers cannot be certain that the way in which couples behave when being observed in the laboratory is similar to their behavior in their natural environment. Nevertheless, this could be balanced by the concurrent collection of information on individuals' functioning in their everyday lives, such as that provided by daily diaries. Moreover, diaries can provide an efficient method of studying marital processes over extended periods of time, something not conducive to study by observations within a laboratory setting.

Another caveat of daily diary, or other repeated measure designs, is the potential for reactivity or sensitization effects to occur due to the intensive self-
monitoring inherent to diary methodologies (see DeLongis et al., 1992; Affleck et al., 1999, for discussions). By asking people to complete the structured diaries, individuals may have become aware, or at least focussed more attention, on internal (e.g., mood) and external events (e.g., partner's behaviour). This heightened attention may change the actual processes under study. As Affleck and his colleagues (1999) highlight, self-monitoring is considered a therapeutic technique in some settings. However, some researchers argue that measurement reactivity is not a significant problem in daily reports (e.g., Vuchinich, Tucker, & Harlee, 1988). Further, there is evidence that reactivity effects are minimized when more than one behavior is recorded and when participants have no opportunity to review previous reports (Hayes & Cavior, 1980). As a means of mitigating against these potential problems in the current study, couples were asked to report on a variety of processes, not to discuss their reports with others (including their spouses), and to seal completed pages of their diaries at the end of each day.

Another potential limitation is that no attempt was made in the current study to create a representative sample of remarried couples. This may limit the generalizability of the findings. The study examined relationships within remarried couples living in stepfamilies and the information gained in this context might not generalize to other marriages, or even to other remarried couples. In addition, the sample was predominantly white, Judeo-Christian, and middle to upper middle class. Obviously, the current sample does not accurately reflect the cultural diversity of North American society. The relationships of social support and social strain with well-being among husbands and wives from other cultural backgrounds may be very different. Therefore, there is a need for the findings to be replicated in other
populations. Further, couples in stepfamilies are faced with a number of potential stressors (see Bray & Kelly, 1998; Hobart, 1990; Keshet, 1990, for reviews), many of which are unique to their particular family constellation and not to be found among intact families. Clearly, the findings of this study might not, therefore, generalize to intact families. The particular family context studied in the present study may have contributed to the specific pattern of findings regarding the significant influences of support and strain on well-being, and patterns may differ in persons undergoing different life circumstances.

On the other hand, the findings of this study regarding the effects of stress and support are consistent with those of numerous other studies examining similar processes across a diverse array of age groups, marital and family constellations, and socio-economic and racial groups. And although the evidence suggests that these more distal demographic factors can influence stress and support processes, the basic findings of an interplay among these factors in influencing outcomes has been well replicated across these groups.

Consistent with the findings of other community-based studies of married couples (e.g., Argyle & Furnham, 1983; DeLongis et al., 1988), most participants in the present study reported that their marriages were well adjusted, that their levels of well-being were fairly high, and further, that their levels of satisfaction and adjustment tended to be stable across the time period under study. As a result, the magnitude of the relationships among support, strain, dyadic adjustment, and well-being may have been attenuated by this low variability. It might be expected that studies that include poorer functioning couples might find even stronger relationships among the variables examined here due to a greater variability in marital processes and
adjustment. Thus, the current study may represent a conservative estimate of the relationships among the variables assessed.

On the other hand, the pattern of relations among the study variables may differ qualitatively from clinical samples of maritally distressed couples as well as other couples dealing with particularly severe or chronic marital conflict. Although couples in stepfamilies are known to be at greater risk of dissolution than those in first marriages, the applicability of the current findings to those clinically distressed may be limited. For instance, Jacobson, Waldron, and Moore (1980) found evidence that distressed and nondistressed couples attend to different kinds of spousal behaviour. For distressed couples, negative behaviours were a stronger negative predictor of daily satisfaction with the marital relationship, while among nondistressed couples, positive behaviours were the best predictor of daily satisfaction with the marriage. It would be necessary to examine the relations among spousal support, spousal strain, and well-being in both clinically distressed and non-distressed couples in order to determine if the relations are qualitatively different in these populations.

Another potential limitation of the current study is its reliance on single item measures to assess spousal support and spousal strain. Consistent with a number of other studies of stress and support processes using daily diary methodology (see DeLongis et al, 1992, for a discussion), single items were used in the current study to measure support and strain due to a desire to reduce participant burden. One potential problem in using diary methodology is the increased burden placed on study participants who are asked to complete questionnaires at multiple time-points both within and across-days. In an effort to decrease this burden while still assessing a number of study variables, the number of items used to assess each construct was
reduced over what would typically be used in a design with only one or two time-points.

As a result of using single items, the relative contribution of various dimensions of support and strain could not be examined. In an effort to capture the broad constructs of both support and strain in a parsimonious fashion, two terms were combined in each of the single items (i.e., support was assessed by a single item asking about both affection and support received, and strain was assessed by a single item inquiring about both disappointment with the spouse and criticism from the spouse). This raises concerns about whether there is in fact a single underlying dimension tapped by each item, or whether, in fact, the two parts to each item are tapping two disparate processes that do not hang together. This issue cannot be addressed in the present data given internal reliability cannot be determined for single item scales. However, the terms for support and strain that were combined in the single items in the current study are comparable to those used in multi-item measures of social support (e.g., House & Kahn, 1985) and social strain (e.g., Stader & Hokanson, 1998) that have been found to have acceptable validity and internal reliability. However, it should be noted that to the extent that these issues posed serious problems in the current study, they would most likely have manifested themselves in attenuated effect sizes. Thus, Type II error, but not necessarily Type I error, would have increased. Further, the pattern of findings in the current study are consistent with previous research that have used multi-item measures of support (e.g., Cutrona, 1986) or strain (e.g., Stader & Hokanson, 1998).

Furthermore, a lack of power in the current study may have resulted in Type II errors. Unfortunately, hierarchical linear modelling is a relatively novel statistical
technique and little is known to date about power issues. Of special concern are the interaction effects tested in the current study (see Cohen & Wills, 1985, for a discussion), as these are particularly vulnerable to power problems and as a result are more subject to Type II errors. Thus, we must be especially careful in drawing conclusions regarding null effects found in the present study.

As a final point, findings of nonexperimental studies such as the current study must always be interpreted with caution when inferring causality. This is especially a concern with the cross-sectional same day relationships presented here. However, the across days effects have the benefit of temporal precedence of the independent variables and therefore allow one to begin to address process or causal issues more directly. An obvious third variable that could confound interpretation of the results, participant’s morning negative affect, was included in all models. In addition, the relationship of a limited number of demographic variables to negative affect were examined (i.e., gender, age, and SES). Although consideration of these variables helps in the interpretation of the findings, the obvious limitations of non-experimental methods remain. Specifically, there remains the possibility that some other factor, such as neuroticism, could explain some of the results found.

Future Directions

The limitations of the study notwithstanding, the current study delineates the relationships among social support, social strain, and well-being in intimate relationships. In addition, it raises many issues that would warrant further study, some of which have already been addressed in the previous section.

The present study was designed to examine the associations of positive and negative social interactions with negative affect. Positive affect, however, was not
explored. It has been proposed that support may have a stronger effect on positive
dimensions of well-being than on negative dimensions of well-being (e.g., Major et
al., 1997; Ingersoll-Dayton et al., 1997). In addition, there is recent interest in
considering both positive and negative dimensions of marital quality (e.g., Fincham &
Linfield, 1997; Fincham, Beach & Kemp-Fincham, 1997). The extension of the
current study to incorporate these factors could help construct a more comprehensive
understanding of the influences of support and strain processes.

Social support and social strain can both be considered multidimensional
constructs, and researchers have suggested a number of different dimensions of
support (e.g., Barrera, 1981; House, 1981) and strain (e.g., Rook & Pietromonaco,
1987). A logical extension of the current study would be to delineate the differential
influence of specific dimensions of support or strain. It may increase understanding
to consider possible contextual factors, such as certain types of stressors, which may
have distinct relationships to certain dimensions of support or strain.

The current study examined the role of interpersonal and situational factors in
moderating the influence of spousal support and strain on well-being. Intrapersonal
factors, such as personality, are another potentially important context (Sarason et al.,
1992). The design of the current study would be particularly suited to addressing this
question. For instance, Epstein (1983) argued that multiple time-points may be
necessary for an appropriate test of relations among dispositional variables and
dependent measures. As Epstein points out, individual difference variables assess
dispositional trends, which may not become apparent using one time-point measures
of dependent variables. That is, dispositional tendencies may become apparent only
over several similar situations as they occur over time. The application of HLM to the
analysis of diary data would maximize the likelihood of detecting stable influences of personality on well-being, while allowing for analyses which simultaneously consider the influences of situational variables that change across time.

Finally, an extension of the time frame under examination would allow for a more detailed examination of the process of spousal support and spousal strain over time. In addition, it would have the statistical benefit of providing greater variability so that there would be sufficient data for further explorations of between-person influences on the within-subject relations under study.

In summary, many issues raised in the current study invite further examination. The current study used a within-subject repeated measures design which offered the opportunity for fine-grained analysis of naturally occurring ups and downs in a community sample of remarried spouses. As revealed by the findings, spousal relationships have the potential for providing a complex mixture of uplifting and disappointing experiences, and the relationship of these experiences to well-being appears to vary over time and across couples. These patterns might not have been detected when looking at cross-sectional analyses limited to a single measurement or an aggregation of multiple measurements. Therefore, it is recommended that within-subject repeated measure designs continue to be utilized because of the considerable benefits in the quest to understand the processes in which social bonds may affect well-being over time.


Appendix I

Dyadic adjustment scale

On a scale from 1 to 5, with 1 meaning never disagree and 5 meaning usually disagree, to what extent do you and your (husband/wife) disagree about... READ ISSUES BELOW?

1. Leisure time, interests, and activities
2. Household tasks
3. Friends
4. Conventionality (correct or proper behavior)
5. Religious matters
6. Philosophy of life
7. Aims, goals, and things believed important
8. Ways of dealing with parents or in-laws
9. Career decisions
10. Handling family finances
11. Amount of time spent together
12. The way the two of you make major decisions
13. Demonstrations of affection
14. Sex relations

On a scale from 1 to 5, where 1 means never and 5 means very often, how often/frequently (in the past six months) did/was:

15. You consider: divorce, separation or termination of your relationship
16. You regret that you are married/in this relationship
17. You or your (husband/wife) leave the house after a fight
18. You and your (husband/wife) quarrel
19. You “Get on each other’s nerves”
20. The two of you have a stimulating exchange of ideas
21. You laugh together
22. You calmly discuss something
23. You work together on a project
24. You think that things were going well between the two of you
25. You embrace or kiss each other
26. Being too tired for sex a problem
27. Not showing love a problem

28. On a scale from 1 to 5, where 1 is extremely unhappy and 5 is extremely happy, how happy, all things considered, would you say you are in your relationship?
Appendix II

Daily hassles checklist

Check any of the problems listed below that you have had since your last diary entry.

[ ] A lot of work at home or a lot of family demands
[ ] A lot of demands made by other relatives or friends
[ ] A lot of work at a job outside the home
[ ] Missed/late for an appointment/deadline at job
[ ] Missed/late for some other appointment/deadline
[ ] Financial problem
[ ] Something misplaced/stolen/broken at home
[ ] Something misplaced/stolen/broken at job
[ ] Some other disruption in routine at home
[ ] Some other disruption in routine at work
Appendix III

The data was analysed within the framework of hierarchical linear models, where repeated measures from the diary were nested within persons, which in turn were nested within couples. ¹ ²

The analyses were divided into three sets.

I. Models specified in the first set of analyses:

First, the daily (level one) relationships among the independent variables (daily spousal support, daily spousal strain, daily hassles, same day AM negative affect) and dependent variable (same day PM negative affect) was modelled. Because preliminary analyses had revealed that gender was a significant predictor of negative affect, it was included as a control variable for all the analyses in the study. A model was fitted that included an interaction term between spousal support and spousal strain. This model was specified as follows (see Table 4, model 1, for results of analysis):

Level 1: \[ Y_{(PM \text{ Negative affect})_{ijk}} = \beta_{0jik} + \beta_{1jik}(AM \text{ negative affect})_{ijk} + \beta_{2jik}(Spousal \text{ support})_{ijk} + \beta_{3jik}(Spousal \text{ strain})_{ijk} + \beta_{4jik}(Hassles)_{ijk} + \beta_{5jik}(Product \text{ of spousal support and spousal strain}) + e_{ijk} \]

Level 2: \[ \beta_{0jik} = \gamma_{00k} + \gamma_{01k}(Gender) + \xi_{0jk} \]
\[ \beta_{1jik} = \gamma_{10k} \]
\[ \beta_{2jik} = \gamma_{20k} \]
\[ \beta_{3jik} = \gamma_{30k} \]
\[ \beta_{4jik} = \gamma_{40k} \]
\[ \beta_{5jik} = \gamma_{50k} \]

Level 3:
\[ \gamma_{00k} = \theta_{000} + u_{00k} \]
\[ \gamma_{10k} = \theta_{100} \]
\[ \gamma_{20k} = \theta_{200} \]
\[ \gamma_{30k} = \theta_{300} \]
\[ \gamma_{40k} = \theta_{400} \]
\[ \gamma_{50k} = \theta_{500} \]

This model shows the relationships among the daily variables on the \( j \)th day by person \( j \) in couple \( k \). At the person level, only gender was entered as a predictor of the level one intercept (i.e., \( \beta_{0jik} = \gamma_{00k} + \gamma_{01k}(Gender) + \xi_{0jk} \)). Thus, the variance

¹ In preparation for hypothesis testing, null models were run for all study variables (i.e., separate models utilizing each variable as a dependent variable, but with no predictors in the models). These analyses revealed that there was significant between-person and between-couple variability for all the variables. Thus, these analyses validated the utility of using a multi-level design for the analysis of the data.
² A three level hierarchical model is considered a valid statistical technique to control for the inherent dependency among multiple observations of individuals in couples (R.T. Brennan, personal communication, September 13, 1999; A. Marchant, personal communication, September 14, 1999).
attributable to differences between individuals were partitioned at the second level as follows: where $\beta_{0jk}$ is the intercept 1 which represents the mean for each participant which equals $\gamma_{00k}$ (also equals the mean for couple $k$ plus random error) plus the effect for gender of the participant plus random error effect for each individual. At the couple levels, no predictor variables were modelled, and the variance attributable to differences between couples was partitioned at the third level as follows: $\gamma_{00k} = \theta_{000} + u_{00k}$, where $\gamma_{00k}$ is the mean for couple $k$ and is equal to the grand mean plus random error effect for each couple.

The degrees of freedom for the effects of each model are dependent on the manner in which the models are specified. All the models in the current study have specified random errors terms for the intercepts at all three levels, but no other random error terms are specified. Thus, the degrees of freedom for effects of variables modelled onto intercepts (e.g., gender, main effect of dyadic adjustment), is the number of level 3 units minus the number of theta’s ($\theta$) associated with the effect. The degrees of freedom for all other effects are the number of level one units (total number of observations) minus the number of fixed effects in the model.

As the interaction between spousal support by spousal support interaction was not a significant predictor of the same day PM negative affect, the model was then refitted without the interaction term and specified as follows (see Table 4, model 2, for results of analysis):

**Level 1:**

$Y(\text{PM Negative affect})_{ijk} = \beta_{0ijk} + \beta_{1ijk}(\text{AM negative affect})_{ijk} + \beta_{2ijk}(\text{Spousal support})_{ijk} + \beta_{3ijk}(\text{Spousal strain})_{ijk} + \beta_{4ijk}(\text{Hassles})_{ijk} + e_{ijk}$

**Level 2:**

$\beta_{0ijk} = \gamma_{00k} + \gamma_{01k}(\text{Gender}) + r_{0jk}$
$\beta_{1ijk} = \gamma_{10k}$
$\beta_{2ijk} = \gamma_{20k}$
$\beta_{3ijk} = \gamma_{30k}$
$\beta_{4ijk} = \gamma_{40k}$

**Level 3:**

$\gamma_{00k} = \theta_{000} + u_{00k}$
$\gamma_{10k} = \theta_{100}$
$\gamma_{20k} = \theta_{200}$
$\gamma_{30k} = \theta_{300}$
$\gamma_{40k} = \theta_{400}$

The effects for the remaining predictors were fixed (i.e., no random error term specified) as the data was considered insufficient for these additional parameters to be estimated. This was evidenced by the extremely large number of iterations needed for the estimation algorithm to converge in models where these additional parameters were estimated (see Kreft & de Leeuw, 1997, for discussion regarding over specification of parameters in multilevel modelling).

Because a listwise deletion was chosen, only participants who had values for every variable in the equation, for at least one day, were used in each analysis.

Formulae for determination of degrees of freedom were supplied by Richard Congdon, one of the developers of the HLM statistical program (personal communication, February 4, 2000).
The last model in the first set of analyses examined the relations among spousal support, spousal strain, hassles, same day AM negative affect, and next day AM negative affect. Again, the model was first fitted with an interaction term between spousal support and spousal strain. Because this was found significant, the model was retained for the testing of hypotheses regarding spousal support, spousal strain, and next day AM negative affect. The modelled was specified as follows (see Table 5, for results of analysis):

**Level 1:**
\[
Y_{(next\ day\ AM\ Negative\ affect)} = \beta_{0i} + \beta_{1i}(AM\ negative\ affect) + \beta_{2i}(Spousal\ support) + \beta_{3i}(Spousal\ strain) + \beta_{4i}(Hassles) + \beta_{5i}(Product\ of\ spousal\ support\ and\ spousal\ strain) + e_{ijk}
\]

**Level 2:**
\[
\beta_{0i} = \gamma_{00i} + \gamma_{01i}(Gender) + r_{0i}
\beta_{1i} = \gamma_{10i}
\beta_{2i} = \gamma_{20i}
\beta_{3i} = \gamma_{30i}
\beta_{4i} = \gamma_{40i}
\beta_{5i} = \gamma_{50i}
\]

**Level 3:**
\[
\gamma_{00i} = \theta_{000} + \mu_{00i}
\gamma_{10i} = \theta_{100}
\gamma_{20i} = \theta_{200}
\gamma_{30i} = \theta_{300}
\gamma_{40i} = \theta_{400}
\gamma_{50i} = \theta_{500}
\]

II. **Models specified in the second set of analyses:**

The second set of analyses involved adding to the previously tested level one models potential interactions between daily spousal support or daily spousal strain and daily hassles and the associations with negative affect. The interactions were modelled separately to minimize potential multicolinearity that could mask possible relationships (see Kreft & De Leeuw, 1998, for discussion of multicolinearity problems in HLM). The models were specified as follows (see Table 6, model 1, and Table 6, Model 2, for results of analyses):
Table 6 (model 1):

**Level 1:** \[ Y(PM \text{ Negative affect})_{ijk} = \beta_{0ijk} + \beta_{1ijk}(AM \text{ negative affect})_{ijk} + \beta_{2ijk}(\text{Spousal support})_{ijk} + \beta_{3ijk}(\text{Spousal strain})_{ijk} + \beta_{4ijk}(\text{Hassles})_{ijk} + \beta_{5ijk}(\text{Product of spousal support and hassles})_{ijk} + \epsilon_{ijk} \]

**Level 2:**
- \[ \beta_{0ijk} = \gamma_{00k} + \gamma_{01k}(\text{Gender}) + \iota_{0ijk} \]
- \[ \beta_{1ijk} = \gamma_{10k} \]
- \[ \beta_{2ijk} = \gamma_{20k} \]
- \[ \beta_{3ijk} = \gamma_{30k} \]
- \[ \beta_{4ijk} = \gamma_{40k} \]
- \[ \beta_{5ijk} = \gamma_{50k} \]

**Level 3:**
- \[ \gamma_{00k} = \theta_{000} + \mu_{00k} \]
- \[ \gamma_{10k} = \theta_{100} \]
- \[ \gamma_{20k} = \theta_{200} \]
- \[ \gamma_{30k} = \theta_{300} \]
- \[ \gamma_{40k} = \theta_{400} \]
- \[ \gamma_{50k} = \theta_{500} \]

Table 6 (model 2):

**Level 1:** \[ Y(PM \text{ Negative affect})_{ijk} = \beta_{0ijk} + \beta_{1ijk}(AM \text{ negative affect})_{ijk} + \beta_{2ijk}(\text{Spousal support})_{ijk} + \beta_{3ijk}(\text{Spousal strain})_{ijk} + \beta_{4ijk}(\text{Hassles})_{ijk} + \beta_{5ijk}(\text{Product of spousal strain and hassles})_{ijk} + \epsilon_{ijk} \]

**Level 2:**
- \[ \beta_{0ijk} = \gamma_{00k} + \gamma_{01k}(\text{Gender}) + \iota_{0ijk} \]
- \[ \beta_{1ijk} = \gamma_{10k} \]
- \[ \beta_{2ijk} = \gamma_{20k} \]
- \[ \beta_{3ijk} = \gamma_{30k} \]
- \[ \beta_{4ijk} = \gamma_{40k} \]
- \[ \beta_{5ijk} = \gamma_{50k} \]

**Level 3:**
- \[ \gamma_{00k} = \theta_{000} + \mu_{00k} \]
- \[ \gamma_{10k} = \theta_{100} \]
- \[ \gamma_{20k} = \theta_{200} \]
- \[ \gamma_{30k} = \theta_{300} \]
- \[ \gamma_{40k} = \theta_{400} \]
- \[ \gamma_{50k} = \theta_{500} \]

To test whether hassles interacted with spousal support or spousal strain to predict next day AM negative affect, these effects were modeled separately. The models were specified as follows (see Table 7, model 1 & 2, for results of analyses):
Table 7 (model 1):

**Level 1:**  
\[ Y_{i,k} = \beta_{0i,k} + \beta_{1i,k}(AM negative affect)_{i,k} + \beta_{2i,k}(Spousal support)_{i,k} + \beta_{3i,k}(Spousal strain)_{i,k} + \beta_{4i,k}(Hassles)_{i,k} + \beta_{5i,k}(Product of spousal support and spousal strain)_{i,k} + \beta_{6i,k}(Product of spousal support and hassles)_{i,k} + e_{i,k} \]

**Level 2:**  
\[ \beta_{0i,k} = \gamma_{00k} + \gamma_{01k}(Gender) + \gamma_{02k} \]  
\[ \beta_{1i,k} = \gamma_{10k} \]  
\[ \beta_{2i,k} = \gamma_{20k} \]  
\[ \beta_{3i,k} = \gamma_{30k} \]  
\[ \beta_{4i,k} = \gamma_{40k} \]  
\[ \beta_{5i,k} = \gamma_{50k} \]  
\[ \beta_{6i,k} = \gamma_{60k} \]

**Level 3:**  
\[ \gamma_{00k} = \theta_{000} + \mu_{00k} \]  
\[ \gamma_{10k} = \theta_{100} \]  
\[ \gamma_{20k} = \theta_{200} \]  
\[ \gamma_{30k} = \theta_{300} \]  
\[ \gamma_{40k} = \theta_{400} \]  
\[ \gamma_{50k} = \theta_{500} \]  
\[ \gamma_{60k} = \theta_{600} \]

Table 7 (model 2):

**Level 1:**  
\[ Y_{i,k} = \beta_{0i,k} + \beta_{1i,k}(AM negative affect)_{i,k} + \beta_{2i,k}(Spousal support)_{i,k} + \beta_{3i,k}(Spousal strain)_{i,k} + \beta_{4i,k}(Hassles)_{i,k} + \beta_{5i,k}(Product of spousal support and spousal strain)_{i,k} + \beta_{6i,k}(Product of spousal strain and hassles)_{i,k} + e_{i,k} \]

**Level 2:**  
\[ \beta_{0i,k} = \gamma_{00k} + \gamma_{01k}(Gender) + \gamma_{02k} \]  
\[ \beta_{1i,k} = \gamma_{10k} \]  
\[ \beta_{2i,k} = \gamma_{20k} \]  
\[ \beta_{3i,k} = \gamma_{30k} \]  
\[ \beta_{4i,k} = \gamma_{40k} \]  
\[ \beta_{5i,k} = \gamma_{50k} \]  
\[ \beta_{6i,k} = \gamma_{60k} \]

**Level 3:**  
\[ \gamma_{00k} = \theta_{000} + \mu_{00k} \]  
\[ \gamma_{10k} = \theta_{100} \]  
\[ \gamma_{20k} = \theta_{200} \]  
\[ \gamma_{30k} = \theta_{300} \]  
\[ \gamma_{40k} = \theta_{400} \]  
\[ \gamma_{50k} = \theta_{500} \]  
\[ \gamma_{60k} = \theta_{600} \]
Models specified for the third set of analyses.

The third set of analyses involved the modelling of the level two variable, dyadic adjustment. In order to test whether dyadic adjustment moderated the relations between spousal support and spousal strain to same day PM negative affect, cross-level interactions between support or strain and dyadic adjustment were modelled separately. The models were specified as follows (see Table 8, Model 1 & Model 2, for results of analyses):

Table 8, Model 1

Level 1:  \[ Y_{ijk} = \beta_{0ijk} + \beta_{1ijk}(AM\ negative\ affect)_{ijk} + \beta_{2ijk}(Spousal\ support)_{ijk} + \beta_{3ijk}(Spousal\ strain)_{ijk} + \beta_{4ijk}(Hassles)_{ijk} + e_{ijk} \]

Level 2:  \[ \beta_{0ijk} = \gamma_{00k} + \gamma_{01k}(Gender) + \gamma_{02k}(Dyadic\ adjustment) + \epsilon_{0ijk} \]
\[ \beta_{1ijk} = \gamma_{10k} \]
\[ \beta_{2ijk} = \gamma_{20k} + \gamma_{21k}(Dyadic\ adjustment) \]
\[ \beta_{3ijk} = \gamma_{30k} \]
\[ \beta_{4ijk} = \gamma_{40k} \]

Level 3:  \[ \gamma_{00k} = \theta_{000} + \mu_{00k} \]
\[ \gamma_{02k} = \theta_{020} \]
\[ \gamma_{10k} = \theta_{100} \]
\[ \gamma_{20k} = \theta_{200} \]
\[ \gamma_{21k} = \theta_{210} \]
\[ \gamma_{30k} = \theta_{300} \]
\[ \gamma_{40k} = \theta_{400} \]

Table 8, Model 2

Level 1:  \[ Y_{ijk} = \beta_{0ijk} + \beta_{1ijk}(AM\ negative\ affect)_{ijk} + \beta_{2ijk}(Spousal\ support)_{ijk} + \beta_{3ijk}(Spousal\ strain)_{ijk} + \beta_{4ijk}(Hassles)_{ijk} + e_{ijk} \]

Level 2:  \[ \beta_{0ijk} = \gamma_{00k} + \gamma_{01k}(Gender) + \gamma_{02k}(Dyadic\ adjustment) + \epsilon_{0ijk} \]
\[ \beta_{1ijk} = \gamma_{10k} \]
\[ \beta_{2ijk} = \gamma_{20k} \]
\[ \beta_{3ijk} = \gamma_{30k} + \gamma_{31k}(Dyadic\ adjustment) \]
\[ \beta_{4ijk} = \gamma_{40k} \]

Level 3:  \[ \gamma_{00k} = \theta_{000} + \mu_{00k} \]
\[ \gamma_{02k} = \theta_{020} \]
\[ \gamma_{10k} = \theta_{100} \]
\[ \gamma_{20k} = \theta_{200} \]
\[ \gamma_{30k} = \theta_{300} \]
\[ \gamma_{31k} = \theta_{210} \]
\[ \gamma_{40k} = \theta_{400} \]
Next, a model was specified to test whether dyadic adjustment moderated the relations between spousal support or spousal strain and next day AM negative affect. When neither of these interactions were significant, the model was re-specified without either interaction term included. The models were specified as follows (see Table 9, model 1, model 2 & model 3, for results of analyses):

Table 9, model 1

**Level 1:**
\[ Y(\text{next day AM negative affect})_{ijk} = \beta_{0ijk} + \beta_{1ijk}(AM \text{ negative affect})_{ijk} + \beta_{2ijk}(Spousal \text{ support}_{ijk} + \beta_{3ijk}(Spousal \text{ strain})_{ijk} + \beta_{4ijk}(Hassles)_{ijk} + \beta_{5ijk} (\text{Product of spousal support and spousal strain}) + \epsilon_{ijk} \]

**Level 2:**
\[ \beta_{0ijk} = \gamma_{00k} + \gamma_{01k}(\text{Gender}) + \gamma_{02k}(\text{Dyadic adjustment}) + \tau_{00k} \]
\[ \beta_{1ijk} = \gamma_{10k} \]
\[ \beta_{2ijk} = \gamma_{20k} + \gamma_{21k}(\text{Dyadic adjustment}) \]
\[ \beta_{3ijk} = \gamma_{30k} \]
\[ \beta_{4ijk} = \gamma_{40k} \]
\[ \beta_{5ijk} = \gamma_{50k} \]

**Level 3:**
\[ \gamma_{00k} = \theta_{000} + \mu_{00k} \]
\[ \gamma_{02k} = \theta_{020} \]
\[ \gamma_{10k} = \theta_{100} \]
\[ \gamma_{20k} = \theta_{200} \]
\[ \gamma_{21k} = \theta_{210} \]
\[ \gamma_{30k} = \theta_{300} \]
\[ \gamma_{40k} = \theta_{400} \]
\[ \gamma_{50k} = \theta_{500} \]

Table 9, model 2

**Level 1:**
\[ Y(\text{next day AM negative affect})_{ijk} = \beta_{0ijk} + \beta_{1ijk}(AM \text{ negative affect})_{ijk} + \beta_{2ijk}(Spousal \text{ support}_{ijk} + \beta_{3ijk}(Spousal \text{ strain})_{ijk} + \beta_{4ijk}(Hassles)_{ijk} + \beta_{5ijk} (\text{Product of spousal support and spousal strain}) + \epsilon_{ijk} \]

**Level 2:**
\[ \beta_{0ijk} = \gamma_{00k} + \gamma_{01k}(\text{Gender}) + \gamma_{02k}(\text{Dyadic adjustment}) + \tau_{00k} \]
\[ \beta_{1ijk} = \gamma_{10k} \]
\[ \beta_{2ijk} = \gamma_{20k} \]
\[ \beta_{3ijk} = \gamma_{30k} + \gamma_{31k}(\text{Dyadic adjustment}) \]
\[ \beta_{4ijk} = \gamma_{40k} \]
\[ \beta_{5ijk} = \gamma_{50k} \]

**Level 3:**
\[ \gamma_{00k} = \theta_{000} + \mu_{00k} \]
\[ \gamma_{02k} = \theta_{020} \]
\[ \gamma_{10k} = \theta_{100} \]
\[ \gamma_{20k} = \theta_{200} \]
\[ \gamma_{30k} = \theta_{300} \]
\[ \gamma_{31k} = \theta_{310} \]
\[ \gamma_{40k} = \theta_{400} \]
\[ \gamma_{50k} = \theta_{500} \]

Table 9, model 3

**Level 1:**
\[ \gamma(\text{next day AM negative affect})_{ik} = \beta_{0ik} + \beta_{1ik}(AM \text{ negative affect})_{ik} + \beta_{2ik}(Spousal support)_{ik} + \beta_{3ik}(Spousal strain)_{ik} + \beta_{4ik}(Hassles)_{ik} + \beta_{5ik} \]
(\text{Product of spousal support and spousal strain}) + \epsilon_{ijk} \]

**Level 2:**
\[ \beta_{0ik} = \gamma_{00k} + \gamma_{01k} \] (Gender) + \[ \gamma_{02k} \] (Dyadic adjustment) + \[ \gamma_{03k} \]
\[ \beta_{1ik} = \gamma_{10k} \]
\[ \beta_{2ik} = \gamma_{20k} \]
\[ \beta_{3ik} = \gamma_{30k} \]
\[ \beta_{4ik} = \gamma_{40k} \]
\[ \beta_{5ik} = \gamma_{50k} \]

**Level 3:**
\[ \gamma_{00k} = \theta_{000} + \mu_{00k} \]
\[ \gamma_{02k} = \theta_{020} \]
\[ \gamma_{10k} = \theta_{100} \]
\[ \gamma_{20k} = \theta_{200} \]
\[ \gamma_{30k} = \theta_{300} \]
\[ \gamma_{40k} = \theta_{400} \]
\[ \gamma_{50k} = \theta_{500} \]