The Direct and Indirect Effects of Family Stress and Coping Resources on Marital Satisfaction and Couple Burnout for Dual-Earner Couples

By
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Abstract

Guided by the multisystem assessment of stress and health (MASH) model, this study examined the direct and indirect effects of family stress and coping resources (i.e., supportive listening and flexibility) on adaptation (i.e., marital satisfaction and couple burnout) for dual-earner couples. These relationships were tested dyadically using the actor–partner interdependence model (APIM) and the actor-partner interdependence mediation model (APIMeM). Data from 180 dual-earner couples were collected online using a commercial survey administration company, Qualtrics.

Direct effects concerning the role of family stress on adaptation indicated that spouses' family stress was negatively associated with their own marital satisfaction; wives' family stress was negatively associated with their partners' marital satisfaction. In addition, spouses' family stress was negatively associated with their partners' couple burnout.

Direct effects concerning the role of family stress on coping resources showed significant associations. Specifically, spouses who experienced more family stress reported less of their partners' supportive listening. Spouses who experienced more family stress reported less of their own and their partners' self-reported supportive listening. Moreover, spouses' family stress was negatively associated with their own flexibility; wives' family stress was negatively associated with their partners' flexibility.

Direct effects concerning the role of coping resources on adaptation revealed the following relations. First, spouses' perceptions of their own and their partners' supportive listening were positively associated with their own and their spouses' marital satisfaction. Second, spouses' reports of their partners' supportive listening were negatively associated with their partners' couple burnout, and spouses' reports of their own supportive listening were

associated with decreases in their own and their partners' couple burnout. Third, spouses' family stress was positively associated with their own and their partners' marital satisfaction. Fourth, spouses' family stress was negatively associated with their own and their partners' couple burnout.

Finally, indirect effects showed that the coping resources, supportive listening and flexibility, played a significant role in husbands' and wives' family stress and adaptation. First, spouses' family stress was negatively associated with their own reports of their partners' supportive listening, which in turn was negatively associated with their own reports of marital satisfaction. Second, husbands' family stress was negatively associated with their wives' self-reported supportive listening, which in turn was negatively associated with their own and their wives' marital satisfaction. Third, spouses' family stress was negatively associated with their reports of their partners' supportive listening, which in turn was negatively associated with their partners' couple burnout. Fourth, husbands' family stress was negatively associated with their wives' perceptions of their own supportive listening, which in turn was negatively associated with their own and their wives' couple burnout. Fifth, wives' family stress was negatively associated with their own and their partners' flexibility, which in turn was positively associated with their own and their partners' marital satisfaction. Last, wives' family stress was negatively associated with their own and their partners' flexibility, which in turn was negatively associated with their partners' couple burnout.

Contributions of the current study, study limitations, and directions for future research are presented. Overall, this study highlighted the importance of assessing communication when couples cope with family stress. Researchers and counselors can utilize this study to better understand how coping resources can enable more positive adaptation.

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Chapter 1: Introduction

Having both spouses working in professional careers is becoming increasingly predominant (Altenburger et al., 2018; Crouter & Manke, 1997; Neilson & Stanfors, 2018). Dual-earner couples refer to married couples that are both working full-time outside of the home and getting paid for their work (Frisco & Williams, 2003). Recent statistics show that dual-earner couples account for 49.70% of married-couple families in 2019 in the U.S. (U.S. Department of Labor, Bureau of Labor Statistics, 2021).

Research has found that stress from work and family that dual-earner couples experience has a significant impact on marital relationships. For example, many married working couples reported that they have to sacrifice their time in the family domain to gain more time in the work domain in order to achieve career success; the need for balancing their family needs and work demands at the same time can be challenging and can produce stress (Bharucha, 2018; Haddock & Rattenborg, 2003). Particularly, when dual-earner couples are parents, they reported that they spend less time on maintaining relationships with their spouses (Dai, 2016; Jones, 2018), and they would like to have shorter working hours, more flexible working time, and more affordable childcare to reduce stress and ensure work-family balance (Thornthwaite, 2004; van Wanrooy, 2013; Waismel-Manor & Levanon, 2017). Further, reports of work and family stress have been associated with angry mannerisms towards one's spouse (Bakker et al., 2008), apathetic behaviors toward one's spouse (Debrot et al., 2018), decreased family cohesion (Thompson et al., 2005), and poor marital quality (Rantanen et al., 2008). Therefore, the current research is intended to examine variables that may reduce dual-earner couples' stress. Work stress has been studied extensively in the stress-coping literature (e.g., Honda et al., 2015; Kluger & Itzchakov, in press), so this research will focus on the less researched area: family stress.

Burnout occurs when individuals experience stress for an extended period of time (Kahill, 1988). When couples have to deal with chronic and daily stressors, they might feel resentment, hopelessness, tiredness, and disappointment toward their spouses; this phenomenon is known as couple burnout or marital burnout (Davarniya et al., 2018). Burnout can cause physical health problems such as insomnia, substance abuse, headaches, and digestive problems (Morse et al., 2012; Tabaj et al., 2015). It may also lead to mental health problems such as depression, anxiety, exhaustion, and memory loss (Garske, 2007; Morse et al., 2012). Among married couples, experiencing burnout may increase hostile behaviors, decrease relationship satisfaction, and eventually increase the tendency of getting a divorce (Westman & Bakker, 2008). Besides burnout among couples, research has consistently reported that a low level of marital satisfaction is related to many negative aspects such as boredom, financial hardships, physical abuse, communication difficulties, separation, and divorce (Apostolou et al., 2019; Archuleta et al., 2011; Levinger, 1966; Solomon & Jackson, 2014). Therefore, while the consequences of burnout and a low level of marital satisfaction are extensive, researchers are now encouraged to focus on factors that predict couple burnout and marital satisfaction for dual-earner couples (e.g., Pines & Nunes, 2003; Yelsma & Marrow, 2003).

Research has noted that listening skills have a significant impact on individuals' well-being and marital quality. For example, having a conversation with a good listener is healing for the support seeker (Jones, 2011), is associated with greater marital satisfaction (Gottman & Levenson, 1992), and is related to more effective dyadic coping behaviors (Kuhn et al., 2018). Pasupathi et al. (1999) reported that happy couples displayed better listening behaviors like maintaining eye contact, nodding, and giving verbal confirmation compared to unhappy couples.

In addition to listening skills, flexibility can also influence individuals' well-being and marital satisfaction. For example, many studies have emphasized the impact of family flexibility on psychological functioning and physical health of family members (McCubbin et al., 1989; Olson, 1989; Olson, 1997; Olson & Gorall, 2006; Olson & Portner, 1983; Rolland, 1994; Stewart, 1988). Olson et al. (2008) found that healthy marital relationships are a result of flexibility. In the area of burnout, Appel and Kim-Appel (2008) reported that family flexibility is significantly related to couples' emotional exhaustion.

Marriage is dyadic in nature, so individuals' behaviors not only influence their own behaviors but also their spouses' behaviors (Demerouti et al., 2005; Durtschi et al., 2011; Kenny et al., 2006; Westman & Etzion, 2005). It has been well established in the literature that the better a couple jointly copes with stress, the higher the likelihood of achieving a happy and stable marriage (Bodenmann, 2005). Therefore, the current study focuses on the mutual influence among couples as well as the role of communication variables (i.e., listening and flexibility) in the stress-coping process in order to gain a better understanding of how perceived stress impacts marital satisfaction and burnout. Specifically, this project examines the associations among family stress, coping resources, marital satisfaction, and couple burnout for dual-earner couples. It takes a dyadic approach in order to account for the mutual influence among married couples.

In the next chapter, I first introduce the guiding theory of this project—the multisystem assessment of stress and health (MASH) model—and then explain each of the three main components (Olson, 2004). Second, I explain the variables that make up each of the three main components in the MASH model and offer hypotheses based on my review of empirical studies regarding the association among the variables. Last, I highlight the necessity for a dyadic approach to examine the relationship between the variables.

Chapter 2: Literature Review

Theoretical Framework

Olson (2004) formulated the multisystem assessment of stress and health (MASH) model, which is a biopsychosocial and multidimensional cybernetic model. The MASH model includes three main components (i.e., stress, coping resources, and adaptation), and each component is examined at four system levels (i.e., the personal, couple, family, and work system levels) (see Figure 1). The following paragraphs will introduce the main components in the MASH model.

Stress

The stress component encompasses the stressors and strains that people may encounter. When under stress, individuals are challenged by specific situational occurrences in their daily lives (Olson, 1997) and may not have enough resources available to cope with the daily hassles (Lazarus & Folkman, 1984). In the MASH model, an individual's stress is coming from four system levels: personal, couple, family, and work. The total stress is the sum of the stress from all four levels. Although many studies have reported that major life events can explain the stress-coping process, some research has suggested that daily hassles and minor life strains, such as everyday family stressors, are better predictors of psychological symptoms (Kanner et al., 1981; Lazarus, 1981); therefore, stress is conceptualized as daily strains in all of the systems levels of the MASH model (Olson, 2004). In addition, there are various types of stressors (e.g., work stressors and family stressors), but it is not uncommon for researchers to only look at one stressor. For example, Roberts and Levenson (2001) studied the impact of job stress on marital distress between 19 couples.

Coping Resources

The next component of the model comprises the coping resources. Coping resources are

the ways in which family members respond to stress (Olson, 2004). In the MASH model, coping resources primarily build upon the Circumplex Model of Marital and Family Systems (Olson, 1993), a seminal theory used to examine family functioning (Olson, 2000). The Circumplex Model of Marital and Family Systems theory includes three dimensions: flexibility, cohesion, and communication. *Flexibility*, also known as adaptability, refers to the quality of leadership structure, role relationships, rules, and interactions among family members (Olson, 2011). The Circumplex Model proposes that flexibility ranges across five levels on a continuum: rigid/too little change, somewhat flexible, flexible, very flexible, and chaotic/too much change. Moreover, the two extreme levels of flexibility on the continuum (i.e., rigid and chaotic) reflect unbalanced flexibility, whereas the three middle range levels on the continuum (i.e., somewhat flexible, flexible, and very flexible) reflect balanced flexibility (Olson, 2011). *Cohesion* represents the emotional bonding that family members have towards one another (Olson, 2000). The Circumplex Model states that cohesion also ranges across five levels on another continuum: disengaged/too little emotional bonding, somewhat connected, connected, very connected, and enmeshed/too much emotional bonding. Moreover, the two extreme levels of cohesion on the continuum (i.e., disengaged and enmeshed) reflect unbalanced cohesion, whereas the three middle range levels of cohesion on the continuum (i.e., somewhat connected, connected, and very connected) reflect balanced cohesion (Olson, 2011).

The Circumplex Model of Marital and Family Systems has been empirically tested and examined for over 30 years (Olson & Gorall, 2006). The main concepts (i.e., flexibility and cohesion) of the Circumplex Model have been modified, conceptually and operationally, several times to contribute to a reliable and valid understanding of family functioning (Olson, 2011). Conceptually, the concepts evolved from four levels to five levels of flexibility and cohesion.

The four levels of flexibility from the previous model were ranging from very low (rigid), to low to moderate (structured), to moderate to high (flexible), to very high (chaotic); the four levels of cohesion were ranging from very low (disengaged), to low to moderate (separated), to moderate to high (connected), to very high (enmeshed) (Olson, 1993). Whereas, the five levels of flexibility from the current model are ranging from too little change (rigid), somewhat flexible, flexible, very flexible, and too much change (chaotic); the five levels of cohesion are ranging from too little emotional bonding (disengaged), somewhat connected, connected, very connected, and too much emotional bonding (enmeshed) (Olson & Gorall, 2006). Operationally, the Family Adaptability and Cohesion Evaluation Scales (FACES), which have been used among researchers to assess the Circumplex Model, have evolved to respond to recent critiques (Olson, 2011). The first critique is that the previous versions of FACES failed to accurately measure the full range/curvilinear nature (i.e., the low and high extremes of flexibility and cohesion) of flexibility and cohesion because those previous versions measured flexibility and cohesion in a linear manner by only including two scales assessing flexibility and cohesion (Olson, 2000; Olson, 2011). To address this, four scales representing the four extremes (i.e., disengaged, enmeshed, rigid, and chaotic) were added to the latest version of FACES (i.e., FACES IV). The second critique is that previous versions did not adequately assessed the balanced region of flexibility and cohesion; accordingly, two scales representing the two balanced regions of the Circumplex Model (i.e., balanced flexibility and balanced cohesion) were added to FACES IV (Olson, 2011). Furthermore, the previous definition of flexibility was the amount of change in leadership structure, role relationships, and relationship rules among family members (Olson, 1993). To better reflect some items in the new scales that are not related to the amount of change in families, the current conceptual definition of flexibility refers to the quality of leadership

structure, role relationships, rules, and interactions among family members (Olson, 2011). To conclude, the changes that have been made to the Circumplex Model and FACES enhance the accuracy and reliability of the measure and terminologies; the fundamental ideas and hypothesis of the model for understanding family functioning still remain consistent. Hence, although the current project will use the latest versions of Circumplex Model and FACES IV, this project will still acknowledge the findings of studies using previous versions of FACES that are associated with major variables in this study.

The main hypothesis of the Circumplex Model is that balanced levels of flexibility and cohesion are associated with healthy family functioning (e.g., contentment and success), whereas unbalanced levels of the flexibility and cohesion are associated with unhealthy family functioning (Olson & Gorall, 2006). For example, balanced levels of flexibility and cohesion are associated with effective coping with stress (Crowe & Lyness, 2013), higher levels of satisfaction with life and personal relationships (Oshri, 2015), and lower levels of stress, anxiety, depressive symptoms, and daily hassles (Pollock et al., 2015).

Communication, the third dimension in the MASH model, focuses on how an individual interacts with others (e.g., open and respectful communication, active and empathic listening, speaking clearly, and staying on topic) (Olson et al., 2019). Communication serves as a facilitating dimension that helps families adjust their levels of flexibility and cohesion (Olson & Gorall, 2006). Families with more positive communication (e.g., staying on topic and focusing on empathy) tend to be more balanced, whereas families with more negative communication (e.g., lack of clarity in the communication) tend to be more unbalanced (Olson, 2000).

Building upon the Circumplex Model, coping resources are categorized into a relationship dimension and a skill dimension in the MASH model. The relationship dimension

includes flexibility and cohesion. Both concepts are conceptualized the same as they are in the Circumplex Model (Olson, 1993). The skill dimension includes communication and problem-solving. Communication is also conceptualized the same as it is in the Circumplex Model (Olson, 1993). Problem-solving refers to how an individual cooperates with others to solve problems (e.g., whether a person remains empathic with others while solving problems). Olson (2004) stated, "the coping resources and system types are mediating variables between stress and adaptation" (p. 331). In other words, coping resources can help explain the relationship between stressful events and adaptation at different system levels. As such, coping resources allow a person to be more capable of coping with stress and thus influencing their adaptation (Olson, 1997).

Adaptation

The final component, adaptation, describes the changes in an individual's physical health, mental health, and satisfaction that are produced by stressful events (Olson, 2004). For the adaptation component, the MASH model measures physical health and mental health at the individual level (e.g., individual physical symptoms) and measures levels of satisfaction at the four system levels (i.e., the personal, couple, family, and work system levels).

The use of the MASH model is beneficial mainly because of the following two reasons. First, it provides a theoretical base for within system analysis, which allows researchers to analyze variables within one system level (e.g., A wife's coping behaviors in the family domain might mediate the relationship between her partner's family stress and family satisfaction.). Second, it also offers a theoretical base for between systems analysis, which allows researchers to examine the stressors, mediating roles of resources, and the adaptation across different domains (e.g., A wife's coping behaviors in the family domain might mediate the relationship

between her partner's family stress and work satisfaction.) (Olson, 2004).

Olson (2004) introduced the Coping and Stress Profile (CSP) to assess the MASH model. The CSP scale measures both stressors and coping resources in different areas of life. It includes four sections: personal, couple, family, and work profiles. Each section measures stress, coping resources, and adaptability. For example, the personal section measures personal stress (i.e., personal stress, psychological distress, and physical symptoms), personal coping resources (i.e., personal problem-solving style, personal communication style, personal flexibility style, and personal closeness style), and personal adaptability (i.e., personal satisfaction). The work section measures work stress, work coping resources (i.e., work problem-solving style, work communication style, work flexibility style, work closeness style), and work adaptability (i.e., work satisfaction). The couple section measures couple stress, couple coping resources (i.e., couple problem-solving style, couple communication style, couple flexibility style, couple closeness style), and couple adaptability (i.e., couple satisfaction and social desirability). The family section measures family stress, family coping resources (i.e., family problem-solving style, family communication style, family flexibility style, family closeness style), and family adaptability (i.e., family satisfaction).

A number of studies examining various cultural backgrounds have demonstrated good validity and reliability of the CSP scales and confirmed the usefulness of the MASH model in understanding the stress-coping process (Appel & Kim-Appel, 2008; Steward, 1988). For example, Steward (1988) tested the practicality of the MASH model using the CSP and found that coping recourses from various life domains were predictive of individuals' overall life satisfaction, which was also found to be negatively related to the physical health and distress. Interestingly, they also found that resources from one domain were mainly predictive of

adaptation (i.e., satisfaction) from the same domain. This finding suggests that future researchers should not overlook the coping resources within the same system of the adaptation (e.g., family flexibility style and family satisfaction). Also supporting this idea is Robbins' (1998) research, which examined the MASH model among 139 clinically depressed individuals. Robbins (1998) found strong relationships between stress, coping resources, and adaptation and reported that personal stress reduced couple satisfaction, and couple problem-solving skill counterbalanced symptoms of depression.

Further, Appel and Kim-Appel (2008) utilized the MASH model to assess 220 workers' levels of work burnout across numerous professions. They found significant negative relationships between couple and family coping resources and emotional exhaustion at work and concluded that the MASH model had practical utility when examining work burnout among employees. Hence, the MASH model is valuable for studying stress coping resources from different system levels.

The Current Study

The following section elaborates on the fundamental concepts of the MASH model as it relates to the current study. First, I introduce the stress component, specifically, family stress. Second, I introduce the adaptation component, specifically, marital outcomes including marital satisfaction and couple burnout; I explain the relationship between family stress, marital satisfaction and couple burnout. Last, I introduce the coping resources component, specifically, supportive listening and flexibility; I will also explain the relationships among family stress, supportive listening, flexibility, marital satisfaction, and couple burnout (see Figure 2).

Stress

Stress is both objective and subjective and it is often described as problematic,

demanding, and nerve-racking (Koeske & Koeske, 1993). Stress can occur in different situations, such as family stress that occurs in the family domain. The current study is interested in studying family stress. Examples of family stress include time spent on family chores, pressure to fulfill family responsibilities, care of the children (Luk & Shaffer, 2005), lack of cooperation between spouses in household tasks (Ford et al., 2007), and spousal disputes (Young et al., 2014). Family stress tends to have negative personal and relational consequences. For example, couples who suffer from family stress (e.g., spousal disputes and children's problems) tend to report psychological distress and feeling restless, depressed, worrisome, and angry (e.g., yelling at someone or something) (Young et al., 2014). In a national survey conducted in the U.S., 41% of couples stated that they felt anxious and yelled at their spouse in the past month due to suffering from stressful events (American Psychological Association, 2015).

Adaptation

Adaptation describes the changes associated with an individual's physical health, mental health, and levels of satisfaction produced by stressful events (Olson, 2004). Two variables that have been reported to have a significant relationship with family stress are marital satisfaction (Collins & Coltane, 1991) and couple burnout (Pines et al., 2011). The following paragraphs introduce the conceptualization of marital satisfaction and couple burnout and examine how marital satisfaction and couple burnout serve as adaptation elements.

Marital Satisfaction. Marital satisfaction refers to the degree of happiness and unhappiness regarding the quality of the marital relationship (Haynes et al., 1992). Marital satisfaction can be influenced by stressful events such as family stress (Karney & Bradbury, 1995). For example, Woszidlo and Segrin (2013) reported that spouses who experienced more family stressors were less satisfied with their marriage. In addition, other researchers, who were

interested in specific types of family stress (e.g., unequal share of household chores, lack of emotional support from one's spouse, and caring for a family member in need), also found a significant association between family stress and marital satisfaction. For example, when dual-earner couples felt that the degree of task sharing among husbands and wives was not equally shared, they reported decreased marital satisfaction (Collins & Coltane, 1991; Whisman & Jacobson, 1989; Wilkie et al., 1998). Additionally, Yelsma and Marrow (2003) investigated 66 married couples and reported that lack of emotional support from their spouse was negatively associated with their marital satisfaction. By contrast, Gordon and Chen (2016) reported that people who felt more understood by their partners were more satisfied with their relationships. Furthermore, past research has found that when married couples experience role overload (e.g., taking care of children or an ill family member) at home, they start to neglect marital roles to meet the needs of other roles, and that neglect has a negative impact on marital satisfaction (Belsky & Pensky, 1988; Harper et al., 2013; Klaric et al., 2011; Rollins, 1989; White & Booth, 1991). In order to examine the association between family stress and marital satisfaction, the following hypothesis is offered:

Hypothesis 1 (H1): Family stress will be negatively associated with marital satisfaction.

Couple Burnout. The first study of burnout syndrome was conducted roughly 50 years ago (Freudenberger, 1974). The concept of burnout is now recognized as a serious scientific topic and a significant social problem (Schaufeli & Buunk, 2003). Pines and Aronson (1988) defined burnout as a state of physical, emotional and mental exhaustion caused by prolonged involvement in stressful situations. Physical exhaustion includes persistent fatigue and experiencing a lack of energy. Emotional exhaustion involves feelings of vulnerability and weakness. Finally, mental exhaustion is when an individual has a negative outlook on life

(Schaufeli & Buunk, 2003).

The Burnout Measure (BM) is often used to measure the above aspects of burnout and produces a single cumulative score (Pines, 1993; 1996). People who score higher on the BM tend to show higher levels of burnout symptoms. When Pine's (1993) definition of burnout and the Burnout Measure is applied to couple relationships (Pines, 1996; Pines et al., 2011), it is known as couple burnout (Pines et al., 2011). In comparison to Pine's (1993) definition of burnout, couple burnout also includes physical, emotional, and mental exhaustion, except that they are all related to a couple's relationship. For example, having "difficulty sleeping" because of thinking about one's marriage (i.e., physical exhaustion), feeling "depressed" when thinking about one's marriage (i.e., emotional exhaustion), and feeling "insecure/like a failure" when thinking about one's marriage (i.e., mental exhaustion), are all examples of couple burnout (Pines et al., 2011).

Even though the relationship between stress and burnout has been studied extensively (Schaufeli & Buunk, 2003), most of these studies are within the work domain, despite repeated calls for more research to study burnout in romantic relationships (Pines & Nunes, 2003). There has been little research conducted on the effects of family stress on couple burnout. For example, Westman et al. (2001) reported that when individuals are unable to control important things in their lives, they tend to make their spouse's life difficult, exhibit angry mannerisms toward their spouse, and this can ultimately trigger the feeling of burnout. Additionally, marital stress (e.g., negative interactions), parental stress (e.g., a child encountering problems at school), and parent care stress (e.g., caring for parents with mental illness) were also found to be associated with couple burnout (Pines et al., 2011). Research suggests that when couples are not able to trust, maintain realistic relationship expectations, or offer appraisal and companionship, they tend to experience couple burnout (Pamuk & Durmus, 2015). Therefore, the current study examines the

relationship between family stress and the less studied phenomenon of burnout among couples and proposes the following hypothesis:

Hypothesis 2 (H2): Family stress will be positively associated with couple burnout.

Coping Resources

Research has reported that when married people experience stressors, they frequently turn to their spouses for support (Beach et al., 1993; Bodie & Jones, 2012; Pistrang & Barker, 1995). For instance, a study among breast cancer patients found that patients perceive spousal support to be their most crucial coping resource (Neuling & Winefeld, 1988). Family functioning also plays a vital role in how couples experience family stressors. For example, how families function in response to family stressors can influence individuals' attitude toward the ability of the family in adjusting to stressful situations (Olsen et al., 1999). Although there are different ways for couples to support one another (e.g., emotional and instrumental support) and function in their marriages, this study is interested in two possible intervention mechanisms (i.e., supportive listening and flexibility) among married people that might explain why the family stress-family adaptation (i.e., couple burnout and marital satisfaction) relationship exists.

Supportive Listening. Supportive listening is different from listening during a casual conversation or an intense conflict (Jones, 2011); supportive listening is an individual's skill to attend to, perceive, and obtain emotional messages in the supportive process that is aimed to help the support seeker to deal with stressors such as losing a significant family members (Jones, 2011). People who are good at supportive listening tend to use active, empathic, and person-centered listening behaviors such as asking questions, paraphrasing, assumption checking, establishing eye contact, smiling with kindliness, and conforming to the conversational flow (Bodie et al., 2018; Jones & Bodie, 2014).

It is beneficial to study supportive listening among married couples. Married couples are in a close relationship that is generally sustained largely because the partners like each other and find each other attractive (Huston & Levinger, 1978), and people who are interacting with liked and attractive partners tend to engage in active and empathic listening when experiencing conflicts or tensions (Bodie et al., 2013). Additionally, Kuhn et al. (2018) found that married individuals tended to listen carefully to their spouses when their spouses were stressed. Therefore, studying supportive listening behaviors among married couples might provide researchers with added insights into the effects of listening.

Previous literature has supported the essential role of supportive listening in the stress-coping process. For example, Bodie and Crick (2014) suggested that supportive listening is the foundational term for communication studies because it invokes the notion of otherness rather than selfless and stimulates expressions verbally and nonverbally. Moreover, Jones (2011) acknowledged the healing function of listening for individuals who are dealing with stress and claimed that listening is a primary method of emotional support.

A few studies have shown that individuals' family stress and their partners' use of supportive listening are positively related. For instance, O'Brien et al. (2009) reported that spouses tended to increase their use of supportive listening when their family stress was high. Similarly, Kuhn et al. (2018) noted that spouses were inclined to use supportive listening when their partners were talking about stressful situations. However, a lot of research on supportive behaviors yielded contradictory findings. For example, past studies found that individuals were less likely to provide support to their partners in the context of a chronic stressor (Iida et al., 2010; Neff et al., 2021). Tomova et al. (2014) argued that individuals used less perspective taking behaviors when experiencing stress, which could hinder their ability to provide sufficient

supportive listening to their partners. Moreover, Clavél et al. (2017) reported that support providers who experienced high chronic financial stress were perceived by their partners as less supportive. Lately, Jayamaha et al. (2021) found that support providers who reported greater stress when discussing their partners' goal, their partners were more likely to report receiving lower emotional support. Given mixed evidence regarding the links between family stress and supportive listening behaviors, we addresses the following:

Research Question (RQ1): What is the relationship between family stress and supportive listening?

Even though supportive listening has mainly been underexplored among couples coping with stress (Bodie, 2011b; Jones, 2011), there are a few studies that have explored the positive relational outcomes that are associated with supportive listening in marriages. For example, supportive listening, while the other partner expresses stress, is positively related to the other partner's evaluation of the dyadic coping (e.g., feeling satisfied with the support from the listener) and relationship satisfaction (Kuhn et al., 2018). Moreover, Davis (1994) found that supportive listening behaviors, such as empathic responding, helped to maintain emotional intimacy and relationship satisfaction in stressful family situations. Furthermore, Pasch and Bradbury (1998) noted that people's positive listening behaviors, such as providing helpful information, asking specific questions aimed at narrowing or defining the problem, providing genuine encouragement, encouraging disclosure, acknowledging feelings and interpretations, and displaying love and care, were associated with their spouses' increased marital satisfaction. Thus, the current research offers the following hypothesis:

Hypothesis 3 (H3): Supportive listening will be positively associated with marital satisfaction.

Even though supportive listening has been included in prior couple burnout studies, it has never been examined as a key variable. For example, in Pines et al.'s (2011) study on the relationship between marital rewards and couple burnout, they included a statement on listening (e.g., my spouse is "a good listener") in their measure of marital rewards. They reported that marital rewards reduced couple burnout among working couples. Jafari et al. (2021) studied the impact of communication skills training intervention on marital burnout among married women and found that effective communication skills, such as active listening skills, significantly reduced marital burnout. Consequently, scholars emphasized the need for more marriage studies to examine supportive listening as a central construct (Bodie, 2011b). Therefore, this study aims to contribute to the current marriage literature by examining how listening, as a central variable, influences couple burnout.

Furthermore, researchers have found that the absence of supportive listening tends to be associated with one's spouse's negative relational outcomes (Doohan, 2007; Skaldeman, 2008). For example, Skaldeman (2006) surveyed 70 married or divorced males and females and found that divorced individuals, in contrast to married individuals, tended to view their partners as less able listeners. Given that couple burnout is a negative relational outcome, the current study proposes the following:

Hypothesis 4 (H4): Supportive listening will be negatively associated with couple burnout.

Flexibility. Married couples face many stressors, such as lack of emotional support from children or spouses, feeling unacknowledged at home, and having to do too many chores (Schwartzberg & Dytell, 1996). This stress is often associated with negative feelings and poor relationship quality. Researchers suggest that enhancement of family functioning is beneficial for

couples who are coping with stress (Olson, 1997). A theory that provides a conceptual framework of family functioning is the Circumplex Model. The three main variables of the Circumplex Model are flexibility, cohesion, and communication (Olson, 2004). Olson (2004) views flexibility and cohesion as two main family functioning variables and views communication as the facilitating variable that displays the changes between flexibility and cohesion.

Flexibility is an essential variable in the family stress-coping process. For example, Olson (1988) stated that individuals tend to rely primarily on internal resources (e.g., flexibility) rather than on external resources (e.g., work support) to cope with family stress. Olson and Gorall (2006) also concluded that flexibility enables families to respond to stress. Furthermore, families who experience more stress are less likely to be flexibility. For example, Higgins et al. (2005) reported that the family stress of caring for an ill child was negatively associated with flexibility and marital happiness when compared to normative data. As another example, Martínez-Pampliega et al. (2017) reported that family stress was negatively correlated with flexibility. Therefore, the following hypotheses are posited:

Hypothesis 5 (H5): Family stress will be negatively associated with flexibility.

Flexibility has been repeatedly found to be positively correlated with marital satisfaction (Farrell & Barnes, 1993; James & Hunsley, 1995). For example, Craddock (1991) studied 100 married couples and found that couples that were more balanced in flexibility felt more satisfied with their marriages than couples that were in the more extreme levels of flexibility (i.e., chaotic or rigid). Additionally, Elizur and Hirsh (1999) reported that marital flexibility was found to make significant contributions to recovery and marital satisfaction for married patients who underwent planned bypass surgery. Thus, the current study proposes the following:

Hypothesis 6 (H6): Flexibility will be positively associated with marital satisfaction.

Even though there has been no research examining the relationship between flexibility and couple burnout, previous research has reported that flexibility is positively associated with healthy family functioning (Olson, 2011). For example, one study found that husbands who reported higher levels of flexibility tended to engage in less marital conflicts, to have greater abilities to deal with emotional problems, and to resolve conflicts in a more constructive and integrating manner (Dialog, 2021). Couple burnout results from long-term exposure to stress, which eventually leads to a painful state of exhaustion towards one's marriage (Pines & Nunes, 2003), and it is positively related to unhealthy family functioning, such as hostile behaviors and marital dissatisfaction (Huston, 2009). Based on this research, this study poses the following hypothesis:

Hypothesis 7 (H7): Flexibility will be negatively associated with couple burnout.

Coping Resources as Explanatory Variables

Previous research has demonstrated that supportive listening and flexibility are significant coping resources (Jones, 2011; Olson, 1997). Research has also suggested that these coping resources can affect adaptation, such as marital satisfaction and couple burnout (Davis, 1994; Doohan, 2007; James & Hunsley, 1995; Olson, 2011). Moreover, the effect of family stress on marital satisfaction and couple burnout has been recognized in the prior literature (e.g., Fenell, 1993; Pines et al., 2011).

Although the relationships among family stress, marital satisfaction, and couple burnout have been well established, we know less about variables (i.e., supportive listening and flexibility) that explain their relationships. According to the MASH model, coping resources are mediating variables between stress and adaptation (Olson, 1997).

Prior research has found support for the mediating role of coping resources in explaining the relationship between stress and adaptation. For example, Perrone and Worthington (2001) reported that coping behaviors (e.g., restructuring roles as needed) mediated job-family role strain and marital satisfaction among dual-earner couples. Using a sample of 337 couples from a longitudinal study, Matthews et al. (1996) showed that psychological distress and work-family conflict affected marital quality through warm and supportive marital interactions. Furthermore, Quittner et al. (1990) reported that social support mediated the relationship between parenting stress and psychological distress among mothers. In the light of the aforementioned hypotheses, the MASH model, and prior literature, the final hypothesis is posited:

Hypothesis 8 (H8): Family stress will have an indirect effect on adaptation (i.e., marital satisfaction and couple burnout) through coping resources (i.e., supportive listening and flexibility).

Dyadic Perspective

Spouses comprise a dyadic relationship and a shared social context; their concerns, thoughts, and behaviors always influence each other, either directly or indirectly (Bodenmann, 2005). For example, Woszidlo and Segrin (2013) reported that husbands' and wives' family stress was negatively associated with the marital satisfaction of their partners. Additionally, Landis et al. (2013) reported that married couples' perceived coping resources from their spouses not only significantly increased their own marital satisfaction but also increased their partners' marital satisfaction.

Limited studies have examined the mediating effects of coping resources between stress and adaptation among married couples at the dyadic level (Falconier & Epstein, 2010, 2011; Karademas & Roussi, 2016). For instance, Karademas and Roussi (2016) reported that spouses'

financial strain was related to their own coping resources (e.g., empathic and supportive interaction), which in turn, was related to their own and their partners' marital satisfaction. Moreover, Falconier and Epstein (2010) found that husbands' economic stress indirectly influenced their wives' relationship satisfaction through their own and their wives' psychological aggression (e.g., refusing to discuss a problem) and positive behaviors (e.g., cleaning up after making a mess); they also stated that husbands' economic stress indirectly influenced their own marital satisfaction through their own psychological aggression. As such, it is appropriate to analyze couples' stress coping experiences and relational outcomes at the dyadic level by taking into account information from both spouses in the marital relationship. Because the current study is interested in understanding married couples' perceptions and experiences during stress coping, all hypotheses that are proposed in this study will be analyzed at the dyadic level (see Figure 3 & 4).

Chapter 3: Method

Procedure

A commercial survey technology platform, Qualtrics (https://www.qualtrics.com), was contracted to recruit participants from the Qualtrics network of participant panels. The contract with Qualtrics specified the target audience (i.e., live in the U.S., heterosexual married couples, employed full-time, and over the age of 18), desired sample size (i.e., 200 completed dyads), and minimum survey completion time (i.e., 16.67 minutes). The minimum of 30 working hours per week for full-time employment was chosen for inclusion in this study because the Internal Revenue Service (2020) stated that a full-time employee works at least 30 hours per week.

Qualtrics randomly sent invites to either one of the couples in each marriage for online surveys. In order to link each spouse as a couple, both partners of the couple took the surveys by clicking on the same survey link. Couples were informed that once they completed their surveys, they needed to send the same link to their partners for participation. Each participant was told to complete the survey independently from their partner and that their answers would not be shared. Partners completed identical surveys. All procedures were approved by the Institutional Review Board at the University of Kansas.

A total of 214 dyads were collected by Qualtrics. Thirty-four dyads were excluded because one or both people in the dyad did not meet the study criteria (i.e., straight liners, contradictory responses, outliers, and working hours less than 30 hours per week). In conclusion, the final analyses were based on responses from 180 husband-wife dyads.

Subjects

The average length of marriage for couples was 14.75 (SD = 10.00). With regard to combined annual household's income in the past year, 6.67% of husbands reported earning

between $20,000 and $39,999, 10.00% earned between $40,000 and $59,999, 16.67% earned between $60,000 and $79,999, 17.22% earned between $80,000 and $99,999, 10.00% earned between $100,000 and $119,999, 10.56% earned between $120,000 and $139,999, 10.00% earned between $140,000 and $159,999, 3.33% earned between $160,000 and $179,999, 5.00% earned between $180,000 and $199,999, 1.67% earned between $200,000 and $219,999, 2.22% earned between $220,000 and $239,999, 1.67% earned between $240,000 and $ 259,999, .56% earned between $280,000 and $ 299,999, 2.22% earned $300,000 or more, and 2.22% choose not to report.

Husband Demographics

Husbands had a mean age of 43.16 years (*SD* = 10.21). A majority of husbands were White or Caucasian (78.89%), and the rest were Black or African American (8.33%), Hispanic/Latino (6.67%), Asian (5.56%), and American Indian or Alaska Native (.56%).

In terms of education, 1.67% had not completed high school, 16.11% graduated from high school, 10.56% completed some college, 11.67% earned a two-year degree, 39.44% earned a four-year degree, 16.67% earned a master's degree, 3.33% earned a doctoral degree, and .56% earned a trade degree.

Husbands worked on average 43.03 (*SD* = 5.91) hours per week. The average hours of quality time they reported spending with their partner per week was 23.29 (*SD* = 15.18). In the current sample, 85.56% of husbands in first marriages, 10.56% of those in second marriages, and 3.89% of those in third marriages. Of the 82.78% of husbands reported having children, 21.67% had 1 child, 37.22% had 2 children, 17.78% had 3 children, .44% had 4 children, 1.11% had 5 children, and .56% had 7 children. When asked who makes financial decisions at home, 23.33% of husbands reported that they make financial decisions at home, 19.44% reported that their

partner makes financial decisions at home, 56.67% reported that they and their partner both make financial decisions equally, and .56% reported others. Most of the husbands (71.11%) believed in some spiritual force, while 25.00% did not, and 3.89% chose not to report. When asked how important believing in a spiritual force is to them, they reported an average of 3.38 (*SD* = 1.64, range 1-5).

Wife Demographics

The wives had a mean age of 41.39 years (*SD* = 10.12). A large number of wives reported their race/ethnicity as White or Caucasian (78.89%), followed by 8.89% Hispanic/Latino, 6.11% Black or African American, 4.44% Asian, .56% American Indian or Alaska Native, .56% Native Hawaiian or Pacific Islander, and .56% reporting mixed race.

Regarding education, 12.22% graduated from high school, 8.89% completed some college degree, 10.56% earned a two-year degree, 41.67% earned a four-year degree, 23.33% earned a master's degree, 2.22% earned a doctoral degree, and 1.11% earned a trade degree.

Wives worked on average 41.26 (*SD* = 5.62) per week and reported spending a weekly average of 22.78 (*SD* = 14.93) hours of quality time with their partner. Among wives (84.44%) who reported having children, 22.22% had 1 child, 37.22% had 2 children, 18.33% had 3 children, 5.56% had 4 children, .56% had 5 children, and .56% had 7 children. In the current sample, 81.11% of wives in first marriages, 13.89% of those in second marriages, and 5.00% of those in third marriages. When asked who is in charge of making financial decisions at home, 29.44% of wives reported that they make financial decisions at home, 17.78% reported that their partner makes financial decisions at home, and 52.78% reported that they and their partner both make financial decisions equally. A large majority of wives (79.44%) believed in some spiritual force, 19.44% did not believe in some spiritual force, and 1.11% choose not to report. The

average rating on the importance of believing in a spiritual force was 3.44 (*SD* = 1.48, range 1-5).

Measures

The surveys administered to couples were the same for both spouses. Cronbach reliability scores (α) for all husband and wife measures can be found in Table 1. The surveys were identical for husbands and wives and contained the following measures:

Family Stress

Family stress was measured using a modified version of the Family Stress Scale (Schwartzberg & Dytell, 1996), which consisted of 16 items tapping six dimensions of family stress: role insignificance (e.g., "The things I do at home don't seem to be very meaningful."), role overload (e.g., "I do not have enough time to do what my family expects of me."), lack of task sharing (e.g., "My spouse and I cooperate with each other to get the household chores done."), conflicting demands (e.g., "Everyone at home seems to want something different from me."), role ambiguity (e.g., "What my family expects of me at home is very clear."), and nonchallenge at home (e.g., "I am not at all challenged by what I do at home."). Each item was measured on a 7-point Likert-type scale ranging from 1 = *Strongly Disagree* to 7 = *Strongly Agree*. Higher scores on all items reflect higher levels of family stress; lower scores on all items reflect lower levels of family stress.

Supportive Listening

Supportive listening was measured using modified versions of the perceived partners' and self-reported Active Empathic Listening Scales (AELS; Bodie, 2011a). The 11-item instrument of the perceived partners' AELS includes three dimensions: sensing (e.g., "My partner is sensitive to what I do not say verbally."), processing (e.g., "My partner keeps track of points I make."), and responding (e.g., "My partner assures me that they are receptive to my

ideas."). Each item was measured on a scale ranging from 1 = *Never* to 7 = *Always*. Higher scores on all items indicate higher levels of perceived partners' supportive listening; lower scores on all items indicate lower levels of perceived partners' supportive listening. The 11-item instrument of the self-reported AELS also includes three dimensions: sensing (e.g., "I am sensitive to what my partner does not say verbally."), processing (e.g., "I keep track of points my partner makes."), and responding (e.g., "I assure my partner that I am receptive to their ideas."). Each item was measured on a scale ranging from 1 = *Never* to 7 = *Always*. Higher scores on all items reflect higher levels of personal supportive listening; lower scores on all items reflect lower levels of personal supportive listening.

Flexibility

Flexibility was measured using the balanced flexibility, rigid, and chaotic scales from the Family Adaptability and Cohesion Evaluation Scale (FACES IV; Olson et al., 2006). Balanced flexibility was measured with seven items such as, "My partner and I try new ways of dealing with problems." Higher scores reflect that couples are more compatible with change when necessary. The rigid scale contains seven items such as, "My partner and I have a rule for almost every possible situation." Higher scores reflect greater inflexibility and rigidity in the marital relationship. Finally, the chaotic scale includes seven items such as, "We never seem to get organized in our marriage." Higher scores reflect greater disorder and chaos in the marital relationship. All of the scales were measured on a 5-point Likert scale ranging from 1 = *Strongly Disagree* to 5 = *Strongly Agree*. The flexibility ratio was calculated by dividing the balanced flexibility scale by the average of the rigid scale and chaotic scale. Higher ratio scores represent higher levels of flexibility; lower ratio scores represent lower levels of flexibility. Permission to use the FACES IV package for the current study was obtained from Life Innovations, Inc. at

www.facesiv.com.

Marital Satisfaction

Marital satisfaction was measured using the Index of Marital Satisfaction (IMS; Hudson & Glisson, 1976). The IMS aims to measure couples' perceptions of the severity of relational problems in their marriages. It consists of 25 items in total (e.g., "I feel that our relationship is very stable."). Each item was measured on a 5-point Likert scale ranging from 1 = *Rarely or None of the Time* to 5 = *Most or All of the Time*. Higher scores reflect higher levels of marital satisfaction; lower scores reflect lower levels of marital satisfaction.

Couple Burnout

Couple burnout was measured using the Couple Burnout Measure (CBM; Pines, 1996). This scale consists of 10 items reflecting the frequency of experiencing the symptoms of physical exhaustion (e.g., feeling "tired" when thinking about one's marriage), emotional exhaustion (e.g., feeling "depressed" when thinking about one's marriage), and mental exhaustion (e.g., feeling "insecure/like a failure" when thinking about one's marriage) concerning their spouses/marriage. Each item was scored using a 5-point Likert scale ranging from 1 = *Never* to 5 = *Always*. Higher scores on all items reflect higher levels of couple burnout; lower scores on all items reflect lower levels of couple burnout.

Chapter 4: Results

Preliminary Analyses

Preliminary analyses were conducted using SPSS 26. All major study variables were checked for normality (see Table 2) and fell within the acceptable range of skewness (-1.40 to 1.40; Aspelmeier & Pierce, 2009) and kurtosis (-.55 to 2.45; Byrne, 2010). Table 3 includes means, standard deviations, and inter-correlations for all major study variables and a control variable, quality time together. Quality time together was included as a control variable because it was a potential confounding factor, and it was significantly related to all major study variables, except for supportive listening (self-reported) (see Table 3). Forty-two out of 43 inter-class correlations were significant, and these ranged in magnitude from .17 (small) to .83 (large) in absolute value.

Table 3 also contains the results of paired sample *t*-tests comparing husbands' and wives' means on all major study variables and the control variable, quality time together. The results revealed that husbands exhibited statistically significantly more perceived partners' supportive listening and marital satisfaction than wives. Additionally, wives reported statistically more family stress, self-reported supportive listening, and couple burnout than husbands. There were no significant differences between husbands' and wives' flexibility and quality time together.

Table 4 presents bivariate correlations between partners and intra-class correlations for all major study variables and the control variable. All of the bivariate correlations were significant, and these ranged in magnitude from .15 (small) to .70 (large) in absolute value. All intra-class correlations were also significant and ranged from .53 (large) to .90 (large) in absolute value. Significant intra-class correlations indicate that spouses' scores were interdependent, warranting the use of dyadic data analysis.

On face value, it appeared that items on the family stress measure may cross-load with items on the couple burnout measure, so exploratory factor analysis (EFA) with principal component analysis was conducted for husbands and wives separately to identify cross-loading items between family stress and couple burnout. The results suggested that all items cleanly loaded onto the two respective theoretical factors (i.e., family stress and couple burnout) and no significant cross-loading items were observed.

Parceling

In order to use structural equation modeling, which accounts for measurement error, latent variables were created using item parceling, as suggested by Little et al. (2013). Parceling is beneficial because it can reduce the number of parameters and can improve model fit comparing to item-level modeling (Little et al., 2002). Three parceling methods are recommended by Little et al. (2013): balanced approach, facet representative approach, and domain representative approach. The balanced approach entails obtaining factor loadings for all items from confirmatory factor analysis (CFA), and then pairs the lowest loading items with the highest loading items to create parcels for each measure. It is used when items in a measure are mostly unidimensional. Facet representative approach uses a measure's subscales as parcels. It is used for multidimensional measures that have distinct subscales. Finally, the domain representative technique assigns items from different subscales to different parcels to ensure that all parcels share variance from all subscales. It is also used for multidimensional measures, but it does not require subscales to be distinctive.

As recommended by Little et al. (2002), exploratory factor analyses (EFAs) using principal components analysis with promax rotation were conducted for major study variables independently (i.e., family stress, perceived partners' supportive listening, self-reported

supportive listening, marital satisfaction, and couple burnout). Flexibility was not included in the EFA because it was represented by a single ratio score, which was calculated from three measures (i.e., balanced flexibility, rigid, and chaotic measures). The EFAs revealed the multidimensionality of all test variables, except for couple burnout, which was found to be unidimensional for wives and multidimensional for husbands. Although the EFAs didn't confirm the multidimensionality of couple burnout for wives and the theoretical unidimensionality of marital satisfaction for husbands nor wives, a decision was made to stay consistent with the original measures and, therefore, treated couple burnout as a multidimensional variable and marital satisfaction as a unidimensional variable. Second-order CFAs were then conducted on all multidimensional measures to ensure that items significantly loaded on their respective subscales. The theoretical subscales of all measures did not fit well with the current data even after modifications (i.e., correlating error terms within the same subscales), and they were not empirically distinctive. So, the domain representative approach was adopted to create parcels for all multidimensional latent constructs. To summarize, parcels for family stress, perceived partners' supportive listening, self-reported supportive listening and couple burnout were created using the domain representative technique; and parcels for marital satisfaction were created using the balanced approach. Each latent variable in this analysis consisted of three parcels to attain the optimal just-identified latent variable (Little et al., 2002). There was one exception, and that was for family stress, which resulted in two parcels because some of the subscales only had two items, which could not be evenly represented in three parcels. Thus, the parceling process resulted in two parcels for family stress and three parcels for all other latent variables (i.e., perceived partners' supportive listening, self-reported supportive listening, couple burnout, and marital satisfaction). Items within each parcel were averaged to form a composite parcel. Due to the

dyadic nature of the data, all husbands' and wives' parcels were created using the same items respectively.

Tests of Distinguishability

Prior to conducting dyadic analyses, the distinguishability of the dyad members needed to be determined (Kenny et al., 2006). A distinguishable dyad is when there is a variable that can help researchers to differentiate the two individuals in the dyad (e.g., husbands and wives); in contrast, an indistinguishable dyad is when there are no variables that can help researcher to differentiate the two individuals in the dyad (e.g., identical twins) (Kenny et al., 2006). Conducting the test of distinguishability is recommended because it could establish distinguishability empirically, present a parsimonious model, and increase power (Ledermann et al., 2011; Kenny et al., 2006). Kenny et al. (2006) suggested that an omnibus test of distinguishability that constrains means, variances, covariances to be equal across sexes should be used to assess distinguishability. If the chi-square test is significant ($p < .05$), the dyad members will be considered to be distinguishable; therefore, a dyadic analysis should be conducted. If the chi-square test is not significant ($p > .05$), the dyad members will be considered to be indistinguishable; accordingly, there is no statistical need to use dyadic analyses. The omnibus test of distinguishability revealed that the dyad members could not be distinguished on self-reported supportive listening, χ^2 (12) = 20.21, *ns*, and flexibility, χ^2 (2) = 2.35, *ns*, but could be distinguished on perceived partners' supportive listening, χ^2 (12) = 37.45, $p < .001$, couple burnout, χ^2 (12) = 74.98, $p < .001$, and marital satisfaction, χ^2 (12) = 41.25, $p < .01$. Thus, for self-reported supportive listening and flexibility, there is no empirical need to conduct dyadic analyses; for perceived partners' supportive listening, couple burnout, and marital satisfaction, it is statistically necessary to conduct dyadic analyses. However, although it's recommended to

obtain the results of the distinguishability tests before using dyadic data analyses, if past research expects dyad members to be distinguishable, dyadic analyses should still be presented without relying on the results of the distinguishability tests (Kenny et al., 2006). The current study collected data from husbands and wives, and they are distinguishable dyad members theoretically, so dyadic data analyses were accepted for this study.

Model Fit Indices

Three model fit indices, chi-square (χ^2) with *p* value and degree of freedom (*df*), comparative fit index (CFI), and root-mean-square error of approximation (RMSEA), were assessed and reported (Kenny et al., 2006). If the chi-square *p* value was greater than .05, CFI was greater than .95, and RMSEA was equal or less than .06, the model was considered a good fit (Hu & Bentler, 1999; Schermelleh-Engel et al., 2003). Kenny et al. (2006) stated that the chi-square test can be an unreliable indicator for testing model fit because it is sensitive to sample sizes and non-normal distributions, so alternative measures of model fit (i.e., CFI and RMSEA) should also be used to evaluate the goodness of fit for each model. For all of my models, all data analyses were estimated using the maximum likelihood estimation in SEM with AMOS 26.0, SPSS.

Dyadic Analyses

To consider the issue of interdependence, an Actor–Partner Interdependence Model (APIM) was estimated. The analysis of dyadic data using an APIM allows for the assessment of one's independent variable (x_1) on their own dependent variable (y_1) (actor effect) as well as on their partners' dependent variable (y_2) (partner effect). Therefore, APIMs were conducted to examine the association between family stress, coping resources, and adaptation (i.e., H1-7 and RQ1). The APIMs are depicted in Figure 3.

To recap, H1-7 and RQ1 tested the direct associations between pairs of variables (direct effects) that did not include any mediating variables, and H8 tested indirect effects by incorporating mediating variables to the pairs of variables. To test H8, the actor-partner interdependence mediation model (APIMeM) was used because the APIMeM examines the effect of an independent variable (X) on a dependent variable (Y) through a mediating variable (M) while accounting for shared dyadic variance. Specifically, the APIMeM allows researchers to examine not only the direct actor and partner effects but also the indirect effects among three pairs of variables in a dyad (i.e., husbands' and wives' independent variables, husbands' and wives' mediating variables, and husbands' and wives' dependent variables). There are eight indirect effects in the APIMeM: two actor-actor effects (i.e., husbands' independent variable → husbands' mediating variable→ husbands' dependent variable; wives' independent variable → wives' mediating variable→ wives' dependent variable), two actor-partner effects (i.e., husbands' independent variable → husbands' mediating variable→ wives' dependent variable; wives' independent variable → wives' mediating variable→ husbands' dependent variable), two partner-actor effects (i.e., husbands' independent variable → wives' mediating variable→ wives' dependent variable; wives' independent variable → husbands' mediating variable→ husbands' dependent variable), and two partner-partner effects (i.e., husbands' independent variable → wives' mediating variable→ husbands' dependent variable; wives' independent variable → husbands' mediating variable→ wives' dependent variable) (see Figure 4).

In the APIMeM, the effect of an independent variable on a mediating variable was labeled as X→M, the effect of a mediating variable on a dependent variable was labeled as M→Y, and the effect of an independent variable on a dependent variable or the direct effect was labeled as X→Y. Thus, the direct effects were X→M, M→Y, and X→Y; the mediating or

indirect effect (X→M→Y) was estimated as X→M times M→Y; and the total effect as the sum of X→Y and X→M→Y. The indirect effect shows how much of the association between an independent variable and a dependent variable is explained by a mediating variable. The total effect reflects the relationship between an independent variable and a dependent variable before adjustment for the mediating variable.

For each APIM(eM), a measurement model was conducted to assess model fit before moving to the next step, which was constructing a structural model. If the measurement model had a poor fit, theoretically meaningful modifications that were suggested by modification indices in AMOS were implemented to improve the fit, and only the method of correlating husbands' error terms with their wives' respective error terms was considered to be a theoretically meaningful modification in this study due to the interdependent nature between husbands and wives.

After attaining a good-fitting measurement model, a structural model was constructed with a control variable, quality time together, which was represented for husbands and wives, respectively, and the fit of the structural model was reported. Next, a chi-square difference test was used to test the potential sex differences between the unconstrained model with free parameters and the constrained model, in which all major pathways (i.e., all actor and partner effects for all study variables, except for the control variable) between husbands and wives were constrained to be equal.

For H1-H7 and RQ1, there were a total of four major pathways in the each of the APIMs (labels for pathways are shown in parentheses): the pathway from husbands' independent variable to husbands' dependent variable ($X_h \rightarrow Y_h$); the pathway from wives' independent variable to wives' dependent variable ($X_w \rightarrow Y_w$); the pathway from husbands' independent

variable to wives' dependent variable ($X_h \rightarrow Y_w$); and the pathway from wives' independent variable to husbands' dependent variable ($X_w \rightarrow Y_h$).

For H8, there were a total of 12 major pathways in each of the hypothesized APIMeMs (labels for pathways are shown in parentheses): the pathway from husbands' independent variable to husbands' mediating variable ($X_h \rightarrow M_h$); the pathway from wives' independent variable to wives' mediating variable ($X_w \rightarrow M_w$); the pathway from husbands' mediating variable to husbands' dependent variable ($M_h \rightarrow Y_h$); the pathway from wives' mediating variable to wives' dependent variable ($M_w \rightarrow Y_w$); the pathway from husbands' independent variable to husbands' dependent variable ($X_h \rightarrow Y_h$); the pathway from wives' independent variable to wives' dependent variable ($X_w \rightarrow Y_w$); the pathway from husbands' independent variable to wives' mediating variable ($X_h \rightarrow M_w$); the pathway from wives' independent variable to husbands' mediating variable ($X_w \rightarrow M_h$); the pathway from husbands' mediating variable to wives' dependent variable ($M_h \rightarrow Y_w$); the pathway from wives' mediating variable to husbands' dependent variable ($M_w \rightarrow Y_h$); the pathway from husbands' independent variable to wives' dependent variable ($X_h \rightarrow Y_w$); and the pathway from wives' independent variable to husbands' dependent variable ($X_w \rightarrow Y_h$).

A non-significant chi-square difference test (χ^2, *ns*) indicates that treating husbands and wives as indistinguishable fit the data well, so the more parsimonious model, which was the constrained model, was chosen for interpretation. A significant chi-square difference test (χ^2, $p < .05$) indicates that treating husbands and wives as distinguishable fit the data well. Therefore, a series of chi-square difference tests were then conducted for all major pathways separately to determine sex differences between specific corresponding pathways. For each of these chi-square tests, the unconstrained model was compared to the constrained model, in which only one pair of

corresponding pathways between husbands and wives was constrained equally (e.g., $X_h \rightarrow Y_h = X_w \rightarrow Y_w$).

For the APIMs, two pairs of corresponding pathways between husbands and wives (i.e., $X_h \rightarrow Y_h = X_w \rightarrow Y_w$ and $X_h \rightarrow Y_w = X_w \rightarrow Y_h$) were constrained individually, which resulted in two separate chi-square difference tests. Likewise, for APIMeMs, six pairs of respective pathways between husbands and wives (i.e., $X_h \rightarrow M_h = X_w \rightarrow M_w$; $M_h \rightarrow Y_h = M_w \rightarrow Y_w$; $X_h \rightarrow Y_h = X_w \rightarrow Y_w$; $X_h \rightarrow M_w = X_w \rightarrow M_h$; $M_h \rightarrow Y_w = M_w \rightarrow Y_h$; and $X_h \rightarrow Y_w = X_w \rightarrow Y_h$) were constrained separately, which resulted in six separate chi-square difference tests. If all of the chi-square tests (i.e., two for each APIM and six for each APIMeM) were found to be significant, the unconstrained model was chosen for interpretation, and the regression coefficients from the unconstrained model were reported and interpreted. If all of the chi-square tests were found to be nonsignificant, the more parsimonious and constrained model was chosen for interpretation. If not all chi-square tests were significant, one final chi-square test was then be performed on a partially constrained model that only constrained nonsignificant pathways to be equal among husbands and wives; and if the final chi-square test was significant the unconstrained model was chosen for interpretation; if the final chi-square test was not significant, the parsimonious and partially constrained model was chosen for interpretation. For ease of interpretation, all regression coefficients reported are standardized coefficients.

Hypotheses Testing Using APIMs

For APIMs, H1 through H7 and RQ1 were tested using APIMs. Each APIM included one independent variable (e.g., family stress) and one dependent variable (e.g., marital satisfaction). Due to the dyadic nature of the analysis, each variable was represented for husbands and wives (e.g., husbands' family stress and wives' family stress). For direct effects, according to Cohen

(1988), the benchmarks for effect size are .10, .30, and .50 as cutoffs for small, medium, and large. Tables 5-12 present the standardized parameter estimates with *p* values and standardized standard errors for all APIMs.

Hypothesis 1 (H1): Family stress will be negatively associated with marital satisfaction.

The measurement model exhibited a good fit to the data, χ^2 (27) = 41.09, $p < .05$, CFI = .99, RMSEA = $.05_{(.01-.09)}$, after correlating two pairs of error terms between husbands and wives on respective parcels. Then, a structural model was constructed and demonstrated a good fit to the data once the hypothesized pathways were specified and quality time together was controlled for, χ^2 (41) = 61.17, $p < .05$, CFI = .99, RMSEA = $.05_{(.02-.08)}$.

A chi-square test was performing by constraining actor and partner effects to be equal, and the chi-square value was significant, χ^2 (2) = 7.50, $p < .05$, so actor and partner effects were constrained and tested separately. Constraining the two actor effects to be equal significantly worsened the model fit, χ^2 (1) = 7.33, $p < .01$; constraining the two partner effects to be equal also significantly worsened the model fit, χ^2 (1) = 7.14, $p < .01$. This indicates that there were significant sex differences in the actor and partner effects. Therefore, the unconstrained model was chosen for interpretation, and the regression coefficients from the unconstrained model were reported and interpreted.

For the actor effects, spouses' family stress significantly predicted their own marital satisfaction (β husband = -.38, $p < .001$; β wife = -.79, $p < .001$). For the partner effects, wives' family stress significantly predicted their husband's marital satisfaction (β = -.42, $p < .001$), but husbands' family stress did not significantly predict their wife's marital satisfaction (β = .05, *ns*) (see Table 5). To summarize, there was partial support for H1. The significant effects ranged from medium (-.38) to large (-.79). For both husbands and wives, higher levels of family stress

were associated with lower levels of their own marital satisfaction. However, higher levels of family stress were associated with lower levels of their partners' marital satisfaction only for wives.

Hypothesis 2 (H2): Family stress will be positively associated with couple burnout.

After correlating one pair of error terms between husbands and wives on respective parcels, the measurement model reached a good fit, χ^2 (28) = 40.50, *ns*, CFI = .99, RMSEA = $.05_{(.00\text{-}.08)}$. A well-fitting structural model specifying the hypothesized pathways between the independent and dependent variables was constructed controlling for quality time together, χ^2 (42) = 51.71, *ns*, CFI = 1.00, RMSEA = $.04_{(.00\text{-}.07)}$.

The chi-square difference test that equalized actor and partner effects was performed and revealed a non-significant value, χ^2 (2) = 3.95, *ns*. This shows that the sex differences in the actor and partner effects were not statistically significant. Therefore, the constrained model was chosen for interpretation. This model closely fit the data, χ^2 (44) = 55.66, *ns*, CFI = .99, RMSEA = $.04_{(.00\text{-}.07)}$.

Table 6 shows that neither actor effects for husbands nor wives were significant (β husband = .10, *ns*; β wife = .14, *ns*), but both partner effects were large and significant (β husbands to wives = .57, $p < .001$; β wives to husbands = .56, $p < .001$). Thus, H2 was partially supported. For both husbands and wives, spouses' family stress was not associated with their own couple burnout. However, spouses' greater family stress was associated with greater couple burnout in their partners.

Research Question (RQ1): What is the relationship between family stress and supportive listening?

There were two APIMs conducted to answer RQ1 because supportive listening was

operationalized by two scales (i.e., perceived partners' and self-reported). The first measurement model (RQ1a) included perceived partners' supportive listening. The second measurement model (RQ1b) included self-reported supportive listening. As a reminder, the scale of perceived partners' supportive listening reflects husbands' and wives' reports of their partners' supportive listening. The scale of self-reported supportive listening reflects husbands' and wives' reports of their own supportive listening.

The first measurement model (RQ1a) had a good fit to the data, χ^2 (28) = 37.82, *ns*, CFI = .99, RMSEA = $.04_{(.00\text{-}.08)}$, after correlating one pair of error terms between husbands and wives on respective parcels. A structural model was then constructed adding the control variable, quality time together, and specifying the actor and partner effects. The model statistics for the structural model were good, χ^2 (42) = 51.56, *ns*, CFI = .99, RMSEA = $.04_{(.00\text{-}.07)}$.

The chi-square difference test was not significant, χ^2 (2) = .42, *ns*, indicating that there were no significant sex differences for actor and partner effects. Therefore, the constrained model was chosen for interpretation. This model had excellent fit, χ^2 (44) = 51.99, *ns*, CFI = 1.00, RMSEA = $.03_{(.00\text{-}.06)}$.

Results in Table 7 indicate that the actor effects between family stress and perceived partners' supportive listening were medium and significant for husbands (β = -.40, $p < .001$) and wives (β = -.41, $p < .001$). The partner effects between family stress and perceived partners' supportive listening were not significant (husbands to wives β = -.04, *ns*; wives to husbands β = -.06, *ns*). This shows that husbands and wives who experienced more family stress reported less of their partners' supportive listening.

The second measurement model (RQ1b), with one pair of correlated errors between husbands and wives on respective parcels, also showed a good fit, χ^2 (28) = 44.71, $p < .05$, CFI

= .99, RMSEA = $.06_{(.02-.09)}$. The subsequent structural model had a good fit to the data as well, χ^2 (42) = 58.52, $p < .05$, CFI = .99, RMSEA = $.05_{(.01-.07)}$.

The chi-square difference test was not statistically significant, χ^2 (2) = 1.15, *ns*, indicating that the sex differences in the actor and partner effects were not statistically significant. Therefore, the constrained model was chosen for interpretation. This model had a good fit, χ^2 (44) = 59.68, *ns*, CFI = .99, RMSEA = $.04_{(.00-.07)}$.

All actor effects between family stress and self-reported supportive listening were significant for both husbands and wives, husbands $\beta = -.13$, $p < .05$ and wives $\beta = -.18$, $p < .05$. All partner effects between family stress and self-reported supportive listening were also significant for both husbands and wives, husbands to wives $\beta = -.30$, $p < .001$; wives to husbands $\beta = -.31$, $p < .001$. The significant effects ranged from small (-.13) to medium (-.31). Husbands and wives appeared to experience increased family stress as their own reports and their partners' reports of their supportive listening decreased.

Hypothesis 3 (H3): Supportive listening will be positively associated with marital satisfaction.

Hypothesis 3 also included two APIMs because the supportive listening variable was measured in two ways (i.e., perceived partners' and self-reported). The first measurement model (H3a) incorporated perceived partners' supportive listening. The second measurement model (H3b) incorporated self-reported supportive listening. As a reminder, the scale of perceived partners' supportive listening reflects husbands' perceptions of their wives' supportive listening and wives' perceptions of their husbands' supportive listening. The scale of self-reported supportive listening reflects husbands' and wives' perceptions of their own supportive listening.

The first measurement model (H3a) demonstrated excellent fit to the data, χ^2 (48) = 58.82, *ns*, CFI = 1.00, RMSEA = $.04_{(.00-.06)}$. A structural model was constructed and had a good fit, χ^2

(66) = 83.20, *ns*, CFI = .99, RMSEA = $.04_{(.00-.06)}$, after the hypothesized pathways were specified and quality time together was controlled for.

The chi-square test was not significant, χ^2 (2) = .16, *ns*, showing that there were no statistically significant sex difference in the actor and partner effects. Therefore, the constrained model was chosen for interpretation, and it had a good fit, χ^2 (68) = 83.35, *ns*, CFI = .99, RMSEA = $.04_{(.00-.06)}$.

All of the actor and partner effects for both husbands and wives were significant (see Table 8), husbands β = .40, $p < .001$; wives β = .42, $p < .001$; husbands to wives β = .10, $p < .01$; wives to husbands β = .14, $p < .01$. The significant effects ranged from small (.10) to medium (.42).

The second measurement model (H3b) also had a good fit, χ^2 (48) = 80.48, $p < .01$, CFI = .99, RMSEA = $.06_{(.04-.08)}$. The structural model fit well to the data, χ^2 (66) = 109.91, $p < .001$, CFI = .98, RMSEA = $.06_{(.04-.08)}$.

The chi-square test was not significant, χ^2 (2) = 2.63, *ns*, so pathways for husbands and wives were not significantly different. Therefore, the constrained model was chosen for interpretation. This model had acceptable fit to the data, χ^2 (68) = 112.54, $p < .001$, CFI = .98, RMSEA = $.06_{(.04-.08)}$.

All of the actor and partner effects for both husbands and wives were significant (see Table 8), husbands β = .27, $p < .001$; wives β = .19, $p < .001$; husbands to wives β = .26, $p < .001$; wives to husbands β = .25, $p < .001$. The significant effects were small, ranging from .19 to .27.

Therefore, H3 was supported. Husbands' and wives' perceptions of their partners' supportive listening was positively associated with their own and their spouses' marital satisfaction. Moreover, husbands' and wives' own supportive listening was positively associated

with their own and their partners' marital satisfaction.

Hypothesis 4 (H4): Supportive listening will be negatively associated with couple burnout.

Two APIMs were conducted in order to understand the relationships between supportive listening from two perspectives (i.e., perceived partners' and self-reported) and couple burnout. The first measurement model (H4a) assessed perceived partners' supportive listening and couple burnout. The second measurement model (H4b) assessed self-reported supportive listening and couple burnout. As a reminder, perceived partners' supportive listening was measured by husbands reporting their wives' supportive listening and wives reporting their husbands' supportive listening, and the self-reported supportive listening was measured by husbands and wives reporting on their own supportive listening.

The first measurement model (H4a) included the perceived partners' supportive listening and couple burnout and fit the data well, χ^2 (47) = 76.05, $p < .01$, CFI = .98, RMSEA = $.06_{(.03-.08)}$, once one pair of error terms between husbands and wives on respective parcels was correlated. A structural model was constructed specifying the hypothesized pathways between the independent and dependent variables, and the model was fitted, χ^2 (65) = 89.69, $p < .05$, CFI = .99, RMSEA = $.05_{(.02-.07)}$.

The nonsignificant chi-square test, χ^2 (2) = .39, *ns*, suggested that there were no significant sex differences in the actor and partner effects. Therefore, the constrained model was chosen for interpretation, and it had a good fit, χ^2 (67) = 90.08, $p < .05$, CFI = .99, RMSEA = $.04_{(.01-.07)}$.

As reported in Table 9, the actor effects were not significant (husbands $\beta = -.06$, *ns*; wives $\beta = -.09$, *n*s), but partner effects were medium and significant (husband to wives $\beta = -.38$, $p < .001$; wives to husbands $\beta = -.34$, $p < .001$).

The second measurement model (H4b) included self-reported supportive listening and couple burnout and resulted a good fit, χ^2 (47) = 72.98, $p < .01$, CFI = .99, RMSEA = $.06_{(.03-.08)}$, after correlating one pair of error terms between husbands and wives on respective parcels. The following structural model fitted well with the data, χ^2 (65) = 91.73, $p < .05$, CFI = .99, RMSEA = $.05_{(.02-.07)}$.

The chi-square test was not significant, χ^2 (2) = 3.36, *ns*. There were no significant differences in the actor and partner effects between husbands and wives. Therefore the constrained model was chosen for interpretation, and it presented a good fit, χ^2 (67) = 95.09, $p < .05$, CFI = .99, RMSEA = $.05_{(.02-.07)}$.

All actor and partner effects were significant (see Table 9): husbands $\beta = -.22$, $p < .001$; wives $\beta = -.25$, $p < .001$; husband to wives $\beta = -.19$, $p < .01$; wives to husbands $\beta = -.12$, $p < .01$. The significant effects were small, ranging from -.12 to -.25.

To summarize, H4 was partially supported. Increases in spouses' reports of their partners' supportive listening were associated with their partners' lower couple burnout, whereas spouses' reports of their partners' supportive listening were not associated with their own couple burnout. Additionally, increases in spouses' reports of their own supportive listening were associated with decreases in their own couple burnout and their partner's couple burnout.

Hypothesis 5 (H5): Family stress will be negatively associated with flexibility.

The measurement model had excellent fit after correlating one pair of error terms between husbands and wives on respective parcels, χ^2 (4) = 2.68, *ns*, CFI = 1.00, RMSEA = $.00_{(.00-.09)}$. The subsequent structural model had outstanding fit, χ^2 (10) = 9.48, *ns*, CFI = 1.00, RMSEA = $.00_{(.00-.08)}$.

All pathways for husbands were constrained equal to their respective pathways for wives

in the model, and then the model was compared to the unconstrained model using the chi-square difference test. The test was significant, χ^2 (2) = 8.24, $p < .05$. Potential sex differences for actor and partner effects were then tested separately. When sex constraints were placed on all actor effects, fit of the model worsened, χ^2 (1) = 3.93, $p < .05$. Also, when sex constraints were placed on all partner effects, fit of the model worsened, χ^2 (1) = 6.85, $p < .01$, and indicated that the sex differences in the actor and partner effects were statistically significant. Therefore, the unconstrained model was chosen for interpretation.

Actor effects were significant (see Table 10) for husbands β = -.25, $p < .01$ and wives β = -.66, $p < .001$. For partner effects, wives' family stress significantly predicted their husbands' flexibility (β = -.50, $p < .001$), but husbands' family stress did not significantly predict their wives' flexibility (β = -.05, *ns*). Thus, there was partial support for H5. The significant effects ranged from small (-.25) to large (-.66). Higher family stress was associated with lower flexibility for husbands and wives. Additionally, higher family stress among wives was significantly associated with lower flexibility among their husbands.

Hypothesis 6 (H6): Flexibility will be positively associated with marital satisfaction.

The measurement model had outstanding fit when one pair of error terms between husbands and wives on respective parcels was correlated, χ^2 (15) = 22.87, *ns*, CFI = 1.00, RMSEA = $.05_{(.00-.10)}$. The structural model had acceptable fit to the data, χ^2 (25) = 39.28, $p < .05$, CFI = .99, RMSEA = $.05_{(.01-.09)}$.

The chi-square difference test was nonsignificant, χ^2 (2) = 4.74, *ns,* suggesting that no significant sex differences were present for actor and partner effects. Therefore, the constrained model was chosen for interpretation. This model revealed a good fit, χ^2 (27) = 43.01, $p < .05$, CFI = .99, RMSEA = $.06_{(.02-.09)}$.

There were significant actor and partner effects between spouses' family stress and marital satisfaction (see Table 11): husbands $\beta = .44$, $p < .001$; wives $\beta = .39$, $p < .001$; husbands to wives $\beta = .28$, $p < .001$; wives to husbands $\beta = .30$, $p < .001$). In sum, husbands' and wives' family stress was positively associated with their own and their partners' marital satisfaction. Therefore, H6 was supported. All significant effects were medium in size, ranging from .28 to .44.

Hypothesis 7 (H7): Flexibility will be negatively associated with couple burnout.

By correlating one pair of error terms between husbands and wives on respective parcels, the measurement model provided a good fit to the data, χ^2 (15) = 23.57, *ns*, CFI = .99, RMSEA = $.06_{(.00-.10)}$. The structural model demonstrated excellent fit to the data, χ^2 (25) = 30.42, *ns*, CFI = 1.00, RMSEA = $.03_{(.00-.07)}$.

The chi-square difference test was significant, χ^2 (2) = 15.91, $p < .001$, so two separate tests were conducted for actor and partner effects. However, when equality constraints were placed on all actor effects, the effects for husbands and wives were not significantly different from each other, χ^2 (1) = .38, *ns*. Similarly, when sex constraints were placed on all partner effects, the effects for husbands and wives were not significantly different from each other, χ^2 (1) = 1.92, *ns*. Therefore, the constrained model was chosen for interpretation, and it had a good fit to the data, χ^2 (27) = 46.33, $p < .05$, CFI = .99, RMSEA = $.06_{(.03-.09)}$.

As reported in Table 12, actor and partner effects of husbands' and wives' family stress on their own (husbands $\beta = -.21$, $p < .001$; wives $\beta = -.23$, $p < .001$) and their partners' (husbands to wives $\beta = -.45$, $p < .001$; wives to husbands $\beta = -.40$, $p < .001$) couple burnout were significant. In sum, as spouses' family stress increased, their own and their partners' couple burnout decreased, thus, supporting H7. The significant effects ranged from small (-.21) to medium (-.45).

Hypothesis Testing Using APIMeMs

Hypothesis 8 (H8): Family stress will have an indirect effect on adaptation (i.e., marital satisfaction and couple burnout) through coping resources (i.e., supportive listening and flexibility).

For the current study, the APIMeMs tested family stress as the independent variable, coping resources (i.e., perceived partners' supportive listening, self-reported supportive listening or flexibility) as the mediating variable, and adaptation (i.e., marital satisfaction or couple burnout) as the dependent variable. There were six APIMeMs in total based on the different combinations of the coping resources and adaptation variables (i.e., family stress → perceived partners' supportive listening → marital satisfaction; family stress → self-reported supportive listening → marital satisfaction; family stress → perceived partners' supportive listening → couple burnout; family stress → self-reported supportive listening → couple burnout; family stress → flexibility → marital satisfaction; family stress → flexibility → couple burnout).

For each model, eight indirect effects were assessed, and the eight indirect effects included two actor-actor effects (e.g., husbands' family stress → husbands' flexibility → husbands' marital satisfaction), two actor-partner effects (e.g., husbands' family stress → husbands' flexibility → wives' marital satisfaction), two partner-actor effects (e.g., husbands' family stress → wives' flexibility → wives' marital satisfaction), and two partner-partner effects (e.g., husbands' family stress → wives' flexibility → husbands' marital satisfaction) were tested.

Labels were given to the eight indirect effects. X referred to the independent variable, M referred to the mediating variable, and Y referred to the dependent variable. The subscript $_H$ referred to husbands and the subscript $_W$ referred to wives. X→M→Y referred to an indirect effect of X on Y through M. For example, $X_H \rightarrow M_W \rightarrow Y_H$ means an indirect effect of a husbands'

independent variable on a husbands' dependent variable through a wives' mediating variable.

For evaluating all the hypothesized actor and partner indirect effects, bootstrapping was used to generate the representation of the sampling distribution of the indirect effect using 95% confidence intervals (CIs). The confidence intervals were generated using 5,000 bootstrap samples. The decision was made because bootstrapping confidence intervals are more likely to have a higher power than other inferential tests (e.g., Sobel test) (Kenny & Ledermann, 2010). If a CI did not include 0, the indirect effect was interpreted as statistically significant. If a CI included 0, the indirect effect was interpreted as statistically nonsignificant. The magnitude of the indirect effects (i.e., the effect size) will be reported based on recommended benchmarks: small = .01, medium= .09, and large= .25 (Kenny, 2021). Tables 13-18 include standardized regression coefficients, standardized standard errors (SEs), 95% CIs, and *p* values for all the actor and partner indirect effects in the proposed APIMeMs. In addition, standardized direct effects for all APIMeMs are presented in Figure 5-10.

Hypothesis 8a (H8a): Spouses' family stress will have an indirect effect on their own and their partners' marital satisfaction through their own and their partners' supportive listening.

There were two APIMeMs tested for H8a because supportive listening was measured using two scales (i.e., perceived partners' and self-reported). The first measurement model (H8aa) included perceived partners' supportive listening. The second measurement model (H8ab) included self-reported supportive listening. As a reminder, the perceived partners' supportive listening reflects husbands' and wives' perceptions of their spouses' supportive listening. The self-reported supportive listening reflects husbands' and wives' perceptions of their own supportive listening.

The first APIMeM (H8aa) included family stress as the independent variable, perceived

partners' supportive listening as the mediating variable, and marital satisfaction as the dependent variable. The measurement model had a good fit, χ^2 (89) = 122.58, $p < .05$, CFI = .99, RMSEA = $.05_{(.02-.07)}$. Then, a structural model was constructed and also had a good fit to the data once the hypothesized pathways were specified and quality time together was controlled for, χ^2 (113) = 151.41, $p < .01$, CFI = .99, RMSEA = $.04_{(.02-.06)}$.

Equality constraints for both husbands and wives were placed on all the pathways to test for potential sex differences. The subsequent chi-square tests comparing the unconstrained model, where parameters were freely estimated, to the constrained model resulted in a nonsignificant change in chi-squared, χ^2 (6) = 8.82, *ns*, indicating no sex differences were present. Thus, the constrained model was chosen for reporting and interpreting regression coefficients, and it had a good fit, χ^2 (119) = 160.24, $p < .01$, CFI = .99, RMSEA = $.04_{(.02-.06)}$.

Significant actor-actor indirect effects emerged for husbands, $X_H \rightarrow M_H \rightarrow Y_H$ $\beta = -.09$, $p < .001$, and wives, $X_W \rightarrow M_W \rightarrow Y_W$ $\beta = -.09$, $p < .001$. Specifically, spouses' greater family stress was negatively associated with their own reports of their partners' supportive listening, which in turn was negatively associated with their own reports of marital satisfaction. The significant effects were medium (-.09) in size. All the remaining indirect effects involving partner effects were not significant. See Figure 5 for standardized direct effect estimates, and Table 13 for standardized indirect effect estimates.

The second APIMeM (H8ab) examined the relationship between family stress and marital satisfaction, using self-reported supportive listening as the mediating variable. The measurement model provided a good fit to the data, χ^2 (89) = 150.79, $p < .001$, CFI = .98, RMSEA = $.06_{(.05-.08)}$. The structural model was also demonstrated acceptable fit, χ^2 (113) = 183.09, $p < .001$, CFI = .98, RMSEA = $.06_{(.04-.07)}$.

When sex equality constraints were placed on all the pathways, husband and wife effects were found to be significantly different from each other, χ^2 (6) = 13.97, $p < .05$. Then, each pathway was constrained to be equal between husbands and wives and tested separately using the chi-square difference test. Four of the six chi-square tests were found to be significant: $X_h \rightarrow M_h = X_w \rightarrow M_w$, χ^2 (1) = .09, *ns*; $M_h \rightarrow Y_h = M_w \rightarrow Y_w$, χ^2 (1) = 5.45, $p < .05$; $X_h \rightarrow Y_h = X_w \rightarrow Y_w$, χ^2 (1) = 9.69, $p < .01$; $X_h \rightarrow M_w = X_w \rightarrow M_h$, χ^2 (1) = .01, *ns*; $M_h \rightarrow Y_w = M_w \rightarrow Y_h$, χ^2 (1) = 5.59, $p < .05$; and $X_h \rightarrow Y_w = X_w \rightarrow Y_h$, χ^2 (1) = 9.73, $p < .01$. These significant chi-square results indicated significant differences between husbands and wives and their respective effects. Thus, a partially constrained model was constructed where the significant effects were freely estimated while the nonsignificant effects were constrained to be equal. The partially constrained model did not fit the data differently than the unconstrained model, χ^2 (1) = .72, *ns*. Therefore, the partially constrained model was chosen for interpretation. This model had a good fit, χ^2 (115) = 183.81, $p < .001$, CFI = .98, RMSEA = $.06_{(.04-.07)}$.

Two significant indirect effects emerged. First, one partner-actor indirect effect for husbands was significant, $X_H \rightarrow M_W \rightarrow Y_W$ $\beta = -.07$, $p < .01$, was significant. Husbands' family stress was negatively associated with their wives' self-reported supportive listening, which in turn was negatively associated with their wives' marital satisfaction. Additionally, a partner-partner indirect effect, $X_H \rightarrow M_W \rightarrow Y_H$ $\beta = -.07$, $p < .01$, was significant for husbands. Husbands' increased family stress was associated with wives' decreased supportive listening (as reported by their wives), which in turn was associated with husbands' decreased marital satisfaction. The significant effects were medium (-.07) in size. All of the remaining indirect effects were not significant. See Figure 6 for standardized direct effect estimates, and Table 14 for standardized indirect effect estimates.

Hypothesis 8b (H8b): Spouses' family stress will have an indirect effect on their own and their partners' couple burnout through their own and their partners' supportive listening.

There were also two APIMeMs tested for H8b because supportive listening was measured in two ways (i.e., perceived partners' and self-reported). The first measurement model (H8ba) included perceived partners' supportive listening. The second measurement model (H8bb) included self-reported supportive listening. As a reminder, the perceived partners' supportive listening reflects spouses' reports of their partners' supportive listening, and the self-reported scale of supportive listening reflects spouses' reports of their own supportive listening.

The first APIMeM (H8ba) tested perceived partners' supportive listening as a mediator for the relationship between family stress and couple burnout. The measurement model, when one pair of error terms between husbands and wives on respective parcels were allowed to correlate, exhibited good model fit, χ^2 (88) = 122.50, $p < .01$, CFI = .99, RMSEA = $.05_{(.02-.07)}$. A structural model was constructed and had a good fit to the data after the hypothesized pathways were specified and quality time together was controlled for. The model fit for the structural model was good, χ^2 (112) = 142.45, $p < .05$, CFI = .99, RMSEA = $.04_{(.01-.06)}$.

When sex equality constrains were placed on all of the pathways, the nonsignificant chi-square χ^2 (6) = 6.97, *ns*, revealed that the husbands' and wives' effects were not significantly different from each other, thereby the constrained model was chosen for interpretation, and it had a good fit to the data, χ^2 (118) = 149.42, $p < .05$, CFI = .99, RMSEA = $.04_{(.01-.06)}$.

Two actor-partner indirect effects were significant: $X_H \rightarrow M_H \rightarrow Y_W = .07$, $p < .05$ and $X_W \rightarrow M_W \rightarrow Y_H = .07$, $p < .05$ for husbands and wives, respectively. The first indirect effect indicates that husbands' family stress was negatively associated with their reports of their partners' supportive listening, which in turn was negatively associated with their wives' couple

burnout. The latter indirect effect shows that wives' increased family stress was associated with wives' reports of their partners' decreased supportive listening, which in turn was associated with their husbands' increased couple burnout. The significant effects were medium (.07) in size. See Figure 7 for standardized direct effect estimates, and Table 15 for standardized indirect effect estimates.

The second APIMeM (H8bb) examined the indirect effect of family stress on couple burnout through self-reported supportive listening. Once one pair of error terms were allowed to correlate with each other in the measurement model, it demonstrated a good fit to the data, χ^2 (88) = 128.88, $p < .01$, CFI = .98, RMSEA = $.05_{(.03-.07)}$. The subsequent structural model also resulted in a good fit to the sample data, χ^2 (112) = 150.75, $p < .01$, CFI = .99, RMSEA = $.04_{(.02-.06)}$.

When sex equality constraints were imposed on all of the pathways, husbands' and wives' effects were found to be significantly different from each other, χ^2 (6) = 13.41, $p < .05$. Consequently, each pathway was constrained equally between husbands and wives and tested separately using chi-square difference tests. Only one of the six chi-square tests was found to be significant: $X_h \rightarrow M_h = X_w \rightarrow M_w$, χ^2 (1) = .12, *ns*; $M_h \rightarrow Y_h = M_w \rightarrow Y_w$, χ^2 (1) = 8.17, $p < .01$; $X_h \rightarrow Y_h = X_w \rightarrow Y_w$, χ^2 (1) = .42, *ns*; $X_h \rightarrow M_w = X_w \rightarrow M_h$, χ^2 (1) = .0000007, *ns*; $M_h \rightarrow Y_w = M_w \rightarrow Y_h$, χ^2 (1) = 3.44, *ns*; and $X_h \rightarrow Y_w = X_w \rightarrow Y_h$, χ^2 (1) = 3.17, *ns*. The significant chi-square results indicated a significant difference between the effect of husbands' supportive listening (husbands-report) on husbands' couple burnout and the effect of wives' supportive listening (wives-report) on wives' couple burnout; This effect was freely estimated in the partially constrained model while the other nonsignificant effects were constrained equally. However, the partially constrained model fit the data differently that the unconstrained model, χ^2 (5) = 11.38, $p < .05$. Therefore, a decision was made to report and interpret the unconstrained model.

Two significant indirect effects emerged. A partner-actor indirect effect was significant ($X_H \rightarrow M_W \rightarrow Y_W$ $\beta = .07$, $p < .05$). Husbands' family stress was negatively associated with their wives' perceptions of their own supportive listening, which in turn was negatively associated with their wives' couple burnout. Additionally, one partner-partner indirect effect was significant ($X_H \rightarrow M_W \rightarrow Y_H$ $\beta = .04$, $p < .05$), and indicated that for husbands, greater family stress was associated with their wives' decreased supportive listening (reported by their wives), which in turn was associated with husbands' increased couple burnout. The significant effects ranged from small (.04) to medium (.07). See Figure 8 for standardized direct effect estimates, and Table 16 for standardized indirect effect estimates.

Hypothesis 8c (H8c): Spouses' family stress will have an indirect effect on their own and their partners' marital satisfaction through their own and their partners' flexibility.

The APIMeM included an independent variable (i.e., family stress), a mediating variable (i.e., flexibility), and a dependent variable (i.e., marital satisfaction). Results of the measurement model with one pair of error terms correlated indicated a good fit to the data, χ^2 (40) = 60.66, $p < .05$, CFI = .99, RMSEA = $.05_{(.02-.08)}$. A structural model was specified with the control variable, quality time together, and included both direct and indirect paths. The model statistics for the structural model yielded a good fit to the data, χ^2 (56) = 82.64, $p < .05$, CFI = .99, RMSEA = $.05_{(.03-.07)}$.

All major pathways for husbands were constrained equal to their respective pathways for wives. The chi-square difference test was significant, χ^2 (6) = 13.86, $p < .05$. Next, each pair of respective pathways was constrained to be equal and examined separately to identify sex differences for specific paths. The two of the six chi-square difference tests were significant: $X_h \rightarrow M_h = X_w \rightarrow M_w$, χ^2 (1) = 5.00, $p < .05$; $M_h \rightarrow Y_h = M_w \rightarrow Y_w$, χ^2 (1) = .42, *ns*; $X_h \rightarrow Y_h = X_w$

$\rightarrow Y_w$, χ^2 (1) = 2.93, *ns*; $X_h \rightarrow M_w = X_w \rightarrow M_h$, χ^2 (1) = 7.98, $p < .01$; $M_h \rightarrow Y_w = M_w \rightarrow Y_h$, χ^2 (1) = .26, *ns*; and $X_h \rightarrow Y_w = X_w \rightarrow Y_h$, χ^2 (1) = 3.29, *ns*. These significant chi-square results indicated significant differences between husbands and wives on these specific paths. Thus, a partially constrained model was constructed where the significant effects were freely estimated while the other nonsignificant effects were constrained to be equal. The chi-square test was nonsignificant, χ^2 (4) = 4.57, *ns*, and concluded that the partially constrained model fit the data just as good as the unconstrained model. Hence, the partially constrained model was chosen for interpretation. This model closely fit the data, χ^2 (61) = 89.61, $p < .05$, CFI = .99, RMSEA = $.05_{(.03-.07)}$.

A significant actor-actor effect, $X_W \rightarrow M_W \rightarrow Y_W$ $\beta = -.13$, $p < .001$, and actor-partner effect, $X_W \rightarrow M_W \rightarrow Y_H$ $\beta = -.11$, $p < .001$ emerged for wives. Specifically, wives' family stress was negatively associated with their own flexibility, which in turn was positively associated with their own and their husbands' marital satisfaction. Additionally, a significant partner-actor effect, $X_W \rightarrow M_H \rightarrow Y_H$ $\beta = -.14$, $p < .001$, and partner-partner effect, $X_W \rightarrow M_H \rightarrow Y_W$ $\beta = -.09$, $p < .001$ emerged for wives. Wives' family stress was negatively associated with their husbands' flexibility, which in turn was positively associated with their own and their husbands' marital satisfaction. No other significant indirect effects were detected. All significant effects were medium in size and ranged from -.09 to -.14. See Figure 9 for standardized direct effect estimates, and Table 17 for standardized indirect effect estimates.

Hypothesis 8d (H8d): Spouses' family stress will have an indirect effect on their own and their partners' couple burnout through their own and their partners' flexibility.

The final APIMeM included family stress as the independent variable, flexibility as the mediating variable, and couple burnout as the dependent variable. After correlating one pair of

error terms, the measurement model presented excellent fit, χ^2 (40) = 49.66, *ns*, CFI = 1.00, RMSEA = $.04_{(.00\text{-}.07)}$. The resulting structural model also closely fit the data, χ^2 (56) = 62.94, *ns*, CFI = 1.00, RMSEA = $.03_{(.00\text{-}.06)}$.

After placing sex equality constraints on all the major pathways, husband and wife effects were found to be significantly different from each other, χ^2 (6) = 18.16, $p < .01$. Each pathway was then constrained to be equal between husbands and wives and tested separately using the chi-square difference test. Two of the six chi-square difference tests were found to be significant: $X_h \rightarrow M_h = X_w \rightarrow M_w$, χ^2 (1) = 4.57, $p < .05$; $M_h \rightarrow Y_h = M_w \rightarrow Y_w$, χ^2 (1) = .003, *ns*; $X_h \rightarrow Y_h = X_w \rightarrow Y_w$, χ^2 (1) = .02, *ns*; $X_h \rightarrow M_w = X_w \rightarrow M_h$, χ^2 (1) = 7.48, $p < .01$; $M_h \rightarrow Y_w = M_w \rightarrow Y_h$, χ^2 (1) = 1.73, *ns*; and $X_h \rightarrow Y_w = X_w \rightarrow Y_h$, χ^2 (1) = .003, *ns*. Subsequently, a partially constrained model was constructed where the significant effects were allowed to freely estimate while the other nonsignificant effects were constrained to be equal. The chi-square test comparing the partially constrained model and the unconstrained model was not significant, χ^2 (4) = 7.48, *ns*, so the partially constrained model was chosen for interpretation. This model closely fit the data, χ^2 (61) = 79.48, *ns*, CFI = .99, RMSEA = $.04_{(.00\text{-}.07)}$.

Two indirect effects that were associated with wives' family stress were significant. The significant actor-partner effect, $X_W \rightarrow M_W \rightarrow Y_H$ $\beta = .13$, $p < .001$, indicated that wives' family stress was negatively associated with wives' flexibility, which in turn was negatively associated with husbands' couple burnout. The significant partner-partner effect, $X_W \rightarrow M_H \rightarrow Y_W$ $\beta = .15$, $p < .001$, showed that wives' family stress was negatively associated with husbands' flexibility, which in turn was negatively associated with wives' couple burnout. All significant effects were medium in size and ranged from .13 to .15. See Figure 10 for standardized direct effect estimates, and Table 18 for standardized indirect effect estimates.

In conclusion, H8 predicted that spouses' family stress would have an indirect effect on adaptation (i.e., marital satisfaction and couple burnout) through coping resources (i.e., perceived partners' supportive listening, self-reported supportive listening, and flexibility). This hypothesis was partially supported. Overall, out of the 48 possible indirect effects that could have been detected (i.e., eight indirect effects for each of the six APIMeMs), 14 indirect effects (i.e., three actor-actor effects, four actor-partner effects, three partner-actor effects, and four partner-partner effects) were significant. Each of the six models presented two to four significant indirect effects. All of the variables contributed to significant indirect effects in their respective models, except for wives' family stress and husbands' reports of their own supportive listening in H8ab and H8bb, husbands' family stress in H8c and H8d. All models had significant actor-partner effects and/or partner-actor effects, except for H8aa, which only had significant actor-actor effects.

Chapter 5: Discussion

The main goal of this study was to investigate the relationships between family stress and adaptation (i.e., marital satisfaction and couple burnout) through coping resources (i.e., supportive listening and flexibility) for heterosexual dual-earner couples. The following sections discuss general findings and interpretations, contributions, theoretical and practical implications, limitations, and future directions of this study.

Findings and Interpretations

Hypotheses tested in this study are summarized and interpreted in this section. Specifically, the first part of this section discusses the role of family stress on adaptation (i.e., H1 and H2); the second part discusses the role of family stress on coping resources (i.e., RQ1 and H5); the third part discusses covers the role of coping resources on adaptation (i.e., H3, H4, H6, and H7); the fourth part includes the indirect effects of family stress on adaptation through coping resources (i.e., H8).

The Role of Family Stress on Adaptation

The adaptation was examined by two marital outcomes, which were marital satisfaction and couple burnout. Both variables are reflective of outcomes that spouses experience in the marital relationship.

Family Stress and Marital Satisfaction. The current study found significant actor effects for wives and husbands regarding the associations between family stress and marital satisfaction. Specifically, spouses' family stress was inversely associated with their own marital satisfaction. These findings are consistent with the past research that husbands' and wives' family stress are negatively associated with their own and their partners' marital satisfaction (Woszidlo & Segrin, 2013). This is also consistent with Neff and Karney's (2007) finding that

newlyweds reported less marital satisfaction when they were under higher levels of stress.

This study also found one significant partner effect such that wives' family stress was negatively associated with their husbands' marital satisfaction. Because men are more likely to blame rather than feel sympathy for support seekers (MacGeorge, 2003), it is reasonable that husbands may feel dissatisfied in their marriage when their stressed wives seek their support. Likewise, Neff and Karney (2005) found that wives tended to receive more negative behaviors (e.g., arguing and criticizing) from their husbands as their stress levels increased. It is also possible that stressed wives express their family stress with their partners in a more emotional and confronting way (e.g., anger, sadness, and whining) than husbands (Carstensen et al., 1995), which is likely to decrease their husbands' marital satisfaction (Pasch & Bradbury, 1998).

Family Stress and Couple Burnout. The family stress and couple burnout association only yielded partner effects, meaning that husbands and wives with more family stress did not perceive more couple burnout themselves, only their partners did. This suggests that the experience of couple burnout is compounded by the stressors that one's partner experiences in their marriage. These significant partner effects are consistent with the past research that has found positive associations between spouses' overall marital stress and their partners' couple burnout (Pines et al., 2011). However, the non-significant actor effects are not consistent with Pines et al.'s (2011) finding that spouses' overall marital stress was positively associated with their own couple burnout. It could be argued that when spouses are under stress, they often withdraw from their partners and disengage from family responsibilities (Story & Repetti, 2006; Thorp et al., 2004). At the same time, they also need support from their partners to cope with stress. Thus, the support givers are under the pressure of coping with partners' detachment as well as helping them to recover. It is possible that support receivers who are experiencing family

stress are less likely to feel burnout than their partners who are support givers.

In addition, it is interesting to see that husbands' and wives' family stress was associated with their own marital satisfaction but not their own burnout. The difference in findings may be explained by the operationalization of the marital satisfaction and couple burnout measures in this study. Pines's (1996) couple burnout measure reflects the frequency of experiencing symptoms of physical, emotional, and mental exhaustion, such as feeling "insecure/like a failure" when thinking about one's marriage (Pines et al., 2011). So, the couple burnout measure is more related to one's own experience regarding marriage overall. However, the Index of Marital Satisfaction measures spouses' feelings toward their partners' behaviors, such as "I feel that my partner is affectionate enough" and "I feel that my partner really cares for me." Thus, the marital satisfaction measure is more connected with one's own feeling regarding their partner's specific behaviors. This may suggest that family stress is associated with one's own state of the relationship rather than one's own state of the self in the marriage. In other words, family stress might influence how spouses feel about their partners, but not how they feel about their personal experiences in the marriage. For example, an individual who is stressed about excessive household chores may think that their partner is not doing enough chores and feel dissatisfied with their partner's role in the marriage, but this stress regarding household labor division does not make them feel like a failure in the marriage.

The Role of Family Stress on Coping Resources

Stressed spouses seek support from their marriages through communication. Consistent with past research (Kuhn et al., 2018; Higgins et al., 2005), this study in general supported the finding that husbands and wives who experienced family stress engaged in supportive behaviors with their spouses. The two supportive behaviors or coping resources that were examined in this

study were supportive listening and flexibility. In addition, supportive listening was not only reported by participants themselves but also reported by their partners.

Family Stress and Perceived Partners' Supportive Listening. This study yielded significant actor effects in that spouses' family stress impacted their own perceptions of their partners' supportive listening. Specifically, spouses who reported more family stress reported their partners' to engage in less supportive listening. These significant actor effects may be results of the stress experience itself. For example, some research has found that stress can make it difficult for spouses to notice supportive behaviors from their partners (Neff & Karney, 2017). This is not surprising, given that negative emotions or tensions that emerge from family stress may be transmitted to higher demands of partners' supportive behaviors, which may be associated with perceptions of partners being less supportive. It is also possible that as family stress increases, couples spend less time together and have less energy to focus on the relationship (Marciano et al., 2015), so they have a lower likelihood of providing support.

For husbands and wives, however, there was no evidence of significant partner effects as spouses' family stress was not associated with their partners' perceptions of their supportive listening. It might be that spouses' actual supportive behaviors do not change much with stress, but, rather, other factors affect their partners' perceptions of supportive behaviors. Some research indicates that supportive behaviors can become habitual in mature relationships (Kammrath et al., 2015), such as marital relationships, so, it is plausible that spouses enact habitual or consistent supportive listening behaviors when under stress.

Family Stress and Self-Reported Supportive Listening. There were significant actor effects for wives and husbands regarding self-reported supportive listening. Specifically, spouses who reported more family stress reported engaging in less supportive listening to their partners.

This is consistent with past research. For example, Neff et al. (2021) found that individuals' stress hindered their support to their partners. Specifically, when husbands were stressed, they reported giving less support to their wives. Similarly, Jayamaha et al. (2021) reported that when spouses experienced greater stress during discussions with their partners about goals, they reported giving less emotional support to their partners.

There were also significant negative partner effects for wives and husbands regarding self-reported supportive listening. Specifically, spouses' greater family stress was associated with their partners' reporting less partner supportive listening (e.g., husbands' greater family stress was associated with their wives' reports of the decreased amount of supportive listening they provide to their husbands). It is possible that when individuals become more stressed, their supportive responses and their partners' supportive responses become less frequent (Bodenmann et al., 2015; Neff & Karney, 2005).

For this study, supportive listening was operationalized in two ways (i.e., perceived partners' and self-reported) to capture both support providers' and receivers' perspectives. Two separate APIM models (i.e., one used perceived partners' supportive listening and one used self-reported supportive listening) revealed that out of eight direct effects (i.e., four actor effects and four partner effects), only two effects (i.e., two partner effects) were not significant. These included the pathways between spouses' family stress and their partners' perceptions of their supportive listening. Taken together, the results for RQ1 offer some clarity to the previously discrepant results specific to the links from family stress to supportive listening and that spouses' family stress is negatively related to coping resources.

Past research on listening has argued that there are differences in the way people assess their own listening behaviors and the way others assess the same behaviors, and suggested that

listening should be measured from various perspectives (Bodie, 2013). The findings in this study confirm that spouses and their partners perceive the same supportive listening behaviors differently. Post-hoc paired *t*-test analyses also found significant differences between self-reported and perceived partners' supportive listening for husbands ($t = 4.44$, $p < .001$) and wives ($t = -4.33$, $p < .001$). Specifically, wives ($M = 4.64$) perceived their partners to engage in less supportive listening than their partners ($M = 4.93$) did themselves; husbands ($M = 4.90$) perceived their partners to engage in less supportive listening that their partners ($M = 5.24$) did themselves. This might be that spouses have higher expectations or standards for their partners' supportive listening skills. Due to the discrepancy between husbands and wives on what is counted as an effective supportive listening behavior, future research should consider measuring supportive listening from both partners' perspectives and perhaps include additional operationalization methods (e.g., objective coding of listening behaviors, third party's perspectives of listening, and listening manipulation) to accurately measure listening behaviors before making claims about the functions of listening.

Family Stress and Flexibility. Both actor effects regarding flexibility were significant. The amount of family stress that spouses perceive was directly related to their own perceptions of flexibility in the marriage. Specifically, spouses' family stress was negatively associated with their own report of flexibility. This suggests that spouses are less likely to engage in flexible behaviors (e.g., shift household responsibilities and adjust to change when necessary) when they are stressed in the family environment. This is consistent with past research that family stress is negatively correlated with one's own report of flexibility (Martínez-Pampliega et al., 2017). While not a primary focus of this study, a significant sex effect emerged regarding this finding. Namely, wives' family stress played a more pronounced role, in comparison to husbands', in

predicting the amount of their own flexibility. This may due to the norm that wives are taking a bigger responsibility at home and spend significantly more time on marriage related tasks (Lyonette & Crompton, 2015), so they may not have much energy and time left for being adaptable.

There was one significant partner effect as wives', not husbands', as family stress was negatively associated with their partners' perceptions of flexibility in the marriage. This suggests that when wives experience greater family stress, their husbands perceive themselves to be less flexible in their marriage. Past research has found that wives are more likely to actively seek support from their partners (Jensen et al., 2013) and use more demanding and criticizing behaviors (Christensen & Heavey, 1990). Therefore, when wives are stressed out, it is possible that their husbands feel pressured to change when they may not want to and, therefore, perceive themselves to be less flexible overall. It is important to reiterate that wives' family stress not only affects their own perceptions of flexibility, but also their husbands' perceptions of flexibility. This suggests that wives' stress plays a more prominent role in the stress-coping process.

The Role of Coping Resources on Adaptation

Supportive Listening and Marital Satisfaction. As expected, spouses' perceptions of their partners' supportive listening (i.e., perceived partners' supportive listening) was a significant predictor of their own and their partners' marital satisfaction. Specifically, spouses' who perceived that their partners were engaging in more supportive listening were prone to perceive more marital satisfaction, and their partners tended to perceive more marital satisfaction as well. Regarding self-reported supportive listening, the current study found that spouses' perceptions of their own supportive listening was significantly associated with their own and

their partners' marital satisfaction. Specifically, spouses' who thought that they used more supportive listening were more satisfied, their partners also felt more satisfied with their marriage. These findings are consistent with past literature, which has found that supportive listening is positively related to marital satisfaction. For example, Kuhn et al.'s (2018) found that spouses who were coded as listening more closely to their partners in a stress-focused conversation were more likely to report feeling more satisfied in their relationship. Additionally, Manusov et al. (2020) surveyed 137 participants that were in a close relationship and reported that greater supportive listening was positively related to relational satisfaction. The current study measured supportive listening from both support providers' and receivers' perspectives. This adds to the existing literature as it suggests that the positive associations between supportive listening and marital satisfaction stay true for both perceived partners' and self-reported supportive listening.

Supportive Listening and Couple Burnout. There was support for partner effects of perceived partners' supportive listening. Wives and husbands' lower levels of perceived partners' supportive listening are associated with their partners' higher couple burnout. When spouses perceive their partners not providing enough supportive listening, they may display negative behaviors (e.g., nagging, complaining, etc.). Thus, their partners may be affected by those negative behaviors and become burnt out in the long run.

Contrary to our expectation, spouses perceived partners' supportive listening are not associated with their own couple burnout. This suggests that when spouses perceive low supportive listening from their partners, they may not develop a state of exhaustion towards the marriage (e.g., feeling depressed when thinking about the marriage). This may due to that when spouses perceive insufficient supportive listening behaviors from their partners, they may feel

less satisfied with their partners (i.e., marital satisfaction), but they may turn to other sources (e.g., friends and relatives) to meet the need of being listened, so this unsatisfaction may not necessarily linked to their own levels of burnout towards the marriage. Another reason for this finding might be that spouses' perceptions of their spouses' other qualities, such as helping with childcare, doing household labor, and earn money for the family, are more related to their own couple burnout than their perceptions of their partners' supportive listening. Future research should explore what sources or means could impact the relationships between partner perceived family stress and couple burnout.

This study found that spouses' perceptions of their own supportive listening (i.e., self-reported supportive listening) was associated with their own and their partners' burnout. In other words, when spouses perceived high supportive listening to their partners, they and their partners experienced low couple burnout. Thus, perceiving more supportive listening to one's partner is desirable for a spouse because it results in decrease in couple burnout for both spouses. This is not surprising given that spouses who have effective communication skills (e.g., listening) are less likely to experience couple burnout (Ahrari et al., 2020). A study conducted by Jafari et al. (2021) showed that communication skills training, such as listening skills, could significantly reduce couple burnout among married women. So, when spouses feel that they are engaging in high quality listening behaviors with their partners, they may experience less burnout towards the marriage. The current study added to the existing couple burnout studies by examining supportive listening as a key variable and confirmed the unique relational benefits of improving spouses' supportive listening.

Flexibility and Marital Satisfaction. Uniform actor and partner effects were found for husbands and wives. Specifically, spouses' flexibility was positively associated with their own

and their partners' marital satisfaction. These findings are consistent with previous studies, which have conveyed that high flexibility makes couples feel satisfied in the marriage (Elizur & Hirsh, 1999; Ricketts, 2020). Additionally, it is important to note there were no significant sex differences detected (see Table 3 and Table 11). Thus, this study reinforces that flexibility, regardless of who is reporting to have it, has a significant positive effect on marital satisfaction.

Flexibility and Couple Burnout. Additionally, all actor and partner effects for the relationships between flexibility and couple burnout were significant. Specifically, when spouses reported higher flexibility in their marriage, they and their partners reported less couple burnout. Because flexibility is reflected in clear negotiation of rules, responsibilities, and decisions, and having the ability to change as needed and to deal with stress effectively (Olson, 2000), it makes sense that couples would perceive less burnout in their marriage. This is consistent with past research on family stress and marital quality. For example, one study found that husbands who reported higher levels of flexibility tended to have less marital conflicts (Dialog, 2021). Additionally, León et al. (2015) reported that greater flexibility was associated with lower levels of family stress (i.e., parental stress) in adoptive families. To date, no study has investigated the association between flexibility and couple burnout among dual-earner couples. The present study has extended the extant literature by finding the negative association between flexibility and couple burnout.

Although not all perspectives of supportive listening were significant predictors of marital outcomes, the findings consistently found that supportive listening and flexibility affect the marital satisfaction and burnout levels of dual working couples. In general, husbands and wives who are supportive listeners and flexible are more satisfied and experience less burnout in their marriages. Past research stated that effective communication processes tend to lead to more

positive relational outcomes and less negative outcomes (Jafari et al., 2021; Pasch & Bradbury, 1998). The MASH model posits that coping resources influence adaptation. The current research finds that to be partially true in regard to marital satisfaction and couple burnout. This suggests that coping resources, such as supportive listening and flexibility, appear to function as protective behaviors for stressed husbands and wives.

The Mediating Role of Coping Resources

This study hypothesized that family stress would be negatively related to coping resources (i.e., supportive listening and flexibility), and in turn be associated with less marital satisfaction and more burnout. In sum, both coping resources were able to explain the relationships between family stress and marital outcomes.

Supportive Listening and its Indirect Effects. Supportive listening provides an individual's perceptions of the listening skills used in the marital dyad. The construct was operationalized via two reports of supportive listening (i.e., perceived partners' and self-reported). Thus, the first part of this section will discuss the mediating role of perceived partners' supportive listening and the second part will discuss the mediating role of self-reported supportive listening.

This study partially supported the hypothesis that perceived partners' supportive listening mediated the relationships between family stress and marital satisfaction. Specifically, there was evidence of significant actor-actor effects for husbands and wives. Husbands and wives who reported more family stress also reported less perceived partners' supportive listening, and this was in turn associated with personally feeling less satisfied in their marriage. This study also found evidence for the actor-partner effects in that husbands' and wives' family stress impacted their partners' couple burnout through their own perceptions of their partners' supportive

listening. In essence, when stressed spouses perceived their partners to engage in less supportive listening, their partners reported more couple burnout.

Concerning the indirect effects of self-reported supportive listening, wives' perceptions of their own supportive listening partially mediated the relationship between their partners' family stress and their own and their partners' marital satisfaction and couple burnout. Specifically, when husbands perceive more family stress, they and their wives report less marital satisfaction and more couple burnout, in part, because of the decrease in their wives' self-reported supportive listening.

In sum, husbands' reports of their wives' supportive listening, wives' reports of their husbands' supportive listening, and wives' reports of their own supportive listening all contributed significantly to the indirect effects between spouses' family stress and marital outcomes. However, husbands' reports of their own listening did not explain their own and their partners' marital outcomes when spouses reported feeling stressed at home. Stated differently, the indirect effects of supportive listening that were significant were all associated with wives. This suggests that the wives' role is more relevant than their husbands' role in the stress coping process at home. A possible interpretation of these findings is that wives tend to be more responsive and outspoken in times of stress (Gottman & Silver, 1999). Thus, it is possible that wives may drastically change their evaluations of supportive listening and their actual supportive listening behaviors in the presence of family stress.

Flexibility and its Indirect Effects. The second coping resource in this study was flexibility. Husbands' and wives' flexibility was able to explain the relationship between wives' family stress and their own and their partners' marital satisfaction. Thus, wives who experienced more stress were less likely to be flexible, which in turn resulted in decreased marital satisfaction

for themselves and their partners (e.g., wives' family stress leads to wives' lower assessments of flexibility which leads to lower reports of marital satisfaction for both husbands and wives.)

Concerning the indirect effects associated with couple burnout, only two significant indirect effects emerged. First, when wives perceived more family stress, they reported less couple burnout, in part, because their husbands were less flexible. Second, when wives perceived more family stress, their husbands reported less couple burnout, in part, because they were less flexible. Although these findings are correlational and not definitive proof of causation, but these significant findings are in accordance with the MASH model of marital functioning, which posits that coping resources enable the indirect effect between stress and adaptation to occur (Olson, 1997).

All of the significant indirect effects associated with flexibility started with wives' family stress. These findings imply that family stress is more relevant to wives than husbands. Gender norms might be applicable when trying to make sense of why these indirect effects were observed. In general, society expects that wives take on more household responsibilities and be more present at home, while husbands are expected to work more outside of the home and be the breadwinner (Yavorsky et al., 2015). Also, wives typically perform tasks (e.g., childcare activities) that are more time sensitive and emotionally laden than their husbands (e.g., yard work) (Biernat & Wortman, 1991; Feldman, 2000). Therefore, wives' behaviors might have more influence on spouses' coping behaviors within the family system. For example, when wives are stressed out, they may not have enough extra time and energy to adapt to family stress and do chores efficiently, thus their husbands may need to take on some of these challenging and unaccustomed responsibilities. Consequently, this might result in husbands' lack of flexibility or inability to change routine behaviors. Overall, these nuanced findings emphasize the necessity of

examining spouses in their respective socio-cultural aspects.

In conclusion, this study expected that coping resources would enable associations between family stress and adaptation to occur. The MASH model and the existing research all indicate that supportive listening and flexibility are critical to understanding the detrimental effects of family stress. These results suggest that increased flexibility to change for both husbands and wives could facilitate the development of positive strategies to cope with wives' family stress and promote positive relational outcomes for both husbands and wives.

Additional Considerations about the Role of Sex in Marriage

Although sex differences were not of central interest in the current study, some significant differences were detected in the preliminary analyses. Wives reported significantly more family stress and couple burnout than husbands, while husbands reported more marital satisfaction than wives. This is consistent with past research that has found that wives tend to report more stress (Kuhn et al., 2018; Matud, 2004) and couple burnout (Pines et al., 2011) at home. In addition, wives reported significantly more self-reported supportive listening than their husbands, while husbands reported more perceived partners' supportive listening than their wives. These differences in supportive listening suggest that both husbands and wives perceive that wives provide more supportive listening in marriage.

Regarding the relationships between the major study variables, few sex differences emerged. Specifically, out of all of the possible 44 direct effects tested in 11 APIMs, only 4 sex differences emerged. First, the association between spouses' family stress and their own marital satisfaction (actor effect) was significantly larger for wives than husbands. Second, the association between spouses' family stress and their partners' marital satisfaction (partner effect) was significant for wives but not husbands. Third, the association between spouses' family stress

and their own flexibility (actor effect) was significantly larger for wives than husbands. Finally, the association between spouses' family stress and partners' flexibility (partner effect) was significant for wives but not husbands.

These aforementioned findings are in accordance with traditional sex roles. It appears that women's stress is more present in the family context, which supports previous research that found wives' stress played a particularly important role in shaping marital functioning. For example, Neff and Karney (2007) reported that when wives were experiencing greater levels of stress, they and their partners reported feeling less satisfied in the marriage. However, when husbands reported greater stress, only they, not their partners, reported decreased marital satisfaction. More research should be done examining wives' stress to better understand how it affects couples' communication in marriage. In general, the APIMs revealed that husbands and wives were more similar than they were different. This could be explained in two ways. First, the similarity in couples might be caused by the occurrence of assortative mating. For example, Ranzini et al. (2022) found that people were more likely to partner with mates who held a similar level of education. It is possible that spouses already have similar levels of communication skills before getting married. It might also be the case that couples mutually influence each other in the marriage. Research has suggested that spouses influence each other's thoughts and behaviors (Bodenmann, 2005). Thus, it is likely that spouses learn communication behaviors from each other through daily interactions in their marriage.

Scholarly Contributions

This research contributes to the current scholarship in several ways. First, it adds support to research highlighting the important function that coping resources can provide in a marital relationship. Past research has shown that resources from marriages can serve in increasing

healthy marital relationships (Gottman & Levenson, 1992; Olson et al., 2008). This study adds to the current knowledge that supportive listening and flexibility are important factors in explaining the relationships between family stress and adaptation.

Second, the current research addresses concerns over the use of self-reports such as common method bias and social desirability bias by examining both relational partners' perceptions of supportive listening (i.e., perceived partners' and self-reported). Discrepancies between self- and other-report of supportive listening were observed. These findings contribute to the literature on the potential of improving incremental validity of supportive listening by collecting data from multiple sources.

Furthermore, the use of dyadic data analysis such as APIM and APIMeM explores how individuals' marital outcomes are related to their own and their partners' characteristics. APIM and APIMeM are widely used to study dyadic relationships, including married couples. This is the first known study to examine family stress on couple burnout via supportive listening and flexibility using a dyadic approach. This dyadic-oriented research is beneficial because we now have a better understanding of how communication variables, such as supportive listening and flexibility, work in heterosexual marital relationships.

Additionally, this study contributes to our understanding of dual-earner families, which are a sizable segment of the U.S. population (U.S. Department of Labor, Bureau of Labor Statistics, 2021). Only full-time employed couples were recruited to reduce the possible confounding variables, such as working status (employed part-time versus full-time). Thus, this study is able to show how communication variables contribute to full-time employed dual-earner families.

Finally, all variables in this study were measured within the context of family

relationships. Family stress is experienced at home. Supportive listening and flexibility are performed between couples. Marital satisfaction and couple burnout are shared within the marriage. As such, the marital dyad is an ideal context in which to explore family communication and family functioning as married couples often spend much time together, involve in high amount of communication, and cope with challenges at home together. Thus, the study contributes to the literature about the unique characteristics of family environments and facilitates context-specific interventions by investigating context specific communication behaviors (i.e., supporting listening and flexibility) rather than general communication variables.

Implications of the Current Research

Theoretical Implications

The findings of this study provide partial empirical evidence for the MASH model (Olson, 2004). In particular, significant direct and indirect effects were detected in all APIM(eM) models; however, not all paths in those models were significant. This modest finding suggests that family stress did not always lead to marital satisfaction via supportive listening and flexibility. This might have been because the operationalization of the variables, which are all based on individuals' perceptions (i.e., self-reported) and may not accurately reflect their true experiences and behaviors.

Second, the current study supports the MASH model's prediction that stress causes couples to engage in coping behaviors, which in turn impacts marital outcomes. Specifically, family stress was associated with couples engaging in less supportive listening and less flexibility, which in turn was associated with less marital satisfaction and more couple burnout. This suggests that stress serves as a debilitative factor impairing the effectiveness of communication and relational outcomes in marriages. Therefore, the findings of this study

reinforce the importance of stress jumpstarting this process of poor coping and adaptation in the MASH model.

Moreover, all of the study variables in this study are in relation to marriage. The results of this study imply that communication is an important variable to consider when examining the relationships between family stress and relational outcomes, such as marital satisfaction and couple burnout. Supportive listening and flexibility have the ability to enhance couple relationships and hence, their function should continue to be investigated by future communication scholars. These findings suggest that the MASH model can be broadened to include communication variables (i.e., supportive listening) and marital outcome variables (i.e., couple burnout).

Finally, these findings increase researchers' understanding on how perceptions of supportive listening from either partner are associated with marital satisfaction and couple burnout. This information can enhance construct validity by comparing scores reported by both support providers and receivers. As a reminder, both perceived partners' and self-reported supportive listening yielded significant direct and indirect effects between family stress, coping resources, and adaptation. This implies that the MASH model can be tested using not only self-reported scores but also other-reported scores.

Practical Implications

The current study identifies two coping resources that are linked to relationship outcomes. The results of this study suggest that communication variables, such as supportive listening and flexibility, are important skills that should be emphasized in couple counseling services. In most cases, the findings showed that family stress was linked to the decreased use of supportive listening and flexibility, which was linked to decreased marital satisfaction and increased couple

burnout. The study's results could be used in interventions for those experiencing relationship difficulties to identify coping resources, understand positive effects of those resources on marital relationships, and employ those resources. Therapists might highlight the need for spouses to provide helpful supportive behaviors to their stressed partners and encourage couples to reset rules and expectations in their marriages. For example, it would be helpful for therapists to teach couples how to engage in more supportive listening and be adaptive to change. Accordingly, stressed partners might then feel more satisfied with their relationships and less likely to experience burnout.

In addition, the study found that family stress was the start of poor communication behaviors (i.e., decreased supportive listening and flexibility) and poor marital outcomes (i.e., decreased marital satisfaction and increased couple burnout). If couples do not experience elevated family stress, they may not enter this circle of negative outcomes. Therefore, therapists could teach couples to recognize stressors and reframe their perceptions of stress to prevent the activation of a series of poor communication choices (e.g., decreased supportive listening). For example, therapists could guide couples to see stress as an opportunity for personal and relational growth and guide couples to take actions to improve their marriages.

Additionally, this study's results imply that wives' supportive behaviors are more relevant to both spouses' relationship outcomes, perhaps because wives were found to be a primary source in satisfied marriages in this study. This may be because their supportive behaviors and perceptions matter more to the marriage than husbands' behaviors and perceptions. Maybe the phrase, "happy wife, happy life" is more than just a rhyme. These findings suggest that therapists could work with couples to focus on marital roles in the family and pay particular attention to the stress associated with wives' involvement in the family. For example, they could

help couples to understand and renegotiate their roles in the family, especially focusing on strategies that can help wives to cope with family stress (e.g., increasing husbands' willingness to participate in childcare; seek institutional support and/or community resources).

The current study also suggests preventive interventions for those who are going to get married or enter close relationships. For example, premarital counseling therapy might teach partners important listening skills and strategies to adapt to change before entering into a marital union. As such, interventions may help to increase people's awareness that family stress is associated with relationship outcomes via supportive listening and flexibility.

Limitations and Future Directions

Despite many scholarly contributions, the current study has several limitations and suggestions for the future research. First, participants of this study were predominantly white, religious, and couples with high levels of education and income. In comparison to couples who are less educated and have lower incomes, the current sample may have more resources and experience less family stress, which may limit the generalizations of the findings. For example, for participants who received at least 4-year degree and above, it is possible that they enrolled in communication-related courses and had better communication skills than those who did not. We cannot be sure that taking communication-related courses biased the study results, but we should be cautious when generalizing these results to relatively low-educated couples. Future research should consider collecting data with diverse demographic characteristics.

Second, participants of this study were predominantly satisfied in their relationships. For example, marital satisfaction had a Z-value of -.7.75, and couple burnout had a Z-value of 7.75 (see Table 2). Such distribution of responses could lead to ceiling and floor effects, respectively (Kim, 2013). Further, the average length of marriage for couples was 14.75 (*SD* = 10.00) in this

study. Research that has examined the trajectory of marital satisfaction has documented support for various patterns of satisfaction. Some of which, such as the stability pattern, argues that there is no great change of marital satisfaction over time (Karney & Bradbury, 2020; Proulx et al., 2017). This would support that having a sample of predominately satisfied long-term marriage with a high standard deviation in this study. Future research should continue to acknowledge that such effects may occur with certain samples (e.g., long-term married couples or committed relationships) and variables (e.g., relationship satisfaction) in marriage literature, and these effects should be taken into consideration, especially when explaining the findings and interpreting the results.

Third, this study is limited by the reliance on spouses' reports via an online survey method. This method may bring in inflated correlations due to the influence of common method variance. Therefore, future studies could utilize an observational method, which may result in different findings. For instance, by using an observational method, researchers could directly observe listening behaviors between stressed couples without relying on participants' perceptions. Thus, researchers may get more accurate data of couples' supportive listening skills.

Fourth, the use of a cross-sectional design is also a limitation of this study. The correlational nature of the design precluded the capability to examine causal relations and the directionality of the associations between study variables. While the directionality of the models was driven by theory, future studies would benefit from longitudinal designs, which could further address the directionality of those constructs.

Fifth, due to the limited recruitment options via Qualtrics, participants in a dyad had to share the same link to the survey. Specifically, once participants finished their part of the survey, they emailed the survey link to their partners and asked them to continue the survey. Thus, it is

possible that one spouse completed both surveys, despite the numerous efforts (i.e., using attention check questions, setting minimum survey completion time, and removing surveys with inconsistent answers between couples) that were made to eradicate this limitation. Moreover, although individuals were not able to go back to prior questions answered by their partners and were specifically requested to enter their responses independently, it was hard to rule out the possible cooperation between couples. Future researchers should be cautious when using survey companies such as Qualtrics to recruit dyadic samples. Specifically, they should request that spouses use separate email accounts and receive independent survey links. While this cannot guarantee that all spouses will complete the survey independently, it could provide some additional assurance.

Sixth, this study did not ask whether participants working outside the home or working from home, which might have an effect on the stress-coping process. For example, working outside the home may influence participants' family role obligations and reduce the amount of time and energy available to spend with their partners (Allen et al., 2000). Thus, participants' presence or absence in their homes should be considered in future studies.

Finally, it is important to note that the data for the current research was collected at the early stage of the COVID-19 outbreak in the U.S. The pandemic and lockdown produced a sudden shift in many family routines (e.g., working from home, homeschooling children) and may have influenced people's marital functioning (e.g., increased interaction at home, coping jointly with the crisis). For example, fathers displayed significantly greater parenting stress during the pandemic than prior to it, but this difference was not significant for mothers (Taubman–Ben-Ari et al., 2021). Future research should consider the influence of the pandemic when referencing the results of this study. It is possible that the findings are unique to the

COVID-19 Pandemic.

Figure 1

The Multisystem Assessment of Stress and Health (MASH) Model (Olson, 2004)

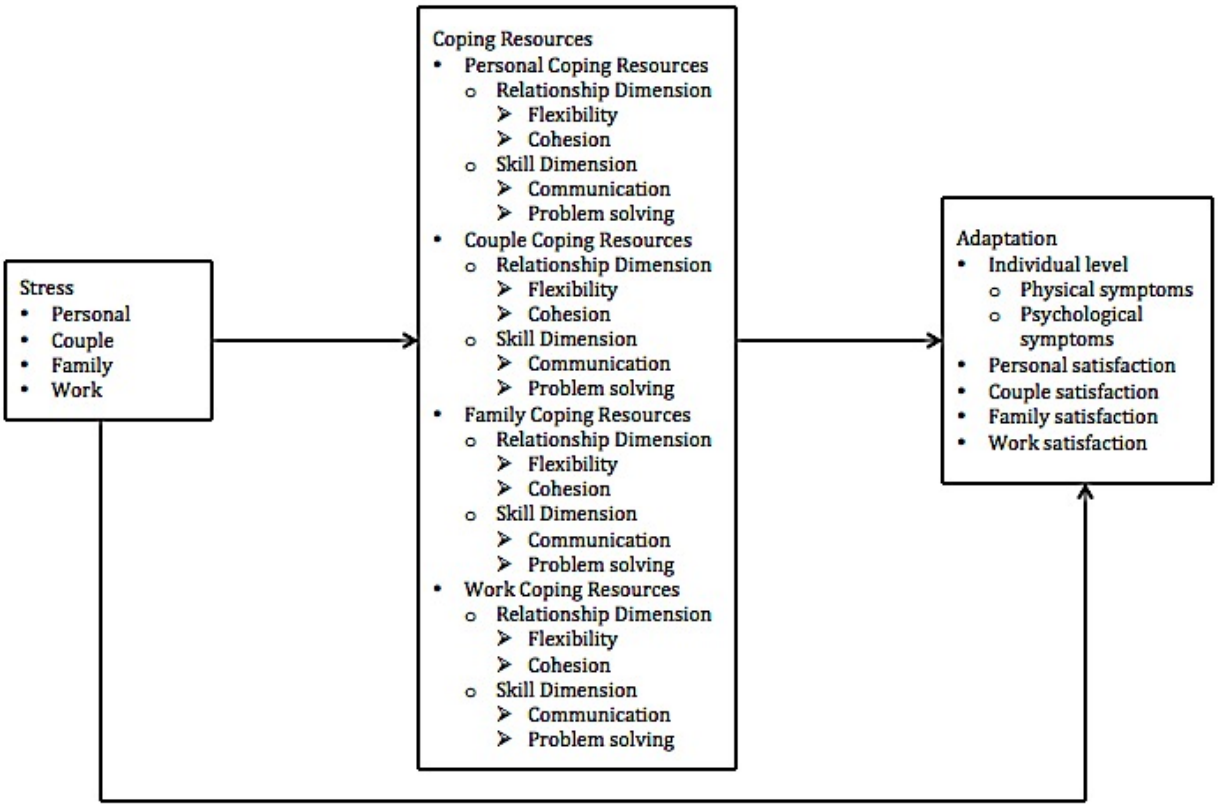


Figure 2

A Conceptual Model

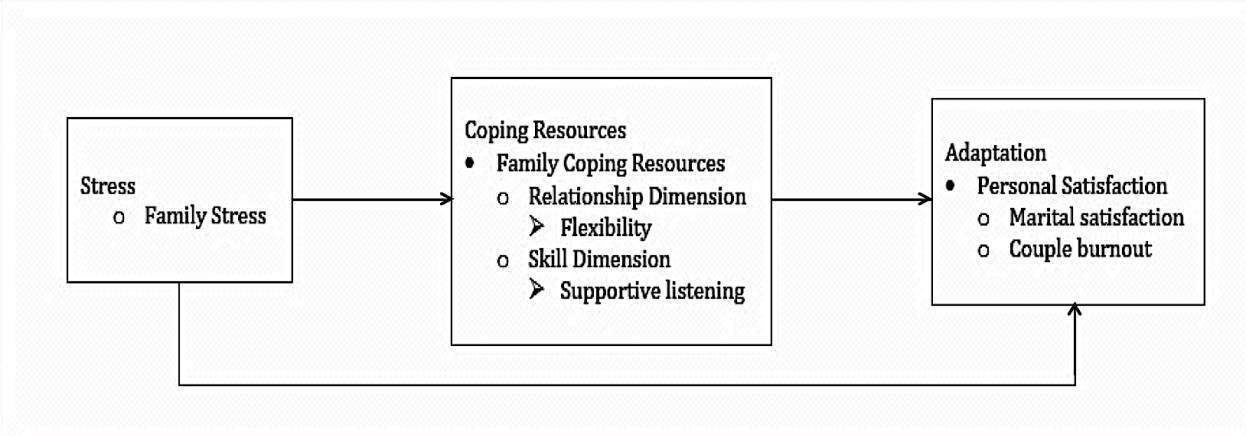


Figure 3

The Actor–Partner Interdependence Model (APIM)

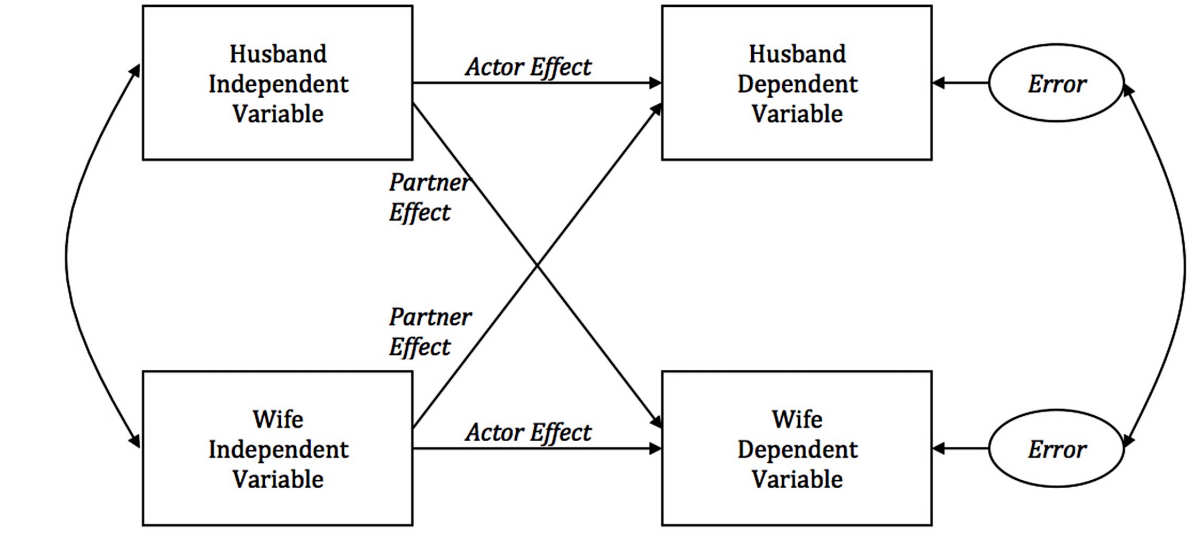


Figure 4

The Actor–Partner Interdependence Mediation Model (APIMeM)

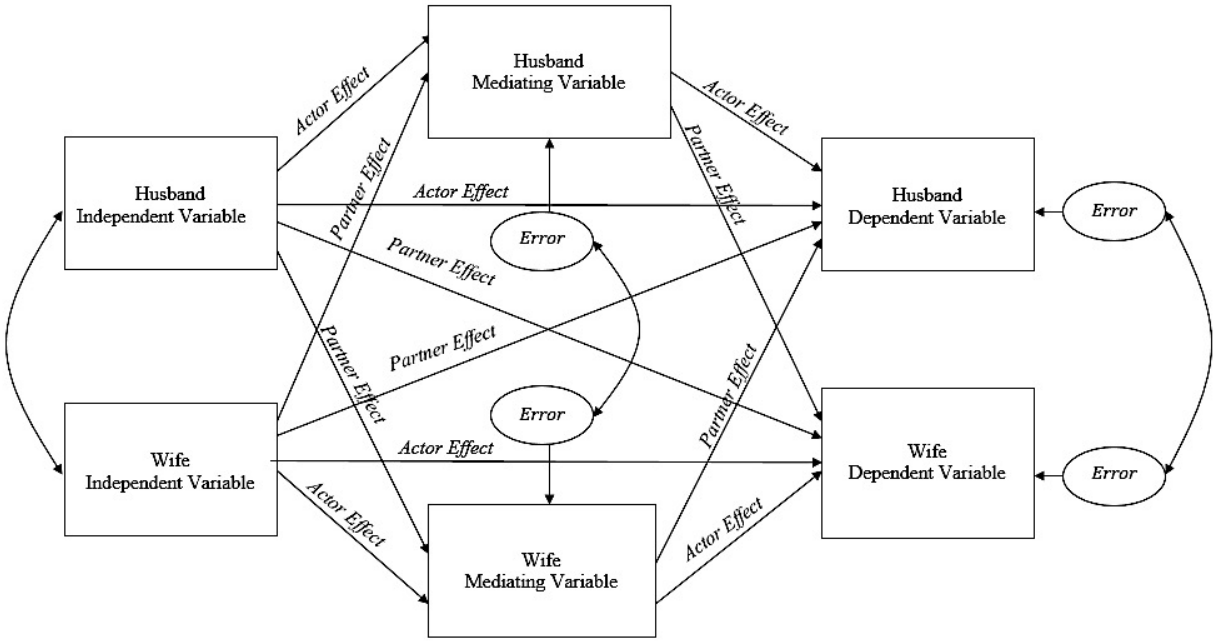
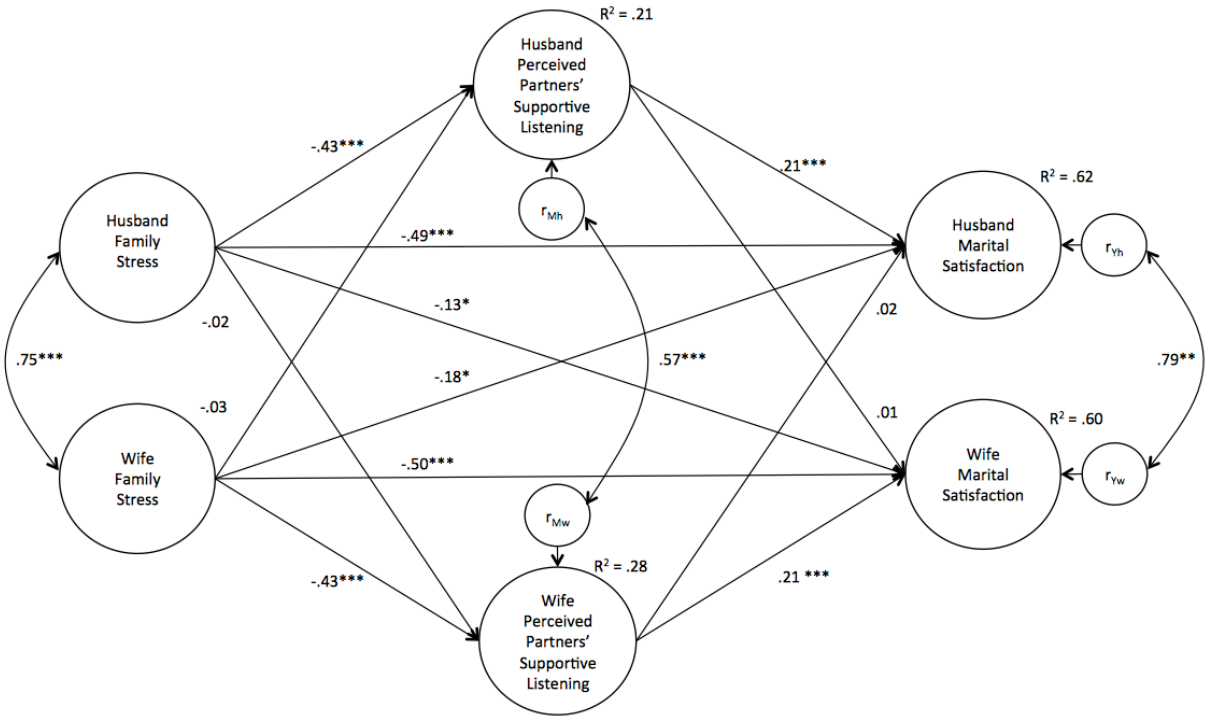


Figure 5

APIMeM With Standardized Indirect Effect Estimates of Husbands' and Wives' Family Stress on Their Marital Satisfaction Through Their Perceived Partners' Supportive Listening (H8aa)

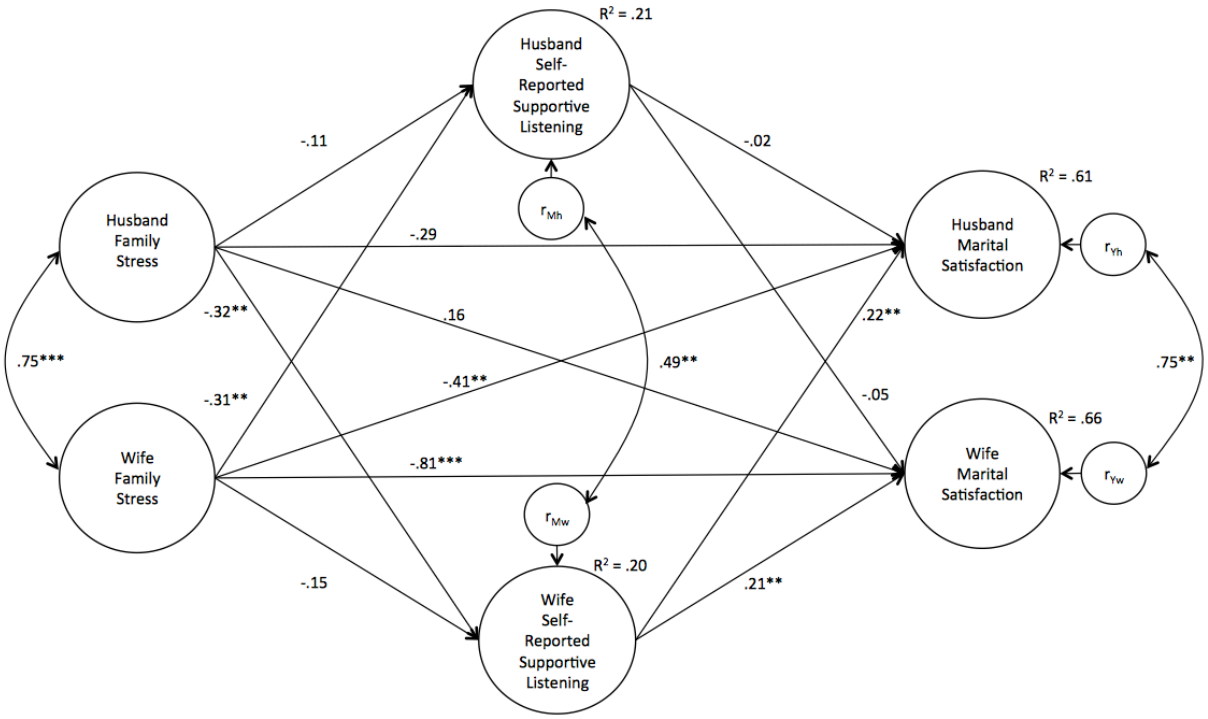


Note. Figure values are from the constrained model. R^2 = squared multiple correlation.

$^{*}p < .05$. $^{***}p < .001$.

Figure 6

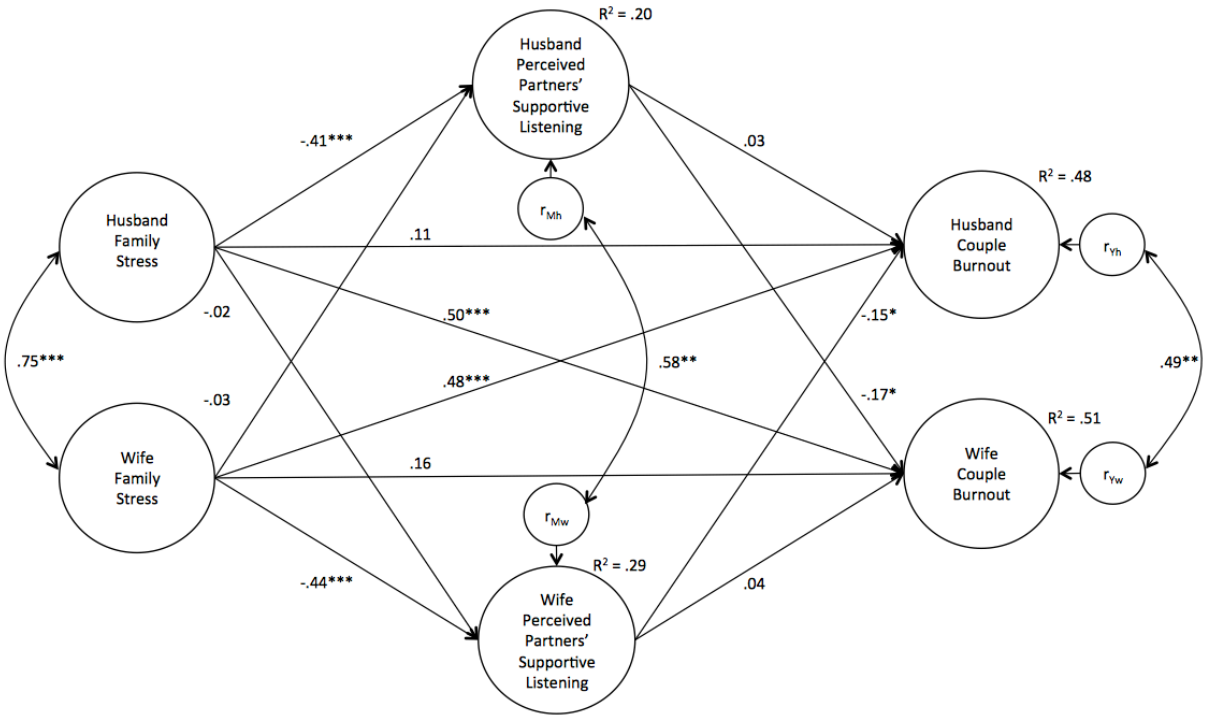
APIMeM With Standardized Indirect Effect Estimates of Husbands' and Wives' Family Stress on Their Marital Satisfaction Through Their Self-Reported Supportive Listening (H8ab)



Note. Figure values are from the partially constrained model. R^2 = squared multiple correlation. $^{**}p < .01$, $^{***}p < .001$.

Figure 7

APIMeM With Standardized Indirect Effect Estimates of Husbands' and Wives' Family Stress on Their Couple Burnout Through Their Perceived Partners' Supportive Listening (H8ba)

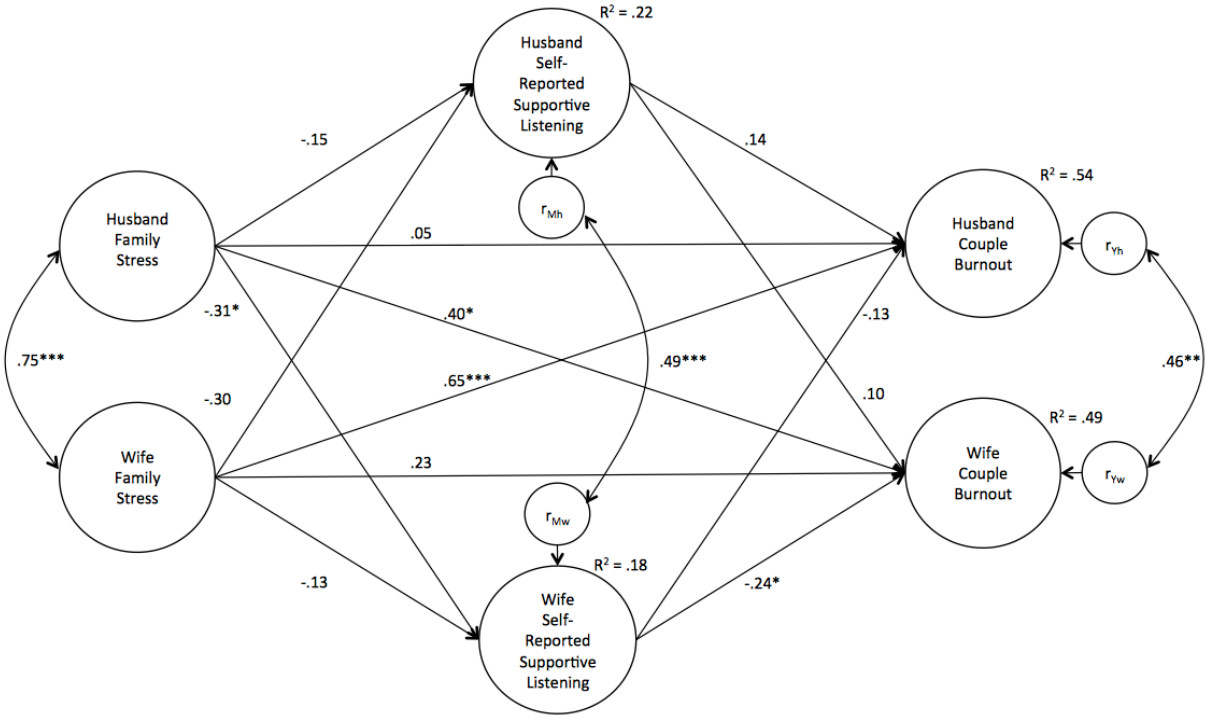


Note. Figure values are from the constrained model. R^2 = squared multiple correlation.

$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Figure 8

APIMeM With Standardized Indirect Effect Estimates of Husbands' and Wives' Family Stress on Their Couple Burnout Through Their Self-Reported Supportive Listening (H8bb)

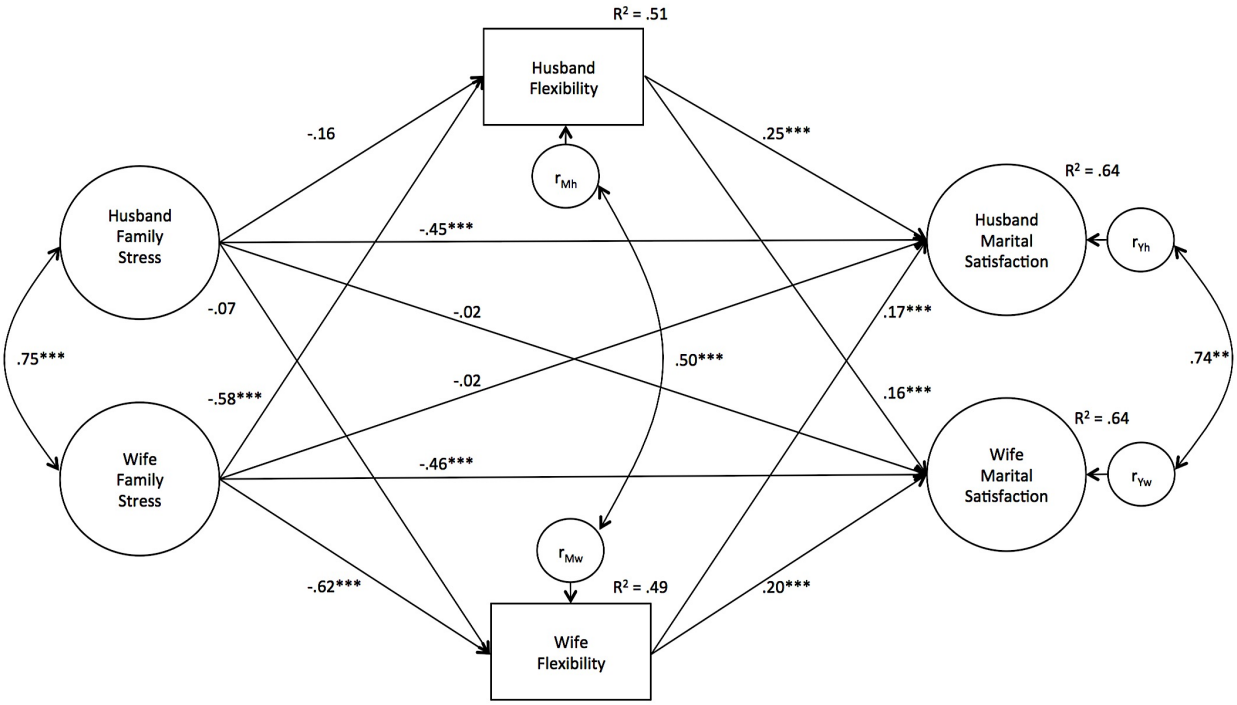


Note. Figure values are from the unconstrained model. R^2 = squared multiple correlation.

$^{*}p < .05$. $^{***}p < .001$.

Figure 9

APIMeM With Standardized Indirect Effect Estimates of Husbands' and Wives' Family Stress on Their Marital Satisfaction Through Their Flexibility (H8c)

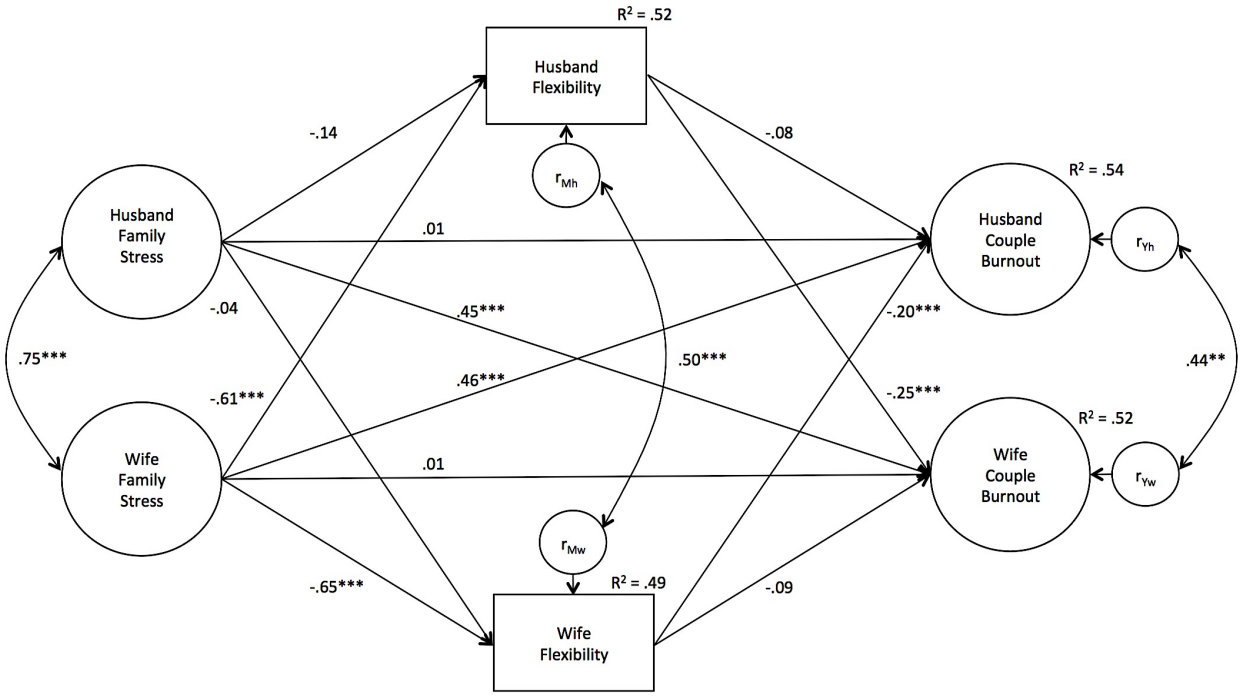


Note. Figure values are from the partially constrained model. R^2 = squared multiple correlation.

$^{***}p < .001$.

Figure 10

APIMeM With Standardized Indirect Effect Estimates of Husbands' and Wives' Family Stress on Their Couple Burnout Through Their Flexibility (H8d)



Note. Figure values are from the partially constrained model. R^2 = squared multiple correlation.

$^{***}p < .001$.

Table 1

Cronbach's Alpha (α) Values for all Measures

Measure	Husbands	Wives
Family stress	.86	.87
Perceived partners' supportive listening	.92	.91
Self-reported supportive listening	.90	.92
Flexibility		
Balanced flexibility	.75	.76
Rigid	.71	.70
Chaotic	.77	.73
Marital satisfaction	.95	.97
Couple burnout	.90	.94

Note. The Cronbach's Alpha value of Rigid for husbands and wives was improved to .71 and .70 respectively after deleting an item (i.e., "My partner and I become frustrated when there is a change in our plans or routines."). Flexibility does not have a reported α value because it is a ratio score that is calculated from the summed scores of Balanced flexibility, Rigid, and Chaotic.

Table 2

Normality Tests for Study Variables (N =180 dyads)

Variable	Skewness	Kurtosis	Z-Value for Skewness	Z-Value for Kurtosis	Kolmogorov–Smirnov test	Shapiro–Wilk test
Huabands						
Family stress	.41	-.20	2.25	-.55	.06	.98*
Perceived partners' supportive listening	-.33	-.23	-1.84	-.64	.05	.99
Self-reported supportive listening	-.41	-.08	-2.27	-.21	.07*	.98*
Flexibility	.36	-.04	1.97	-.11	.06	.99
Marital satisfaction	-1.40	2.35	-7.75	6.53	.13***	.86***
Couple burnout	1.40	2.45	7.75	6.81	.14***	.88***
Wives						
Family stress	.44	-.54	2.43	-1.51	.11***	.97***
Perceived partners' supportive listening	-.21	-.55	-1.13	-1.52	.05	.99
Self-reported supportive listening	-.41	.07	-2.27	.19	.07*	.98*
Flexibility	.33	.28	1.82	.79	.05	.99
Marital satisfaction	-.1.05	.44	-5.80	1.23	.13***	.89***
Couple burnout	.88	-.002	4.87	-.006	.13***	.91***

Note. Absolute z-value greater than 3.29 suggests a non-normal distribution (Kim, 2013).

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

Table 3

Means, Standard Deviations, and Correlations for Study Variables (N =180 dyads)

Variable	1	2	3	4	5	6	7
1. Family stress	----	-.37***	-.32***	-.60***	-.67***	.61***	-.21**
2. Perceived partners' supportive listening	-.47***	----	.60***	.34***	.48***	-.40***	.17*
3. Self-reported supportive listening	-.33***	.63***	----	.33***	.39***	-.28***	.24**
4. Flexibility	-.68***	.40***	.32***	----	.65***	-.55***	.21**
5. Marital satisfaction	-.75***	.53***	.39***	.68***	----	-.78***	.29***
6. Couple burnout	.68***	-.39***	-.28***	-.66***	-.83***	----	-.20**
7. Quality time together	-.32***	.33***	.13	.28***	.38***	-.31***	----
Husbands' *M*(*SD*)	2.99 (.93)	4.90 (1.02)	4.93 (1.03)	1.54 (.38)	4.12 (.70)	1.76 (.71)	23.29 (15.18)
Wives' *M*(*SD*)	3.15 (.99)	4.64 (1.10)	5.24 (.89)	1.52 (.36)	4.01 (.84)	2.07 (.90)	22.78 (14.93)
t-values	2.80**	-3.55***	4.44***	-1.30	-3.30**	6.13***	-.99

Note. Table shows inter-correlations for husbands' (above diagonal) and wives' (below diagonal).

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

Table 4

Bivariate Correlations Between Partners for Study Variables (N =180 dyads)

Variable	Wives						
	1	2	3	4	5	6	7
Husbands							
1. Family stress	**.70*****	-.33***	-.34***	-.51***	-.54***	.55***	-.20**
2. Perceived partners' supportive listening	-.33***	**.58*****	.67***	.30***	.38***	-.24***	.17*
3. Self-reported supportive listening	-.40***	.67***	**.53*****	.30***	.37***	-.26***	.23**
4. Flexibility	-.67***	.47***	.32***	**.75*****	.64***	-.60***	.25***
5. Marital satisfaction	-.68***	.43***	.45***	.64***	**.83*****	-.70***	.32***
6. Couple burnout	.56***	-.34***	-.38***	-.50***	-.65***	**.66*****	-.23**
7. Quality time together	-.22**	.30***	.15*	.24**	.30***	-.28***	**.90*****

Note. Table shows intra-class correlations (along diagonal in bold).

$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Table 5

APIM Results for Family Stress and Marital Satisfaction (H1)

	Independent Variable	Dependent Variable	Unconstrained model			
			Actor Effect		Partner Effect	
			Husband	Wife	Husband →Wife	Wife → Husband
H1	Family Stress	Marital Satisfaction	-.38*** (.09)	-.79*** (.10)	.05 (.09)	-.42*** (.09)

Note. Table values are standardized regression coefficients (standardized standard error in parentheses). H = Hypothesis.

***$p < .001$.

Table 6

APIM Results for Family Stress and Couple Burnout (H2)

	Independent Variable	Dependent Variable	Constrained model			
			Actor Effect		Partner Effect	
			Husband	Wife	Husband → Wife	Wife → Husband
H2	Family Stress	Couple Burnout	.10 (.05)	.14 (.08)	.57*** (.07)	.56*** (.07)

Note. Table values are standardized regression coefficients (standardized standard error in parentheses). H = Hypothesis.

***$p < .001$.

Table 7

APIM Results for Family Stress and Supportive Listening (Perceived Partners' and Self-Reported) (RQ1)

	Independent Variable	Dependent Variable	Constrained model			
			Actor Effect		Partner Effect	
			Husband	Wife	Husband →Wife	Wife → Husband
RQ1a	Family Stress	Perceived Partners' Supportive Listening	-.40*** (.07)	-.41*** (.07)	-.04 (.05)	-.06 (.07)
RQ1b	Family Stress	Self-Reported Supportive Listening	-.13* (.06)	-.18* (.08)	-.30*** (.06)	-.31*** (.07)

Note. Table values are standardized regression coefficients (standardized standard error in parentheses). RQ = Research Question.

*$p < .05$. ***$p < .001$.

Table 8

APIM Results for Partner's Supportive Listening (Perceived Partners' and Self-Reported) and Marital Satisfaction (H3)

	Independent Variable	Dependent Variable	Constrained model			
			Actor Effect		Partner Effect	
			Husband	Wife	Husband → Wife	Wife → Husband
H3a	Perceived Partners' Supportive Listening	Marital Satisfaction	.40*** (.05)	.42*** (.05)	.10** (.04)	.14** (.05)
H3b	Self-Reported Supportive Listening	Marital Satisfaction	.27*** (.05)	.19*** (.04)	.26*** (.05)	.25*** (.04)

Note. Table values are standardized regression coefficients (standardized standard error in parentheses). H = Hypothesis.
**$p < .01$. ***$p < .001$.

Table 9

APIM Results for Partner's Supportive Listening (Perceived Partners' and Self-Reported) and Couple Burnout (H4)

	Independent Variable	Dependent Variable	Constrained model			
			Actor Effect		Partner Effect	
			Husband	Wife	Husband → Wife	Wife → Husband
H4a	Perceived Partners' Supportive Listening	Couple Burnout	-.06 (.04)	-.09 (.07)	-.38*** (.06)	-.34*** (.05)
H4b	Self-Reported Supportive Listening	Couple Burnout	-.22*** (.05)	-.25*** (.06)	-.19** (.06)	-.12** (.04)

Note. Table values are standardized regression coefficients (standardized standard error in parentheses). H = Hypothesis.

**$p < .01$. ***$p < .001$.

Table 10

APIM Results for Family Stress and Flexibility (H5)

	Independent Variable	Dependent Variable	Unconstrained model			
			Actor Effect		Partner Effect	
			Husband	Wife	Husband → Wife	Wife → Husband
H5	Family Stress	Flexibility	-.25** (.09)	-.66*** (.10)	-.05 (.09)	-.50*** (.09)

Note. Table values are standardized regression coefficients (standardized standard error in parentheses). H = Hypothesis.
**$p < .01$. ***$p < .001$.

Table 11

APIM Results for Flexibility and Marital Satisfaction (H6)

	Independent Variable	Dependent Variable	Constrained model			
			Actor Effect		Partner Effect	
			Husband	Wife	Husband →Wife	Wife → Husband
H6	Flexibility	Marital Satisfaction	.44*** (.04)	.39*** (.04)	.28*** (.04)	.30*** (.04)

Note. Table values are standardized regression coefficients (standardized standard error in parentheses). H = Hypothesis.

***$p < .001$.

Table 12

APIM Results for Flexibility and Couple Burnout (H7)

	Independent Variable	Dependent Variable	Constrained model			
			Actor Effect		Partner Effect	
			Husband	Wife	Husband →Wife	Wife → Husband
H7	Flexibility	Couple Burnout	-.21*** (.05)	-.23*** (.06)	-.45*** (.06)	-.40*** (.05)

Note. Table values are standardized regression coefficients (standardized standard error in parentheses). H = Hypothesis.

***$p < .001$.

Table 13

Indirect Effects for the Actor–Partner Mediator Model (APIMEM) With Family Stress as the Independent Variable, Perceived Partners' Supportive Listening as the Mediator, and Marital Satisfaction as the Dependent Variable (H8aa)

Variable		Constrained Model			
		IE	*SE*	95% CI	
				LL	*UL*
$X_H \rightarrow M_H \rightarrow Y_H$	= A→A	-.09***	.02	-.12	-.04
$X_H \rightarrow M_H \rightarrow Y_W$	= A→P	-.01	.02	-.04	.03
$X_H \rightarrow M_W \rightarrow Y_W$	= P→A	-.004	.01	-.03	.02
$X_H \rightarrow M_W \rightarrow Y_H$	= P→P	-.0003	.004	-.01	.004
$X_W \rightarrow M_W \rightarrow Y_W$	= A→A	-.09***	.02	-.12	-.04
$X_W \rightarrow M_W \rightarrow Y_H$	= A→P	-.01	.02	-.04	.03
$X_W \rightarrow M_H \rightarrow Y_H$	= P→A	-.01	.01	-.03	0.2
$X_W \rightarrow M_H \rightarrow Y_W$	= P→P	-.0003	.004	-.01	.004

Note. Table values are standardized coefficients. X = family stress; M = perceived partners' supportive listening; Y = marital satisfaction; IE = indirect effect; *SE* = standard error; $_W$ = wife; $_H$ = husband; A = actor effect; P = partner effect; *LL* = lower limit; *UL* = upper limit.

***$p < .001$.

Table 14

Indirect Effects for the Actor–Partner Mediator Model (APIMEM) With Family Stress as the Independent Variable, Self-Reported Supportive Listening as the Mediator, and Marital Satisfaction as the Dependent Variable (H8ab)

Variable		Partially Constrained Model			
		IE	*SE*	95% CI	
				LL	*UL*
$X_H \rightarrow M_H \rightarrow Y_H$	= A→A	.002	.01	-.01	.03
$X_H \rightarrow M_H \rightarrow Y_W$	= A→P	.01	.01	-.01	.05
$X_H \rightarrow M_W \rightarrow Y_W$	= P→A	-.07**	.03	-.14	-.02
$X_H \rightarrow M_W \rightarrow Y_H$	= P→P	-.07**	.02	-.12	-.02
$X_W \rightarrow M_W \rightarrow Y_W$	= A→A	-.03	.02	-.08	.01
$X_W \rightarrow M_W \rightarrow Y_H$	= A→P	-.03	.02	-.08	.01
$X_W \rightarrow M_H \rightarrow Y_H$	= P→A	.01	.02	-.04	.04
$X_W \rightarrow M_H \rightarrow Y_W$	= P→P	.02	.02	-.02	.07

Note. Table values are standardized coefficients. X = family stress; M = self-reported supportive listening; Y = marital satisfaction; IE = indirect effect; *SE* = standard error; $_W$ = wife; $_H$ = husband; A = actor effect; P = partner effect; *LL* = lower limit; *UL* = upper limit.

** $p < .01$.

Table 15

Indirect Effects for the Actor–Partner Mediator Model (APIMEM) With Family Stress as the Independent Variable, Perceived Partners' Supportive Listening as the Mediator, and Couple Burnout as the Dependent Variable (H8ba)

Variable		Constrained Model			
		IE	*SE*	95% CI	
				LL	*UL*
$X_H \rightarrow M_H \rightarrow Y_H$	= A→A	-.01	.03	-.06	.04
$X_H \rightarrow M_H \rightarrow Y_W$	= A→P	.07*	.03	.01	.12
$X_H \rightarrow M_W \rightarrow Y_W$	= P→A	-.001	.01	-.02	.01
$X_H \rightarrow M_W \rightarrow Y_H$	= P→P	.004	.01	-.01	.04
$X_W \rightarrow M_W \rightarrow Y_W$	= A→A	-.02	.03	-.06	.04
$X_W \rightarrow M_W \rightarrow Y_H$	= A→P	.07*	.03	.01	.12
$X_W \rightarrow M_H \rightarrow Y_H$	= P→A	-.001	.01	-.02	.01
$X_W \rightarrow M_H \rightarrow Y_W$	= P→P	.01	.01	-.01	.04

Note. Table values are standardized coefficients. X = family stress; M = perceived partners' supportive listening; Y = couple burnout; IE = indirect effect; *SE* = standard error; $_W$ = wife; $_H$ = husband; A = actor effect; P = partner effect; *LL* = lower limit; *UL* = upper limit.

*$p < .05$.

Table 16

Indirect Effects for the Actor–Partner Mediator Model (APIMEM) With Family Stress as the Independent Variable, Self-Reported Supportive Listening as the Mediator, and Couple Burnout as the Dependent Variable (H8bb)

Variable		Unconstrained Model			
		IE	*SE*	95% CI	
				LL	*UL*
$X_H \rightarrow M_H \rightarrow Y_H$	= A→A	-.02	.03	-.13	.02
$X_H \rightarrow M_H \rightarrow Y_W$	= A→P	-.02	.03	-.10	.01
$X_H \rightarrow M_W \rightarrow Y_W$	= P→A	.07*	.04	.01	.15
$X_H \rightarrow M_W \rightarrow Y_H$	= P→P	.04*	.03	.001	.12
$X_W \rightarrow M_W \rightarrow Y_W$	= A→A	.03	.03	-.02	.09
$X_W \rightarrow M_W \rightarrow Y_H$	= A→P	.02	.02	-.01	.07
$X_W \rightarrow M_H \rightarrow Y_H$	= P→A	-.04	.04	-.15	.01
$X_W \rightarrow M_H \rightarrow Y_W$	= P→P	-.03	.03	-.10	.02

Note. Table values are standardized coefficients. X = family stress; M = self-reported supportive listening; Y = couple burnout; IE = indirect effect; *SE* = standard error; $_W$ = wife; $_H$ = husband; A = actor effect; P = partner effect; *LL* = lower limit; *UL* = upper limit.

*$p < .05$.

Table 17

Indirect Effects for the Actor–Partner Mediator Model (APIMEM) With Family Stress as the Independent Variable, Flexibility as the Mediator, and Marital Satisfaction as the Dependent Variable (H8c)

Variable		Partially Constrained Model			
		IE	*SE*	95% CI	
				LL	*UL*
$X_H \rightarrow M_H \rightarrow Y_H$	= A→A	-.04	.02	-.07	.004
$X_H \rightarrow M_H \rightarrow Y_W$	= A→P	-.03	.01	-.06	.002
$X_H \rightarrow M_W \rightarrow Y_W$	= P→A	-.01	.02	-.05	.02
$X_H \rightarrow M_W \rightarrow Y_H$	= P→P	-.01	.01	-.04	.02
$X_W \rightarrow M_W \rightarrow Y_W$	= A→A	-.13***	.03	-.16	-.05
$X_W \rightarrow M_W \rightarrow Y_H$	= A→P	-.11***	.02	-.12	-.03
$X_W \rightarrow M_H \rightarrow Y_H$	= P→A	-.14***	.03	-.16	-.05
$X_W \rightarrow M_H \rightarrow Y_W$	= P→P	-.09***	.02	-.12	-.03

Note. Table values are standardized coefficients. X = family stress; M = flexibility; Y = marital satisfaction; IE = indirect effect; *SE* = standard error; $_W$ = wife; $_H$ = husband; A = actor effect; P = partner effect; *LL* = lower limit; *UL* = upper limit.

***$p < .001$.

Table 18

Indirect Effects for the Actor–Partner Mediator Model (APIMEM) With Family Stress as the Independent Variable, Flexibility as the Mediator, and Couple Burnout as the Dependent Variable (Hd)

Variable		Partially Constrained Model			
		IE	*SE*	95% CI	
				LL	*UL*
$X_H \rightarrow M_H \rightarrow Y_H$	= A→A	.01	.01	-.003	.05
$X_H \rightarrow M_H \rightarrow Y_W$	= A→P	.04	.02	-.01	.08
$X_H \rightarrow M_W \rightarrow Y_W$	= P→A	.003	.01	-.01	.03
$X_H \rightarrow M_W \rightarrow Y_H$	= P→P	.01	.02	-.03	.05
$X_W \rightarrow M_W \rightarrow Y_W$	= A→A	.06	.03	-.01	.10
$X_W \rightarrow M_W \rightarrow Y_H$	= A→P	.13***	.04	.04	.19
$X_W \rightarrow M_H \rightarrow Y_H$	= P→A	.05	.03	-.01	.10
$X_W \rightarrow M_H \rightarrow Y_W$	= P→P	.15***	.04	.04	.19

Note. Table values are standardized coefficients. X = family stress; M = flexibility; Y = couple burnout; IE = indirect effect; *SE* = standard error; $_W$ = wife; $_H$ = husband; A = actor effect; P = partner effect; *LL* = lower limit; *UL* = upper limit.

***$p < .001$.

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Appendix A: IRB Approval

THE UNIVERSITY OF KANSAS Research

Date: February 5, 2020

TO: Qiaozhen Jia, (q160j538@ku.edu)

FROM: Alyssa Haase, IRB Administrator (785-864-7385, irb@ku.edu)

RE: **Approval of Initial Study**

The IRB reviewed the submission referenced below on 2/5/2020. The IRB approved the protocol, effective 2/5/2020.

IRB Action: APPROVED	**Effective date: 2/5/2020**	**Expiration Date : 2/4/2025**
STUDY DETAILS		
Investigator:	Qiaozhen Jia	
IRB ID:	STUDY00145198	
Title of Study:	The Direct and Indirect Effects of Family Stress and Coping on Marital Satisfaction and Couple Burnout for Dual Earner Couples	
Funding ID:	Name: Office of Research	
REVIEW INFORMATION		
Review Type:	Initial Study	
Review Date:	2/5/2020	
Documents Reviewed:	• Information Statement.docx, • Information Statement.docx, • KU HRPP Human Research Protocol_Qiaozhen Jia copy.docx, • KU HRPP Human Research Protocol_Qiaozhen Jia.docx, • Proposal application_Qiaozhen Jia.docx, • Recruitment materials.docx, • Survey via Qualtrics.docx	
Exemption Determination:	• (2)(i) Tests, surveys, interviews, or observation (non-identifiable)	
Additional Information:		

KEY PROCEDURES AND GUIDELINES. Consult our website for additional information.

1. **Approved Consent Form:** You must use the final, watermarked version of the consent form, available under the "Documents" tab, "Final" column, in eCompliance. Participants must be given a copy of the form.
2. **Continuing Review and Study Closure:** You are required to provide a project update to HRPP before the above expiration date through the submission of a Continuing Review. Please close your study at completion.
3. **Modifications:** Modifications to the study may affect Exempt status and must be submitted for review and approval before implementing changes. For more information on the types of modifications that require IRB review and approval, visit our website.
4. **Add Study Team Member:** Complete a study team modification if you need to add investigators not named in original application. Note that new investigators must take the online tutorial prior to being approved to work on the project.
5. **Data Security**: University data security and handling requirements apply to your project.
6. **Submit a Report of New Information (RNI):** If a subject is injured in the course of the research procedure or there is a breach of participant information, an RNI must be submitted immediately. Potential non-compliance may also be reported through the RNI process.
7. **Consent Records:** When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity.

THE UNIVERSITY OF KANSAS
Research

8. **Study Records** must be kept a minimum of three years after the completion of the research. Funding agencies may have retention requirements that exceed three years.

Appendix B: Study Instrument

Information Statement

Dear Participant,

The Department of Communication Studies at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

You are being invited to take part in a research study designed to investigate the communication between marital partners. This will entail your completion for an online questionnaire. The questionnaire is expected to take approximately 25 minutes to complete. We ask that you please fill out the questionnaire independently without help or consultation from other family members. The content of the questionnaire should cause no more discomfort than you would experience in your everyday life.

Although participation may not benefit you directly, we believe that the information obtained from this study will help researchers gain a better understanding of what makes a marriage work. Your participation is solicited, although strictly voluntary. Your name will not be collected nor associated in any way with the research findings. Your identifiable information will not be shared unless (a) it is required by law or university policy, or (b) you give written permission. All data will be kept on a password-protected account (panel provider) and a password-protected drive (Dropbox). It is possible, however, with internet communications, that through intent or accident, someone other than the intended recipient may see your response.

You will receive points that equal monetary value for participating in this research study. Both marital partners must complete the survey in order to receive points for participation. Investigators may ask for your social security number in order to comply with federal and state tax and accounting regulations.

If you would like additional information concerning this study before or after it is completed, please feel free to contact me by email at kumarriagestudies@gmail.com. Completion of the survey indicates your willingness to participate in this project and that you are at least age eighteen.

If you have any additional questions about your rights as a research participant, you may write Human Research Protection Program (HRPP), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email irb@ku.edu.

Sincerely,
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Perceived Partners' Supportive Listening (PSL; Bodie, 2011a)

Instructions: Please think about your partner's general habits and mannerisms. Read each statement and indicate how frequently you perceive it is true about your partner.

Never	Rarely	Occasionally	About Half of the Time	Often	Almost Always	Always
○	○	○	○	○	○	○

My partner is sensitive to what I do not say verbally.
My partner assures me that they will remember what I say.
My partner assures me that they are listening by using verbal acknowledgments.
My partner is aware of what I imply but do not say.
My partner summarizes my points of agreement and disagreement when appropriate.
My partner assures me that they are receptive to my ideas.
My partner understands how I feel.
My partner keeps track of points I make.
My partner asks questions that show an understanding of my positions.
My partner listens for more than just my spoken words.
My partner shows me that they are listening by using body language (e.g., head nods and eye contacts).

Perceived Self Supportive Listening (SSL; Bodie, 2011a)

Instructions: Please think about your general habits and mannerisms. Read each statement and indicate how frequently you perceive it is true about yourself.

Never	Rarely	Occasionally	About Half of the Time	Often	Almost Always	Always
○	○	○	○	○	○	○

I am sensitive to what my partner does not say verbally.
I assure my partner that I will remember what they say.
I assure my partner that I am listening by using verbal acknowledgments.

I am aware of what my partner implies but does not say.
I summarize my partner's points of agreement and disagreement when appropriate.
I assure my partner that I am receptive to their ideas.
I understand how my partner feels.
I keep track of points my partner makes.
I ask questions that show an understanding of my partner's positions.
I listen for more than just my partner's spoken words.
I show my partner that I am listening by using body language (e.g., head nods and eye contacts).

Marital Flexibility (FACES IV; Olson et al., 2006)

This scale may be obtained from:
www.facesiv.com

Couple Burnout (CB; Pines et al., 2011)

Instructions: When you think about your marriage overall, how often have you felt:

	Never (1)	Rarely (2)	Sometimes (3)	Very Often (4)	Always (5)
Tired	○	○	○	○	○
Disappointed with my partner	○	○	○	○	○
Hopeless	○	○	○	○	○
Trapped	○	○	○	○	○
Helpless	○	○	○	○	○
Depressed	○	○	○	○	○
Weak/Sickly	○	○	○	○	○
Insecure/Like a failure	○	○	○	○	○
Difficulty sleeping	○	○	○	○	○
''I've had it''	○	○	○	○	○

Index of Marital Satisfaction (IMS; Hudson & Glisson, 1976)

Instructions: The next set of statements includes behaviors that your partner may or may not engage in. Please select the response that best reflects how often they engage in each behavior.

Rarely or None of the Time	A Little of the Time	Sometimes	A Good Part of the Time	Most or All of the Time
○	○	○	○	○

I feel that my partner is affectionate enough.
I feel that my partner treats me badly.
I feel that my partner really cares for me.
I feel that I would not choose the same partner if I had it to do over.
I feel that I can trust my partner.
I feel that our marriage is breaking up.
I feel that my partner doesn't understand me.
I feel that our marriage is a good one.
I feel that ours is a very happy marriage.
I feel that our life together is dull.
I feel that we have a lot of fun together.
I feel that my partner doesn't confide in me.
I feel that ours is a very close relationship.
I feel that I cannot rely on my partner.
I feel that we do not have enough interests in common.
I feel that we manage arguments and disagreements very well.
I feel that we do a good job of managing our finances.
I feel that I should never have married my partner.
I feel that my partner and I get along very well together.
I feel that our relationship is very stable.
I feel that my partner is pleased with me as a sex partner.
I feel that we should do more things together.
I feel that the future looks bright for our relationship.
I feel that our relationship is empty.
I feel that there is no excitement in our relationship.
Thinking about your marriage, are you satisfied with the amount of quality time you spend with your partner?

Very Unsatisfied	Unsatisfied	Somewhat Unsatisfied	Neither Satisfied nor Unsatisfied	Somewhat Satisfied	Satisfied	Very Satisfied
○	○	○	○	○	○	○

Thinking about your relationship, what is the likelihood that you and your partner will breakup or get divorced within the next year?

Extremely Unlikely	Moderately Unlikely	Slightly Unlikely	Neither Likely nor Unlikely	Slightly Likely	Moderately Likely	Extremely Likely
○	○	○	○	○	○	○

Family Stressors (FSG; Schwartzberg & Dytell, 1996)

Instructions: Please read the following statements pertaining to your family and select the response that best reflects how you feel about each statement.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
○	○	○	○	○	○	○

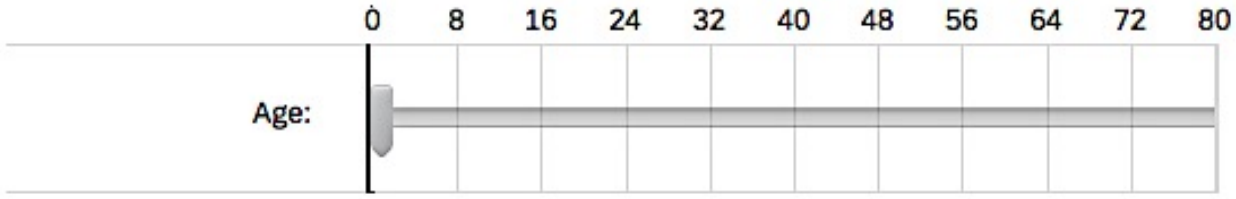
My partner and I cooperate with each other to get the household chores done.
The things I do at home don't seem to be very meaningful.
I do not have enough time to do what my family expects of me.
My role at home allows me to develop my special abilities and interests.
I am asked to do excessive amounts of work at home.
My work at home is boring.
What I do at home is so simple anyone could handle it.
I am not at all challenged by what I do at home.
I never know from day to day what my family will want from me.
I believe I am doing something important at home.
What my family expects of me at home is very clear.
Everyone at home seems to want something different from me.
At home I am frequently in conflict over whose needs are to be met first.
My spouse is not sufficiently involved in household chores.
I don't have enough energy to meet my family's demands.
Talking care of family members' health takes a toll on me.
My family is always struggling with money issues.

Demographic Information (DI)

Instructions: Please answer the following demographic questions.
What is your sex?

- Man
- Woman
- Other. Please specify: _____
- I'd Rather Not Say

What is your age? Please move the slider to indicate your age in years. As you move the slider to the right you will see the exact number above or to the right of the scale.



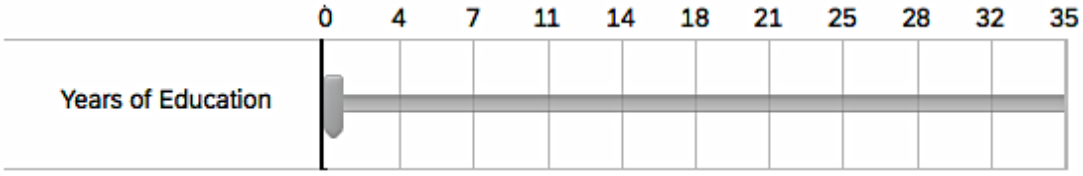
What is your race or ethnic background?

- White or Caucasian
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Hispanic/Latino
- Other. Please Specify: _____

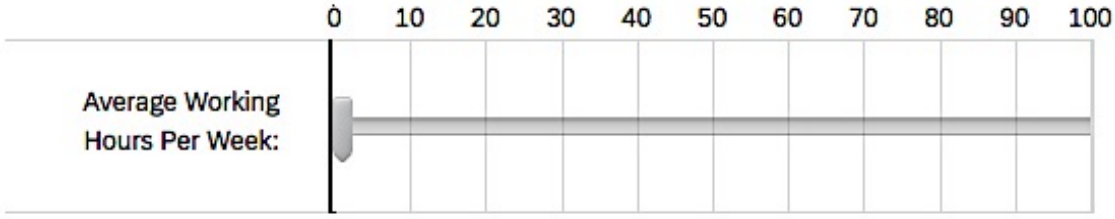
What is the highest level of education you have completed?

- Less than high school
- High school graduate
- Some college
- 2 year degree
- 4 year degree
- Master's degree
- Doctorate degree
- Other. Please specify: _____

How many years of education have your completed? (e.g., typically 12 years for completing through high school; 13 years for freshman in college). As you move the slider to the right you will see the exact number above or to the right of the scale.



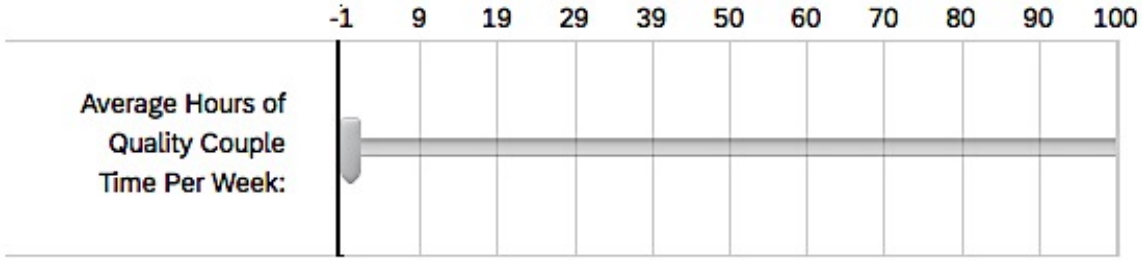
How many hours on average do you work for pay each week? Please move the slider to indicate the number of hours. As you move the slider to the right you will see the exact number above or to the right of the scale.



If you are married, in what month and year were you married? Please select the month from the dropdown menu, and then select the year from the dropdown menu. If you will only be able to select a year after you select a month.

Month
Year

On average, how many hours of quality time do you spend with your partner each week? Please move the slider to indicate the number of hours. As you move the slider to the right you will see the exact number above or to the right of the scale.



How many children do you have?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 8+

What is the age of your child(ren)? Please type your child's age and if you have more than one, please separate each age with a comma. If your child is under 1 year old, please type 1. For example, if you have three children and they are 5 months old, 10 years old, and 18 years old, you would type 1, 10, 18.

_____

Have you ever been divorced?

- No
- Yes

How many times have you been divorced?

- 1
- 2
- 3
- 4
- 4+

Who makes financial decisions in your household?

- Primarily I do (1)
- Primarily My Partner Does (2)
- We Both Make Financial Decisions Equally (3)
- Other. Please specify: (4) _____

What is your household's combined annual income before taxes in the past year?

- Less than $20,000

- $20,000 to $39,999
- $40,000 to $59,999
- $60,000 to $79,999
- $80,000 to $99,999
- $100,000 to $119,999
- $120,000 to $139,999
- $140,000 to $159,999
- $160,000 to $179,999
- $180,000 to $199,999
- $200,000 to $219,999
- $220,000 to $239,999
- $240,000 to $ 259,999
- $260,000 to $279,999
- $280,000 to $ 299,999
- $300,000 or more
- I'd Rather Not Say

Do you believe in some higher power or spiritual force?

- No
- Yes
- I'd Rather Not Say

How important is believing in a higher power or spiritual force to you?

- Not at all important
- Slightly important
- Moderately important
- Very important
- Extremely important
- I'd Rather Not Say