The role of stress on close relationships and marital satisfaction

Randall, A K; Bodenmann, G
The Role of Stress on Close Relationships and Marital Satisfaction

Ashley K. Randall, Guy Bodenmann

PII: S0272-7358(08)00140-2
Reference: CPR 950

To appear in: Clinical Psychology Review

Received date: 31 January 2008
Revised date: 28 October 2008
Accepted date: 30 October 2008


This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.
The Role of Stress on Close Relationships and Marital Satisfaction

Ashley K. Randall

Institute for Family Research and Counseling
University of Fribourg, Switzerland

Guy Bodenmann

Institute for Family Research and Counseling
University of Fribourg, Switzerland

Please address correspondence concerning this article to Ashley K. Randall, M.S. (akrandal@emil.arizona.edu) at the present address: University of Arizona, Family Studies and Human Development, Norton School of Consumer Sciences, Tucson/AZ 85721-0033. Guy Bodenmann, Ph.D. (guy.bodenmann@psychologie.uzh.ch) at the present address: University of Zurich, Binzmühlestrasse 14/23, 8050 Zürich/Switzerland.
Abstract

Stress is a concept that has received increased attention in marital research during the last decade, showing that it plays an important role in understanding the quality and stability of close relationships. Evidence suggests that stress is a threat to marital satisfaction and its longevity. Research has been based upon theoretical models of stress in close relationships, specifically family stress models (e.g., Hill, 1958; McCubbin & Patterson, 1983) and couple’s stress model’s proposed by Karney, Story, & Bradbury (2005) and Bodenmann (1995, 2005). In this review we: (1) examine the various theoretical models of stress, (2) analyze and summarize the typologies relating to stress models (internal versus external, major versus minor, acute versus chronic), and (3) summarize findings from stress research in couples that has practical significance and may inspire clinical work. Future directions in research and clinical significance are suggested.

Keywords: Stress, critical life events, daily hassles, distress, marital satisfaction.
The Role of Stress on Close Relationships and Marital Satisfaction

In the last decade stress research in couples has received increased attention. While this topic had already been of interest in the early 1930’s, in the context of economic depression and war (e.g., Angell, 1936; Cavan & Ranck, 1938; Komarovsky, 1940; Koos, 1946), in following years it was further developed by a small group of researchers (e.g., Burr, 1973; Burr & Klein, 1994; McCubbin & Patterson, 1983). Interestingly, individual stress theories, such as the influential transactional stress theory by Lazarus (1966), did not have a significant influence on stress theories. An increased attention for the theme was, however, observed again in the last fifteen years. The beginnings of stress research in couples focused on major stressors (i.e., critical life events), whereas modern stress research in couples more often considers both major stressors as well as minor stressors.

But what exactly is stress? The phenomenon stress has been defined in three different ways: (1) stress as a stimulus (critical life events) that triggers psychological or physical stress reactions, such as anxiety or cardio-vascular problems (e.g., Dohrenwend & Dohrenwend, 1974), (2) stress as a specific psychological and physical reaction to acute or enduring demands (e.g., Selye, 1974) or (3) stress as a process between a person and their environment (transactional stress approach; Lazarus & Folkman, 1984). Among these three, the reaction-oriented and the transactional stress approaches have been the most influential.

Selye’s General Adaptation Syndrome (GAS) has been widely used to explain the bodily reaction to stressful situations in three phases: the alarm phase, resistance phase, and the exhaustion phase. In the alarm phase, resistance to physical damage decreases in order to prepare the body to cope with stressors. This causes blood pressure to increase, blood-sugar to rise, muscle tension to increase, and breathing to become faster and deeper. If the stressor is not
longer present after this phase, the body returns to homeostasis. However, if the stressor persists, the organism begins to create higher levels of stress hormones (resistance phase). This allows the body to cope with the stressor, as in the alarm phase but with more intensity, for an infinite period of time until the stressor is removed. In this instance (the exhaustion phase) the level of resistance to physical disorders, diseases, and psychological pressure is at its lowest. Consequently, one’s ability to find coping resources is diminished (Selye, 1976).

The transactional definition of stress and coping (Lazarus & Folkman, 1984) suggests that demands of a situation only become stressful according to the subjective negative appraisals of the person (e.g., appraising the demands of the situation as a threat, loss or damage or evaluating one’s coping responses as insufficient to deal effectively with those demands). This state-oriented conceptualization of stress (i.e., stress as a subjective and situational phenomenon) often is contrasted to more trait-oriented stress and coping concepts, where personal vulnerability plays a more important role. It has been shown that there are biological mechanisms and physiological correlates in the hypothalamus pituitary-adrenal cortex (HPA) axis in the stress response (Tsigos & Chrousos, 2002). These processes help to control physiological reactions to stress and help to regulate the body in digestion, immune system functioning, mood and sexuality, as well as efficient energy use. However, it is beyond the scope of this review to address the psychological and physiological responses of stress in specific situations. Apart from biological or genetic vulnerability to stress (Selye, 1976) there are other identified factors of vulnerability to stress as seen in poor skills (such as coping or problem solving abilities) or personality traits acquired during human socialization and interplaying with genetics (e.g., neuroticism, rigidity, intolerance, or the concept of monitoring or blunting) (Miller, 1981).
Wheaton (1996) proposed to consider the stress process by linking stressors (stimuli) to stress (process) and distress (reaction). Stressors are classically defined by problematic or demanding situations that are perceived as stressful (e.g., harmful, threatening or demanding) by a large number of subjects (e.g., situations with high inter-rater reliability with regard to their negative impact, typically including situations such as the loss of a significant other, severe illness, handicap, unemployment, separation or divorce etc.). Distress, on the other hand, is related to negative individual responses to those problems, in contrast to eustress that Selye, (1974) introduced as the name for positive, challenging stress. Stress refers to the process by which stressors lead to individual stress experience according to Lazarus’ stress theory (Story & Bradbury, 2004). To date, most stress theories deal with individual stress experience. The purpose of this review is to focus on stress from a social or systemic perspective, where the interactive character of stress between system members (e.g., partners) is emphasized. In this approach, it is assumed that there are stressors which are determined by biological, social, cultural, and personal factors which individuals as well as couples encounter. The main focus of this review is on dyadic stress.

**Definition of stress in couples.** For a long time, stressors and stress have been defined on an individual level – as a phenomenon that affects primarily individuals and their well-being (e.g., Lazarus, 1999; Lazarus & Folkman; 1984). A greater focus on aspects of the social environment is provided in the Conservation of Resources (CoR) approach (e.g., Hobfoll, Dunahoo, Ben-Porath, & Monnier, 1994). According to this theory, subjective perceptions of stress are embedded in a social context and effects of individual coping are viewed with regard to their social consequences. Thus, many theorists emphasized stress as an individual phenomenon, although assuming that personal stress has social consequences to be considered (e.g., Lazarus &
Folkman, 1984; Pearlin & Schooler, 1978). Only in recent years, stress in couples was defined as a purely dyadic or social phenomenon following the tradition of Reiss (1981) (e.g., Bodenmann, 1995, 1997, 2005; Lyons, Mickelson, Sullivan, & Coye, 1998). According to this view, dyadic stress represents a distinct form of social stress involving common concerns, emotional intimacy between the partners, and the maintenance of the close relationship.

Bodenmann (2005) defined dyadic stress as a stressful event or encounter that always concerns both partners, either directly when both partners are confronted by the same stressful event or when the stress orginates inside the couple, or indirectly when the stress of one partner spills over to the close relationship and affects both partners. In both cases dyadic stress *elicits* joint appraisals, that is dyadic appraisals in addition to individual appraisals of the stressful situation that enlarge the primary and secondary appraisals in Lazarus’ approach, and joint coping efforts of the couples, or cooperative use of common resources, referred to as dyadic coping (Bodenmann, 2005). Thus, dyadic stress can be classified along three dimensions: (a) the way each partner is affected by the stressful event (i.e., directly or indirectly), (b) the origin of stress (i.e., whether it originates from inside or outside of the couple), and (c) the time sequence (at what moment in the coping process each partner becomes involved). Currently many researchers and theorists agree in that stress in couples is always a dyadic phenomenon that affects both partners in some way (Bodenmann, 2005; Story & Bradbury, 2004; Williams, 1995).

The debate of whether stress in couples remains a purely individual phenomenon, related to subjective appraisals of each partner according to the transactional stress theory by Lazarus (1999), or the theoretical position by Pearlin and Schooler (1978), or whether it is a dyadic phenomenon has gained increased attention in the last years. It is noteworthy that many theorists and researchers, however, have adopted a systemic view of stress assuming that the stress of one
partner always has an impact on the other partner and that the individual stress of one partner impinges on the dyad. This new view of stress has important implications for stress research in couples, the measurement of stress in couples, as well as the statistical treatment of data. Thus, we are convinced that a systemic view and definition of stress in couples (and families) is highly important and promising for a better understanding of how couples perceive stress and ultimately cope with stress that affects the couple’s system, directly or indirectly. This knowledge is particularly useful for prevention and therapy with couples. It allows us to go beyond individual-oriented interventions and methods, such as classical stress trainings for individuals, and to integrate the role of the partner. It also shows how both partners can mutually assist each other in the coping process and how dyadic coping resources in addition to individual coping skills can be enhanced and fostered by professionals. Such programs are highly needed in the professional context (e.g., work-related stress), in couples dealing with chronic illness (e.g., cancer of one partner), and in couples confronted with the psychological troubles (e.g., depression) or dual career couples with high daily workload. But before we divulge into this theme, let us first classify different types of stress in relation to close relationships.

**Typology of stressors**

It may be useful to define different types of stress and to recall dimensions of how stress can be characterised as not all stress has the same impact on couples (and individuals) according to (1) the *locus* of stress (external versus internal stress), (2) the *intensity* of stress (major versus minor stress) and (3) the *duration* of stress (acute versus chronic stress).

*External versus internal.* It makes sense to differentiate between stress that originates inside or outside the couple. Bodenmann (1995, 2005) and Story and Bradbury (2004) have defined external stressors to be those that originate outside of the close relationship. These
mainly include the interplay between partners and their social environment which may indirectly affect the relationship, in that individual stress spills over to the dyad and triggers dyadic stress such as arguments and conflicts. Types of these stressors include: stress at the workplace, financial stress, social stress in the neighborhood, or stress with regard to the extended family including siblings, parents-in-law, and other relatives. Stress related to children is also defined as an external stressor as it is proposed that the stress caused is not inherent to the couple’s themselves (see Bodenmann, Ledermann, Blattner-Bolliger, & Galluzzo, 2006). Contrary, internal stressors are defined by stress that originates within the couple (dyadic). These include conflicts and tensions arising between the partners from expressed different goals, attitudes, needs and desires, habits of one partner that disturb the other, or a lack of compatibility between the partners. Internal stress also includes worries and sorrow about the partner due to his/her well-being (see Bodenmann et al., 2006). For a long time scholars in the field did not carefully differentiate between these two types of stressors. Consequently, significance of outcomes in previous studies on the impact of stress on close relationships were weakened, as often internal stress and external stress were confounded. When an interest in understanding the impact of stress on close relationships exists, there is a need to study both stressors individually and the interplay between the two with regard to their co-variation with relationship functioning. The interaction between the variables is extremely important and has received increased attention in studies where the impact of external stress on internal stress and close relationships were examined (e.g., Bodenmann, Ledermann, & Bradbury, 2007; Repetti, 1989; Story & Repetti, 2006).

Major versus minor. Major stressors are defined as normative and non-normative critical life events, such as severe illness, handicap, unemployment, death of a significant other, or
accidents (e.g., Dohrenwend & Dohrenwend, 1974). Stressful life events sustain physical illness (Cohen, 1979) which only aids in creating and maintain the detriments that stress plays on the close relationship (Caspi, Bolger, & Eckenrode, 1987). For a long time and in the tradition of family stress theories, the impact of major stressors on close relationships (and families) has mainly been studied (e.g., Burr, 1973; Burr & Klein, 1994; McCubbin & Patterson, 1983). However, recent research shows that minor stress seems to play an even more important role in understanding couples functioning.

Minor, or everyday daily stressors, on the other hand, include an array of dimensions, including aspects of family life (in respect to children), conflicts in one’s work setting, and aspects of the physical environment (e.g., neighbors) (Caspi et al., 1987). Minor stressors include irritating, frustrating, and distressing demands that occur in everyday contact with the environment such as being late for an appointment, forgetting a meeting, etc. (Bodenmann et al., 2006; Lazarus & Folkman, 1984).

Acute versus Chronic. The main differentiation between acute versus chronic stressors is the duration of time within which the couples are exposed to the stressor. Acute stressors are temporary and their effects may also be limited to a single instance (e.g., Cohan & Bradbury, 1997). On the other hand, chronic stressors (e.g., Bahr, 1979) are stable aspects of the environment and their effects can be long-lasting (Karney, Story, & Bradbury, 1995).

Scholars in the field also spent more attention on contextual factors that trigger stress in close relationships or spill-over from outside to the close relationship (e.g., Bodenmann et al., 2007; Karney et al., 2005). Such external stressors may originate from stressful experiences at workplace, with neighbors or relatives, low socioeconomic status, and within the cultural milieus (Revenson, Kayser, & Bodenmann, 2005). The interaction between a variety of variables
outside the close relationship and the reaction to these from either partner may often cause stress in the relationship (internal stress) and in turn increase the likelihood of conflicts and poor marital outcomes (Bodenmann et al., 2007; Karney et al., 2005). Understanding the impact of stress on close relationships is highly relevant as relationship quality is one of the best predictor of life satisfaction (Ruvolo, 1998). This understanding may play a causal role in promoting physical health (Burman & Margolin, 1992; Schmaling & Goldman Sher, 2000), emotional well-being and resistance to depression (Tesser & Beach, 1998), as well as performance in the workplace (Renick, Blumberg, & Markman, 1992).

In summary, we are convinced that current stress research in couples needs to consider all three dimensions of stress in order to depict, in a reliable and valid way, the impact that stress has on close relationships. A conceptualization of stress in close relationships considering (a) internal versus external stress, (b) acute versus chronic stress and (c) major versus minor stress goes along with specific demands in measuring stress in couples and in analyzing variables between partners by using the Actor-Partner-Interdependence-Model (e.g., Kenny, 1996; Kenny & Cook, 1999) or in some cases even the Actor-Partner-Mediator-Model (e.g., Campbell, Simpson, Kashy, & Fletcher, 2001; Fletcher & Thomas, 2000; Ledermann & Bodenmann, 2006). Only sophisticated theoretical frameworks and statistics allow to highlight the association between stress and relationship functioning.

Theoretical Models on the Role of Stress in Close Relationships

To date, there has been a plethora of empirical research having shown the influence of stress on distress among couples. This research has been based upon theoretical models of stress in close relationships, specifically family stress models (e.g., Hill, 1958; McCubbin & Patterson,
1983) and couple’s stress model’s proposed by Karney et al., (2005), and Bodenmann (1995; 2005). These theories are briefly summarized.

*Family stress models.* For many years the ABC-X theory, focusing primarily on major stressful life events, dominated the study of stress in couples and families (e.g., Hill, 1958; McCubbin & Patterson, 1983). Hill defined the interacting variables as: *A* (the event and related hardships), which interacts with *B* (the family’s crisis meeting resources), which in turn interacts with *C* (the definition the family makes of the event), which produces *X* (the crisis). There are two parts of this theoretical framework: (1) set of theoretical statements regarding the period of crisis and (2) a set of statements referring to the course of family adjustment (e.g. period of disorganization, an angle of recovery, and new level or organization) (McCubbin, Joy, Cauble, Comeau, Patterson, & Needle, 1980). McCubbin and Patterson redefined Hill’s ABC-X variables to include the classification of variables which occurred following the crisis and the family’s post-crisis adjustment. Subsequently, *aA* examines the complication of stressors within the family as the couple adjusts to divorce (e.g., reorganization of social relationships, financial difficulties), and *bB* includes the personal and family resources available to the divorcee in meeting the demands of the divorce, including any additional stressors that may occur due to the divorce. These demands include but are not limited to flexibility of role taking within the family, change of income, and meeting expressive needs. Next, *cC*’s are factors within the family’s definition of the divorce, which may be defined as a loss or threat to the former spouse’s needs and integrity (McCubbin & Patterson, 1983). Lastly, the *xX* factors involved the attainment of new levels of family functioning in the ABC-X model. The ABC-X theory and the revised, enlarged models of this theory were theoretically highly influential for many years. Although this approach is interesting, there also are several weaknesses of the ABC-X model of family
stress including: (1) only major critical life events are addressed and (2) the model integrates so many variables and processes that it is hardly empirically testable and the high complexity of the model limits its practical usefulness.

**Couples’ stress models.** Karney and Bradbury (1995), in a framework designed to expand beyond the prevailing view that adverse marital outcomes were caused primarily by deficits in problem-solving, hypothesized that marital distress and dissolution emerge from the combination of: (a) enduring vulnerabilities (e.g., problematic personality traits such as neuroticism, turbulent family of origin), (b) stressful events (e.g., major life events, stressful circumstances, normative transitions), and (c) poor adaptive processes (e.g., inability to empathize with and support the partner, defensive, hostile, and disengaged problem-solving skills). Thus, according to this vulnerability-stress-adaptation model, distress and dissolution are most likely to the extent that spouses who enter marriage with a high degree of enduring vulnerabilities marry to form couples that possess poor adaptive processes; subsequently these couples encounter high levels of stress. Marital quality is assumed to fluctuate downward with acute life events, and these fluctuations are expected to be especially large when chronic stress is high (Karney et al., 2005).

The stress-divorce-model proposed by Bodenmann (1995; 2000) and Bodenmann et al. (2007) mainly focuses on the impact of minor (acute or chronic) daily stress on couples functioning (e.g., time spent together, communication, well-being of both partners) and how these mediators co-vary with relationship satisfaction and the likelihood of divorce. This model affords greater specificity about the role of stress processes in marriage than the vulnerability-stress-adaptation model. Bodenmann (2000) and Bodenmann et al. (2007) assume that minor stresses originating outside the relationship and spilling over into marriage are particularly
deleterious for close relationships as these stresses lead to mutual alienation and slowly decrease relationship quality over time. These stresses often lie largely outside of conscious awareness as there are constant minor impacts, rather than a large impact (i.e., a critical life event) that is much easier perceivable.

In detail, Bodenmann’s stress model suggests that external stress affects relationship quality by: (a) decreasing the time that partners spend together, which in turn results in a loss of joint experiences, weakening feelings of togetherness, decreased self-disclosure, and poorer dyadic coping, (b) decreasing the quality of communication by eliciting less positive interaction and more negative interaction and withdrawal, (c) increasing the risk of psychological and physical problems, such as sleep disorders, sexual dysfunction, and mood disturbances, and (d) increasing the likelihood that problematic personality traits will be expressed between partners, as in the form of rigidity, anxiety, and hostility. These processes may result in alienation, in a state of lacking mutual knowledge about each other as both partners develop but do not assist in the development of the other (see Figure 1). The likelihood of divorce increases when partners reveal less about their private lives, their personal needs, and their goals and interests so that they gradually become strangers to each other and/or engage more in dyadic conflict (Bodenmann, 2005). According to this model, deterioration in marital quality is presumed to often be related to chronic everyday stress that is poorly handled.

As it has been shown, the focus between these three stress models in close relationship is different. While the ABC-X-model focuses mainly on major stress, Bodenmann’s model clearly emphasizes minor stress in everyday life. The vulnerability-stress-adaptation model (Karney & Bradbury, 1995) on the other hand is in between, as the focus of this model is less clear and potentially both kinds of stress may be addressed in this model although major life events are
more prominently discussed. A second dimension that has to be considered when discussing stress issues in the context of close relationships is in respect to where the stress originates.

While all three stress models mainly address external stress, Bodenmann’s model is primarily interested in the impact of external stress on internal stress (e.g., less time together, negative communication, poor health outcomes, etc.) that in turn is associated with poorer relationship quality. The third dimension that needs to be addressed in an attempt to understand the impact of stress on relationships (as well as on health issues) refers how long the individual or couple is exposed to the stressor. This dimension of acute or chronic stress is not systematically addressed in the three stress models but gets the most attention in the ABC-X model (McCubbin & McCubbin, 1989) and Burr’s (1973) theory where the impact of stress on the family system and the long-term impact of stress on maladaptation (i.e., disorganization, recovery, reorganization) are explicitly addressed. This long-term impact, however, is also considered in the model by Karney and Bradbury (1995) and Bodenmann (2004) but with regard to divorce and less within a more general optic of adaptation and functioning (e.g., physical and psychological functioning, reorganization of systems). On the other hand, it is not evident whether the stressors addressed in the ABC-X-model are more of acute or chronic nature. Again the same problem is found in the vulnerability-stress-adaptation model. Only in Bodenmann’s model (2004) is there explicit attention on chronic minor stress as it is assumed that the pile-up of daily hassles leads to an overload of individual and dyadic resources.

In sum, the three dimensions of stress in close relationships (internal vs. external; major vs. minor; acute vs. chronic) allow us to classify the main focus of the above mentioned three stress theories in couples (see Table 1) and allow us to determine which model has specific strengths in an attempt to explain the impact of stress on couples. There is not one model
explaining all stress relevant impacts on couples, but each model focuses on specific dimensions of stress and on specific consequences. In the future, it would be recommended to bring the different dimensions together and to propose a stress theory for couples that consider all three dimensions (internal versus external stress, acute versus chronic stress as well as major and minor stress). To date, such a model is lacking, although all three models try to consider the aspect of vulnerability and coping in their stress model.

McCubbin and McCubbin (1989) presented a sophisticated typology of different vulnerable families or couples (e.g., secure families, vulnerable families, resilient families, regenerative families, durable families) and Burr (1973) addressed the notion of family vulnerability and the family’s regenerative capacity as central aspects. Karney and Bradbury’s model (1995) explicitly address personal vulnerability (e.g., neuroticism). This aspect is also discussed in Bodenmann’s model (1995; 2005) where the pile-up of everyday stress is related to the general stress level (e.g., chronic stress) interacting with personality (e.g., neuroticism, personal stress tolerance). Thus all three models postulate that the impact of stress on couples always depends on couples’ vulnerabilities on the one hand and the coping resources on the other hand. However, we agree that further theoretical work is needed where personal vulnerability (of both partners) and couple’s vulnerability is more clearly conceptualized and distinguished. We believe that apart from personal vulnerability also couple’s vulnerability may exist (e.g., traumatic experiences to which the couples was confronted, couple’s negative history, etc.). Another aspect of vulnerability is related to coping.

While the vulnerability stress model (Karney & Bradbury, 1995) refers to coping in the variable adaptional processes, the other two models discuss coping as moderator variables buffering the impact of stress on the couple. Functional coping and problem solving of each
partner as well as of the dyad are seen as important features in the stress process and its impact on the couples functioning and outcome. Although the transactional approach implies that coping reactions differ between types of situations with regard to specific demands, most of current models of coping in couples refer to general couple’s coping and not situation-specific coping. However, as mentioned above, the question of where the stress occurs (within or outside the close relationship) is essential in order to understand stress and coping in couples, as coping reaction (e.g., empathy or supportive dyadic coping towards the partner) differ with regard to the origin of stress. While coping demands of family or couple stress may not differ from coping demands of workplace stress, the way couples handle this stress is different. When a partner is sad because the other partner has not enough time for him/her, dyadic coping may differ from a situation where the partner is sad because he failed at the workplace. While the first situation elicits less empathy and understanding (as one partner is the reason for the other partner’s sadness), it is easier for the partner to understand and support the other in the second situation as the stress originates outside the relationship. Thus, we believe it is not important to distinguish all types of stressful situations (family stress, workplace stress, social stress etc.) but to consider the origin of stress (outside or inside the close relationship).

As several studies have revealed, coping is a key variable in the understanding of stress impact on couples. In addition to individual coping of each partner, dyadic coping (i.e., the way couples cope together with stress) is highly predictive for relationship functioning, the developmental course of close relationships, and stability (e.g., Bodenmann, 2005; Bodenmann et al., 2006).
Thus, we address only the link between external stress and close relationships in this article, as internal stress (i.e., marital conflicts, tensions, and arguments) traditionally have been a main topic in couples’ research (e.g., Gottman, 1994; Weiss & Heyman, 1997).

Empirical Results on the Influence of Stress on Couples

In the following part we are interested in a summary of stress research conducted in couples trying to refer these findings to the above presented stress theories and the taxonomy of stress in couples (see Table 1). These two aspects in mind, we conducted literature search through PsycINFO and the ISI Web of Science Knowledge. We focused on search based on the past 20 years, but as early as the 1980s as marked by the appearance of several articles (Bolger, DeLongis, Kessler, & Wethington, 1989; Whiffen & Gotlib, 1989; Wolf, 1987, among others). The following search terms were used in various combinations: minor stress, daily stress, hassles, major stress, chronic stress, external stress, internal stress, stress, and live events, combined with couple, marriage, or close relationship. Further, more specific searches were conducted to examine the effect of stress on the close relationships.

Articles selected were restricted to (1) empirical studies, (2) mentioning explicitly stress as an issue (not just handicap, death, illness, etc.), and (3) explicitly addressing the couple as a unit and individual differences versus the family as a whole (as this scope would have been too large). Our overview focused on studies that were directly linked to external and internal stressors with specific attention to general and primary views of what causes stress (e.g., work, illness, etc.). We did not include specific and tertiary aspects of stress such as infertility, handicap, chronic pain, dual career, loss of a child, handicap, unemployment, etc. although many of these studies may exist in relation to couples. In depth focus on specific variables to aspects that may induce stress in the relationship were not included because the review would have been
exhaustive. Our purpose was to provide a universal overview to highlight the important role that stress plays in couples. Articles were restricted to those appearing in peer-reviewed journals using adult populations and couples.

As shown in Table 2, two types of studies are represented: (1) studies that investigated the association of major stress events (major stress) such as severe chronic illness (e.g., cancer or congestive heart failure; Schmaling & Goldman Sher, 2000), economic stress (e.g., Bahr, 1979), or life-stage transitions (Coyne & Smith, 1994) on close relationships, and (2) studies that examined the role of everyday stress (minor stress) on marital functioning. While the focus on the type of stress is relatively evident, it is more difficult to find a concise distinction between acute and chronic stress or internal and external stress in most studies. Only a few studies addressed stress issues by considering different dimensions of stress (such as internal/external; acute/chronic, major/minor) and none integrating systematically all of these dimensions.

Results concerning the influence of critical life events (major stress) on relationship quality, however, are surprisingly inconsistent. Studies by Williams (1995) and Bodenmann (2000) report inconsistent relationships between major stress events and marital quality, particularly when internal marital stresses (e.g., severe troubles in the relationship, separation, or divorce) were excluded from critical life events. One possible explanation for these inconsistent effects is that some couples are more vulnerable to stressful events than others due to their inadequate problem solving (e.g., Cohan & Bradbury, 1997) and that couples react with different coping patterns on major life events. While some face life events with an increased cohesion, other become distanced and split apart. Overall, there were more studies that focused on major stressors in the context of relationship as compared to minor stress or daily hassles. Latter type of stress was only addressed in the last decade. An overview of the different study designs reveals
that most of the studies were cross-sectional studies (based on self-report data), a few were longitudinal and only a small number were experimental studies.

Results on the association between minor stress and relationship quality revealed more homogenous and robust findings, showing that there is a clear negative relationship between minor stress and relationship quality (e.g., see for an overview Bodenmann, 2000, 2005; Whiffen & Gotlib, 1989). Within these studies on minor stress, several studies report a spillover of external stress (e.g., from work) on marital communication and quality (e.g., Bodenmann, 2000; Bodenmann et al., 2006; Bodenmann et al., 2007; Bolger et al., 1989; Repetti, 1989, Schulz, Cowan, Cowan, & Brennan, 2004). Although most of these studies were cross-sectional, some used multi-level analyses and addressed mediation processes between external stress, internal stress, and relationship quality (e.g., Bodenmann et al., 2007). In addition, three longitudinal studies were found that examined the association between external stress and relationship functioning and stability. These studies suggest a long-term association between stress and relationship outcomes and illustrate that everyday stress is often also associated with relationship deterioration (e.g., Bodenmann & Cina, 2006; Bodenmann et al., 2007; Karney et al., 2005).

In total, 24 empirical studies highlighted the impacts of stress on marital relationships. All studies were methodologically and statistically sound. Most sample sizes used $N = 60$ couples or more, with the exception of the experimental study conducted by Bodenmann and Perrez (1992) which had a sample size of $N = 22$. This study served as a pilot study for the second experimental stress induction study in Bodenmann’s lab conducted with 72 couples.

As shown in Table 2, 18 of these studies were cross-sectional (e.g., Bodenmann, 2000; Bolger et al., 1989; Neff & Karney, 2004; Repetti & Wood, 1997). There was a total of five studies which used longitudinal data to assess various constructs as economic stress (Bahr,
1979), problem-solving behavior (Cohan & Bradbury, 1997), and the impact of stress on dyadic interaction, relationship satisfaction, and relationship stability (e.g., Bodenmann & Perrez, 1996; Bodenmann, 1997). One study used an experimental design to assess the impact of experimentally-induced stress on dyadic interaction (Bodenmann & Perrez, 1992).

Data in 23 studies were collected from questionnaires and self-report measures (e.g., Bodenmann & Perrez, 1992; Bodenmann et al.; Bolger, Vinokur, Foster, & Ng, 1996; Hagedoorn, Kuijer, Wobbes, & Sanderman, 2000; Schulz et al., 2004; Whiffen & Gotlib, 1989). One study was completed with longitudinal data taken from the National Longitudinal Survey of Labor Market Experience (Bahr, 1979). Five studies were based on behavioral observation (e.g., Bodenmann, 1997, 2000; Bodenmann, Perrez & Gottman, 1996; Cohan & Bradbury, 1997; Repetti & Wood, 1997). Several studies used a cross-sectional study and diaries to examine the relationship between work and stress in the home (e.g., Story & Repetti, 2006; Saxbe, Repetti, & Nishina, 2008).

Primary issues addressed in our analysis were related to daily life issues. Fourteen studies (e.g., Bodenmann, 2000; Cohan & Bradbury, 1997; Harper, Schaalje, & Sandberg, 2000; Wolf, 1987) examined how daily stress or intrapersonal interactions affect marital satisfaction. Four of the studies examined how health-related issues, such as cancer (e.g., Bolger et al., 1996; Hagedoorn et al., 2000; Hoekstra-Weebers, Jaspers, Kamps, & Klip, 1998), congestive heart failure (e.g., Rohrbaugh, Shoham, Cranford, Nicklas, Sonnega, & Coyne, 2002), and increased cortisol levels (Saxbe, Repetti, & Nishina, 2008) were related to couple’s stress. Consistent finding on negative correlations between marital satisfaction and stressors were reported in six other studies (e.g., Bolger et al., 1989; Grzywacz, Almeida, & McDonald, 2002; Repetti &
Wood, 1997; Schulz et al., 2004; Story & Repetti 2006), suggesting that more negatively arousing workdays were linked with negative marital behavior and emotions.

Whiffen and Gotlib (1989) examined the adjustment during pregnancy and postpartum period and found that when husbands exhibited marital distress, both partners reported more depressive symptoms, life stress, and more maladaptive coping. When wives were distressed, effects were only seen for their functioning. Bahr (1979) examined how economic stress affected relationships and found that individuals receiving welfare (e.g., AFDC, food stamps, or other government assistance) ended their marriages more frequently then those not receiving any government help. Two studies conducted by Bodenmann and colleagues examined the role that stress plays on relationship satisfaction, sexual activity, and sexual problems. Findings on stress and sexuality suggested that internal daily stress and in some cases critical life events rather than external daily stress were related to sexual problems (Bodenmann et al., 2006). Sexual activity was governed by daily hassles and problems experienced within the dyad (internal stress) that was in turn related to external stress (Bodenmann et al., 2007).

Discussion

Stress plays an increasingly important and harmful role in modern societies. For this reason, stress research has received increased attention and recently stress research in couples has gained more attention which is reflected in a growing number of theoretical contributions and empirical studies on this issue. Greater research attention is now being given to the role of stress on private lives in general and couples in particular (e.g., Bodenmann, 1995, 2000; Neff & Karney, 2004; Repetti, 1989; Story & Bradbury, 2004). Several more recently published theories (e.g., Bodenmann, 2005; Karney & Bradbury, 1995) assume that the role of stress can be detrimental to the functioning and longevity of close relationships. Three main models on the
role of stress in close relationships were discussed in this paper: the family stress model (McCubbin & Patterson, 1983), the vulnerability-stress-adaptation model (Karney & Bradbury, 1995) and the stress model by Bodenmann (1995; 2000). First, the family stress model yields a framework for a better understanding of crisis and adaptation processes in families but is not often used in couples’ research. Second, the vulnerability-stress-adaptation model provides a framework for understanding how relationship quality is assumed to fluctuate stress downward (Karney et al., 2005). Finally, Bodenmann’s model (1995; 2000) allows one to gain greater insight about the role of chronic daily stress in close relationships, specifically examining the diverse minor processes, such as time spent together, decreased self-disclosure, poorer dyadic coping, decreased communication, and increased risk of psychological and physical problems, that lead to negative relationship outcomes such as alienation, low relationship satisfaction, and yields a higher risk for divorce.

In this contribution we tried to give a general guideline taxonomy referring to: (1) the intensity of stress (major versus minor stress), (2) the duration of stress exposure (acute versus chronic stress) and (3) the question of where stress originates (outside or inside the close relationship). These three dimensions yield a stress taxonomy in close relationships including major stress (i.e., critical life events; Dohrenwend & Dohrenwend, 1974) and minor or everyday stress (i.e., daily hassles; Lazarus & Folkman, 1984), acute versus chronic stress (e.g., Karney, et al., 2005) and internal versus external stress (e.g., Bodenmann, 1995, 2000; Neff & Karney, 2004). We argued that stress research has to consider all three dimensions in order to reliably understand the impact of stress on relationship functioning and outcome as it makes a significant differences whether stress originates within or outside the relationship, is highly intensive (major
stress) or of more trivial nature (daily hassles) and whether the couples is only shortly exposed to stress (acute stress) or for a long time (chronic stress).

Our analysis revealed that many studies thus far have not greatly focused on these three dimensions and are therefore limited in their contribution to a better understanding of the impact of stress on close relationships, their developmental course and outcome (e.g., separation or divorce). Furthermore, we summarized that for a long time empirical research in couples has focused on individual stress models (Lazarus & Folkman, 1984) rather than genuine dyadic stress models. This is due to the fact that dyadic conceptualizations of stress are recent (only emerging in the 1990’s) and that they have yet to address all stress dimensions in a unitary model. Often, we also noted in these studies that it was not explicitly evident whether internal or external stress or acute or chronic stressors were addressed. A better distinction was found, however, with regard to major or minor stress. Our analysis showed that for a long time more studies were conducted examining major stress events while only in the recent past the role of minor stress (daily hassles) obtained greater consideration in stress research in couples. A stress taxonomy in couples built on three dimensions (intensity, origin, duration) also allows to test for more complex models and processes, for example, how external stress spills over into the relationship by increasing internal stress (e.g., more relationship conflicts or withdrawal from the partner) and how internal stress affects relationship satisfaction or the likelihood of divorce (e.g., mediating processes where external stress triggers internal stress and internal stress increases relationship dissatisfaction) (e.g., Bodenmann et al., 2007). However, we are only able to understand the impact of stress on couples when the duration of stress exposure is considered as it makes a big difference whether a couple suffers from chronic, continuing stress exposure (e.g., financial strain, bad life conditions, exposure to long-term stress related to chronic illness,
handicap, unemployment or ongoing social stress) or acute stress that may be rather punctual, clearly limited in time, and therefore less demanding and less exhausting for couples’ resources. Coping on higher levels which demands major adaptations (i.e., Burr & Klein, 1994) are not expected in this case. Third, the intensity of stress (major versus minor stress) is a relevant dimension in understanding the impact of stress on close relationships. Few studies have shown that major stress has different consequences on relationship functioning by either increasing cohesion or by accelerating negative aspects and disruption, thus no clear direction could be found (Bodenmann, 2000; Williams, 1995).

Although growing research has shown the importance of examining dyadic models of stress, these theoretical models alone are not sufficient. A serious consideration of different forms of stress, new assessment tools which allow for a clearer distinction between the various stressors described above, longitudinal designs, and multilevel data analyses strategies are needed. All these aspects (i.e., theoretical background of considering stress in couples as a systemic phenomenon, taxonomy of different stressors, reliable and valid assessment of different stressors, and statistical data treatment) are important issues in future stress research. Although several studies have been conducted in the field, no one so far has considered all of these aspects in a holistic way (see Table 2).

As we stated, research and close examination of how stress impinges on close relationships is necessary for several reasons: (1) stress is widespread in modern societies and incurs high personal, social, and economic costs, (2) previous studies suggest that stress is linked to adverse relationship development and outcomes, (3) stress outside of the marriage can be expected to spill over into the close relationship and trigger marital conflicts, and (4) stress may
undermine otherwise adequate communication skills, lead to alienation in the couples a higher risk for divorce (Bodenmann et al., 2007).

Understanding how stress can promote or hinder well-being in close relationships is important because relationship quality is the primary predictor of life satisfaction (e.g., Ruvolo, 1998) and it may play a causal role in promoting physical health (e.g., Burman & Margolin, 1992; Schmaling & Goldman Sher, 2000), emotional well-being and resistance to depression (e.g., Tesser & Beach, 1998), and performance in the workplace (Renick et al., 1992). Indeed, recent studies are clear in indicating that marital discord exerts significant and deleterious effects on objective health outcomes (Kiecolt-Glaser et al., 2005; Robles & Kiecolt-Glaser, 2003; Kiecolt-Glaser, Bane, Glaser, & Malarkey, 2003).

Future directions in couple’ stress research should take into consideration all moderating and mediating effects of stress affecting the multifaceted relationship between couples. This knowledge provided by basic research is crucial to focus on strengthening both individual and dyadic coping resources in couple therapy or relationship distress prevention programs in order to maintain a high level of marital satisfaction, due to the negative effects that stress has on a relationship (Bodenmann 2000; Karney & Bradbury, 1995). Thus, studying the effects of stress on close relationships is of high importance, both for individuals, couples, and society, and may lead to new techniques and methods in relationship distress prevention and couple therapy (see Bodenmann & Shantinath, 2004, for example). This line of research is extremely important and has high clinical significance. Both theorists and clinicians should realize the role that stress has on relationship functioning and the need to integrate coping work in couple therapy (Bodenmann, 2005; Epstein & Baucom, 2006).
References


California: Sage Publications.


Zwei erweiterungen des akteur-parner-interdependenz-modells. [Moderator and
mediator effects if dyadic research: Two extensions of the actor-partner interdependence
McCubbin, H. I., Joy, C. B., Cauble, A. E., Comeau, J. K., Patterson, J. M., & Needle, R. H.
42, 855-871.
McCubbin, M. A., & McCubbin, H. I. (1989). Theoretical orientations to family stress and
coping. In C. R. Figley (Ed.), Treating stress in families (pp. 3–43). New York:
Brunner/Mazel
McCubbin & C. R. Figley (Eds.), Stress and the family: Coping with normative
Psychoanalysis, 41, 227-234.
external stress and cognitive processes within marriage. Personality and Social
Behavior, 19, 2-21.
enhancement program (PREP): An empirically based preventive intervention program for couples. *Family Relations, 41*, 141-147.


Gender, marital satisfaction, and the daily spillover of workday experience into couples interactions. Journal of Family Psychology, 18, 250-263.


predictive validity of FOCCUS. *Journal of Marital and Family Therapy, 21*, 141-153.

Figure 1. Bodenmann’s Stress-Divorce Model

Chronic everyday stress

- Low time spent together as a couple
- Low quality of marital communication
- High risk for physical and psychological problems
- Problematic personality traits getting revealed

Mutual alienation

- Marital dissatisfaction
- Triggers
  - Subjective evaluation of facilitating conditions and inhibiting
  - Divorce
Table 1. Different forms of stress in close relationships and the main focus of theoretical stress models in close relationships

<table>
<thead>
<tr>
<th></th>
<th>Internal stress</th>
<th>External stress</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute</td>
<td>Chronic</td>
</tr>
<tr>
<td>Minor stress</td>
<td></td>
<td>Bodenmann’s stress model</td>
</tr>
<tr>
<td>(daily hassles)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major stress</td>
<td></td>
<td>Vulnerability-stress-adaptation model</td>
</tr>
<tr>
<td>(critical life events)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Summary of studies related to major or minor stress in close relationships

<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Research Question</th>
<th>Source of perception</th>
<th>Significant findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahr (1979)</td>
<td>4,332 females, age range from 30-44 years old</td>
<td>Relationship between stress (welfare, low income) and marital stability</td>
<td>Data taken from the National Longitudinal Survey of Labor Market Experience conducted by the Center for Human Resource Research at Ohio State University</td>
<td>The effects of welfare (internal stressor) on low-income whites who received AFDC, food stamps, or other government assistance ended their marriages more frequently than those not receiving any government help. Data also suggested those of AFDC discouraged individuals to remarry (young females).</td>
</tr>
<tr>
<td>Bodenmann &amp; Perrez (1992)</td>
<td>22 couples</td>
<td>The impact of experimentally induced stress on dyadic interaction</td>
<td>Self-report of both partners; observational data,</td>
<td>Findings suggested that experimentally induced stress had a detrimental impact on dyadic interaction. A significant difference between the quality of the interaction before and after stress induction was found. Typically, couples showed less positivity and more negative interaction behaviors when they were stressed.</td>
</tr>
<tr>
<td>Bodenmann (1997)</td>
<td>600 couples</td>
<td>Association between micro (minor)- and macro (major) stress and relationship satisfaction</td>
<td>Self-report of both partners</td>
<td>Findings supported the notion that there is a strong association between minor stressors and low relationship quality but no clear association between major stressors and relationship satisfaction. Best predictors of low relationship quality were daily</td>
</tr>
<tr>
<td>Bodenmann &amp; Cina (2006)</td>
<td>70 couples</td>
<td>The impact of stress on dyadic interaction; relationship satisfaction within 5 years</td>
<td>Behavioral coding; Behavioral agitation measures</td>
<td>Couples experiencing stress showed a significant decrease in quality of their dyadic interaction of 40%. Long-term stress revealed to be a significant predictor of negative relationship development and a higher likelihood of divorce.</td>
</tr>
<tr>
<td>Bodenmann (2000)</td>
<td>600 couples</td>
<td>Association between micro (minor)- and macro (major) stress and relationship satisfaction</td>
<td>Self-report of both partners</td>
<td>Findings supported the notion that there is a strong association between minor stressors and low relationship quality but no clear association between major stressors and relationship satisfaction. Best predictors of low relationship quality were daily</td>
</tr>
</tbody>
</table>
### Table 2: Summary of studies related to major or minor stress in close relationships

<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Research Question</th>
<th>Source of perception</th>
<th>Significant findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bodenmann (2000), cont.</td>
<td>(SD = 9.4); women mean age 40.1 (SD = 9.14)</td>
<td>Hassles and stress with regard to the leisure time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bodenmann, Ledermann, Blattner, &amp; Galluzzo (2006)</td>
<td>198 couples</td>
<td>Association between stress and sexual problems in close relationships</td>
<td>Self-report of both partners</td>
<td>Results showed an incremental effect of stress on sexual problems after controlling for psychological symptoms and relationship quality. It was primarily internal daily stress and in some cases critical life events rather than external daily stress that was related to sexual problems, particularly hypoactive sexual desire in women and men, sexual aversion in women, vaginismus in women and premature ejaculation in men. Analyses showed that external stress caused more internal stress that was negatively associated with sexual problems.</td>
</tr>
<tr>
<td>Bodenmann, Ledermann, &amp; Bradbury (2007)</td>
<td>198 couples</td>
<td>Association between stress and relationship quality, sexual activity in the couple as well as sexual satisfaction in the couple</td>
<td>Self-reports of both partners</td>
<td>Findings suggested that relationship satisfaction and sexual activity were governed by hassles and problems experienced within the dyad (internal stress) that was in turn related to external stress. External stress was positively associated with sexual activity in men, external stress was only related with internal stress that was negatively associated with sexual activity. Minor stress was a better predictor than major stress in both women and men.</td>
</tr>
<tr>
<td>Bolger, DeLongis, Kessler, &amp; Wethington (1989)</td>
<td>166 married couples</td>
<td>Interplay between daily stress experienced at the workplace and at home</td>
<td>Individual self-report</td>
<td>Causal dynamics between work and stress (both husbands and wives). Husbands are more likely than their wives to bring their home stresses into the workplace.</td>
</tr>
</tbody>
</table>
Table 2: Summary of studies related to major or minor stress in close relationships

<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Research Question</th>
<th>Source of perception</th>
<th>Significant findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolger et al. (1989), cont.</td>
<td>$(SD=13)$, women mean age 40.9 $(SD=12.3)$; (2) either the husband or the wife did not complete the diary on all 42 days $(n = 66)$, men mean age 41.3 $(SD=12.4)$, women mean age 39 $(SD=11.9)$, and (3) both the husband and the wife completed diaries, men mean age 44.6 $(SD=11.9)$, women mean age 41.5 $(SD=11.5)$</td>
<td>Major-stress (physical impairment) and enacted support from significant others</td>
<td>Individual self-report, observational data from behavioral interaction</td>
<td>Negative affects of illness on relationship functioning. Patients' physical impairment increased the significant others' support, patients' distress eroded the support. Distress among crisis victims may undermine support processes (Dunkel-Schetter &amp; Skokan, 1990; Herbert &amp; Dunkel-Schetter, 1992) (p. 288).</td>
</tr>
<tr>
<td>Bolger, Vinokur, Foster, &amp; Ng (1996)</td>
<td>102 breast cancer patients and their significant others, mean age 58 $(SD=10)$</td>
<td>Major-stress (physical impairment) and enacted support from significant others</td>
<td>Individual self-report</td>
<td>Patients' physical impairment increased the significant others' support, patients' distress eroded the support. Distress among crisis victims may undermine support processes (Dunkel-Schetter &amp; Skokan, 1990; Herbert &amp; Dunkel-Schetter, 1992) (p. 288).</td>
</tr>
<tr>
<td>Cohan &amp; Bradbury (1997)</td>
<td>60 couples (measured over 18 months) Mean age of husband 25.5 $(SD = 3.4)$, wives younger than 35 years</td>
<td>Relationship between major-stress (critical life events) and relationship satisfaction as well as psychological distress (depression) by including moderators such as problem-solving (SLE; Bradbury, 1990)</td>
<td>Individual self-report, observational data from behavioral interaction</td>
<td>Problem-solving behavior moderated the relationship between life events and adjustment. Behaviors (e.g., wife’s anger affected adjustment to major and interpersonal events such as depression) made spouses more vulnerable to stress.</td>
</tr>
</tbody>
</table>
Table 2: Summary of studies related to major or minor stress in close relationships

<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Research Question</th>
<th>Source of perception</th>
<th>Significant findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grzywacz, Almeida, &amp; McDonald (2002)</td>
<td>1,030 individual sampled from the National Survey of Midlife Development in United States (MIDUS) and the National Study of Daily Experiences (NSDE)</td>
<td>Relationship between stress at work and at home. Three groups were examined: (1) the proportion of days the respondent reported both a work- and family-related stressor (i.e., the co-occurrence of work and family stress), (2) the proportion of days the respondent reported a family-related stressor given a work-related stressor the day before (i.e., work-to-family stress), and (3) the proportion of days the respondent reported a work-related stressor given a family-related stress the day before (i.e., family-to-work stress) (pg. 31).</td>
<td>Individual self-report</td>
<td>Age-related associations of work–family spillover effects Clear differences in subjectively reported levels of negative and positive spillover between work and family. Moderate but significant effect of self-reported negative spillover between work and family on experiences of work–family stress.</td>
</tr>
<tr>
<td>Hagedoorn, Kuijer, Wobbes, &amp; Sanderman (2000)</td>
<td>68 patients with cancer and their partners (32 males and 36 females)</td>
<td>The link between physical impairment and marital quality by considering relationship-focused coping (Coyne et al., 1990) such as active engagement, protective buffeting, and overprotection</td>
<td>Individual self-report</td>
<td>Active engagement was positively related to marital quality (patient as well as partner ratings) and negatively related to negative feelings (patient ratings). Protective ‘buffering’ was significantly negatively related to marital quality and positively related to negative feelings. Results suggest that patients that perceiving the highest level of psychological or physical distress benefit from support from their partner.</td>
</tr>
</tbody>
</table>
Table 2: Summary of studies related to major or minor stress in close relationships

<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Research Question</th>
<th>Source of perception</th>
<th>Significant findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harper, Schaalje, &amp; Sandberg (2000)</td>
<td>472 individuals (in marital relationships)</td>
<td>Relationship between daily stress and marital quality by considering the role of intimacy</td>
<td>Individual self-report</td>
<td>Daily stress was negatively related to marital quality for both husbands and wives. Intimacy mediated the relationship between stress and marital quality for both husbands and wives.</td>
</tr>
<tr>
<td>Hoekstra-Weebers, Jaspers, Kamps, &amp; Klip (1998)</td>
<td>124 parents of children with cancer: 62 fathers and 66 mothers</td>
<td>Major-stress (cancer of child) and impact on relationship quality of the parents</td>
<td>Individual self-report</td>
<td>Marital satisfaction decreased significantly over time for both fathers and mothers. Fathers and mothers did not differ significantly from each other in their reported levels of dissatisfaction on any of the measurements. Overall, level of marital dissatisfaction decreased following the year of diagnosis.</td>
</tr>
<tr>
<td>Neff &amp; Karney (2004)</td>
<td>82 couples</td>
<td>Relationship between external stressors, conflicts within the dyad and perception of marital quality</td>
<td>Individual self-report</td>
<td>Found evidence for stress spillover throughout four years of marriage. The experience of stress spillover seemed to have important influences of marital quality. Changes in wives’ stress were associated with changes in perceptions of the relationship. Specific, as wives’ external stress increased, they perceived more problems within the relationship (effective communication, showing affection).</td>
</tr>
<tr>
<td>Repetti &amp; Wood (1997)</td>
<td>139 parents of children (ages 3-6 years) from four child-care centers in U.S.</td>
<td>Impact of work-stress on parenting behavior</td>
<td>Individual self-report, videotaped mother-child dyadic interaction (emotional and behavioral involvement)</td>
<td>Both individual and observers rated mothers more emotionally withdrawn (as defined by speaking less and fewer expression of affection) on days with heavier work and interpersonal stress. Conclusions that job stressors have a large impact on daily parenting behavior.</td>
</tr>
<tr>
<td>Author</td>
<td>Sample</td>
<td>Research Question</td>
<td>Source of perception</td>
<td>Significant findings</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>-------------------</td>
<td>----------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Rohrbaugh, Shoham, Cranford, Nicklas, Sonnega, &amp; Coyne (2002)</td>
<td>132 male and 49 female patients of congestive-heart-failure</td>
<td>Association between major stress (congestive-heart-failure) and marital quality in relation to gender</td>
<td>Interview, self-report</td>
<td>More distress was seen in women than men for spouses than for patients. The patient’s distress, but not the spouse’s, reflected the severity of the patient’s illness. Distress for both partners negatively correlated with ratings of marital quality. Female-patient couples reported better relationship quality than male-patient couples. Mediation analysis indicated that the gender difference may be explained through marital quality.</td>
</tr>
<tr>
<td>Saxbe, Repetti, &amp; Nishina (2008)</td>
<td>30 couples</td>
<td>(1) Examining the relation between basal cortisol cycle and marital satisfaction, and (2) gender differences between the physiological recoveries from work.</td>
<td>Cortisol collection, daily diary, individual self report</td>
<td>For both men and women, evening cortisol levels were lower than usual on higher-workload days. This effect was amplified by marital satisfaction among women. In women, marital satisfaction was significantly associated with stronger basal cortisol cycles. Results suggested that marital quality appeared to strengthen women’s physiological recovery from work. Men showed higher cortisol ratings in the evenings after more distressing experiences at work. This association was strongest in men with higher marital satisfaction.</td>
</tr>
<tr>
<td>Schulz, Cowan, Cowan, &amp; Brennan (2004)</td>
<td>42 married couples</td>
<td>External stress (workday stress) and interaction behavior towards the partner</td>
<td>Individual self-report</td>
<td>More negatively arousing workdays were linked with angrier marital behavior for women and less angry and more withdrawn behaviors for men. Daily changes in workday pace predicted fluctuations in women’s, but not men’s, marital behaviors. Several of these workday–marital behavior connections varied by level of marital satisfaction. In contrast to the gender differences in responses to workday stress,</td>
</tr>
</tbody>
</table>
Table 2: Summary of studies related to major or minor stress in close relationships

<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Research Question</th>
<th>Source of perception</th>
<th>Significant findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schulz, Cowan, Cowan, &amp; Brennan (2004), cont.</td>
<td></td>
<td></td>
<td></td>
<td>no differences were found in marital behaviors.</td>
</tr>
<tr>
<td>Story &amp; Repetti (2006)</td>
<td>43 married couples Cross-sectional study</td>
<td>Association between external stress (job stress) and marital interaction</td>
<td>Daily diary, individual self-report</td>
<td>Significant associations between perceived daily job stressors and behaviors during marital interaction. Specifically, wives reported greater marital anger and withdrawal after a heavy workload, and husbands and wives reported greater marital anger and withdrawal on days when they experienced more negative social interactions at work. Some evidence suggesting that wives, but not husbands, were more likely to report expressing anger toward their partners following heavy workload days.</td>
</tr>
<tr>
<td>Whiffen &amp; Gotlib (1989)</td>
<td>82 couples selected. Previously enrolled in a study examining adjustment during pregnancy and postpartum period Cross-sectional study Four groups: distressed group (n=13), one of two distressed groups (husbands distressed n=25, wife distressed n=14), and nondistressed group (random sample of 30 couples)</td>
<td>Relationship between marital distress, life stress and depressive symptoms as well as coping behavior</td>
<td>Individual self-report</td>
<td>When husbands were distressed, both partners reported more depressive symptoms, life stress, and more maladaptive coping. When wives were distressed, effects were only seen for their functioning. No difference between husbands of distressed and nondistressed wives.</td>
</tr>
</tbody>
</table>
### Table 2: Summary of studies related to major or minor stress in close relationships

<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Research Question</th>
<th>Source of perception</th>
<th>Significant findings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cross-sectional study</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean age: Men = 25 years, Women = 23 years.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wolf (1987)</td>
<td>70 couples</td>
<td>Association between stress appraisal congruency in couples and their relationship satisfaction</td>
<td>Individual self-report from both partners that were compared to each other (S-R-questionnaire)</td>
<td>The higher both partner appraised the situations in a similar way the better their relationship satisfaction</td>
</tr>
</tbody>
</table>