

AN ABSTRACT OF THE THESIS OF

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Title: Daily Stressors and Stressor-Related Affect: The Role of Stressor Type, Who was Involved, and Resolution Status

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Daily social stressors are important everyday experiences that influence an individual's daily health and well-being across the lifespan. One pathway through which daily social stressors influence health and well-being is through changes in positive and negative affect. The vast majority of previous research has focused on individual difference characteristics to understand whom daily social stressors impact the most. Little research, however, has examined the characteristics of daily stressors to understand which stressors have the greatest impact, or whether individual difference and stressor characteristics interact to impact daily positive and negative affect. The purpose of the current study was to answer the following questions: (a) Is the association between daily social stressors and stressor-related affect moderated by who is involved?; (b) Does resolution status moderate the association between daily social stressors and stressor-related affect?; (c) Do resolution status and who is involved interact to moderate the association between daily social stressors and stressor-related affect?; (d) Does gender moderate the associations between who is involved, resolution status, and their interaction and stressor-

related affect? and (e) Does age moderate the associations between who is involved, resolution status, and their interaction - stressor-related affect?.

This study utilized data from the second wave of the National Study of Daily Experiences (NDSE II; $N = 2,022$). The NSDE II was an eight day nightly telephone interview consisting of assessments of negative and positive affect, daily stressful experiences (e.g., arguments, avoided arguments, network stressors), who was involved in these events, and whether each daily social stressor was resolved. Participants' age ranged from 33-84 ($M = 56.25$, $SD = 12.20$); 56% of the participants were female, 84% Caucasian, and 46.29% had some college education. Results suggested that for days when arguments occurred, who is involved was associated with increased negative affect, particularly for arguments involving non-family members. On days with arguments and avoided arguments, resolution status moderated the effect of arguments and avoided arguments for negative affect and arguments for positive affect with larger increases in negative affect and larger decreases in positive affect for unresolved events. Who is involved, and resolution status only interacted to predict negative affect for arguments where resolution status moderated the effect of family – the strongest associations resulted for unresolved non-family arguments. Gender moderated associations between network stressors and positive affect such that men reported larger decreases in positive affect for family members compared to women. Additionally, gender moderated the interaction between who is involved and resolution status for negative affect on avoided arguments: women unresolved non-family avoided arguments were associated with the largest increase in negative affect. Finally, age moderated the associations between who is involved, resolution status, and negative affect for avoided arguments such that

resolution status decreased levels of negative affect for younger adults family-avoided arguments whereas resolution status increased levels of negative affect for older adults family-avoided arguments. Taken together, the results of this study underscore the importance of disambiguating stressors based on their characteristics. Importantly, this study provides insight into *what* makes some daily social stressors more impactful on affective well-being, and for *whom*. Future research would benefit from examination of the roles of who is involved in relation to daily stressor-affect associations, in addition to the meaning and contribution of resolution to the daily stress process.

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Daily Stressors and Stressor-Related Affect: The Role of Stressor Type, Who was
Involved, and Resolution Status

by
Dakota D. Witzel

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I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

Dakota D. Witzel, Author

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DEDICATION

To my father, your love and support has gotten me farther than I could have imagined.

To my mother. If she were here, she would be damn proud.

CHAPTER 1: INTRODUCTION

Daily Stressors and Stressor-Related Affect: The Role of Stressor Type, Who was Involved, and Resolution Status

Stressful experiences have been long researched in the context of both life events (e.g., war, death of a loved one) and minor daily stressors (e.g., conflicts, accidents). Defined as the minor hassles of everyday life, daily stressors include: commuting in traffic, work deadlines, paying bills, or arguing with a spouse (Almeida, 2005). Seminal work by Kanner, Coyne, Schaefer, and Lazarus (1981) suggests that these daily hassles are negative emotion-provoking demands that characterize every day transactions in the environment. Compared to life events, daily stressors occur more frequently and exhibit independent and stronger associations with health outcomes (Almeida, 2005; DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Kanner et al., 1981; Monroe, 1983). Generally, daily stressors are associated with poorer physical health (Grzywacz, Almeida, Neupert, & Ettner, 2004; Piazza, Charles, Sliwinski, Mogle, & Almeida, 2013), mental and emotional health (Bolger, DeLongis, Kessler, & Schilling, 1989; Charles, Piazza, Mogle, Sliwinski, & Almeida, 2013), cognitive health (Sliwinski, Smyth, Hofer, & Stawski, 2006; Stawski, Cerino, Witzel, & McDonald, 2019), and increased mortality risk (Mroczek, Stawski, Turiano, Chan, Almeida, Neupert, & Spiro, 2015). Further, research has suggested that daily stressors impact these longer-term health and well-being outcomes through changes in affect (Bolger et al., 1989; Charles et al., 2013; Mroczek & Almeida, 2004; Watson, 1988). Although it is clear that daily stressors influence health and well-being, little is known about the characteristics that may influence *what* makes some daily stressors more influential than others and for *whom* they are more influential.

1.1 Characteristics of Daily Stressors

Daily stressors vary in any number of characteristics such as the type of stressor (e.g., argument, bill pay, work overload), frequency (i.e., how often they occur), severity (i.e., how stressful it was), who was involved (e.g., friend, family member), and resolution status (i.e., ongoing versus not) suggesting that daily stressors are multidimensional and diverse (Almeida, 2005). Although some previous daily stress research has explicitly examined characteristics of daily stressors, to understand why and how they influence health and well-being (Almeida, Stawski, & Cichy, 2011; Charles, Piazza, Luong, & Almeida 2009; Hay & Diehl, 2010; Cichy, Stawski, & Almeida, 2012), much of the extant research has often focused on aggregate or summary indices of daily stressors (e.g., any stressors reported or not, the total number of stressors reported; Schilling & Diehl, 2014; Stawski et al., 2008; Stawski, Cerino, Witzel, & MacDonald, 2019) or severity-weighted composites (e.g., Mroczek & Almeida 2004). Such aggregations, however, ignore potentially important characteristics of daily stressors that might modulate their association with affect. Consideration of additional nuanced characteristics of stressors is necessary to improve our understanding of how and what it is about daily stressful experiences that contribute to differential daily stressor-affect associations.

Empirical research on whether characteristics of daily stressors modulate the association with stressor-related affect is scant. For example, who was involved in daily stressors may provide information about why some minor daily experiences influence stressor-related affect whereas others are less impactful. In one study, Birditt, Jackey, and Antonucci (2009) found evidence to suggest a stronger increase in negative affect following an argument with a spouse than a child. Moreover, resolution status of a stressor may facilitate one's down-regulation of emotions after a stressful experience, thus reducing potential impact on health (Ochsner, Bunge, Gross, & Gabrieli, 2002). Stressors are multidimensional, with characteristics unique to both the

encounter and the individual. Unpacking the complexities of the daily stress process is important for understanding influences of daily stress on individuals affect. Therefore, the first goal of this study is to examine characteristics of daily stressors, including type of daily stressor, who was involved, resolution status as they relate to the influence of daily stressors on well-being, specifically changes in affect, in an adult sample.

1.2 Characteristics of the Individual

Every individual possesses unique life experiences and characteristics that may modify associations between daily stressors and affect. Two important individual difference characteristics that have been identified in the daily stress literature are gender and age. Research on both gender and age suggests mixed evidence regarding their moderating effects on the daily stress process (e.g., Almeida & Kessler, 1998; Birditt, Fingerman, & Almeida, 2005; Charles & Carstensen, 2010; Charles et al., 2009; Neupert, Almeida, & Charles, 2007; Stawski et al., 2019). Although findings are mixed, it may be that gender and age differences may also interact with the characteristics of the stressors, contributing to heterogeneity in stressor-affect associations. For instance, women are more reactive to interpersonal daily stressors, whereas literature suggests men to be more reactive to work stressors (Bolger et al., 1989). Further, research suggests that older adults decrease in affect to avoided arguments compared to younger adults but do not show decreases in reactivity to arguments compared to younger adults, suggesting that type of stressor is a characteristic that may modulate stressor-affect associations (Charles et al., 2009). Importantly, by exploring gender and age differences in these associations, research can better understand *who* is more reactive to *what* daily social stressors. Thus, the second goal of this study is to explore gender and age differences in daily stress processes, specifically interactions with the daily stressor characteristics type, who was involved, and resolution status.

CHAPTER 2: LITERATURE REVIEW

2.1 Theoretical Perspective

2.1.1 Bioecological Model

The bioecological theory of human development frames this study (Bronfenbrenner, 1979; 2005). Specifically, I utilized the expanded version of the bioecological model, which focuses on four key concepts-process, person, context, and time (P-P-C-T)-that interact to influence behavior and development (Bronfenbrenner & Morris, 2006). The first concept, proximal processes, is considered the interaction between the environment and the person. For example, a common process explored in midlife and older adulthood is the daily stress process (Almeida, 2005). The reaction and behavior of an individual following exposure to a daily stressor depends on the context; for instance, an individual may react differently to an argument than an avoided argument. The current study focuses on the daily stress process occurring within-persons over time (i.e., day-to-day). These daily stressors further vary by characteristics which can be explored through the Daily Stress Process Model (DSPM, see Figure 2.1; Almeida, 2005).

The second defining property is the person. Bronfenbrenner and Morris (2006) consider the person to be the characteristics and reactions of the individual situated within the context. This often refers to the individual that participates in the study or the focus individual. Individual difference characteristics can influence reactions from daily stressors that individuals experience (Almeida, 2005; Bolger & Zuckerman, 1995). Within this, Bronfenbrenner and Morris (2006) suggested three types of characteristics that influence proximal processes: demand characteristics (e.g., age, gender), resource characteristics (e.g., access to family resources), or force characteristics (e.g., personality, temperament). A goal of this study is linking daily social

stressors with positive and negative affect while examining these demand characteristics.

Because of the potential for confusing regarding the meaning of demand characteristics, as defined above by Bronfenbrenner versus demand characteristics in cognitive psychology (Orne, 1962), and to be consistent with previous daily stress research (e.g., Almeida, 2005), *individual difference characteristics* will be used throughout this document (e.g., Almeida, 2005).

Specifically, age and gender have been previously cited as important individual difference factors that influence outcomes following daily stressors (Birditt & Fingerman, 2003; Birditt, Fingerman, & Almeida, 2005; Birditt, Jackey, & Antonucci, 2009) and will be explored directly.

Another concept of the bioecological model is context. Bronfenbrenner (2005) suggests five interconnected circles or systems in the bioecological model: microsystem, mesosystem, exosystem, macrosystem, and, added in later work, the chronosystem (Bronfenbrenner & Morris, 2006). These systems represent the smaller to larger social and contextual stimuli that impact the individual. The microsystem is the environment in which an individual is situated the most directly such as home, work, or school. In line with the previous daily stress example, daily stress can occur in many microsystems (e.g., work, family, school) and daily stressors can involve a multitude of stressor characteristics within the microsystem. This study focuses on the microsystem in that daily social stressors and their characteristics are part of environments that individuals encounter daily. Daily social stressors, arguments, avoided arguments, and network stressors, constitute the various contexts within the daily stress processes. These daily social stressors may additionally vary by characteristics of the stressors including who is involved and resolution status.

Lastly, time is a critical aspect of the bioecological theory. Bronfenbrenner suggests that time is comprised of three levels: microtime, mesotime, and macrotime (Bronfenbrenner &

Morris, 2006). Microtime is the shortest time metric and includes what occurs during specific interactions or encounters (e.g., one day of assessment in a daily diary study). Mesotime is the extent interactions and processes become patterned over time (e.g., likelihood of arguments occurring within a week of study). For example, daily social stressors may occur during multiple assessments throughout the week. Lastly, macrotime is change in processes through the shifting cultural expectations (e.g., history, events, cohorts). The frequency of reporting specific daily stressors may change over time for some individuals. For example, increased number of women entering the workplace may result in more reports of family related overload stressors and more social stressors involving non-family social networks for women. A strength of this study is the daily diary design which allows for a focus on microtime – eight daily assessments of social stressors over a week (for more information please see Chapter 3 - Method).

Based on the expanded bioecological model with P-P-C-T concepts, I focus on the processes that explain the associations between daily social stressors that occur in multiple microsystems and individuals' changes in affect via stressor related affect (Tudge, Mokrova, Hatfield, & Karnik, 2009). By drawing on the daily stress processes, daily social stressor characteristics as microsystems, individual difference characteristics, and day-to-day variation as microtime, this study provides a more bioecological picture of the individual changes in stressor-related affect. Therefore, in this study, individual difference characteristics (i.e., gender and age), type of daily social stressors (i.e., arguments, avoided arguments, network stressors), other stressor characteristics (i.e., who is involved and resolution status) are all examined in association with change in daily positive and negative affect.

2.1.2 The Daily Stress Process Model

One model advanced to explore daily stress processes and the outcomes related to them is Almeida's (2005) daily stress process model (DSPM; see Figure 2.1). The DSPM is a conceptual model articulating key processes and mechanisms linking daily stress to health and well-being, while also acknowledging that individual difference characteristics (i.e., Bronfenbrenner's demand characteristics) influence the daily stress process. The right side of the conceptual model depicts daily stressor characteristics important for understanding possible mechanisms in the daily stress process. One mechanism, exposure, or experiencing a stressor, is quite central to the daily stress process. Such exposures are the experiential factors contributing to why one's affect may vary from day-to-day, which is indicative of reactivity to daily stressors (Almeida, 2005). Without exposure to the daily stressor, the daily stressor cannot, by definition, exist.

The second mechanism, reactivity, reflects changes in both physiological and emotional functioning following stressor exposure. For example, after daily stressor exposure, an individual may exhibit changes in cardiovascular function (e.g., higher heart rate) or an individual may have increases in negative affect. Exposure, then, catalyzes other dimensions of the daily stress process, including reactivity, and can impact subsequent health-related outcomes. The right side of Figure 2.1 shows some of the processes in which exposure influences reactivity and outcomes are shown.

Daily stress processes encompass both stressor characteristics and subjective appraisal of the stressor. Characteristics of stressors include frequency and severity (e.g., ratings of unpleasantness or disruption). The DSPM includes qualifying characteristics that define the microsystem in which the daily stressor occurs. First, type of stressor (termed *content*; e.g., interpersonal, network, work, school) qualifies the overarching microsystem in which the context of the stressor can occur in. Who is involved (termed *focus of involvement*; e.g., family member,

non-kin) and resolution status further qualify the microsystem that the daily stressor is housed in by providing more information about the context. For example, an individual may report a daily stressor, and then further qualify the daily stressor was an argument with a family member. Appraisals of stressors include (but are not limited to) severity and disruption of daily goals. These processes, in turn, can influence daily affect. Lastly, the right side of Figure 2.1 indicates a feedback loop suggesting that well-being may have subsequent effects on resilience and vulnerability.

The left side of conceptual model of the DSPM shows how “resilience and vulnerability factors” an individual may possess contributes to experiencing and reacting to daily stressors. These factors include sociodemographic, psychosocial, and health and consistent with the three characteristics (demand, resource, and force) previously presented in Bronfenbrenner’s bioecological theory (2005). Of course, any individual can have a variety of resilience or vulnerability factors, and these factors may influence one another or interact to influence daily stress processes. These individual difference characteristics make up a majority of the daily stress research – assessing *who* is more vulnerable or resilient to daily stress. The present study examined two individual difference characteristics that are often found in daily stress literature – age and gender (see individual difference characteristics section for more information). Moreover, this study focused on the stressor characteristics type of stressor, who is involved, and resolution status in conjunction with the individual difference characteristics in order to provide a more comprehensive understanding of the daily stress process. Figure 2.2 is a conceptual model based on the DSPM depicting the individual difference characteristics (i.e., age and gender) and stressor characteristics (i.e., type, who is involved, resolution status) as potential

moderators of stressor-related affect to daily social stressors. More information will be provided below on the influence of stressor characteristics and the individual difference characteristics.

It is important to note that current research (e.g., Stawski et al., 2019) questions the appropriateness of the term reactivity as seen in the DSPM. Many studies utilizing the term reactivity do not examine affect-related responses directly following a reported stressful experience. As such, this study utilizes the terms stressor-related negative affect (SRNA) and stressor-related positive affect (SRPA). SRNA refers to the *increases* in negative affect that is associated with a daily stressor and SRPA refers to the *decreases* in positive affect that is associated with a daily stressor. Importantly, these changes in affect are not qualifications of the emotions directly related to the event that occurred. As opposed to other terms, such as reactivity, which imply temporality and causality, SRNA and SRPA emphasize the importance of the stressor-affect association, while being non-causal. Moreover, unless specified, stressor-related affect (SRA) will be used to make generic references about stressor-affect associations, while SRNA and SRPA will be used to qualify valence-specific associations.

Changes in SRA can vary by age and gender as well as daily social stressors, who is involved, and resolution status (Almeida & Horn, 2004). For example, two individuals may have arguments with their respective spouses; however, one individual may have larger increases in SRNA (and/or decreases in SRPA), or may be less likely to resolve the stressor resulting in a greater SRA. It is important to elucidate what characteristics (individual and/or stressor-related) are influential to the daily stress process associations with well-being. The focus of this study will be on interpersonal (i.e., arguments and avoided arguments) and network stressors as microsystems because of the widespread involvement of other individuals. Because not all daily stressors will necessarily have the same influence on SRA, it is important to disambiguate *what*

stressors are differentially associated with affect by considering characteristics of daily stressors, and for *whom* these stressors are differentially impacting.

2.2 Affect in the Context of Daily Stressors

Positive affect focuses on feelings of enthusiasm, alertness, or activity where high positive affect includes high engagement and concentration whereas low positive affect often includes sadness and low energy (Watson et al., 1988). Conversely, negative affect is often reported within the realm of levels of adverse moods, and distress. High negative affect would reflect high levels of the previous mentioned states, while low negative affect includes states of relaxation and calm (Watson et al., 1988). Within daily stress research, SRA has been the primary indicator of the affective impact daily stressors (Mroczek & Almeida, 2004). These variations in affect have been linked to long-term health outcomes such as reporting chronic health conditions (Piazza et al., 2013), inflammation (Sin, Graham-Engeland, Ong, & Almeida, 2015), cognitive health (Stawski et al., 2019), depressive symptoms (Cohen, Gunthert, Butler, O'Neill, & Tolpin, 2005), other affective disorders (Charles et al., 2013), and mortality (Mroczek et al., 2015). Further, research has suggested that SRNA and SRPA have unique associations with health and well-being (Charles, Reynolds, & Gatz, 2001; Hay & Schilling, 2010; Kuiper, & Martin, 1998; Mroczek, & Kolarz, 1998; Watson, 1988).

As SRA is an important predictor of these long-term health outcomes, it is important to examine what influences both SRNA and SRPA within the daily stress process. Daily stress has broadly been associated with increases in negative affect (Almeida, 2005; Almeida & Horn, 2004; Stawski et al., 2019), however, there are mixed associations with positive affect, with some reporting decreases in positive affect associated with daily stress (Röcke, Li, & Smith, 2009; Stawski et al., 2008) and some research suggesting no associations with positive affect

(Bolger et al., 1989; Watson, 1988). Researchers have acknowledged that negative and positive affect are unique constructs to be examined separately (Charles, Reynolds, & Gatz, 2001; Kuiper, & Martin, 1998; Watson, et al., 1988), and, empirically, the two dimensions of affect are only moderately correlated (Watson, Clark, & Tellegen, 1988). Watson, Clark, and Tellegen (1988) and Watson (1988) have suggested that positive and negative affect are not related to the same events. For example, Watson (1988) found physical complaints and perceived stress related to SRNA but not SRPA. Mroczek and Almeida (2004) suggest that individuals vary in their reactions to daily stressors – namely reported negative affect – while less is known about the variation of positive affect. Therefore, it is pertinent to examine both positive and negative affect as unique outcomes of the daily stress process. Given that daily stressors are inherently negative, it stands to reason that these daily stressors would decrease the level of positive emotions felt following the given negative experience.

2.3 Understanding the Importance of Diversifying Daily Stressors

Some researchers have argued the importance of disambiguating daily stressors to better understand how and what specific experiences have the most potent impacts on well-being (Almeida, Stawski, & Cichy, 2011; Stawski, Sliwinski, Almeida, & Smyth 2008). Almeida (2005) suggested that stressor characteristics and appraisals may modulate the influence of stressors on SRNA and SRPA (See Figure 2.1). Further, Almeida, Stawski, and Cichy (2011) suggested the information contained in comprehensive checklists of daily stressors, such as the Daily Inventory of Stressful Events (DISE; Almeida, Wethington, & Kessler, 2002), can be leveraged to understand variability in daily stressor-affect associations. Previous research has examined stressor type as a unique characteristic that may interact with individual difference characteristics such as age and gender, to differentiate SRA. For instance, after differentiating

between type of stressor experienced, Hay and Diehl (2010) observed variation in psychological and physiological reactivity to each type of daily stressors associated with individual differences in daily control and self-concept differentiation. Because daily stressors may vary in potency depending on their characteristics, it is important to utilize information on characteristics of daily stressors for a more nuanced understanding of daily stressor-affect links.

Research has further shown that different stressors exhibit unique and differential associations with affect (Almeida, 2005; Almeida, Stawski, & Cichy, 2011; Bolger et al., 1989). Social stressors, daily stressors that are social in nature (e.g., arguments, avoided arguments, network stressors) are among the most common and distressing daily stressors reported (Almeida, 2005; Almeida, Wethington, & Kessler, 2002; Birditt, Fingerman, & Almeida, 2005; Bolger et al., 1989) compared to other types of daily stressors such as work stressors. Daily social stressors influence both subjective indices (e.g., relationship satisfaction) and objective indicators (e.g., cortisol; Stawski, Cichy, Piazza, & Almeida, 2013). Additionally, Bolger and colleagues (1989) disaggregated types of daily stressors in one study. They examined 166 married couples on seven days with different daily stressors (e.g., home, work, family, financial, interpersonal) and a daily mood measure specifically designed to examine anxiety, hostility, and depression. Results suggested that for men and women alike, interpersonal conflicts were the most upsetting, accounting for 19-20% of the variance in mood. Further, they found that conflicts outweighed other personal daily stressors, uniquely accounting for 16% of the variance.

Other researchers have found similar results. Almeida, Wethington, and Kessler (2002) found interpersonal stressors to occur on 22% of the study days (1.5 days a week), and Almeida (2005) showed that the most common stressor reported for both men and women was interpersonal stressors, accounting for 50% of the total number of stressors reported (49.1% by

men; 50.3% by women). Because daily social stressors are so common and affect multiple areas of well-being, this study explores these specific daily stressors in more detail. The following sections focus on daily social stressors as a whole.

2.3.1 The Importance of Daily Social Stressors

Lazarus and Folkman (1984) defined social stressors as experiences related to psychological and physical strain and are social in nature. Further, according to the DSPM, social stressors consist of both interpersonal and network stressors (Almeida, 2005). Interpersonal stressors often represent arguments or avoided arguments that directly involve the individual being assessed and another person(s); these stressors can involve anyone (e.g., friend, spouse, co-worker, pet). Network stressors are stressors that involve someone in a respondent's social network but do not directly involve the respondent. For example, a network stressor could include the hospitalization of a friend or family member following an accident; although this may not directly impact the individual, the source of stress emanates from one's social network. Thus, in addition to the unique impact of daily social stressors on well-being (Almeida, Wethington, & Kessler, 2002; Birditt, Fingerman, & Almeida, 2005), social stressors provide the ability to examine the impact of non-domain specific interactions with who is involved in the daily stressor in addition to other characteristics. There have been multiple studies exploring daily social stressors and well-being associations (Birditt, 2014; Birditt, Sherman, Polenick, Becker, Webster, Ajrouch, & Antonucci, 2018; Birditt, Tighe, Nevitt, & Zarit, 2017). Birditt and colleagues' findings suggest that daily social stressors influence not only relationship quality with the person involved in the stressor (Birditt et al., 2018) but also decrease positive affect, increase negative affect (Birditt, 2014), and increase alpha amylase (Birditt et al., 2017), thus additionally underscoring the import of focus on daily social stressors.

Most of the work on daily social stressors focuses heavily on individual difference characteristics moderating the influence of daily stressors on affect such as age (Birditt, Fingerman, & Almeida, 2005; Charles et al., 2009), socioeconomic status (Almeida, Neupert, Banks, & Serido, 2005; Grzywacz et al., 2004), and race (Cichy et al., 2014). Explicit use of individual difference characteristics was an integral first step for unpacking differences in stressor-related affect to daily stressors. Research on individual difference characteristics in daily stress processes is important for qualifying *who* is most likely to experience negative outcomes following exposure; however, examining characteristics of stressors that allow researchers to identify *what* about daily social stressors makes them more potent is a potentially important complement to understand how daily stressors influence affect¹. By focusing on the characteristics of the daily social stressor instead of the characteristics of the individual, a more nuanced consideration of the stress process is available to broaden and explain not only *who* the daily social stressor is more impactful for but also *what* about daily social stressors make them important.

2.4 Who is Involved Matters

Researchers have deduced that associations with individuals' social relationships (friends, family, other) and biological (Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002; Uchino, 2006) and emotional functioning (Brooks & Dunkey-Schetter, 2011; Cohen, 2004; Clark & Watson, 1988; Rook, 1984a, 2001, 2015) are multidimensional and complex across the lifespan. For example, Kiecolt-Glaser and colleagues (2002) examined both positive and negative consequences of social relationships; individuals with stronger social relationships showed stronger immune responses to a hepatitis B vaccine, but conflicting social relationships were

¹ Who and what are not mutually exclusive. The role of stressor characteristics may, in some instances, further depend on individual or group difference-level individual difference characteristics.

related to depressive symptoms and immune dysregulation (Keicolt-Glaser et al., 1997). Moreover, whereas Cohen's (2004) research suggests support for social relationships buffering stress, seminal work by Rook (1984) suggests that negative social interactions may have greater impact than positive interactions. Although social relationships can include positive interactions (Bertera, 2005; Rook, 1984a, 1984b) thus lending themselves to the positive outcomes seen previously, the negative side to these relationships is an increasingly important area of study (Ingersoll-Dayton, Morgan, & Antonucci, 1997).

The phrase "who is involved" is used rarely within stress research, and synonymous terms such as focus of involvement, source of stress, or social relationships within research have been utilized more often. The previous monikers can be considered difficult to understand (e.g., focus of involvement) or imply assumptions about the individual involved (e.g., social relationships) or the event (e.g., source of stress). Importantly, "who is involved" is an easily digestible moniker that does not assume the individual involved is the dominant or only source of stress in the event. Further, "who is involved" includes individuals who may be outside of a social convoy (e.g., cashier). A stressor may differ in potency, depending on whether the stressor involves the individual only, a coworker, a friend, or a family member. Specifically, much of the research examining who is involved with the stressor has focused solely on family. Family involvement plays an integral part of the influence stressors have on health (Cohen et al., 1998; Kivimaki et al., 2002; Rook & Charles, 2017); research suggests that negative affect associated with family is related to lower levels of happiness (Antonucci et al., 1998). Social relationships, however, are more than just family relationships, they involve both friends and non-family. The research on source-specific stress (e.g., examining stress with spouse and children separately) is mixed with some suggesting unique contributions from one source over others on depressive

symptomatology (Okun & Keith, 1988) and others suggesting no unique significant associations (Okabayaski et al., 2004). Although cross-sectional, both studies utilized similar measures of negative interactions including being critical, or demanding of the individual, and depressive symptoms.

Via daily diary studies, research has suggested that interactions involving family and friends are uniquely associated with exposure, quality, and reactivity of negative interactions throughout adulthood (Akiyama, Antonucci, Takashi, & Langfahl, 2003; Birditt, Jackey, & Antonucci, 2009). For example, Akiyama et al. (2003) has suggested decreasing exposure to stressors involving family and friends with age, but stressors involving family members continue to be comparatively more common. Further, Birditt, Jackey, and Antonucci (2009) found that relationship quality trajectories were dependent on the relationship type; relationships with friends and children became less negative, while relationships with spouses and partners increased or remained stable over time. Specifically, Birditt and colleagues (2009) suggest that relationship-specific trajectories vary in the quality and influence on well-being. As such, contrasting stressful experiences involving family or non-family can reveal whether or not who is involved may be an important factor to consider when examining why a stressor was impactful.

Daily stressors and family. A handful of studies have examined the role of family in the context of daily stressors. Utilizing the Midlife in the United States study, Cichy, Stawski, and Almeida (2012) examined the influence of daily stressors involving family on daily well-being. Cichy and colleagues (2012) expanded family-specific social stressors into three categories, family arguments, avoided family arguments, and family network stressors, in order to examine the exposure and reactivity of these stressors on daily affect and physical health symptoms. They

further examined these associations by race, comparing African- and European-Americans. Two important findings for this study emerged. Interestingly, they found no significant difference in exposure in any type of family stressor, by race. Additionally, regardless of race, family stressors had unique implications for daily health and well-being; interpersonal family stressors (arguments and avoided arguments) impacted both emotional and daily health and network family stressors only influenced emotional health. Unfortunately, this study focuses solely on stressors involving family, making it difficult to differentiate stressor impact involving other foci of network involvement on social stressors.

Additionally, Birditt, Fingerman, and Almeida (2005) examined the influence of exposure to interpersonal tensions on active destructive (e.g., argue or fight), passive destructive (e.g., ignore), active constructive (e.g., discuss problems), and passive constructive (e.g., let it pass) behavioral reactions and how individual differences moderate this association. They further examined exposure to interpersonal tensions by who was involved (i.e., spouse, child, other family, or non-family). In this study, it is important to note that the researchers conceptualized interpersonal tensions differently than the current study; interpersonal tensions were arguments, avoided arguments, other--neither, or nonevents associated with behavioral reactions and emotional reactivity. Conceptions of other-neither events were considered interpersonal stressors that were not arguments or avoided arguments such as financial issues, disciplining children, or job procedures (Birditt et al., 2005) and nonevents were days that no interpersonal stressor occurred. There were significant findings in that gender and age moderated associations between interpersonal tensions and SRNA and behavioral reactions with these associations further depending on the relationship. To expound, increases in SRNA was stronger for children than

with spouses, and individuals were less likely to argue with acquaintances than with family members.

Unfortunately, little research has examined if the associations between daily social stressors and well-being depend on family member involvement compared to non-family members. Who is involved provides unique contextual information for daily social stressors as examining social stressors by who is involved may provide an explanation as to *what* makes some social stressors more distressing than others. Examining who is involved in a social stressor provides a deeper insight into the stressor context and its potential influence on SRA.

2.5 Resolution in the Context of Daily Stress

Prolonged activation of stress influences health and well-being via cardiovascular, endocrinological, and immunological systems (Brosschot, Gerin, & Thayer, 2006). Prolonged activation, possibly through rumination or worry (i.e., perseverative cognition; Brosschot, 2010), has been linked to cardiovascular disease (Pieper & Brosschot, 2005), slower recovery to stressful experiences (Williams et al., 2015), and increases in reactivity (Brosschot, Gerin, & Thayer, 2006). Much of Brosschot and colleagues' work focuses on the prolonged activation or perseverative cognition aspect of stress, suggesting that duration or continued ideation of the stressor may prolong the physiological activation of the stressor. Because prolonged stressors have an impact on health and well-being (Brosschot, 2010), this warrants empirical attention on the characteristics of the stressors that can influence the duration or intensity of this phenomena.

The subjective resolution of a stressor may play a crucial role in the impact of a stressor. Resolution is defined as a change, altering the course and process of a conflict that can be intrinsically or extrinsically motivated (Webb et al., 2017), and in the context of daily stress, resolution status has been defined as a subjective change from an "on-going" stressor to a

resolved stressor. Applied to the DSPM, resolution status may influence SRA following daily social stressor exposure. Because resolution may serve to reflect social stressors that have occurred are no longer ongoing, resolution status may be a characteristic contributing to differential effects of stressors on health and well-being. It may be that resolution is effective because it decreases the duration of the social stressors impact (Harnish et al., 2000) or that resolution allows for the ability to down-regulate emotions (Ochsner et al., 2002).

A wide area of research focuses on interpersonal conflict resolution. Within the literature, conflict resolution is regarded as the process or result of ending a conflict (Deutsch et al., 2011). Resolution is therefore often regarded as an outcome in which processes and mechanisms lead to resolution (Webb et al., 2017) and is rarely extended as a predictor of health and well-being. Most of the resolution literature pertaining to conflict or, more broadly, stress is cross-sectional. For example, in their study on stressor resolution, Harnish et al. (2000) found that among a convenience sample of young adults, the highest rate of resolution was in the first six to eight months following the stressor and that this resolution rate varied by type of stressor. Although cross-sectional, Harnish and colleagues (2000) results suggest there may be heterogeneity in stressor resolution in day-to-day social stressors resolution may be its own unique process to be examined. However, this cross-sectional study attests to resolution as it pertains to people whereas resolution may influence associations with SRNA for any given person. Daily social stress and its resolution status may provide a more detailed explanation of why heterogeneity in SRA exists.

It is unclear whether daily social stressors vary in their resolution statuses, and further, how resolution status may contribute to influence SRA to daily social stressors. As conflict resolution reduces the duration and potency of the influence of conflict, it may be that resolved

daily social stressors have less of an impact on stressor-related affect than unresolved social stressors. To date, this has not been empirically tested in the daily stress literature. Therefore, a goal of this study is to examine resolution in the context of the daily stress process as a potential moderating factor of the influence of types of social stress and stressor related affect.

2.6 Individual Difference Characteristics and Daily Stress

It is critical to understand that individual difference characteristics may influence both characteristics of daily stressors and stressor-related affect. As previously noted, much of the daily stress literature focuses on individual difference characteristics in order to understand *who* is most reactive to daily stress. These between-persons individual difference characteristics explore mean-level changes associated with SRA. Much less is known about how individual difference characteristics (e.g., age, gender) may influence SRA related to daily social stressors and interact with more nuanced stressor characteristics. For example, although women and men report similar levels of interpersonal stressors (Bolger et al., 1989), it is less clear whether women are more likely to report daily social stressors as being resolved compared to men and if this differential resolution may moderate the associations with SRA and daily stress. The following sections will examine two important individual difference characteristics, gender and age, as they influence exposure to daily social stressor characteristics and SRA following a daily social stressor.

2.6.1 Gender, Daily Stress Processes, and Affect

Gender socialization. In the United States, men and women often follow different social roles and norms. The sex-role hypothesis states that the nature of role demands differs by gender (Barnett & Baruch, 1987). For instance, women report higher levels of daily interpersonal

stressors while men report higher levels of work daily stressors (Almeida, 2005; Bolger et al., 1989). Further, men are more reactive to income loss than women, whereas women were more reactive to network events (Kessler & McLeod, 1984). This difference could be attributed to gender socialization that encourages men to be the “breadwinners” and women to provide emotional support. In the context of daily social stressors, because women are more likely to engage with the social aspects of gender roles, it may be that women are more reactive to the social stressors than men.

Daily social stress is an optimal context in which to examine gender differences in SRA. Research suggests that gender differences in stress may be exacerbated when small, stressful situations occur (Schulz et al., 2004). Almeida and Kessler (1998) found that women reported higher frequency of daily stress and a higher frequency of highly stressful days compared to men. Women reported more home overloads, family demands, other demands, and child arguments, whereas husbands had more frequent work overloads, arguments with single or multiple others, and transportation issues. Although women reported a higher baseline negative affect and were more likely to become more upset when an interpersonal argument occurred, there were no gender differences in staying distressed following a daily stressor.

Gender and who is involved. Limited research exists examining gender differences in daily social stressors outside of the scope of marital couples. In line with Almeida and Kessler (1998), Birditt and colleagues (2005) found that women reported more interpersonal stressors than men, specifically with their children. Additionally, there were no gender differences in the reported use of conflict strategies (e.g., yelling, ignoring), but, importantly, the authors did not examine differences in SRA.

Gender and resolution. Importantly, a study previously mentioned (Almeida & Kessler, 1998) may have indirectly examined same-day resolution status. Because this study examined the continuation of a day with high negative affect into the following days of the study, it may be that they were indirectly examining resolution. Almeida and Kessler (1998) found that both wives and husbands had more continuous days of high negative affect than start days of high negative affect. Moreover, on high intensity stressor days (highly stressful days), they found that women were more likely to have a period of high negative affect on the same day rather than continue that high negative affect the next day whereas men were just as likely to do either. Thus, it may be that women are more likely resolve a daily social stressor than men.

Gender differences in SRA seem to be dependent on daily social stressor characteristics. These characteristics may exacerbate or mollify the gender differences influence of the daily social stressor on SRA; however, little research has examined this in the scope of daily social stressors. Some, like Almeida and Kessler (1998), have looked at daily stressors and affect by exploring frequencies by gender and associations with exposure. Those looking specifically at daily social stressors have only examined exposure to or conflict strategies for different types of social stressors. To date, no research has explored resolution status directly, and few have examined gender as a moderator of daily stress-affect associations outside the marital context. Thus, gender is an important individual difference characteristic to explore nuances in characteristics of daily stressors and how they impact daily stress processes.

2.6.2 Age, Daily Stress, and Stressor-Related Affect.

Recent work focusing on daily stress and SRNA has shown there may be little evidence for age-related differences in SRNA (Stawski et al., 2019); however, the authors discuss that age differences may be stressor characteristic-dependent (e.g., Charles et al., 2009). Moreover, this

coordinated analysis did not include information pertaining to possible age differences in SRPA, as it is relatively uncommon for SRPA to be measured. In the following sections I briefly discuss the possible connections between age, daily stress, and daily stressor characteristics.

Age and who is involved in daily stressors. Theories such as the socioemotional selectivity theory (Carstensen, Isaacowitz, & Charles, 1999) or the strength and vulnerabilities integration model (SAVI; Charles, 2010) have suggested that stressor exposure decreases with age. Within the context of daily social stressors, age is related to decreases in exposure and SRNA depending on who is involved (Akiyama et al., 2003; Birditt et al., 2005). As previously mentioned, Akiyama et al. (2003) suggested that there is a decrease in exposure to stressors and friend stressors with age; further an increase in age was related to a decrease in negative interactions with friends and family members – with the exception of a spouse. Additionally, analyses suggest age-related decreases in negative interactions with friends and most family members but there was different trend for parent interactions. Negative interactions with parents decreased until midlife (64-68 for U.S. mothers, 49-53 for U.S. fathers, and 54-58 for Japan parents), then began to increase.

Additionally, Birditt et al. (2005) suggested that the likelihood of who is involved in an interpersonal stressor varies by age: older adults were more likely to report interpersonal stressors with spouses or partners relative to younger and middle-aged adults. Moreover, young adults were more likely to report non-family interpersonal stressors compared to middle and older adults. Age differences were also significant for SRNA and behavioral reactions, where older adults rated interpersonal stressors as less stressful, were less likely to argue, and more likely to do nothing when an interpersonal stressor occurred. Therefore, when considering age, it may be that older adults will be less likely to have daily social stressors with family members

and non-family members compared to younger adults. Further, when daily social stressors occur, they may be more likely to include family, and age may not significantly influence the association between daily social stressors and affect.

Age and resolution status. Few studies have examined age and resolution status of stressors. Moreover, to date, no studies have examined age and resolution status of daily stressors. One study explored patterns of successful resolution in later life finding severity of stressors did not predict the number of resolved stressors, and older adults reported higher frequency of resolution based on coping strategies and health/emotion status (Brennan, Schutte, & Moos, 2006). Although I am unaware of any literature that has examined resolution status in the daily stress literature, socioemotional selectivity theory (Carstensen, et al., 1999) and SAVI (Charles & Carstensen, 2010) may provide some insight into possible age differences in resolution. Because both theories suggest that older adults are more adept at regulating emotions in order to avoid exposure and mitigate responses to stress, it may be that older adults are more likely to report their stressors as being resolved, whether it be an argument, avoided argument, or network stressor. Further, both theories suggest that when a stressor does occur, younger and older adults report similar levels of affect; thus, older adults may not benefit more from resolving a stressor that has already occurred compared to younger adults.

The relation between age and daily stress processes is complex and potentially dependent on stressor characteristics. As individuals age, they are less likely to experience daily social stressors; however, this may depend on who is involved. The research presented suggests an age-related difference in exposure to daily stressors that can be expanded to daily social stressors, such that older adults may report fewer daily social stressors with the exception of network stressors (Stawski et al., 2013) by avoiding the daily social stressors. Moreover, age may modify

the likelihood of characteristics occurring within the daily stress process such that older adults may report more avoided arguments; family social stressors, specifically with spouses, and resolved social stressors relative to younger adults. Lastly, older adults may be just as reactive to daily social stressors as younger adults. Thus, this study will add to the body of daily stress literature by directly exploring the possible age differences in the daily stress process, including associations with type of daily social stressor, who is involved, and resolution.

2.7 General Overview

Through changes in affect, daily stressors influence health and well-being. Research is clear that daily social stressors play a role in SRA; however, few studies have examined what characteristics make daily social stressors most influential to affective associations. By examining characteristics of stressors such as stressor type, who is involved, and resolution status, this study aims to elucidate the possible mechanisms by which some daily social stressors are more potent than others. Frequency of the type of daily stressors varies, with social stressors being the most common and distressing (Hay & Diehl, 2010). Moreover, there has been mixed research suggesting how who is involved may play a role in how daily social stressors influence SRA. Resolution of stressors have only been examined in the context of conflict resolution; however, research has suggested that resolution may play a role in decreasing the effect of the daily social stressor.

By examining these characteristics alone, without acknowledging that characteristics of daily social stressors may interact, research may be only getting a piece of the puzzle as to why daily stressors are impactful; thus, this study utilizes the bioecological framework, focusing on P-P-C-T, for considering the daily stress process. Moreover, from a bioecological perspective, the individual, particularly individual difference characteristics, play an important role in these

stressor-affect associations. With mixed research on age and gender, it is imperative to explore how the effect of daily social stressor characteristics may be moderated by these individual difference characteristics. By doing so, this research may help elucidate and interpret previous mixed findings.

Within-persons research questions for stressor characteristics. To date, little research has examined the associations between multiple features of daily social stressors and SRA, especially in conjunction with individual difference characteristics. The first goal of this study is to explore how characteristics of daily social stressors are associated with changes in SRNA and SRPA. Therefore, who is involved and resolution status will be examined as moderators to the associations between types of daily social stressors and SRA. Because characteristics do not operate within a vacuum, it is important to examine how stressor characteristics may interact to influence SRA. Who is involved and resolution status will be included as moderators of the associations between types of daily social stressors and SRA. The first three research questions and their hypotheses reference the within-person associations over time as the nature of the daily stressor characteristics are time-varying and within-persons.

RQ1: Is the association between daily social stressors and stressor-related affect moderated by who is involved?

I hypothesize that on days when daily family social stressors occur will be associated with a higher level of negative affect compared to daily non-family social stressors (H1a) and that on days when daily family social stressors occur will be associated with a lower level of positive affect compared to daily non-family social stressors (H1b). These hypotheses are in line

with previous research suggesting increases in negative interactions with family members (Akiyama et al., 2003) and increased SRNA for stressors involving family members (Cichy et al., 2004).

RQ2: Does resolution status moderate the association between daily social stressors and stressor-related affect?”

I hypothesize that on days when daily social stressors are unresolved will be associated with higher negative affect compared to days when daily social stressors are resolved (H2a) and that on days when daily social stressors are unresolved will be associated with lower positive affect compared to days when daily social stressors are resolved (H2b). These hypotheses, although unique to the daily stress literature, are in line with previous conflict resolution literature (Harnish et al., 2000).

RQ3: Does stressor resolution and who is involved interact to moderate the association between daily social stressors and stressor-related affect?

I hypothesize that resolution status and who is involved will interact to influence negative affect such that on days when daily family social stressors are unresolved will be associated higher stressor-related negative affect compared to days with resolved daily non-family social stressors (H3a). Additionally, I hypothesize that resolution status and who is involved will interact to influence positive affect such that days when daily family social stressors are

unresolved will be associated with lower stressor-related positive affect compared to days with resolved daily non-family social stressors (H3b).

Between-persons research questions for individual difference characteristics. The second goal of this study is to explore how two individual difference characteristics may moderate the associations between daily social stressor characteristics and SRNA and SRPA. Thus, age and gender will be examined as moderators to the associations between the daily social stressor characteristics (who is involved, resolution status), and SRNA and SRPA. As age and gender are often invariant across the microtime (see method section for more information), it is important to note that these are between-persons associations. In other words, the effect of stressor characteristics on SRNA and SRPA differ depending on individual differences in gender and age.

RQ4: Does gender moderate the associations between who is involved (RQ1), resolution status (RQ2), and their interaction (RQ3) and stressor-related affect?

I hypothesize that gender will interact with resolution status such that resolution will have a larger effect on SRA for women relative to men. This is in line with previous research suggesting that women have more likely to have high same day negative affect compared to men (Almeida & Kessler, 1998). Further, women may be more likely to have family-involved stressors compared to men (Birditt et al., 2005) and engage with more social aspects of gender roles and thus, may exhibit greater SRA associated with these stressors compared to men.

RQ5: Does age moderate the associations between who is involved (RQ1), resolution status (RQ2), and their interaction (RQ3) and stressor-related affect?

I hypothesize that the effect of resolution will be larger for older adults such that there will be smaller increases in SRNA and smaller decreases in SRPA for older adults compared to younger adults. Further, based on SAVI (Charles, 2010) and socioemotional selectivity (Carstensen, et al., 1999), when daily stressors occur, age may not moderate associations, regardless of family-involvement.

Figure 1. Excerpt Daily Stress Process Model from Almeida (2005)

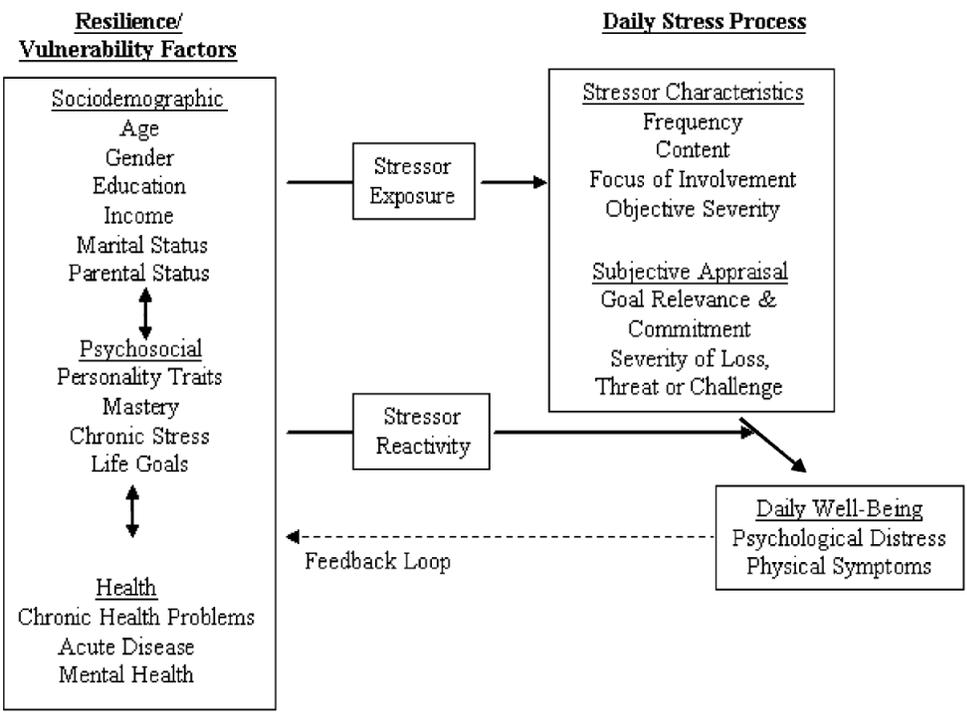
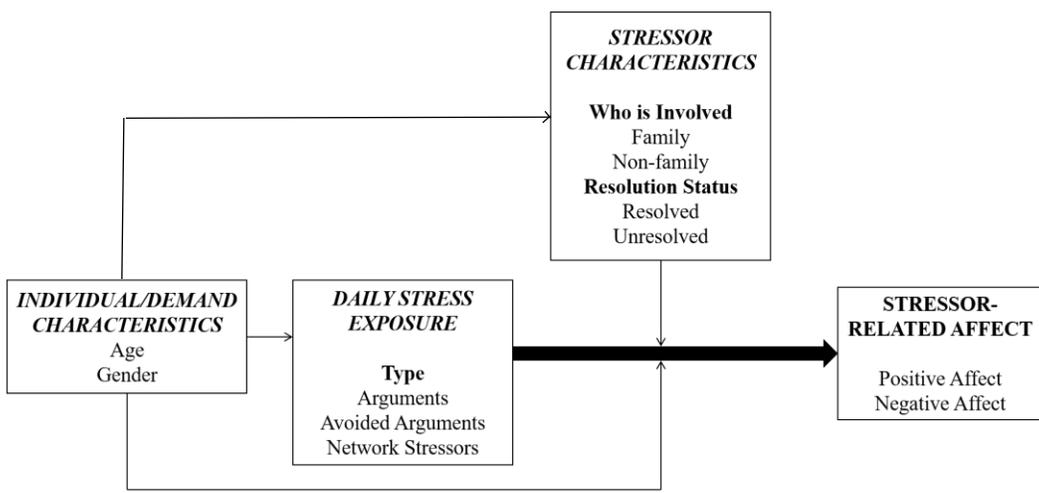


Figure 2. Conceptual Model Utilized for the Current Study Based Loosely from DSPM



Note. Individual characteristics are suggested to influence the entirety of variables in the model. Theoretically, stressor exposure encompasses all stressor characteristics (e.g., type, who is involved, resolution status). Analytically, however, characteristics are housed within the type of stressor that occurred (e.g., arguments, avoided arguments, network stressor). Characteristics may additionally moderate associations between daily stress and stressor-related affect.

CHAPTER 3: METHOD

3.1 Participants

This study utilized data from the second wave of the National Study of Daily Experiences (NSDE). The NSDE is the daily diary subset of a larger secondary wave of the National Study of Midlife in the United States (MIDUS II). The participants in the initial wave of the NSDE were randomly selected in March 1995 from the MIDUS I sample with participants baseline age ranged between 24 and 75 years. The follow-up, MIDUS II, began ten years later in 2004-05 with the initial survey consisting of 4,963 individuals. The NSDE II consisted of 2,022 of the initial survey wave participants. The NSDE II additionally included a secondary sample of African American participants. Age ranged from 33-84 with a mean age of 56.25 ($SD = 12.20$; see Table 3.1). Of those individuals, 56% were female, 84% were Caucasian², and a relatively high proportion of the participants were highly educated (64% with a college degree or more).

3.2 Measures

Negative affect. Participants were asked to rate 14 items asking, “How much of the time today did you feel (*insert emotion here*)?” Examples of the emotions include anxious, nervous, or depressed. Negative affect was calculated by averaging the items and were coded from 0 (*none of the time*) to 4 (*all of the time*) where higher scores represent higher negative affect ($\alpha = .89$; see Appendix A for full measure; Almeida & Kessler, 1998; Mroczek & Kolarz, 1988; Watson, Clark, & Tellegen, 1988). For negative affect, the intraclass correlation coefficients (ICC) of the unconditional model was 0.47 suggesting that 47% of the total variation in negative affect reflects between-person variation, and 53% represents within-person variation.

² The dataset utilized, the NSDE II, reports ethnicity/race as “Caucasian,” thus this study will utilize Caucasian in place of White to stay consistent with the data.

Positive affect. Participants were asked to rate 13 items asking, “How much of the time today did you feel (*insert emotion here*)?” Examples of the emotions include cheerful, satisfied, or enthusiastic. Positive affect was calculated by averaging the items and were coded from 0 (*none of the time*) to 4 (*all of the time*) where higher scores represent higher positive affect ($\alpha = .96$; see Appendix A for full measure; Mroczek, & Kolarz, 1988; Watson, Clark, & Tellegen, 1988). For positive affect, the ICC of the unconditional model was 0.67 suggesting that 67% of the total variation in negative affect reflects between-person variation, and 33% represents within-person variation.

Daily stressors. Daily stressors were reported using the Daily Inventory of Stressful Events (DISE; Almeida, 1998; Almeida et al., 2002), a semi-structured measure consisting of probe questions for daily stressors. Initially, participants reported if a specific type of negative event (i.e., argument, work, network stressor) occurred within the last 24 hours or since the last time they were contacted. The different stressors were dichotomously coded for 0 (*the daily stressor did not occur*) or 1 (*the specific daily stressor did occur*). For our purposes, we only utilize data from the social stressors including arguments, avoided arguments, and network stressors (see Appendix A for full measure).

Who is involved. If a daily stressor probe question was reported as “yes, had happened,” participants were asked the following, “Think of the most stressful (*type of stressor here*) you had since (this time/we spoke) yesterday. Who was that with?” The participant reported one person the event included, and it was coded from 1 (*spouse or partner [including ex-]*), to 25 (*no one else was involved*; see Appendix A for full measure). For the purposes of this study, who is involved was coded as 0 (*no family was involved*), or 1 (*family was involved*). The family

members included in family involvement were spouse or partner, child or grandchild, parent, sibling, general family, or other relative.

Stressor resolution status. Stressor resolution status was reported for each stressor experienced. Participants were asked, “Is the issue resolved?” and reported either 1 (*yes*) or 2 (*no*; See Appendix A for measure). Stressor resolution status was recoded as 0 = *unresolved* and 1 = *resolved*.

Gender. Gender was one question, asking participants their gender. This was further coded as 0 (*women*) or 1 (*men*).

Age. Age was reported in MIDUS I as birth year. In MIDUS II and NSDE II, age was the created from the birth year and current year of the reports. This was further centered on the mean age of 56.

Covariates. I covaried the following variables: marital status, education, day in study, and day of week, as these are known to influence daily stressors-affect associations (Almeida & Horn, 2004; Almeida et al., 2005; Stawski et al., 2019). Marital status was coded as 0 (*married*) or 1 (*other*). Education was coded as 1 (*less than a high school degree*), 2 (*some college*), and 3 (*Bachelor’s or greater*). Race was coded as 0 (*Caucasian*) and 1 (*Not Caucasian*). Day in study was coded 1-8 for each possible study day. Lastly, day of week was coded as 1 (*week day*) and 2 (*weekend*).

3.3 Procedure

The NSDE II is a daily diary study consisting of eight consecutive end-of-day telephone interviews. Participants were solicited to answer a battery of questions regarding their affect and experiences on that day. Data were collected over eight days in order to get a full weeks’ worth of information, as well as retrospective information over the week on the eighth day. Over the

eight days, participants responded to 14,912 of the 16,176 possible daily interviews (92% completion rate). Each phone interview occurred at the end of the day and lasted ten to fifteen minutes. Data were collected during 40 separate 8-week sessions over one year. Additionally, starting days were staggered across the week to account for possible confounding of day of study and day of week. Importantly, skip logic was utilized to obtain information regarding daily stressors. First a participant was asked about the occurrence of a specific daily stressor (e.g., argument, avoided argument). Only if an individual said yes to the occurrence was the individual asked about daily stressor characteristics. If the participant responded yes to the occurrence of a daily stressor, they were asked how severe the daily stressor was on a scale of 0 (*not at all*) to 3 (*severe*). Participants were only asked about other daily stressor characteristics (i.e., resolution status and who is involved) if they reported a severity score of 1 or higher.

Table 3.1 Demographics of Sample and Outcomes

	M	SD	Range	%
Age	56.24	12.20	33-84	
Sex				
Male				44.03%
Female				55.97%
Education				
< HS diploma				36%
Some college				46.29%
≥ Bachelors				17.71%
Race				
Caucasian				83.88%
Not Caucasian				16.12%
Marital Status				
Married				72.26%
Other				27.74%
Negative affect	0.19	0.32	0-5	
Positive affect	2.74	0.79	0-5	

CHAPTER 4: ANALYTIC PLAN

To fully examine the associations between variables, descriptive analyses were conducted prior to the primary analysis. First, I conducted frequency statistics to understand the descriptive breakdown of the number and frequency of daily stressors by type, who is involved, and resolution status. With regard to who is involved, I examined clustering of who was involved to identify potentially meaningful groupings to inform the analysis. For example, if the majority of sources had fallen under family, friends, and coworkers, I would have coded the variable accordingly. I initially gauged the number of arguments, avoided arguments, and network stressors that occurred throughout the eight days of the study. Then, I utilized across-tab frequencies to examine the number of each daily social stressor that has been resolved, the number of each daily social stressor depending on who was involved, and the number of each social stressor that had both been resolved and included a family member.

Each of the research questions was examined utilizing a multilevel model framework. Multilevel modeling was employed because of the nested data structure (days nested within individuals) and to allow for examining time-varying associations when necessary (Hoffman & Stawski, 2009). Analyses were conducted using SAS PROC MIXED v.9.4 (SAS Institute, 2013) using maximum likelihood estimation to maximize information without losing full cases if they had missing observations. For each question, models were estimated for daily social stressors and outcomes without and with covariate adjustment. Models were run including each type of stressor in the model simultaneously to determine whether results were impacted by the other daily social stressors experienced. Moreover, for research question 5, exploratory models were run to examine possible quadratic trends in age differences.

Question One: Who is Involved in Daily Social Stressors

Question one was, “*RQ1: Is the association between daily social stressors and stressor-related affect moderated by who is involved?*” and I hypothesized that days when daily family social stressors occur will be associated with higher levels of negative affect compared to daily non-family social stressors (H1a) and that days when daily family social stressors occur will be associated with a lower level of positive affect compared to daily non-family social stressors (H1b). Importantly, these were within-persons associations. The following equation represents the covariate adjusted models for positive and negative affect:

Equation H1:

$$\text{Affect}_{di} = b_{00} + b_{01}(\text{Arguments}_{di}) + b_{02}(\text{Arguments_Who}_{di}) + b_{03}(\text{AvoidedArguments}_{di}) + b_{04}(\text{AvoidedArguments_Who}_{di}) + b_{05}(\text{Network}_{di}) + b_{06}(\text{Network_Who}_{di}) + b_{07}(\text{Age56}) + b_{08}(\text{Gender}_i) + b_{09}(\text{Marital Status}_i) + b_{010}(\text{Education}_i) + b_{011}(\text{Race}_i) + b_{012}(\text{DayofWeek}_{di}) + b_{013}(\text{DayinStudy}_{di}) + b_{014}(\text{PM_Arg}_i) + b_{015}(\text{PM_Avarg}_i) + b_{016}(\text{PM_Net}_i) U_{0i} + e_{di}$$

Equation H1 shows the level of same-day affect on day d for individual i as a function of an intercept (b_{00}) conditional on daily stress process predictors (indicated by slope parameters) and covariates. b_{01} , b_{03} , and b_{05} represents time-varying association of arguments, avoided arguments, and network stressors respectively. b_{02} , b_{04} , and b_{06} represents the time-varying effect of who is involved for arguments, avoided arguments, and network stressors when an individual’s change in SRNA or SRPA depends on whether family is involved or not. b_{07} represents the covariate for age, centered at the overall sample mean. b_{08} represents the covariate for gender. b_{09} represents the covariate for marital status. b_{010} represents the covariate for

education. b_{012} represents the covariate for race. b_{013} represents the covariate for day of week. b_{014} represents the covariate for day in study. b_{014} , b_{015} , and b_{016} represent the person means for arguments, avoided arguments, and network stressors, respectively, and were included to covary for individual differences in stressor exposure when estimating the time-varying stressor-affect associations (Hoffman & Stawski, 2009). U_{0i} represents the random intercept, allowing for individual differences in the intercept. e_{di} represents residual variance. Each model was run with and without covariates. Significant interactions were decomposed using ESTIMATE commands in SAS (SAS Institute, 2013) to obtain simple slope estimates and comparisons across who is involved by type of stressor for SRNA or SRPA.

Question Two: Resolution Status and Daily Social Stressors

Question two was, “*Does resolution status moderate the association between daily social stressors and stressor-related affect?*” In hypotheses 2a and 2b I posit that days with unresolved daily social stressors will be associated with higher negative affect compared to days with resolved daily social stressors (H2a) and that days with unresolved daily social stressors will be associated with lower positive affect compared to days with resolved daily social stressors (H2b); these were within person associations. The following equation represents the outcome for negative and positive affect:

Equation H2:

$$\text{Affect}_{di} = b_{00} + b_{01}(\text{Arguments}_{di}) + b_{02}(\text{Arguments_Res}_{di}) + b_{03}(\text{AvoidedArguments}_{di}) + b_{04}(\text{AvoidedArguments_Res}_{di}) + b_{04}(\text{Network}_{di}) + b_{06}(\text{Network_Res}_{di}) + b_{07}(\text{Age56}) +$$

$$b_{08}(\text{Gender}_i) + b_{09}(\text{Marital Status}_i) + b_{010}(\text{Education}_i) + b_{011}(\text{Race}_i) + b_{012}(\text{DayofWeek}_{di}) + b_{013}(\text{DayinStudy}_{di}) + b_{014}(\text{PM_Arg}_i) + b_{015}(\text{PM_Avarg}_i) + b_{016}(\text{PM_Net}_i) + U_{0i} + e_{di}$$

Equation H2 reports the same information as equation H1 with the exception of b_{02} , b_{04} , and b_{06} . b_{02} , b_{04} , and b_{06} which represent the slope parameters representing the time-varying association of resolution status for arguments, avoided arguments, and network stressors respectively where an individual's change in SRNA or SRPA depends on whether the stressor was resolved or not. As above with examining the role of who is involved, each model was run with and without covariates. Analyses were further decomposed significant interactions using ESTIMATE commands in SAS (SAS Institute, 2013) to obtain simple slope estimates and comparisons across resolution status by type of stressor for SRNA or SRPA.

Question three: Interaction between resolution and who is involved on SRA

Research question three was as follows, “*Does daily social stressor resolution and who is involved interact to moderate the association between daily social stressors and stressor-related affect?*”

I hypothesized that resolution status and who is involved will interact to influence negative affect such that on days with unresolved daily family social stressors there will be higher stressor-related negative affect compared to days with resolved daily non-family social stressors (H3a). Moreover, I hypothesized that resolution status and who is involved will interact to influence positive affect such that on days with unresolved daily family social stressors there will be lower stressor-related positive affect compared to days with resolved daily non-family social stressors. The following equation represents the outcomes of negative and positive affect:

Equation H3:

$$\begin{aligned}
\text{Affect}_{di} = & b_{00} + b_{01}(\text{Arguments}_{di}) + b_{02}(\text{Arguments_Who}_{di}) + b_{03}(\text{Arguments_Res}_{di}) + \\
& b_{04}(\text{Arg_Who*Arg_Res}_{di}) + b_{05}(\text{AvoidedArguments}_{di}) + b_{06}(\text{AvoidedArguments_Who}_{di}) + \\
& b_{07}(\text{AvoidedArguments_Res}_{di}) + b_{08}(\text{AvArg_Who*AvArg_Res}_{di}) + b_{09}(\text{Network}_{di}) + \\
& b_{010}(\text{Network_Who}_{di}) + b_{011}(\text{Network_Res}_{di}) + b_{012}(\text{Net_Who*Net_Res}_{di}) + b_{013}(\text{Age56}) + \\
& b_{014}(\text{Gender}_i) + b_{015}(\text{Marital Status}_i) + b_{016}(\text{Education}_i) + b_{017}(\text{Race}_i) + b_{018}(\text{DayofWeek}_{di}) + \\
& b_{019}(\text{DayinStudy}_{di}) + b_{020}(\text{PM_Arg}_i) + b_{021}(\text{PM_Avarg}_i) + b_{022}(\text{PM_Net}_i) + U_{0i} + e_{di}
\end{aligned}$$

Equation H3 shows the level of affect on day d for individual i as a function of an intercept (b_{00}) conditional on covariates and daily stress process predictors (indicated by slope parameters). b_{01} represents the time-varying association of arguments. b_{02} represents the time-varying effect of who is involved for arguments; an individual's change in SRNA or SRPA depends on whether family is involved or not. b_{03} represents the slope parameter representing the time-varying association of resolution status for arguments with individual's change in SRNA or SRPA depending on whether resolution occurred or not. b_{04} represents the slope parameter representing the time-varying association of the interaction between who is involved and resolution status for arguments. b_{05} represents the time-varying association of avoided arguments. b_{06} represents the time-varying effect of who is involved for avoided arguments with an individual's change in SRNA or SRPA depending on whether family is involved or not. b_{07} represents the slope parameter representing the time-varying association of resolution status for avoided arguments where individual's change in SRNA or SRPA depends on whether resolution occurred or not. b_{08} represents the slope parameter representing the time-varying association of

the interaction between who is involved and resolution status for avoided arguments. b_{09} represents the time-varying association of network stressors. b_{010} represents the time-varying effect of who is involved for network stressors. b_{011} represents the slope parameter representing the time-varying association of resolution status for network stressors. b_{012} represents the slope parameter representing the time-varying association of the interaction between who is involved and resolution status for network stressors. b_{013} represents the covariate for age, centered at the overall sample mean. b_{014} represents the covariate for gender. b_{015} represents the covariate for marital status. b_{016} represents the covariate for education. b_{017} represents the covariate for race. b_{018} represents the covariate for day of week. b_{019} represents the covariate for day in study. b_{020} represents the person means for arguments. b_{021} represents the person means for avoided arguments. b_{022} represents the person means for network stressors. U_{0i} represents the random intercept, allowing for individual differences in the intercept. e_{di} represents residual variance. Each model was run with and without covariates. Analyses were further decomposed significant interactions using ESTIMATE commands in SAS (SAS Institute, 2013) to obtain simple slope estimates and comparisons across who is involved and resolution status by type of stressor for SRNA or SRPA.

Question four and five: Gender and Age Moderations of RQ1-3

Research question four states, “*Does gender moderate the associations between who is involved (RQ1), resolution status (RQ2), and their interaction (RQ3) and stressor-related affect?*” As such, six multilevel models including gender and age moderations for each hypothesis regarding SRNA and SRPA were analyzed. Each model builds on one another thus,

the following equation represents the most complex of models: gender and age moderations on the interaction between who is involved and resolution status on affect:

Equation H4c and H5c:

$$\begin{aligned}
 \text{Affect}_{di} = & b_{00} + b_{01}(\text{Arguments}_{di}) + b_{02}(\text{Arguments_Who}_{di}) + b_{03}(\text{Arguments_Res}_{di}) + \\
 & b_{04}(\text{Arg_Who*Arg_Res}_{di}) + b_{05}(\text{Gen*Arg}_{di}) + b_{06}(\text{Age56*Arg}_{di}) + b_{07}(\text{Gen*Arg_Who}_{di}) + \\
 & b_{08}(\text{Age*Arg_Who}_{di}) + b_{09}(\text{Gen*Arg_Res}_{di}) + b_{010}(\text{Age*Arg_Res}_{di}) + \\
 & b_{011}(\text{Gen*Arg_Who*Arg_Res}_{di}) + b_{012}(\text{Age*Arg_Who*Arg_Res}_{di}) + b_{013}(\text{AvoidedArguments}_{di}) \\
 & + b_{014}(\text{AvoidedArguments_Who}_{di}) + b_{015}(\text{AvoidedArguments_Res}_{di}) + \\
 & b_{016}(\text{AvArg_Who*AvArg_Res}_{di}) + b_{017}(\text{Gen*AvArg}_{di}) + b_{018}(\text{Age56*AvArg}_{di}) + \\
 & b_{019}(\text{Gen*AvArg_Who}_{di}) + b_{020}(\text{Age*AvArg_Who}_{di}) + b_{021}(\text{Gen*AvArg_Res}_{di}) + \\
 & b_{022}(\text{Age*AvArg_Res}_{di}) + b_{023}(\text{Gen*AvArg_Who*AvArg_Res}_{di}) \\
 & + b_{024}(\text{Age*AvArg_Who*AvArg_Res}_{di}) + b_{025}(\text{Network}_{di}) + b_{026}(\text{Network_Who}_{di}) + \\
 & b_{027}(\text{Network_Res}_{di}) + b_{028}(\text{Net_Who*Net_Res}_{di}) + b_{029}(\text{Gen*Net}_{di}) + b_{030}(\text{Age56*Net}_{di}) + \\
 & b_{031}(\text{Gen*Net_Who}_{di}) + b_{032}(\text{Age*Net_Who}_{di}) + b_{033}(\text{Gen*Net_Res}_{di}) + b_{034}(\text{Age*Net_Res}_{di}) + \\
 & b_{035}(\text{Gen*Net_Who*Net_Res}_{di}) + b_{036}(\text{Age*Net_Who*Net_Res}_{di}) + b_{037}(\text{Age56}) + b_{038}(\text{Gender}_i) \\
 & + b_{039}(\text{Marital Status}_i) + b_{040}(\text{Education}_i) + b_{041}(\text{Race}_i) + b_{042}(\text{DayofWeek}_{di}) + b_{043}(\text{DayinStudy}_{di}) \\
 & + b_{044}(\text{PM_Arg}_i) + b_{045}(\text{PM_Avarg}_i) + b_{046}(\text{PM_Net}_i) + U_{0i} + e_{di}
 \end{aligned}$$

Equation H4c-5c includes similar information to equation H3 in that it reports the time-varying effect for each type of stressor (b_{01} , b_{013} , and b_{025} ; Arg = Arguments, AvArg = Avoided Arguments, Net = Network stressors), their unique time-varying slopes for who is involved (b_{02} , b_{014} , b_{026}), resolution status (b_{03} , b_{015} , b_{027}), and their interaction (b_{04} , b_{016} , b_{028}), in addition to the covariates age, centered at the mean (b_{037}), gender (b_{038}), marital status (b_{039}), education (b_{040}),

race (b_{041}), day of week (b_{042}), day in study (b_{043}), and person means for each daily social stressor (b_{044} , b_{045} , b_{046}). Unique to this equation is the moderating effects of gender and age. b_{05} , b_{016} , and b_{029} represent the time-varying interaction between gender and arguments, avoided arguments, and network stressors respectively. b_{06} , b_{017} , and b_{030} represent the time-varying interactions between age and arguments, avoided arguments, and network stressors respectively. b_{07} , b_{018} , and b_{031} represent the time-varying associations between gender and who is involved for arguments, avoided arguments, and network stressors respectively and the change in SRNA and SRPA depends on whether family was involved in the daily social stressor and on being male or female. The same time-varying associations were represented age and who is involved by the slope parameters b_{08} , b_{019} , and b_{032} . Similarly, b_{09} , b_{020} , b_{033} represent the time-varying interaction between gender and resolution status for arguments, avoided arguments, and network stressors respectively. This suggests that the change in SRNA and SRPA depend on whether the daily social stressor was resolved or ongoing and whether the individual was male or female. Similar to the time-varying associations of gender and resolution status, time-varying associations for age and resolution status were represented by the slope parameters b_{010} , b_{021} , and b_{034} . Three-way interactions between gender, who is involved, and resolution status for arguments, avoided arguments, and network stressors were represented by the time-varying slope parameters b_{11} , b_{22} , and b_{35} . Similar associations for age, who is involved, and resolution status for arguments, avoided arguments, and network stressors were represented by the time-varying slope parameters b_{12} , b_{23} , and b_{36} . For H4a and H5a, analyses were forms of the above equation in that they included the main effect of who is involved and the interactions with gender or age and who is involved but did not include the three-way interactions. For H4b and H5b, analyses were forms of the above equation in that they included the main effect of resolution status and the

interactions with gender or age and who is involved but did not include the three-way interactions. Analyses were further decomposed significant interactions using ESTIMATE commands in SAS (SAS Institute, 2013) to obtain simple slope estimates and comparisons across who is involved, resolution status, age, and gender by type of stressor for SRNA or SRPA.

CHAPTER 5: RESULTS

Results are presented in multiple parts. First, I present descriptive statistics necessary to answer questions one through five. Second, I present the models for research questions one, two, and three. Third, I discuss results for questions four and five on negative and positive affect. Finally, I present the models for exploratory analyses for quadratic age trends.

5.1 DESCRIPTIVE STATISTICS

Across study days, participants reported 1,355 arguments (9.10% of days), 2,177 avoided arguments (14.63% of days), and 760 network stressors (5.10% of days). Of the reported arguments, 65.30% were resolved and 65.39% involved family; of avoided arguments, 63.80% were resolved, 57.69% involved family; and of network stressors, 41.47% were resolved and 64.08% included family. Figures 5.1, 5.2, and 5.3 provide a breakdown of the total arguments, avoided arguments, and network stressors by who is involved and resolution status. In their legends, each table provides the frequency of non-family stressors, family stressors, unresolved stressors, and resolved stressors.

5.2 RESEARCH QUESTION 1. WHO IS INVOLVED AND STRESSOR-RELATED AFFECT

Question one asks, “*Is the association between daily social stressors and stressor-related affect moderated who is involved?*”

As previously mentioned, research question one reports on the within-person associations between days when a daily social stressor involved family compared to days when a daily social stressor does not involve family on stressor-related affect.

5.2.1 Hypothesis 1a. *Days when daily family social stressors occur will be associated with a higher level of negative affect compared to daily social stressors not involving family.*

Results showing the effect of family on SRNA by stressor type are shown in Table 5.1 and Figure 5.4. On days when arguments occurred, the effect of family modulated SRNA for arguments (estimate = -0.05, $SE = 0.01$, $p = .01$). The effect of who was involved was not significant for SRNA regarding days when avoided arguments (estimate = -0.01, $SE = 0.01$, $p = .62$) and network stressors (estimate = 0.02, $SE = 0.03$, $p = 0.40$) occurred. Particularly for arguments, both days when family (estimate = 0.18, $SE = 0.01$, $p < .001$) and non-family (estimate = 0.23, $SE = 0.02$, $p < .001$) involvement occurred were related to increases in SRNA. As indicated by Figure 5.4, SRNA was significantly higher for arguments on days when non-family members were involved compared to days when arguments involved family.

5.2.2 Hypothesis 1b. *Days when daily family social stressors occur will be associated with a lower level of positive affect compared to daily non-family social stressors.*

Indicated by Table 5.1 and Figure 5.5, the effect of family was not significantly associated with SRPA for arguments (estimate = 0.02, $SE = 0.03$, $p = .50$), avoided argument (estimate = -0.02, $SE = 0.02$, $p = .33$) and network stressors (estimate = 0.01, $SE = 0.04$, $p = .73$). Regardless of who was involved, days when arguments and avoided arguments occurred were associated with significantly decreased levels of positive affect ($p < .05$). Days when family (estimate = -0.04, $SE = 0.02$, $p = .14$) nor non-family (estimate = -0.05, $SE = 0.03$, $p = .12$) involvement occurred in network stressors were not significantly associated with changes in positive affect.

5.3 RESEARCH QUESTION 2. RESOLUTION AND STRESSOR-RELATED AFFECT

Question two states, “*Does resolution moderate the association between daily social stressors and stressor-related affect?*”

Research question two reports on the within-person associations between days when a daily social stressor was unresolved compared to days when a daily social stressor was resolved and stressor-related affect.

5.3.1 Hypothesis 2a. *Days when daily social stressors are unresolved will be associated with higher negative affect compared to days when daily social stressors are resolved.*

Days when daily social stressors were identified as resolved and unresolved were associated with significantly increased levels of SRNA for arguments, avoided arguments, and network stressors (see Figure 5.6 and Table 5.2). The effects of resolution were significant for arguments (estimate = - 0.14, $SE = 0.02$, $p < .001$) and avoided arguments (estimate = -0.03, $SE = 0.02$, $p = 0.03$), but not network stressors (estimate = 0.005, $SE = 0.02$, $p = .83$). As seen in Figure 5.6, days when arguments were unresolved (estimate = 0.32, $SE = 0.02$, $p < .001$), and days when avoided arguments were unresolved (estimate = 0.13, $SE = 0.01$, $p < .001$) were associated with higher levels of SRNA compared to days when arguments (estimate = 0.17, $SE = 0.01$, $p < .001$) and avoided arguments (estimate = 0.10, $SE = 0.01$, $p < .001$) were resolved. The null effect of resolution for days when network stressors occurred suggests that while days with unresolved network stressors (estimate = 0.05, $SE = 0.02$, $p < .01$) and resolved network stressors (estimate = 0.05, $SE = 0.02$, $p < .01$) were associated with significant increases in SRNA, they were comparable increases.

5.3.2 Hypothesis 2b. *Days when daily social stressors are unresolved will be associated with lower positive affect compared to days when daily social stressors are resolved.*

Results showing the effect of resolution on SRPA by stressor type are shown in Table 5.2 and Figure 5.7. The effect of resolution was significant for arguments (estimate = 0.12, $SE = 0.03$, $p < .001$) indicating that SRPA was significantly lower for days with unresolved arguments

(estimate = -0.28, $SE = 0.03$, $p < .001$) compared to days with resolved (estimate = -.16, $SE = .002$, $p < .001$) arguments. Further, the effect of resolution was not significant for avoided arguments (estimate = 0.01, $SE = 0.02$, $p = .79$) or network stressors for SRPA (estimate = -0.02, $SE = 0.03$, $p = .50$), suggesting that resolution did not modulate SRPA associated with these stressors.

5.4 RESEARCH QUESTION 3. INTERACTION BETWEEN WHO IS INVOLVED AND RESOLUTION STATUS ON STRESSOR-RELATED AFFECT.

Question three was, “*Does daily social stressor resolution status and who is involved interact to moderate the association between daily social stressors and stressor-related affect?*”

Research question two reports on the within-person associations between days when a daily social stressor was who was involved, and resolution status were both reported and their associations with SRA.

5.4.1 Hypothesis 3a. *Resolution status and who is involved will interact to influence negative affect such that days when daily family social stressors are unresolved will be associated higher stressor-related negative affect compared to days with resolved daily non-family social stressors.*

For days when arguments occurred and SRNA, analyses revealed significant main effects of both resolution status, and who is involved, which were qualified by a significant interaction between these characteristics and SRNA (estimate = 0.12, $SE = 0.04$, $p < .01$). As seen in Figure 5.8 and Table 5.3, the effect of resolution was significant for both non-family (estimate = -0.22, $SE = 0.03$, $p < .001$) and family (estimate = -0.10, $SE = 0.02$, $p < .001$) arguments suggesting that although days when arguments were unresolved were associated with higher SRNA, this association was significantly larger for non-family than family. The interaction between who was

involved and resolution status on SRNA was not significant for avoided arguments (estimate = -0.02, $SE = 0.03$, $p = .53$) or network stressors (estimate = 0.01, $SE = 0.04$, $p = .82$).

5.4.2 Hypothesis 3b. *Resolution status and who is involved will interact to influence positive affect such that days when daily family social stressors are unresolved will be associated with lower stressor-related positive affect compared to days with resolved daily non-family social stressors.*

Both arguments and avoided arguments were associated with significant decreases in SRPA regardless of who was involved and resolution status ($ps < .05$). Network stressors were not significantly associated with SRPA regardless of who was involved or resolution status ($ps > .05$). As seen in Figure 5.9, and Table 5.3, the interaction between who is involved and resolution status was not significant for arguments (estimate = 0.10, $SE = 0.06$, $p = .10$), avoided arguments (estimate = -0.01, $SE = 0.05$, $p = .91$), and network stressors (estimate = -0.06, $SE = 0.07$, $p = .35$) on SRPA suggesting that who was involved and resolution status did not interact to predict SRPA.

5.5 RESEARCH QUESTION 4. GENDER MODERATION OF STRESSOR CHARACTERISTICS AND STRESSOR-RELATED AFFECT.

As previously mentioned, research question four represents the between-persons associations between the time-invariant individual characteristic, gender, and the stressor characteristics predicting SRA.

5.5.1 RQ4a: *Does gender moderate the associations between who is involved and stressor-related affect?*

SRNA. Table 5.4 and Figure 5.10 report the interaction of gender and who was involved on SRNA by stressor type. The interaction between who was involved and gender was not

significant for arguments (estimate = -0.04, $SE = .04$, $p = .31$), avoided arguments (estimate = 0.05, $SE = 0.03$, $p = .10$), or network stressors (estimate = 0.03, $SE = 0.05$, $p = .55$) suggesting that the effect of who is involved on SRNA does not significantly differ for men or women for any of the daily social stressors.

SRPA. Figure 5.11 and Table 5.4 report associations between who was involved, gender and SRPA. While the interaction between gender and who was involved was not significant ($p > .05$), SRPA was significantly decreased by arguments ($p < .05$). Further, analyses additionally suggested that for avoided arguments, there was no significant interaction between who was involved and gender predicting SRPA (estimate = -0.06, $SE = 0.05$, $p = .19$), suggesting that men and women did not differ the effect of who was involved.

Network stressors showed gender differences in the effect of who was involved for SRPA (estimate = -0.19, $SE = 0.09$, $p = .02$). Interestingly, this effect was largely due to the gender differences in family-involved network stressors (estimate = -0.10, $SE = 0.05$, $p = .06$) where men exhibited larger decreases in SRPA (estimate = -0.13, $SE = 0.07$, $p = .057$) compared to women (estimate = 0.07, $SE = 0.05$, $p = .16$). The gender differences for non-family involved networks stressors was not significant ($p > .05$).

5.5.2 RQ4b: Does gender moderate the associations between resolution and stressor-related affect?

SRNA. Associations between gender and resolution status on SRNA by stressor type is reported in Table 5.5 and Figure 5.12. There were no significant interactions for resolution status and gender on SRNA for arguments, avoided arguments, and network stressors ($ps > .05$). This suggests that while there were significant increases in SRNA for each gender by resolution status ($p < .05$), they did not significantly differ for people who were men or women.

SRPA. Both Table 5.5 and Figure 5.13 show the associations between gender and resolution status by stressor type on SRPA. Gender did not significantly moderate the associations between resolution status and SRPA for arguments (estimate = -0.04, $SE = 0.06$, $p = .47$), avoided arguments (estimate = -0.01, $SE = 0.05$, $p = .82$), and network stressors (estimate = 0.002, $SE = 0.07$, $p = .98$).

5.5.3 RQ4c: Does gender moderate the interaction between who is involved, resolution, and stressor-related affect?

SRNA. The three-way interaction for gender, who was involved, and resolution status were not significant for arguments (estimate = 0.04, $SE = 0.09$, $p = .62$) and network stressors (estimate = -0.02, $SE = 0.09$, $p = .83$) for SRNA (see Table 5.6); however, the three-way interaction for gender, resolution status, and who was involved for avoided arguments was significant (estimate = -0.15, $SE = 0.07$, $p = .02$).

Figure 5.14 explores this interaction further. For men, there were significant increases in SRNA regardless of who was involved and resolution status ($ps < .05$). For women, the effect of resolution was most potent for non-family involved avoided arguments (estimate = -0.08, $SE = 0.03$, $p = .02$); suggesting resolved non-family avoided arguments were related to lower levels of SRNA (estimate = 0.10, $SE = 0.02$, $p < .001$) compared to non-family unresolved avoided arguments (estimate = 0.18, $SE = 0.03$, $p < .001$). Another way to interpret these findings is that women showed significant family effects for unresolved avoided arguments such that unresolved non-family avoided arguments was associated with higher levels of SRNA (estimate = 0.18, $SE = 0.03$, $p < .001$) compared to unresolved family avoided arguments (estimate = 0.11, $SE = 0.02$, $p < .001$).

SRPA. There were no significant interactions between gender, who was involved, and resolution status for arguments (estimate = -0.13, $SE = 0.12$, $p = .29$) avoided arguments (estimate = 0.08, $SE = 0.10$, $p = 0.45$), and network stressors (estimate = -0.03, $SE = 0.15$, $p = .84$) for SRPA (see Figure 5.15 and Table 5.6). This suggests that gender did not modulate the associations between who was involved and resolution status on SRPA.

5.6 RESEARCH QUESTION 5. AGE MODERATION OF STRESSOR CHARACTERISTICS AND STRESSOR-RELATED AFFECT

As previously mentioned, research question four represents the between-persons associations between the time-invariant individual characteristic, age, and the stressor characteristics predicting SRA.

5.6.1 RQ5a: Does age moderate the associations between who is involved and stressor related affect?

SRNA. As seen in Figure 5.16 and Table 5.6, decreases in SRNA was not significantly associated with the interaction between age and who was involved for arguments (estimate = 0.00, $SE = 0.00$, $p = .90$) and avoided arguments (estimate = -0.002, $SE = 0.002$, $p = .05$). For network stressors, age did not moderate the effect of who was involved (estimate = -0.001, $SE = 0.002$, $p = .55$). However, age was associated with decreased SRNA for arguments (estimate = -0.002, $SE = 0.002$, $p < .01$) and avoided arguments (estimate = -0.004, $SE = 0.001$, $p < .001$) regardless of who was involved with individuals 1SD below the mean showing larger associations with SRNA compared to individuals 1SD above the mean age. There were no significant age differences in the effect of network stressors on SRNA (estimate = -0.003, $SE = 0.001$, $p = .90$).

SRPA. Table 5.6 reports the associations between who was involved and age on SRPA by stressor type. Age did not significantly moderate the associations with who was involved and SRPA for arguments (estimate = - 0.002, $SE = 0.003$, $p = .37$) or avoided arguments (estimate = - 0.002, $SE = 0.002$, $p = .25$). There were, however, significant decreases in SRPA associated with arguments and avoided arguments regardless of age ($ps < .001$).

Age did interact with who was involved to predict SRPA for network stressors (estimate = 0.01, $SE = 0.003$, $p = .04$). As indicated by Figure 5.17, for individuals 1SD below the mean age, there was little difference between non-family network stressors (estimate = -0.01, $SE = 0.05$, $p = .91$) and family network stressors (estimate = -0.02, $SE = 0.04$, $p = .91$) compared to individuals 1SD above the mean age. For individuals 1SD above the mean compared to 1SD below the mean age, there were significant decreases in SRPA associated with non-family network stressors (estimate = -0.15, $SE = 0.05$, $p < .01$), but not with family network stressors (estimate = -0.002, $SE = 0.04$, $p = .95$).

5.6.2 RQ5b: Does age moderate the associations between resolution and stressor related affect?

SRNA. As indicated by Table 5.5 and Figure 5.18, age did not interact with who was involved to predict SRNA for arguments (estimate = -0.001, $SE = 0.002$, $p = .50$), avoided arguments (estimate = 0.003, $SE = 0.001$, $p = .07$), or network stressors (estimate = 0.00, $SE = 0.002$, $p = .95$). This suggests that for individuals 1SD below the mean age and individuals 1SD above the mean age, who was involved did not differentially modulate associations between social stressors and SRNA. Additionally, for older individuals, compared to younger individuals, age was associated with decreased SRNA with arguments (estimate = -0.003, $SE = 0.002$, $p =$

.04), avoided arguments (estimate = -0.004, $SE = -0.004$, $p < .001$) and network stressors (estimate = -0.004, $SE = -0.004$, $p < .004$) decreased.

SRPA. As shown in Table 5.5, there was no significant interaction between age and resolution status predicting SRPA for arguments (estimate = 0.004, $SE = 0.003$, $p = .13$), avoided arguments (estimate = -0.003, $SE = 0.02$, $p = .16$), and network stressors (estimate = -0.001, $SE = 0.003$, $p = .66$). As suggested by Figure 5.19, there were similar differences in SRPA for unresolved and resolved daily social stressors for individuals 1SD below the mean age compared to individuals 1SD above the mean age.

5.6.3 RQ5c: Does age moderate the interaction between who is involved, resolution, and stressor-related affect?

SRNA. For arguments (estimate = -0.001, $SE = 0.003$, $p = .69$) and network stressors (estimate = -0.00, $SE = 0.004$, $p = .997$; see Table 5.6), the interaction between who was involved and resolution was not further moderated by age. For avoided arguments, however, there was a significant three-way interaction (estimate = 0.01, $SE = 0.003$, $p = .03$). Figure 5.20 shows that the effect of family was largely unrelated to the effect of resolution by age ($ps > .05$). Moreover, this interaction with age largely resulted from the resolution effect for family involved avoided arguments (estimate = 0.13, $SE = 0.05$, $p = .01$). The resolution effect for family avoided arguments for individuals 1 SD below the mean age (estimate = -0.07, $SE = 0.03$, $p = .02$) was significant compared to the same associations for individuals 1SD above the mean age (estimate = 0.05, $SE = 0.04$, $p = .14$). There were no significant age differences in the resolution effect for non-family (estimate = -0.02, $SE = 0.03$, $p = .56$).

SRPA. Age did not moderate the interaction between who was involved and resolution status for arguments (estimate = 0.0003, $SE = 0.01$, $p = .94$), avoided arguments (estimate =

0.001, $SE = 0.005$, $p = .87$), or network stressors (estimate = -0.002, $SE = 0.005$, $p = .76$) for SRPA (see Table 5.6).

5.7 Exploratory Analysis.

Quadratic age trends were utilized to explore evidence of non-linearity for age differences in stressor characteristics related to SRNA and SRPA. While the main analyses suggest some linear age trends between stressor characteristics and SRNA and SRPA, no quadratic effects emerged for any models ($ps > .05$). This suggest that while there were no non-linear age trends in who was involved, resolution status, or their interaction on SRNA or SRPA.

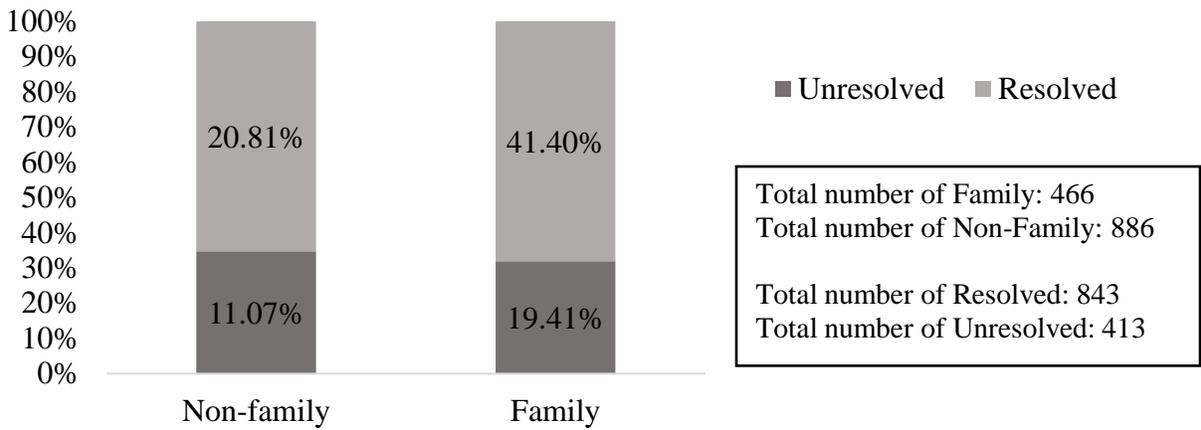


Figure 5.1. Percent of Arguments Reported by Resolution and Who is Involved

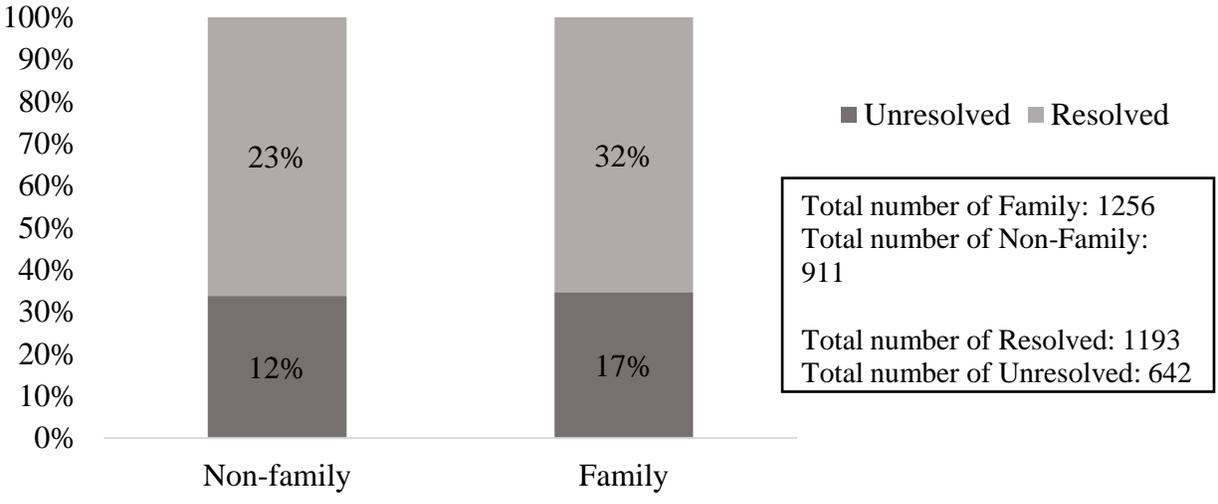


Figure 5.2. Percent of Avoided Arguments Reported by Resolution and Who is Involved

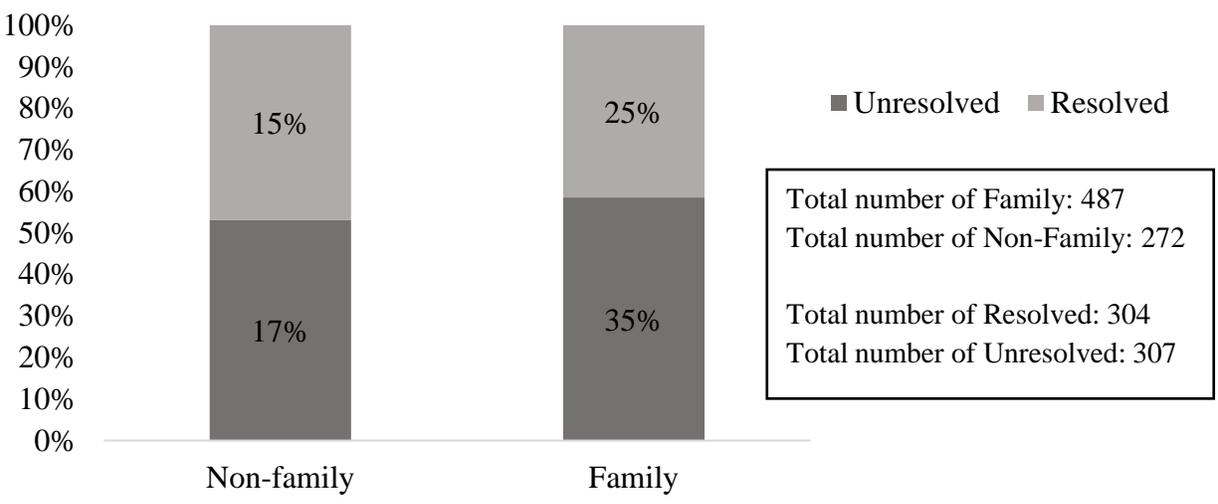


Figure 5.3. Percent of Network Stressors Reported by Resolution and Who is Involved

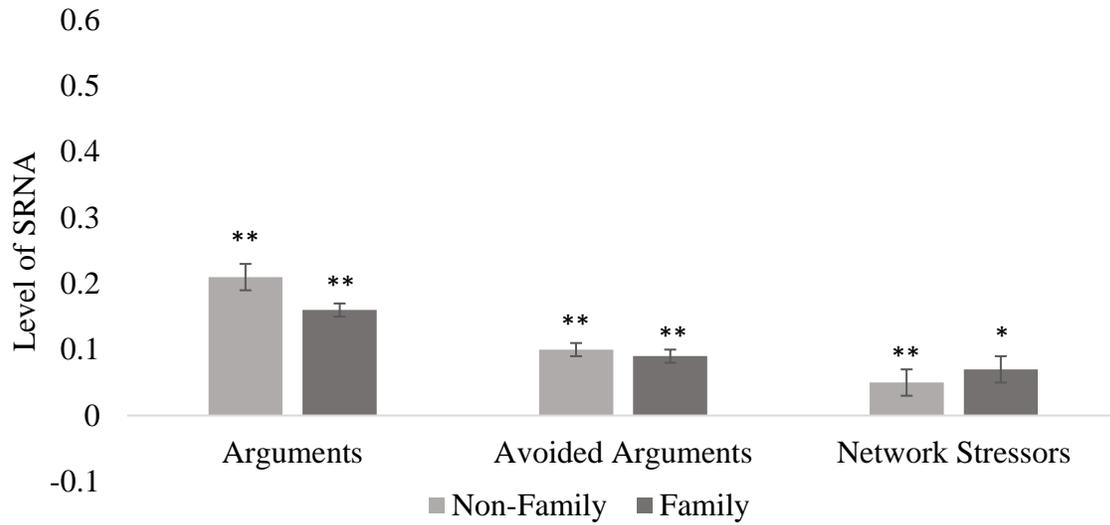


Figure 5.4. Associations between Who is Involved and Stressor-Related Negative Affect by Stressor Type. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of negative affect for each association. SRNA = stressor-related negative affect.

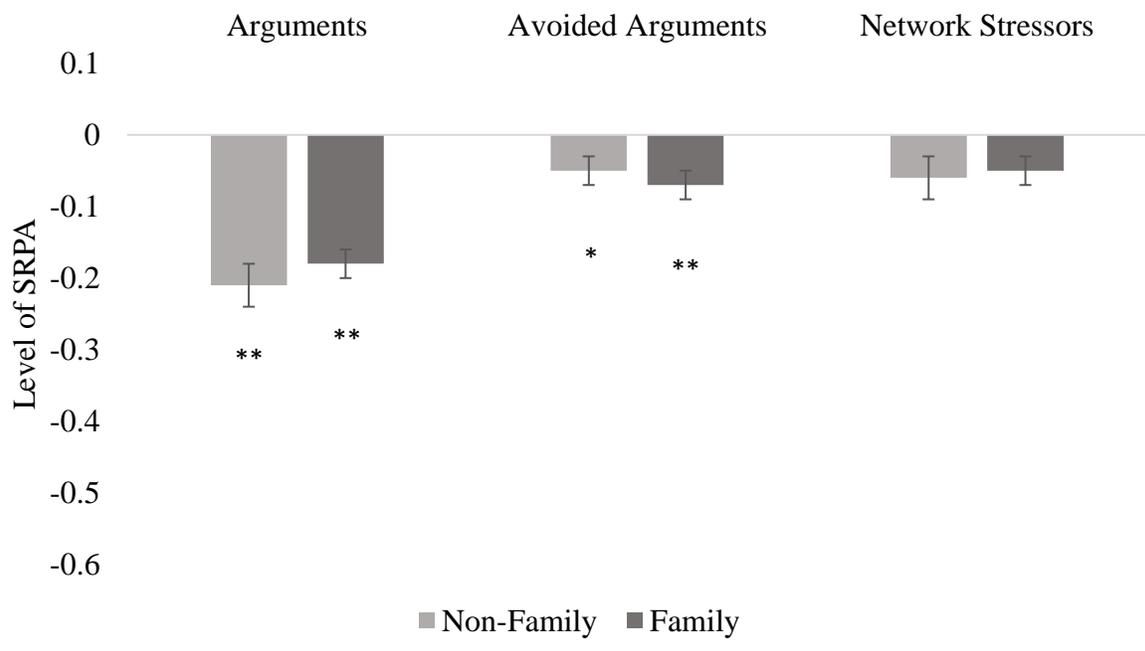


Figure 5.5. Associations between Who is Involved and Stressor-Related Positive Affect by Stressor Type. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of positive affect for each association. SRPA = stressor-related positive affect.

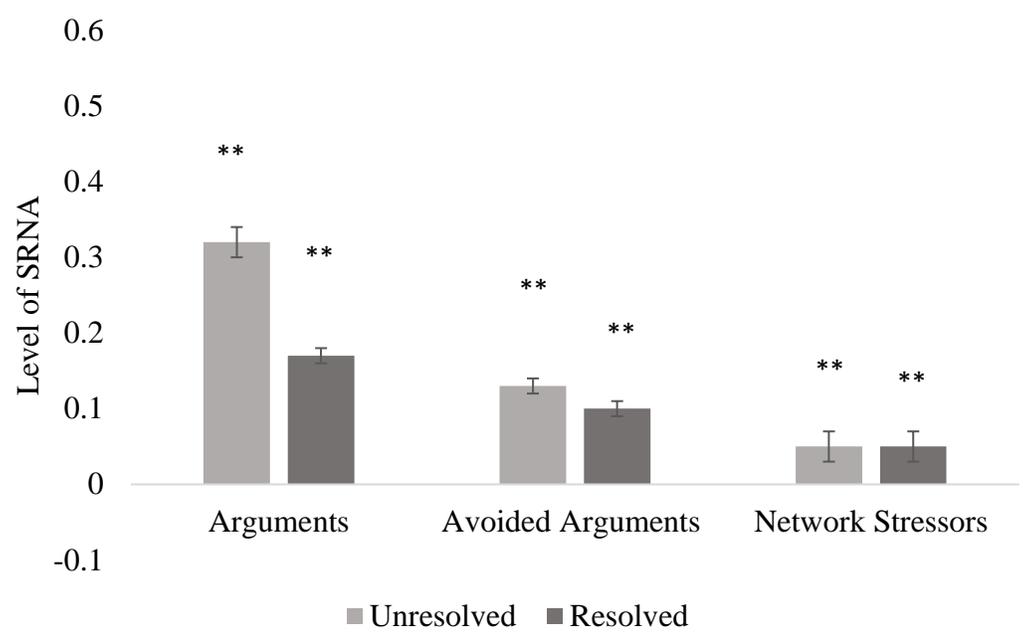


Figure 5.6. Associations between Resolution Status and Stressor-Related Negative Affect by Stressor Type. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of negative affect for each association. SRNA = stressor-related negative affect.

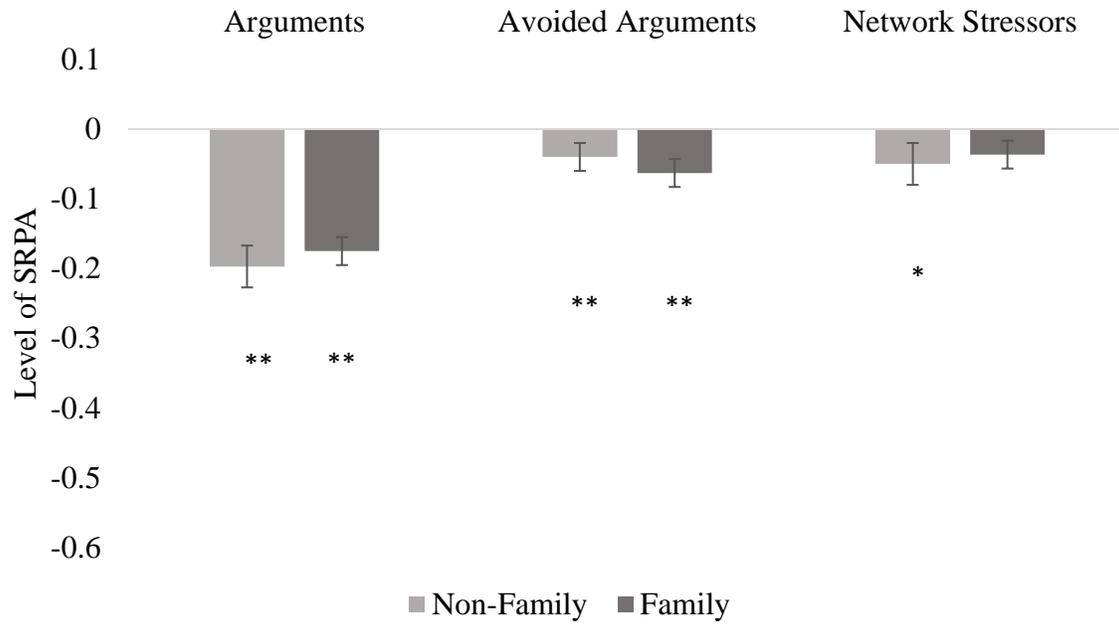


Figure 5.7. Associations between Resolution Status and Stressor-Related Positive Affect by Stressor Type. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of positive affect for each association. SRPA = stressor-related positive affect.

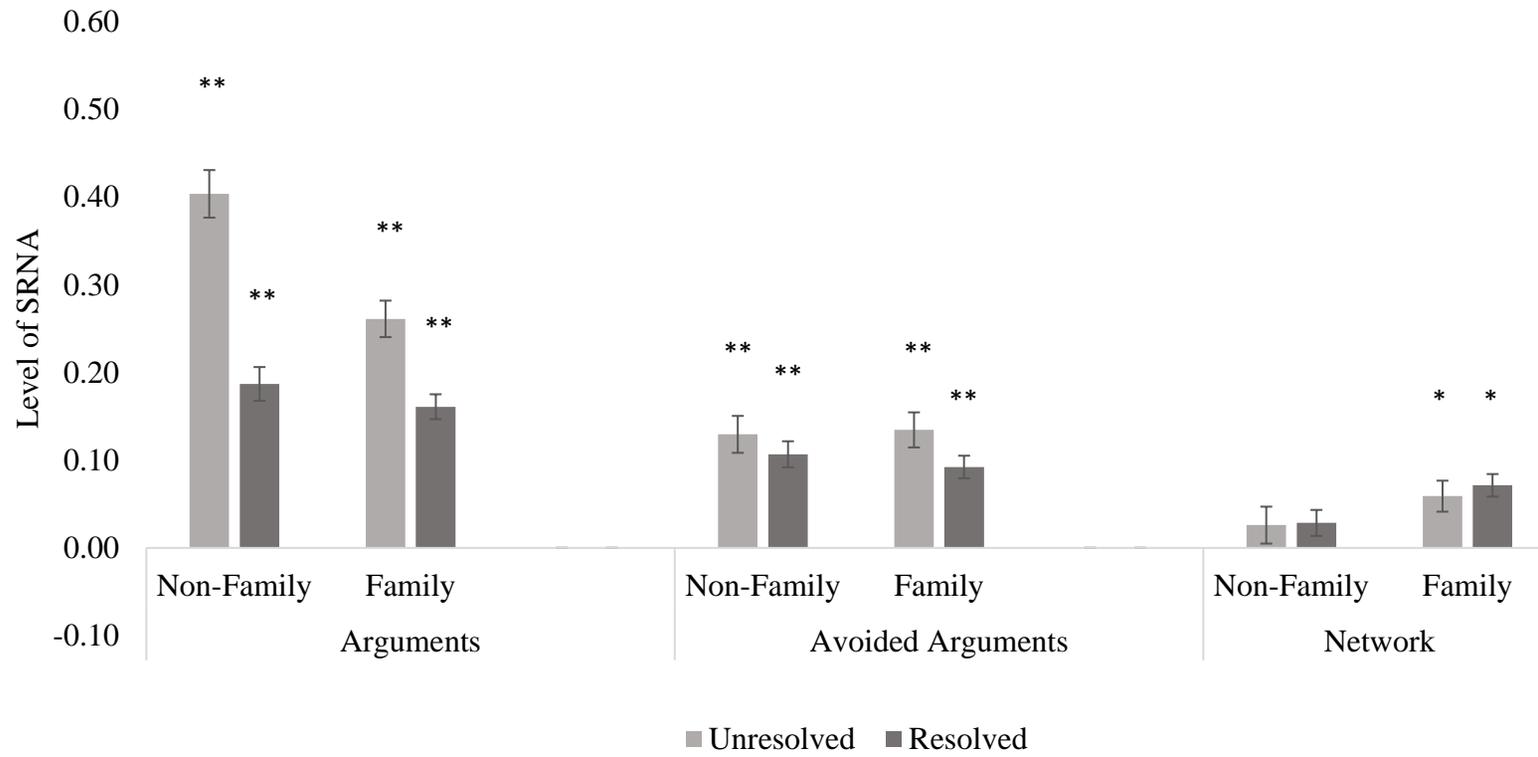


Figure 5.8. Associations between Who is Involved, Resolution Status, and Stressor-Related Negative Affect by Stressor Type. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of negative affect for each association. SRNA = stressor-related negative affect.

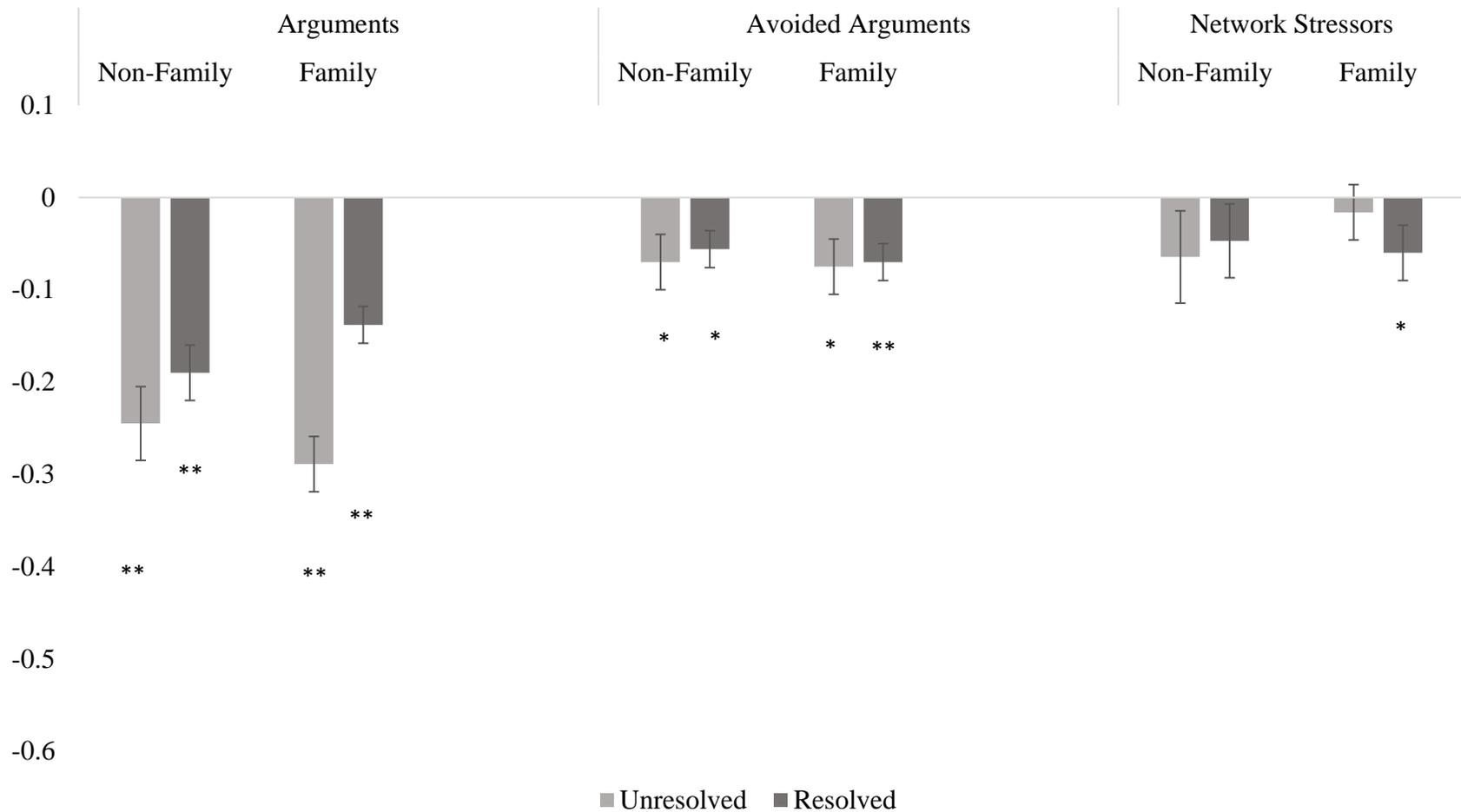


Figure 5.9. Associations between Who is Involved, Resolution Status, and Stressor-Related Positive Affect by Stressor Type. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of positive affect for each association. SRPA = stressor-related positive affect.

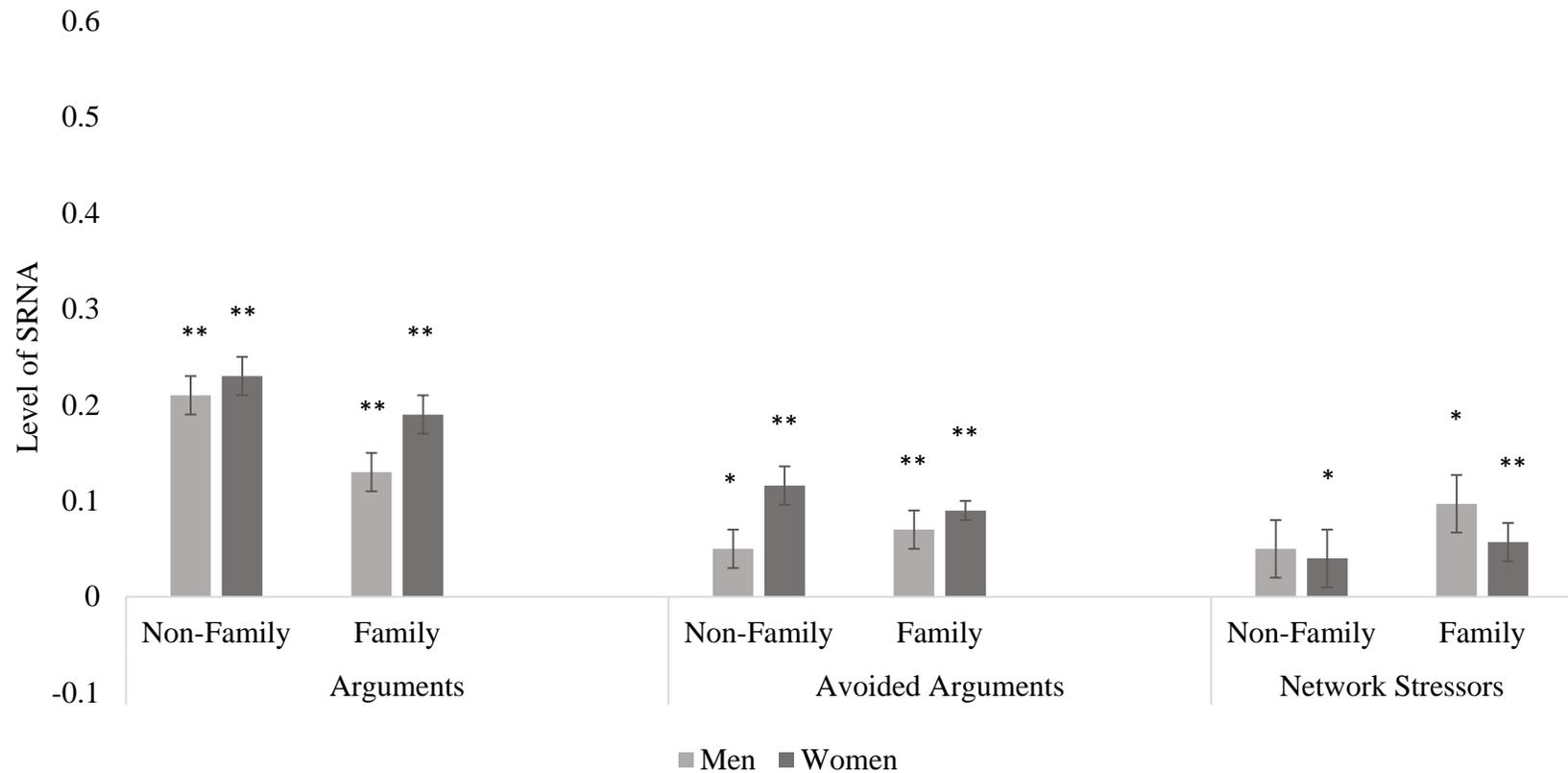


Figure 5.10. Associations between Who was Involved, and Stressor-Related Negative Affect by Stressor Type and Gender. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of negative affect for each association. SRNA = stressor-related negative affect.

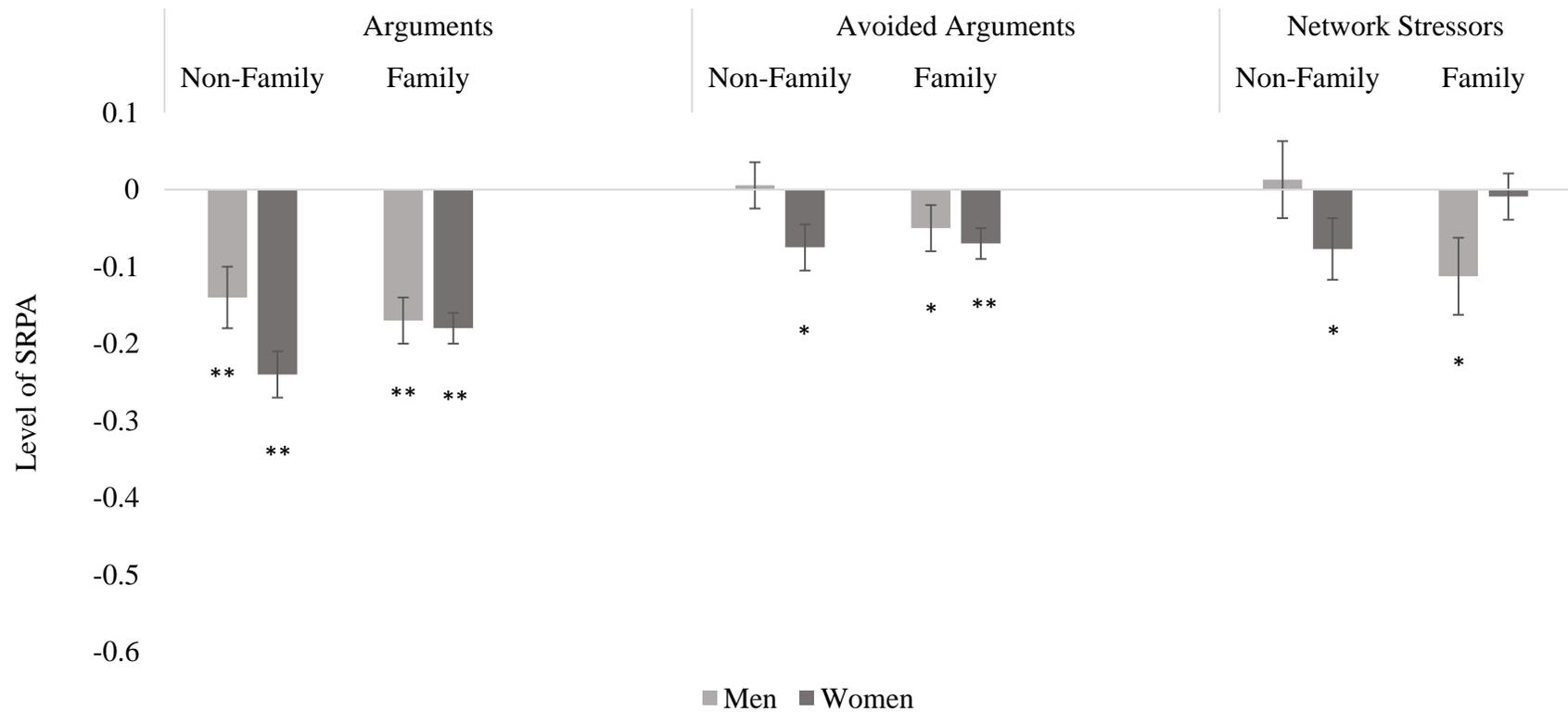


Figure 5.11. Associations between Who was Involved Status, and Stressor-Related Positive Affect by Stressor Type and Gender. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of positive affect for each association. SRPA = stressor-related positive affect.

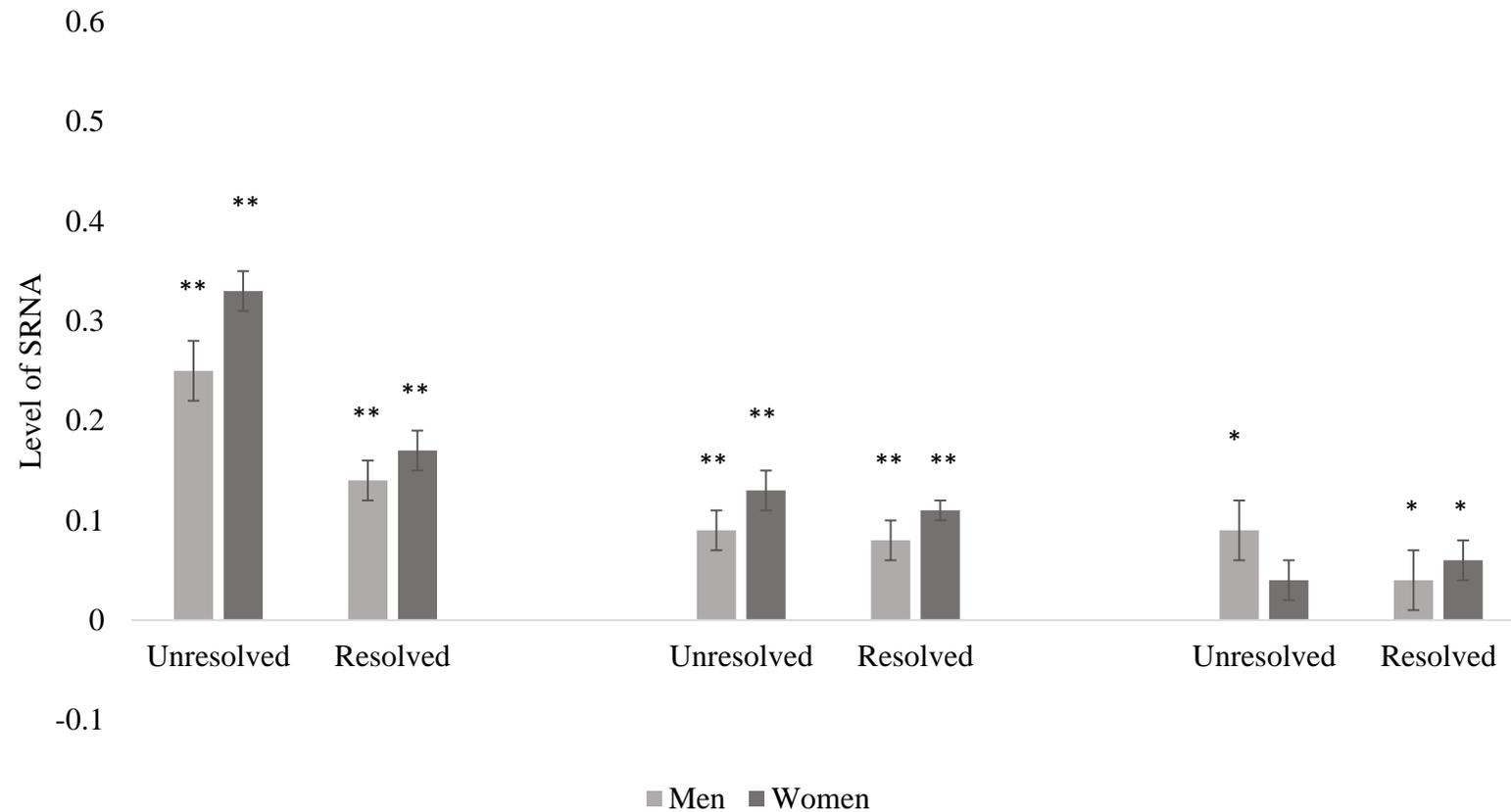


Figure 5.12. Associations between Resolution Status, and Stressor-Related Negative Affect by Stressor Type and Gender ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of negative affect for each association. SRNA = stressor-related negative affect.

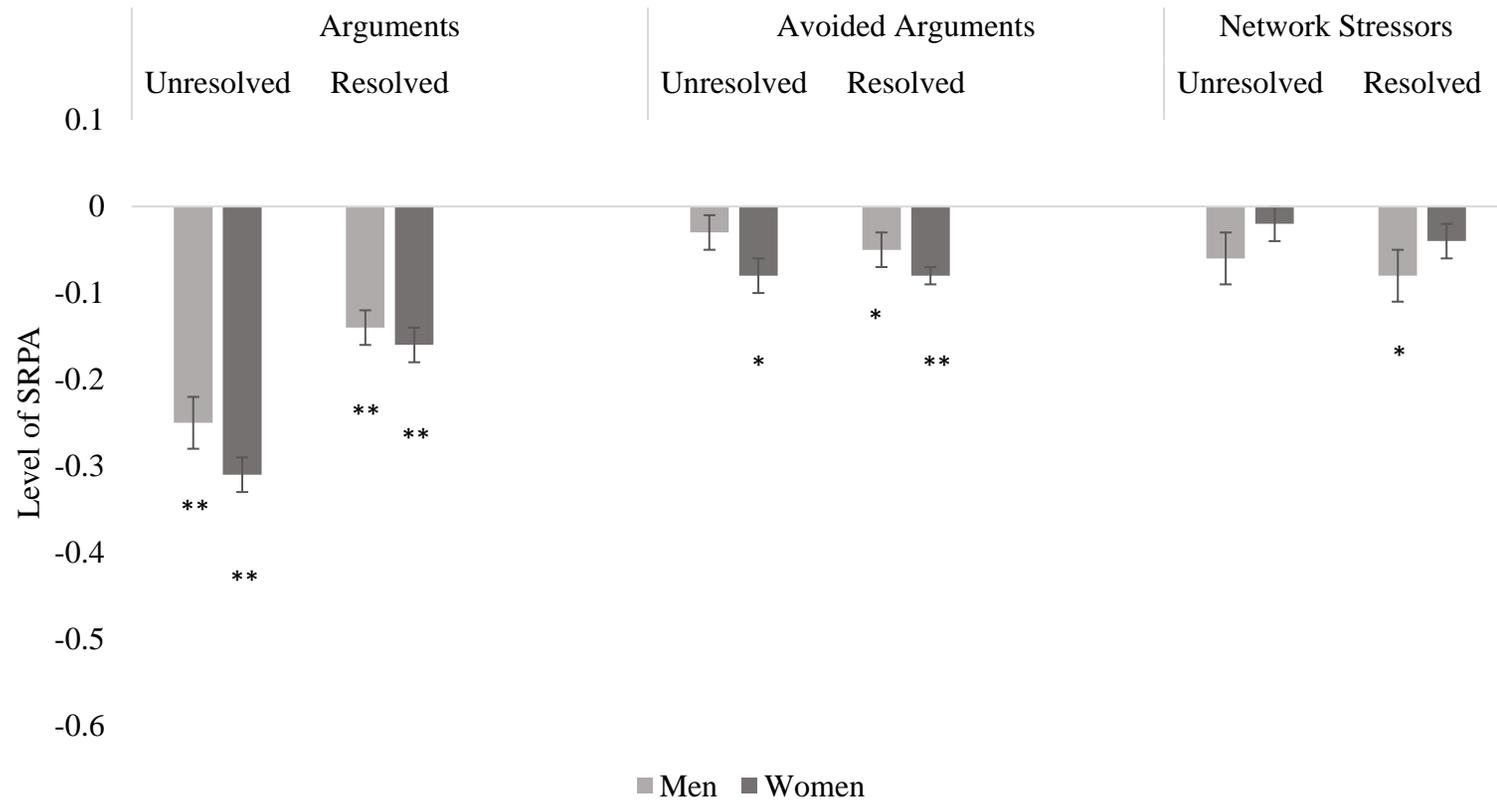


Figure 5.13. Associations between Resolution Status, and Stressor-Related Positive Affect by Stressor Type and Gender. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of positive affect for each association. SRPA = stressor-related positive affect.

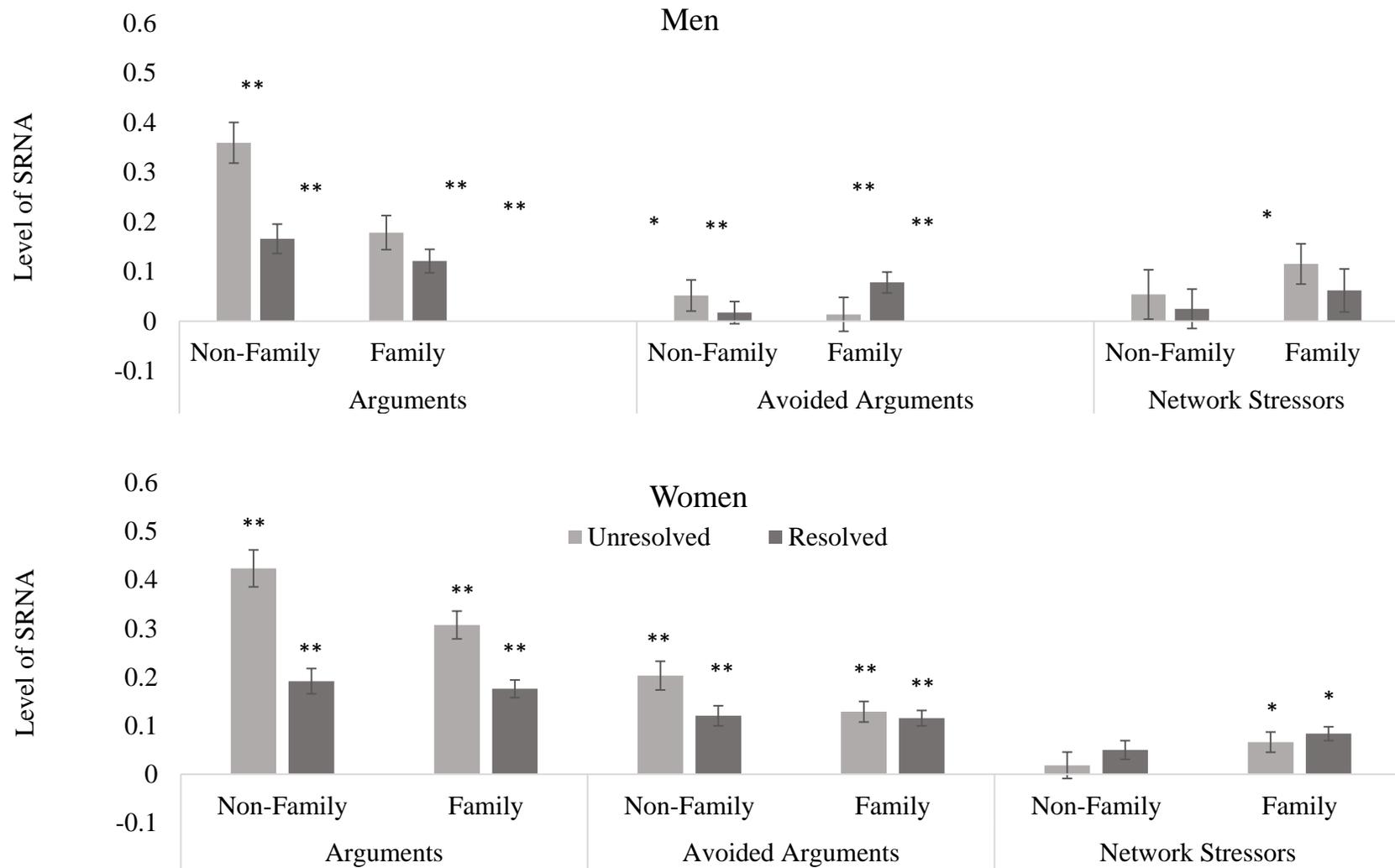


Figure 5.14. Associations between Who is Involved, Resolution Status, and SRNA by Stressor Type and Gender. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of negative affect for each association. SRNA = stressor-related negative affect.

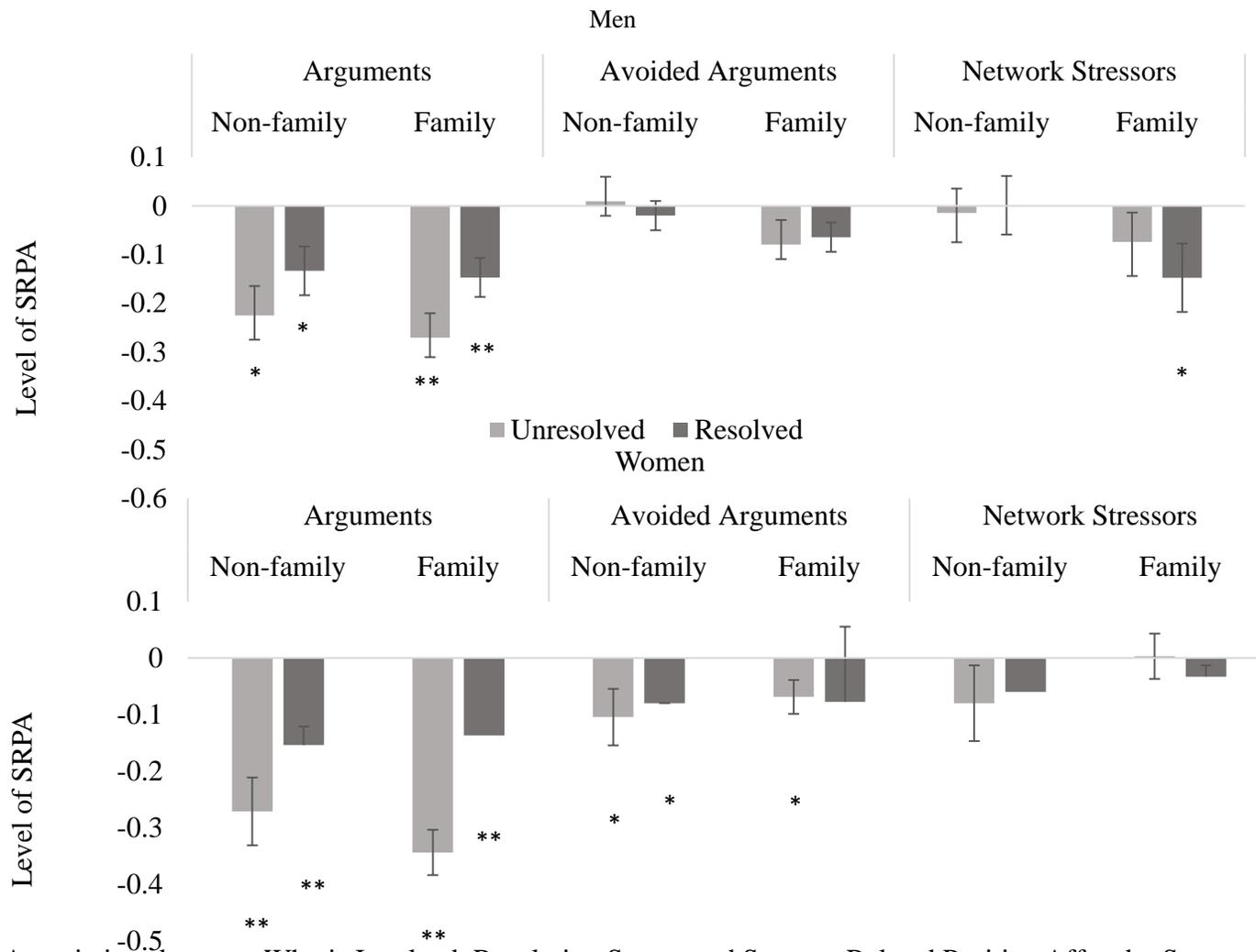


Figure 5.15. Associations between Who is Involved, Resolution Status, and Stressor-Related Positive Affect by Stressor Type and Gender. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of positive affect for each association. SRPA = stressor-related positive affect.

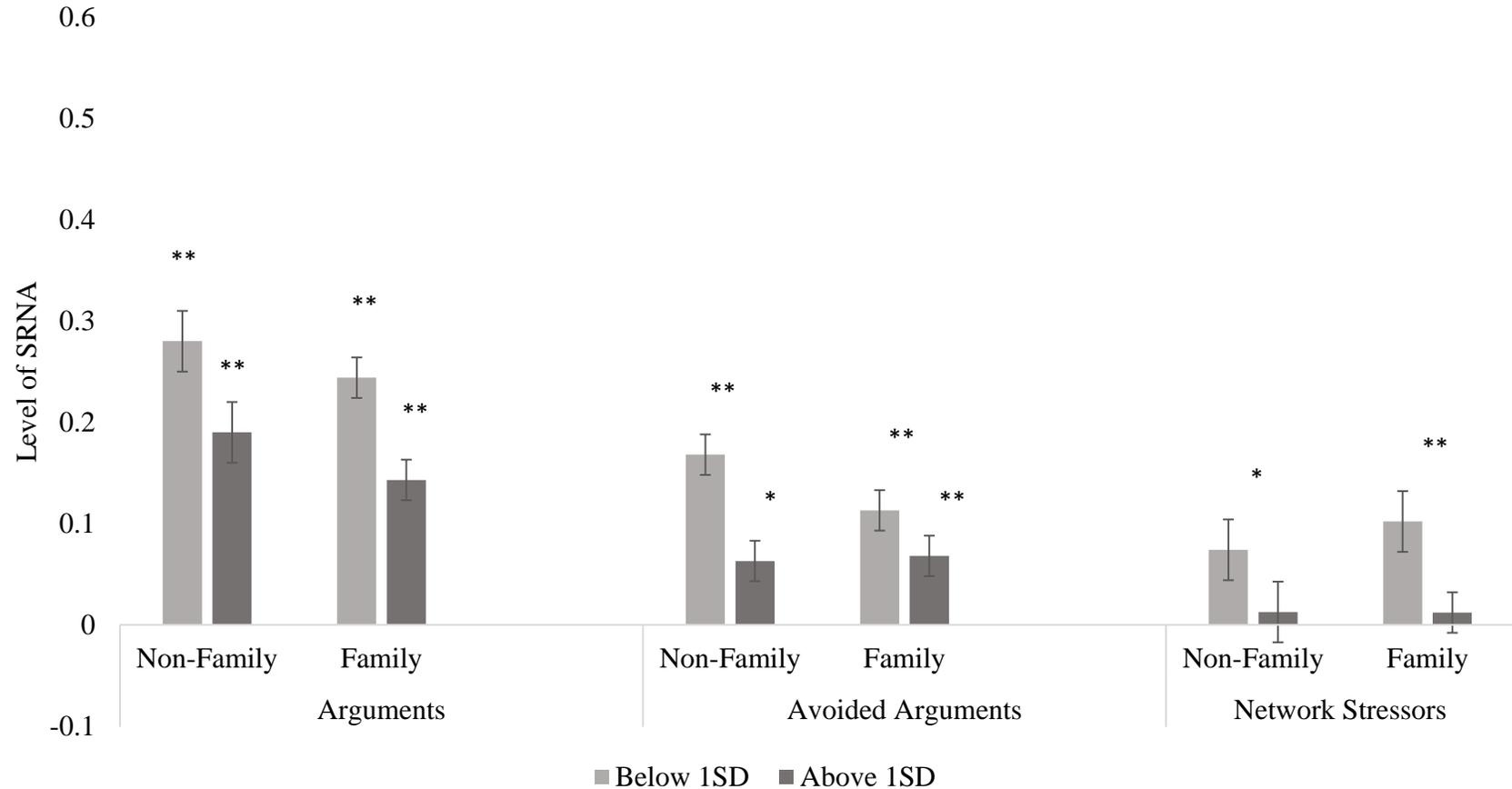


Figure 5.16. Associations between Who is Involved, and Stressor-Related Negative Affect by Stressor Type and Age. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of negative affect for each association. SRNA = stressor-related negative affect.

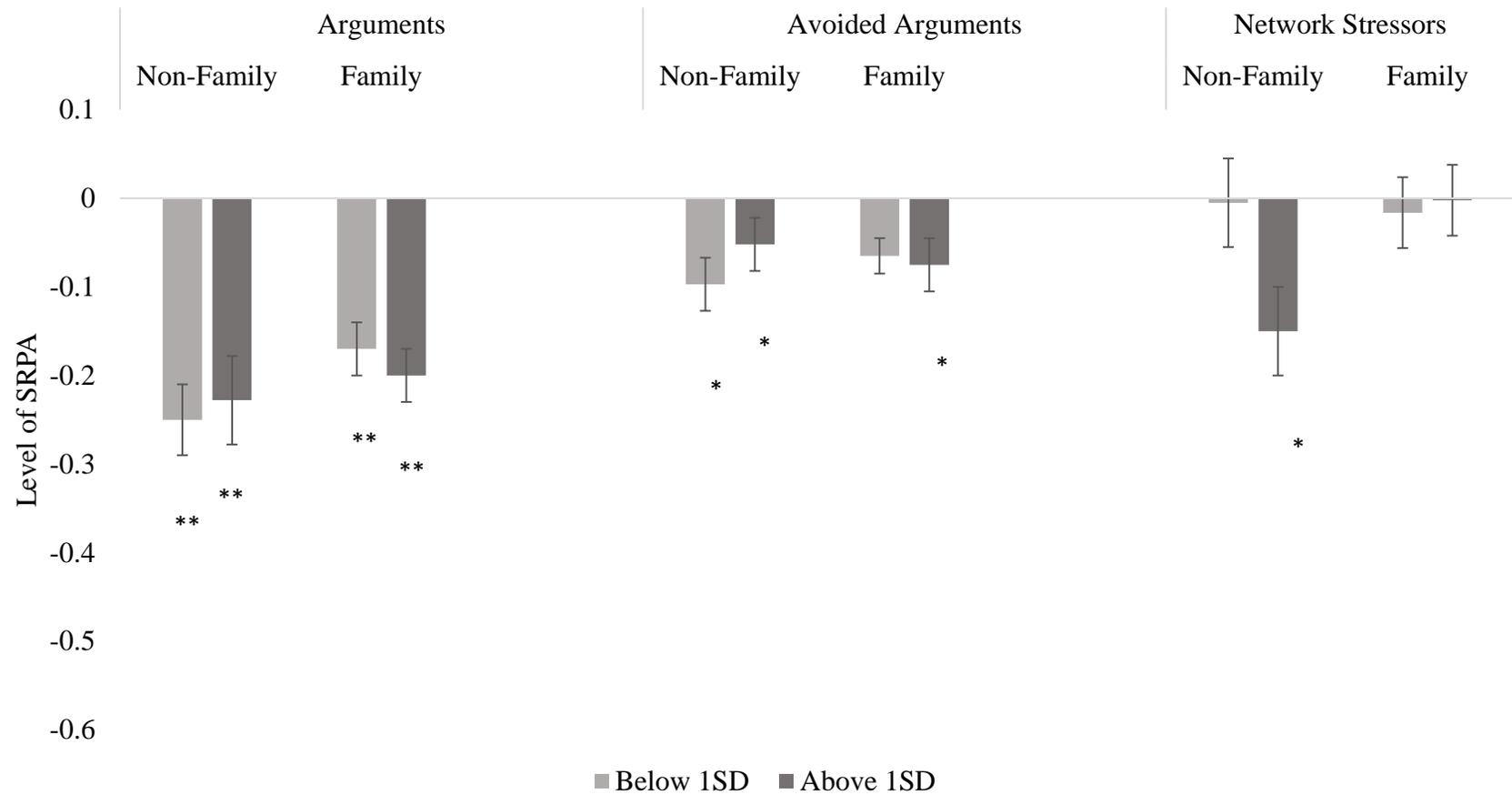


Figure 5.17. Associations between Who is Involved, and Stressor-Related Positive Affect by Stressor Type and Age. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of positive affect for each association. SRPA = stressor-related positive affect.

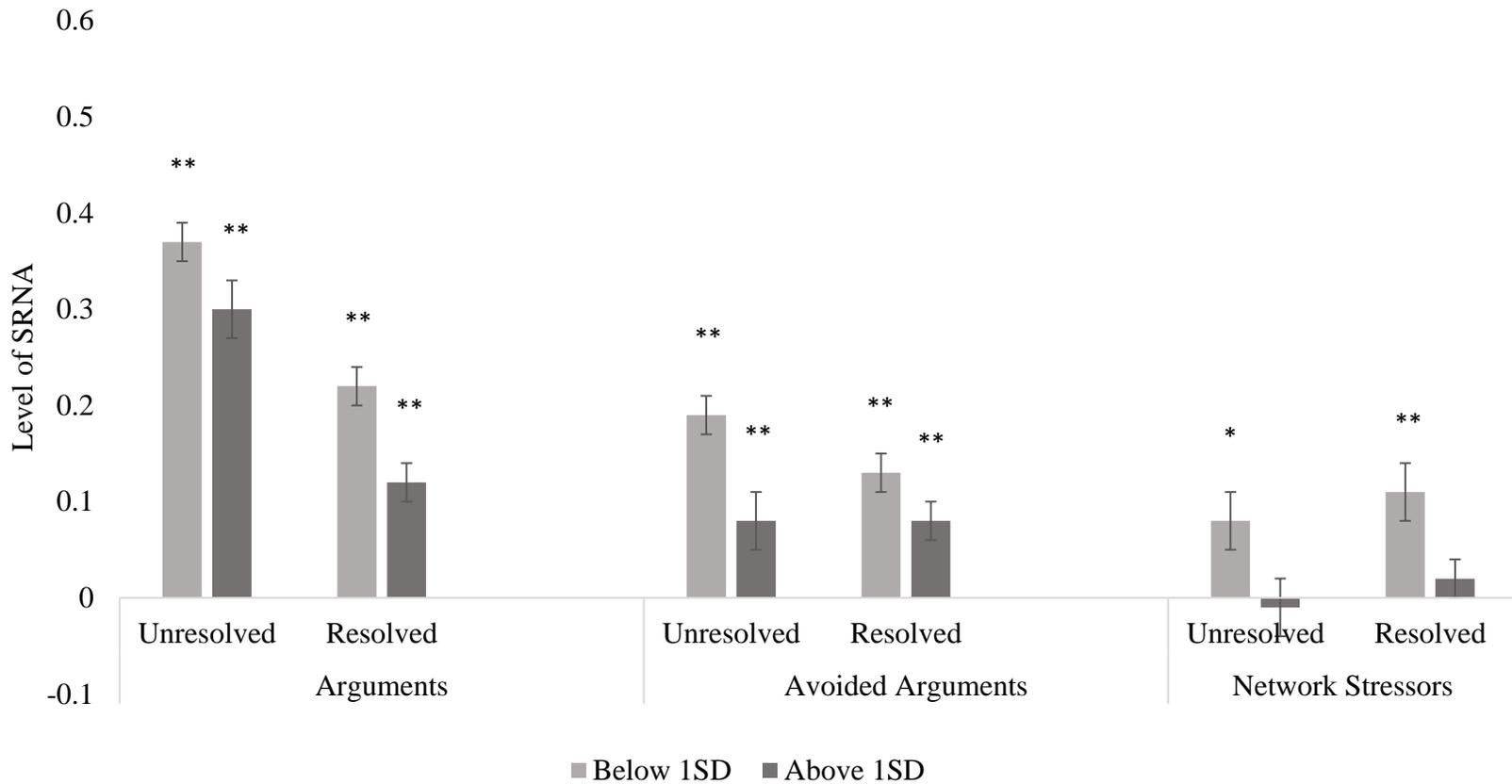


Figure 5.18. Associations between Resolution Status and Stressor-Related Negative Affect by Stressor Type and Age. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of negative affect for each association. SRNA = stressor-related negative affect.

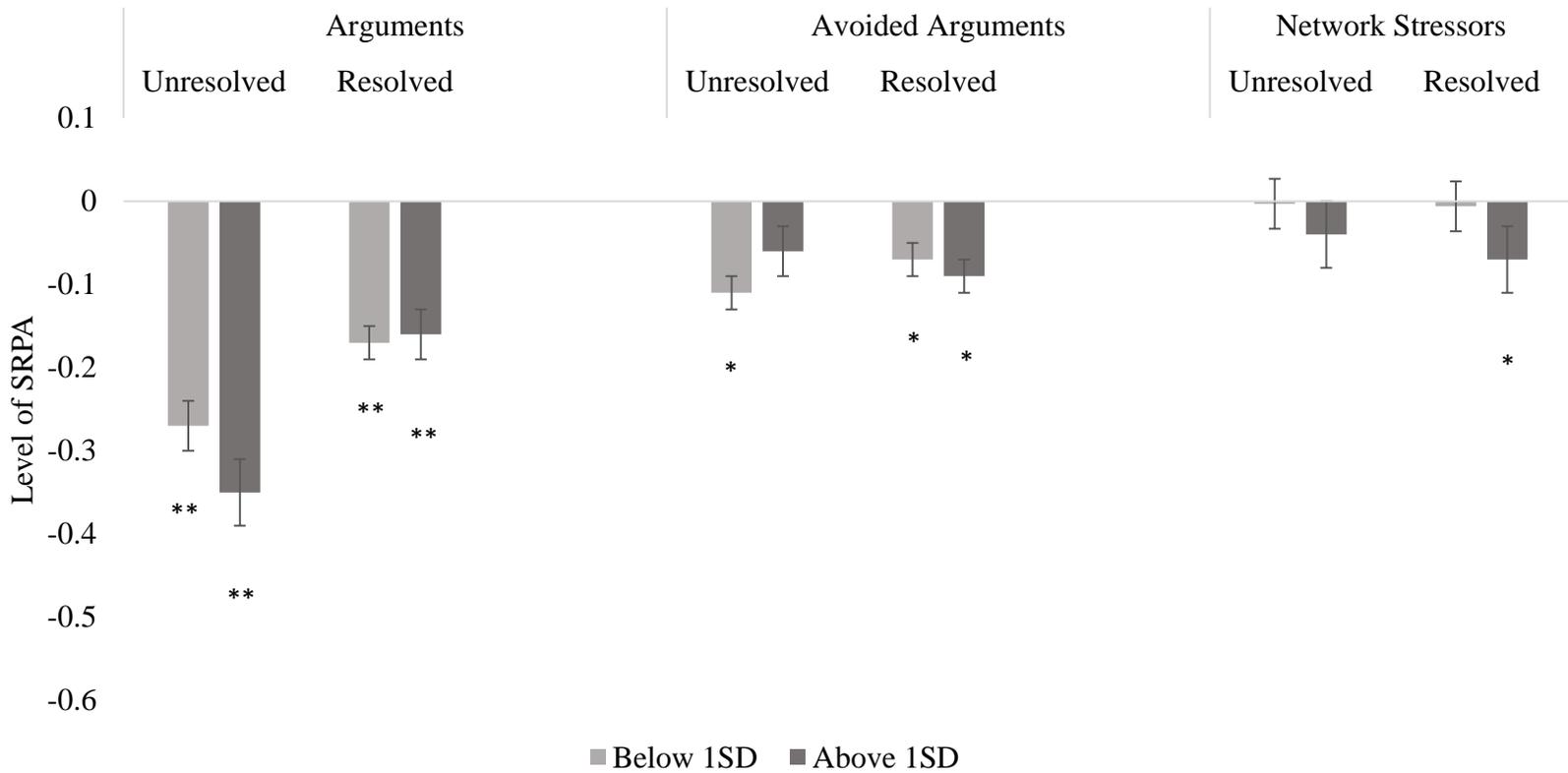


Figure 5.19. Associations between Resolution Status, and Stressor-Related Positive Affect by Stressor Type and Age. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of positive affect for each association. SRPA = stressor-related positive affect.

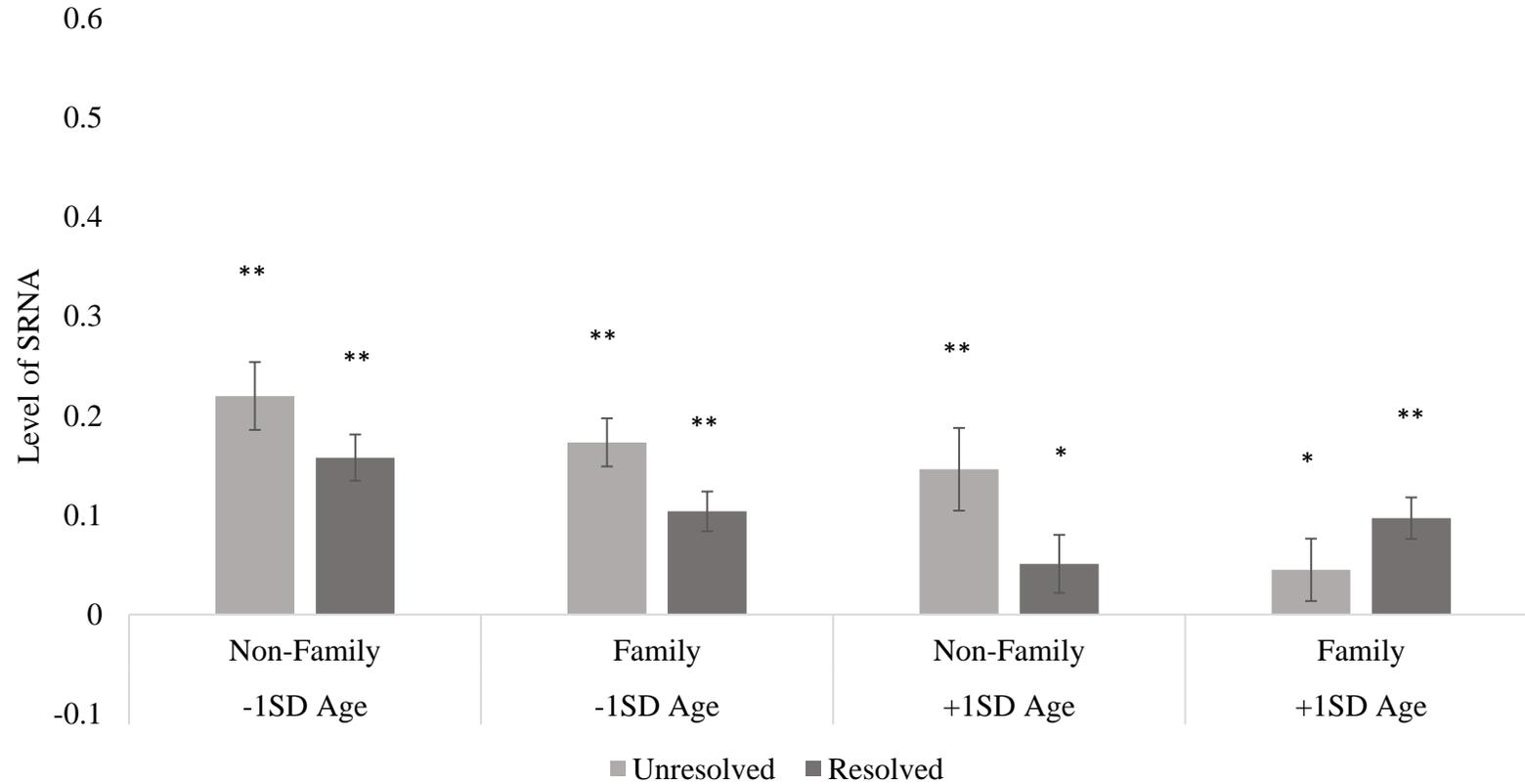


Figure 5.20. Associations between Who is Involved, Resolution Status, and Stressor-Related Negative Affect by Stressor Type and Age. ** represents $p < .0001$, * represents $p < .05$. Estimate commands were utilized to discern slopes for level of negative affect for each association. SRNA = stressor-related negative affect.

Table 5.1.*Fixed Effects for Who is Involved on SRNA and SRPA*

RQ1	SRNA						SRPA					
	Unadjusted			Covariate Adjusted			Unadjusted			Covariate Adjusted		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
<u>Argument</u>												
Exposure	0.26	0.02	<.0001	0.23	0.02	<.0001	-0.22	0.03	<.0001	-0.20	0.03	<.0001
Who is Involved	-0.05	0.02	0.01	-0.05	0.02	0.01	0.03	0.03	0.33	0.02	0.03	0.48
<u>Avoided Arguments</u>												
Exposure	0.13	0.01	<.0001	0.10	0.01	<.0001	-0.06	0.02	0.00	-0.04	0.02	0.02
Who is Involved	-0.01	0.02	0.66	-0.01	0.01	0.62	-0.02	0.02	0.49	-0.02	0.02	0.33
<u>Network Stressors</u>												
Exposure	0.06	0.02	0.00	0.04	0.02	0.03	-0.07	0.03	0.04	-0.05	0.03	0.12
Who is Involved	0.02	0.03	0.38	0.02	0.03	0.40	0.01	0.04	0.79	0.01	0.04	0.73

Note. Four models are represented here, one for each hypothesis (SRNA = left and SRPA = right). Who is involved status was coded as 0 = *non-family* and 1 = *family*. SRNA refers to stressor-related negative affect. SRPA refers to stressor-related positive affect. Further, these models included arguments (A), avoided arguments (AA), and network stressors (NS). For covariate adjusted models, the following covariates were included: person-mean frequency of argument, avoided argument, and network stressor exposure, age (mean centered at 56), gender, marital status, education, race, day of week, and day of study.

Table 5.2.*Fixed Effects for Resolution Status on SRNA and SRPA*

RQ2	SRNA						SRPA					
	Unadjusted			Covariate Adjusted			Unadjusted			Covariate Adjusted		
	Estimate	SE	<i>p</i>	Estimate	SE	<i>p</i>	Estimate	SE	<i>p</i>	Estimate	SE	<i>p</i>
<u>Argument</u>												
Exposure	0.34	0.02	<.0001	0.31	0.02	<.0001	-0.30	0.03	<.0001	-0.28	0.03	<.0001
Resolution Status	-0.15	0.02	<.0001	-0.14	0.02	<.0001	0.12	0.03	<.0001	0.12	0.03	<.0001
<u>Avoided Arguments</u>												
Exposure	0.17	0.01	<.0001	0.13	0.01	<.0001	-0.09	0.02	<.0001	-0.07	0.02	<.01
Resolution Status	-0.04	0.02	0.02	-0.03	0.02	0.03	0.01	0.02	0.66	0.01	0.02	0.79
<u>Network Stressors</u>												
Exposure	0.07	0.02	<.0001	0.05	0.02	<.0001	-0.05	0.03	0.05	-0.03	0.03	0.23
Resolution Status	0.00	0.02	0.92	0.005	0.02	0.83	-0.01	0.03	0.66	-0.02	0.03	0.50

Note. Four models are represented here: one for each hypothesis (SRNA = left and SRPA = right). Resolution status was coded as 0 = *unresolved* and 1 = *resolved*. SRNA refers to stressor-related negative affect. SRPA refers to stressor-related positive affect. Further, these models included arguments (A), avoided arguments (AA), and network stressors (NS). For covariate adjusted models, the following covariates were included: person-mean frequency of argument, avoided argument, and network stressor exposure, age (mean centered at 56), gender, marital status, education, race, day of week, and day of study.

Table 5.3.*Fixed Effects for Who is Involved and Resolution Status on SRNA and SRPA*

RQ3	Stressor-Related Negative Affect						Stressor-Related Positive Affect					
	Unadjusted			Covariate Adjustment			Unadjusted			Covariate Adjustment		
	Estimate	SE	<i>p</i>	Estimate	SE	<i>p</i>	Estimate	SE	<i>p</i>	Estimate	SE	<i>p</i>
<u>Arguments</u>												
Exposure	0.43	0.03	<.0001	0.40	0.03	<.0001	-0.27	0.04	<.001	-0.25	0.04	<.001
Resolution Effect	-0.22	0.03	<.0001	-0.22	0.03	<.0001	0.05	0.05	0.27	0.05	0.05	0.27
Who is Involved	-0.14	0.03	<.0001	-0.14	0.03	<.0001	-0.04	0.05	0.46	-0.04	0.05	0.40
Resolution*Who is Involved	0.11	0.04	0.00	0.12	0.04	<.01	0.11	0.06	0.08	0.10	0.06	0.91
<u>Avoided Arguments</u>												
Exposure	0.16	0.02	<.0001	0.13	0.02	<.0001	-0.09	0.03	0.00	-0.07	0.03	0.05
Resolution Effect	-0.03	0.02	0.28	-0.02	0.02	0.35	0.01	0.04	0.70	0.01	0.04	0.80
Who is Involved	0.00	0.03	0.87	0.01	0.03	0.85	0.00	0.04	0.97	-0.01	0.04	0.83
Resolution*Who is Involved	-0.02	0.03	0.56	-0.02	0.03	0.53	-0.01	0.05	0.90	-0.01	0.05	0.91
<u>Network Stressors</u>												
Exposure	0.05	0.03	0.10	0.03	0.03	0.37	-0.08	0.05	0.08	-0.06	0.05	0.16
Resolution Effect	0.00	0.03	0.97	0.002	0.03	0.94	0.02	0.05	0.72	0.02	0.05	0.74
Who is Involved	0.04	0.04	0.29	0.03	0.04	0.35	0.04	0.06	0.47	0.05	0.06	0.38
Resolution*Who is Involved	0.00	0.04	0.92	0.01	0.04	0.82	-0.05	0.07	0.43	-0.06	0.07	0.35

Note. Four models are represented here: two for each hypothesis (SRNA = left and SRPA = right). Who is involved was coded as 0 = *non-family* and 1 = *family*. SRNA refers to stressor-related negative affect. SRPA refers to stressor-related positive affect. Resolution was coded as 0 = *unresolved*, 1 = *resolved*. Further, these models included arguments (A), avoided arguments (AA), and network stressors (NS). For covariate adjusted models, the following covariates were included: person-mean frequency of argument, avoided argument, and network stressor exposure, age (mean centered at 56), gender, marital status, education, race, day of week, and day of study.

Table 5.4.

Fixed Effects for Gender and Age Differences in Who is Involved Association on SRNA & SRPA
 RQ4a & RQ5a. Gender and Age Differences in Who is Involved

	SRNA			SRPA		
	Estimate	SE	p	Estimate	SE	p
<u>Arguments</u>						
Exposure	0.24	0.02	<.0001	-0.24	0.03	<.0001
Who is Involved Effect	-0.04	0.03	0.14	0.06	0.04	0.18
Age*Exposure	-0.004	0.001	<.01	0.001	0.002	0.62
Age*Who is Involved Effect	0.00	0.002	0.90	-0.002	0.003	0.37
Gender*Exposure	-0.02	0.03	0.51	0.10	0.05	0.05
Gender*Who is Involved Effect	-0.04	0.04	0.31	-0.09	0.06	0.17
<u>Avoided Arguments</u>						
Exposure	0.12	0.02	<.0001	-0.08	0.03	<.01
Who is Involved Effect	-0.02	0.02	0.21	0.01	0.03	0.87
Age*Exposure	-0.004	0.001	<.0001	0.002	0.002	0.24
Age*Who is Involved Effect	0.002	0.001	0.05	-0.002	0.003	0.25
Gender*Exposure	-0.07	0.02	<.01	0.08	0.04	0.03
Gender*Who is Involved Effect	0.05	0.03	0.10	-0.06	0.05	0.19
<u>Network Stressors</u>						
Exposure	0.04	0.03	0.10	-0.08	0.04	0.06
Who is Involved Effect	0.01	0.03	0.66	0.07	0.05	0.16
Age*Exposure	-0.002	0.002	0.10	-0.01	0.002	0.01
Age*Who is Involved Effect	-0.001	0.002	0.55	0.01	0.003	0.04
Gender*Exposure	0.01	0.04	0.85	0.09	0.07	0.17
Gender*Who is Involved Effect	0.03	0.05	0.55	-0.19	0.08	0.02

Note. Two models are represented here: one for each hypothesis (SRNA = left and SRPA = right). Who is involved was coded as 0 = *non-family* and 1 = *family*. SRNA refers to stressor-related negative affect. SRPA refers to stressor-related positive affect. Further, these models included arguments (A), avoided arguments (AA), and network stressors (NS). The following covariates were included in each model: person-mean frequency of argument, avoided argument, and network stressor exposure, age (mean centered at 56), gender, marital status, education, race, day of week, and day of study.

Table 5.5.
Fixed Effects for Gender and Age Differences in Resolution Status on SRNA & SRPA
 RQ4b & RQ5b. Gender and Age Differences in Resolution Status

	SRNA			SRPA		
	Estimate	SE	p	Estimate	SE	p
<u>Arguments</u>						
Exposure	0.33	0.02	<.0001	-0.31	0.04	<.0001
Resolution Status	-0.16	0.03	<.0001	0.15	0.04	<.01
Age*Exposure	-0.003	0.002	0.04	-0.003	0.00	0.16
Age*Resolution Status	-0.001	0.002	0.50	0.004	0.003	0.13
Gender*Exposure	-0.08	0.03	0.02	0.06	0.05	0.24
Gender*Resolution Status	0.05	0.04	0.21	-0.04	0.06	0.47
<u>Avoided Arguments</u>						
Exposure	0.13	0.02	<.0001	-0.08	0.03	<.01
Resolution Status	-0.03	0.02	0.15	-0.001	0.03	0.98
Age*Exposure	-0.004	0.001	<.01	0.002	0.001	0.28
Age*Resolution Status	0.003	0.001	0.07	-0.003	0.002	0.16
Gender*Exposure	-0.05	0.03	0.11	0.05	0.04	0.29
Gender*Resolution Status	0.02	0.05	0.10	-0.01	0.05	0.82
<u>Network Stressors</u>						
Exposure	0.04	0.02	0.09	-0.03	0.03	0.53
Resolution Status	0.03	0.03	0.28	0.02	0.04	0.65
Age*Exposure	-0.004	0.001	0.01	-0.001	0.002	0.51
Age*Resolution Status	0.0001	0.002	0.95	-0.001	0.003	0.66
Gender*Exposure	0.06	0.04	0.12	-0.04	0.06	0.49
Gender*Resolution Status	-0.07	0.05	0.10	0.001	0.07	0.98

Note. Two models are represented here: one for each hypothesis (SRNA = left and SRPA = right). Resolution status was coded as 0 = *unresolved* and 1 = *resolved*. SRNA refers to stressor-related negative affect. SRPA refers to stressor-related positive affect. Further, these models included arguments (A), avoided arguments (AA), and network stressors (NS). The following covariates were included in each model: person-mean frequency of argument, avoided argument, and network stressor exposure, age (mean centered at 56), gender, marital status, education, race, day of week, and day of study.

Table 5.6.*Fixed Effects for Gender and Age Differences in Who is Involved and Resolution Status on SRNA and SRPA*

	SRNA			SRPA		
	Estimate	SE	p	Estimate	SE	p
<u>Argument</u>						
Exposure	0.41	0.04	<.0001	-0.27	0.06	<.001
Resolution Effect	-0.22	0.04	<.0001	0.04	0.07	0.50
Who is Involved Effect	-0.12	0.05	0.01	-0.07	0.07	0.33
Resolution * Who is Involved	0.10	0.05	0.06	0.16	0.08	0.05
Gender*Argument	-0.04	0.05	0.37	0.05	0.09	0.58
Gender*Resolution Effect	0.03	0.06	0.61	0.05	0.10	0.63
Gender*Who is Involved Effect	-0.06	0.07	0.34	0.03	0.11	0.80
Gender*Resolution*Who is Involved	0.04	0.08	0.62	-0.13	0.12	0.29
Age*Argument	-0.004	0.002	0.07	-0.001	0.004	0.78
Age*Resolution Effect	0.00	0.003	0.99	0.004	0.004	0.31
Age*Who is Involved Effect	0.002	0.003	0.57	-0.003	0.004	0.40
Age*Resolution*Who is Involved	-0.001	0.003	0.69	0.0003	0.005	0.94
<u>Avoided Argument</u>						
Exposure	0.20	0.03	<.0001	-0.10	0.05	0.02
Resolution Effect	-0.08	0.03	0.02	0.02	0.05	0.68
Who is Involved Effect	-0.07	0.04	0.04	0.03	0.06	0.53
Resolution * Who is Involved	0.07	0.04	0.10	-0.03	0.07	0.65
Gender*Avoided Argument	-0.13	0.04	<.01	0.11	0.07	0.08
Gender*Resolution Effect	0.10	0.05	0.04	-0.06	0.08	0.47
Gender*Who is Involved Effect	0.16	0.06	<.01	-0.12	0.09	0.16
Gender*Resolution*Who is Involved	-0.15	0.07	0.02	0.08	0.10	0.45
Age*Avoided Argument	-0.003	0.002	0.12	0.004	0.003	0.20
Age*Resolution Effect	-0.002	0.003	0.56	-0.004	0.004	0.34

RQ4c and 5c: Gender and Age Differences in Who is Involved and Resolution Status (CONT.)						
Age*Who is Involved Effect	-0.002	0.002	0.37	-0.003	0.004	0.45
Age*Resolution*Who is Involved	0.01	0.003	0.03	0.001	0.004	0.87
<u>Network Stressors</u>						
Exposure	0.01	0.04	0.83	-0.08	0.06	0.13
Resolution Effect	0.03	0.04	0.43	0.02	0.07	0.74
Who is Involved Effect	0.04	0.04	0.39	0.09	0.07	0.20
Resolution * Who is Involved	-0.004	0.05	0.93	-0.06	0.08	0.48
Gender*Network Stressors	0.05	0.06	0.45	0.07	0.10	0.47
Gender*Resolution Effect	-0.06	0.07	0.35	-0.01	0.11	0.95
Gender*Who is Involved Effect	0.02	0.08	0.75	-0.15	0.12	0.22
Gender*Resolution*Who is Involved	-0.02	0.09	0.83	-0.03	0.15	0.84
Age*Network Stressors	-0.003	0.002	0.17	-0.01	0.004	0.04
Age*Resolution Effect	0.00	0.003	0.99	0.0002	0.004	0.97
Age*Who is Involved Effect	0.00	0.003	0.77	0.009	0.004	0.05
Age*Resolution*Who is Involved	0.00	0.003	0.997	-0.002	0.005	0.76

Note. Two models are represented here: one for each hypothesis (SRNA = left and SRPA = right). Who is involved was coded as 0 = *non-family* and 1 = *family*. Resolution was coded as 0 = *unresolved*, 1 = *resolved*. Gender was coded as 0 = *men*, 1 = *women*. SRNA refers to stressor-related negative affect. SRPA refers to stressor-related positive affect. Further, these models included arguments (A), avoided arguments (AA), and network stressors (NS). The following covariates were included in each model: person-mean frequency of argument, avoided argument, and network stressor exposure, age (mean centered at 56), gender, marital status, education, race, day of week, and day of study.

CHAPTER 6: DISCUSSION

Drawing on Bronfenbrenner's (2005) bioecological framework integrating process, person, context, and time, this study focused on lesser understood characteristics that contribute to daily stress processes (Almeida, 2005). The goal of this study was to explore how characteristics of daily social stressors, including stressor type, resolution status, and who was involved, were associated with SRA. Moreover, this study considered two important individual difference characteristics that have previously been associated with health, wellbeing, and daily stress processes, Bronfenbrenner's demand characteristics age and gender, to explore whether they interacted with stressor characteristics to predict SRA. Analyses bore several findings.

Overall, increases in SRNA were most potent for arguments. Further, with regard to who was involved (RQ1) and resolution status (RQ2), non-family arguments and unresolved arguments were associated with more SRNA compared to family arguments and resolved arguments. These characteristics of arguments further interacted (RQ3) to predict SRNA whereby unresolved, non-family arguments resulted in higher levels of SRNA and the effect of resolution was strongest in non-family arguments. Moreover, individual difference characteristics, including gender (RQ4) and age (RQ5) were related to differences in SRNA for avoided arguments and SRPA for network stressors, with these individual difference characteristics further interacting with who was involved and resolution status. Specifically, unresolved, non-family avoided arguments were associated with disproportionately greater SRNA for women. Network stressors contributed to significant decreases in SRPA, with family-involved network stressors being significantly more potent for men compared to women. Further, avoided arguments showed differences in SRNA where unresolved non-family avoided arguments showed the greatest associations for women; there were no significant differences for

men. Regarding age differences, family-involved networks stressors for older individuals were associated with larger decreases in SRPA compared to younger adults. Additionally, avoided arguments had significant differences by age on SRNA such that family-involved avoided arguments showed significant decreases in SRNA by resolution status for younger adults but increases in SRNA by resolution status for older adults. These findings further inform research on daily stress processes, particularly reactivity as SRA, indicating not all daily stressors are equal, and characteristics of daily stressors contribute to such heterogeneity.

6.1 Who is Involved Associations with SRA

Hypotheses 1a and 1b stated, “*Days when daily family social stressors occur will be associated with a higher level of negative affect compared to daily social stressors not involving family,*” and “*Days when daily family social stressors occur will be associated with a lower level of positive affect compared to daily non-family social stressors,*” respectively. There was partial support for hypothesis 1a, but no evidence to support hypothesis 1b. Who was involved was only significantly associated with SRNA for arguments; however, the direction of this association was contrary to expectations. Specifically, non-family involved arguments were associated with larger increases in SRNA compared to family-involved arguments. This association may have occurred for multiple reasons.

First, individuals may be more invested in their relationships with family members compared to non-family members. Rusbult’s investment theory (Rusbult et al., 1991) states when investment in a relationship is high, individuals may be more likely to accommodate through inhibition of impulses in order to preserve the relationship. It may be that the investment in these family relationships may result in smaller increases in SRNA because individuals may be more motivated to keep these relationships functioning. Additionally, with regard to an individual’s

social convoy (Antonucci, 2001), investment theory (Rusbult et al., 1991) may pertain to anyone in the relatively closer concentric circles of the social convoy regardless family status. However, family investment may be qualitatively and quantitatively different such that investment and family status may have interactive effects. It may be that individuals preserve family relationships by avoiding emotional strain in order to protect future issues about similar topics. However, with non-family arguments may signify a disagreement on the values the participant shares with the other individual involved. Particularly, individuals may be more likely to invest in relationships with individuals that share similar values and interests. It may be that arguments with these non-family network members may threaten investment decision itself. Future research should explore the motivations behind investment of these relationships and the meaning of investment.

Second, non-family arguments may have been more severe and occur less often across the lifespan with the individual. Arguments involving family members may have chronic elements, being about the same content, while non-family arguments may be comparatively new in quality and content thus increasing reactions. Akiyama and colleagues (2003) reported decreases in non-family related negative events (including arguments) through adulthood, but stability for specific family relationships. This stability may reflect familiarity with the arguments occurring and associated decreased responses. This is akin to a habituation response where the continual exposure to daily stress may elicit a reduction in the reaction (Thompson & Spencer, 1966). Research has suggested that habituation increases with repeated exposure to stressors – specifically psychosocial stressors (Wust et al., 2005).

Contrary to hypotheses, SRA associated with avoided arguments and network stressors were comparable regardless of who was involved. One possible explanation for the null findings

is through Antonucci's social convoy (Antonucci et al., 2014). According to Antonucci et al. (2014), an individual's social convoy can be represented as a set of concentric circles. This includes an inner circle that represents a group of individuals that are considered the closest to an individual, followed by a second and third circle depicting less close, or less central relationships. Adults social convoys are comprised of a diverse range of quality contacts that fall into the inner circle and include both family and non-family members (Fiori, Antonucci, & Akiyama, 2008). This relationship quality and closeness may create stronger ties across both family and non-family members and dampen the difference between some, but not all daily social stressors. It may be that individuals react similarly across avoided arguments and network stressors regardless of who was involved because the diversity of quality relationships in the social networks.

Another reason may be that the individuals in the study are continuing to perseverate on these types of stressors more than others. For arguments a specific encounter occurs – whereas with avoided arguments and network stressors the stressor context may be more ambiguous and ill-defined. For example, an individual who could have argued with another person but chose not to may continue to think about the possible event, how it could have transpired, what could have happened. This could be similar to that of anticipatory stress (Neubauer, Smyth, & Sliwinski, 2018) in that anticipated stressful events elicit increases in negative affect when they have not occurred – possibly through the role of perseverative cognition (Brosschot et al., 2005). For network stressors, a similar perseveration may be occurring, however, the continual cognitive stimuli may be in the form of worry (Watkins, 2008). Because these network stressors do not directly involve the individual in study, they may not have enough information relevant to confer

a determination of “resolved.” Thus, individuals may be perseverating about these avoided arguments and network stressors regardless of who was involved but for different reasons.

Another reason why the null findings for avoided argument and network stressors may have occurred is gross categorization of who was involved into non-family and family. With the DISE, while there are six options for family and fifteen options for non-family, nuanced information about who was involved may have been lost by collapsing into these two broader categories. As such, all individuals within the categories are assumed to be interchangeable. For example, previous research (Akiyama et al., 2003; Birditt et al., 2009; Okun & Keith, 1988) have expanded who was involved into categories such as spouse, child, and friend and found different associations between each category. Future research should expand these categories and examine the fine-grained associations with each possible category of who is involved.

Previously, research focusing on daily stress has examined who was involved by exploring solely family-involved stressors (Cichy et al., 2012; Cichy et al., 2014) or exploring family and friends as separate categories such as spouse, child, and friend (Birditt et al., 2009). A major strength of this study was comparing family-involved daily social stressors to non-family involved (e.g., coworker, boss, religious leader) daily social stressors which, in the space of daily stress, which is unique to this study. Importantly so, non-family arguments were the most potent for SRNA and no associations occurred with SRPA. Research should begin to expand focus on daily social stressors related to non-family and family as non-family related arguments garnered the highest levels of SRNA. Non-family related daily stressors may be particularly impactful to affect; however, scant research has considered this particular source of involvement to provide an understanding of why.

6.2 Resolution Status Associations with SRA

Hypothesis 2a, “*Days when daily social stressors are unresolved will be associated with higher negative affect compared to days when daily social stressors are resolved,*” and hypothesis 2b, “*Days when daily social stressors are unresolved will be associated with lower positive affect compared to days when daily social stressors are resolved*” were also partially supported. In line with hypotheses 2a and 2b, the effect of resolution was associated with dampened increases in SRNA for arguments and avoided arguments and dampened decreases in SRPA arguments. Contrary to the resolution-related hypotheses, the effect of resolution did not modulate SRNA or SRPA for network stressors.

Previous research has suggested that subjective resolution represents a proxy for the down-regulation of emotions (Ochsner et al., 2002). Additionally, the effect of resolution may be particularly impactful to arguments and avoided arguments due to respondent’s direct involvement with someone from their social network where the same involvement is lacking for network stressors. The directness of the individual in the situation may provide information about the resolution status that may not otherwise be present. Moreover, control may moderate the associations between resolution status and SRA. Previous research has suggested that areas of control beliefs play an important role in multiple daily stressors – including with interpersonal and network daily stressors (Neupert, Almeida, & Charles, 2007). For interpersonal stressors, Neupert et al. (2007) found that high feelings of constraint were associated with higher psychological and physical distress while for network stressors, constraint was only associated with higher physical distress. It may be that feeling a sense of control over the situation is related to a higher likelihood of resolution status or that low control beliefs are related to worse outcomes regardless of resolution status. Future work should explore how control beliefs, particularly mastery of situations or constraint, play a role in resolution status.

Further, it may be that arguments and avoided arguments are often relatively short-term events that occur throughout the day whereas network stressors can be comparatively longer in duration. In this study, over half of the arguments and avoided arguments that occurred were resolved by the end of the day, while for network stressors, less than half were resolved by the end of the day. For example, an individual may consider an argument resolved when an agreement is met about the subject; however, with a network stressor such as a friend being in a car accident, the overarching accident may be over and resolved but the social network member may still be impacted. Understanding what resolution may mean in each daily social stressor context may be beneficial in deciphering these associations. Future work should explore the meaning of resolution as it pertains to different stressors. It may be a means of down-regulating emotions (Ochsner et al., 2002); moreover, resolution may be a product in the coping process (Aldwin, 2011). Possibly, employing qualitative research to explore the meaning of resolution in each situation by asking questions such as, “What does it mean for this event to be resolved?” or, “How might resolution be facilitated the unresolved daily social stressors?” may provide a first step in exploring the meaning of resolution.

It is important to note that while resolution did reduce SRNA and SRPA associated with arguments, it did not completely attenuate the levels to make them comparable to non-stressor related days. Instead, arguments affected SRA regardless of resolution status although less so for resolved arguments. This is an important consideration for understanding the effect of resolution. Importantly, resolution may contribute to the down-regulatory process of emotional recovery after a stressor occurs, but that it does not fully mitigate the emotional impact of the stressor.

To this researcher’s knowledge, this study is the first to examine resolution in the context of daily stress processes. Importantly, resolution status may provide more information about the

context of daily stress and the associations with SRA – particularly with arguments and avoided arguments. It may be that resolution is a proxy for regulatory processes or a part of the coping process. Importantly however, more research is needed to explore the meaning of resolution especially with respect what it reflects in the context of daily stress processes, and why resolution partially mitigates the effect of SRA.

6.3 Interaction between Resolution Status and Who is Involved

There was partial support for hypothesis 3a, “*Resolution and who is involved will interact to influence negative affect such that unresolved family social stressors will report higher stressor-related negative affect compared to resolved non-family social stressors*” but no support for hypothesis 3b, “*Resolution and who is involved will interact to influence positive affect such that unresolved family social stressors will report lower stressor-related positive affect compared to resolved non-family social stressors.*” In line with hypothesis 3a, arguments were the only social stressor with any signal for an interaction between who was involved and resolution status on SRNA. As previously mentioned, resolution status was stronger for non-family involved arguments compared to family involved arguments. There were no associations for avoided arguments or network stressors.

Bronfenbrenner (2005) suggests that context does not occur in vacuum. Thus, when considering daily stressor characteristics, exploring multiple ways they may influence one another is imperative. For arguments in particular, the context is more than just unresolved or resolved, it is unresolved non-family arguments that are most potent. As mentioned before, previous argument experience may be particularly important for the associations with who was involved; however, individuals may have more opportunity to resolve arguments with family compared to non-family. In this sample, there was a higher percentage of resolved family

arguments than resolved non-family arguments. Proximity to family members may play a key role in resolution on the same day because an individual may be able to have more regular contact with family. Many people an individual does not interact with regularly can fall into categorization of non-family (e.g., religious pastor). It may be that the length of time (or lack thereof) that an individual spends with their non-family social network members may create a barrier to resolution of their daily social stressors. For example, an argument with a coworker may be unresolved by the end of the day because the individual has left the workspace until the next day.

The interaction between who is involved and resolutions status was not related to avoided arguments or network stressors for SRNA or SRPA. Again, it may be that network stressors do not occur directly to the individual, therefore, who may have been involved and resolution status may be less impactful. Further, for avoided arguments, while people have avoided engaging in an argument, it continues to weigh on them, possibly in the form of perseverative cognition (Watkins, 2008). Post-event rumination is a type of perseverative cognition defined as repetitive thinking about a recent social interaction (Watkins, 2008). Both avoided arguments and network stressors with anyone in the social network may result in post-event rumination regardless of resolution status. It may be that an individual continues to ruminate on possible outcomes, situations, and feelings, resulting in similar changes in SRA, regardless of resolution status and who was involved. This post-event rumination may result in similar changes in SRA because of the constant appraisal of the situation that occurred.

6.4 Gender Differences in the Effects of Stressor Characteristics on SRA

Research question 4a, 4b, and 4c, asked, “*Does gender moderate the associations between who is involved and stressor-related affect?*”, “*Does gender moderate the associations*

between resolution and stressor-related affect?”, and *“Does gender moderate the interaction between who is involved, resolution, and stressor-related affect?”* respectively. There was evidence suggesting that gender moderated select associations between who is involved and SRA (RQ4a). Men exhibited greater SRPA for family related network stressors compared to women. There was no evidence to suggest gender moderated associations between resolution status and SRA (RQ4b). Moreover, gender moderated the interaction between who was involved and stressor related affect for avoided arguments (RQ4c). Specifically, for women, the effect of resolution was larger for non-family-, compared to family-, involved avoided arguments, whereas however, the effect of resolution was similar for men, regardless of who was involved.

Interestingly, gender moderated the effect of who was involved on SRPA for network stressors where the effect was due to larger decreases in SRPA for family-involved network stressors for men compared to women. For family-involved network stressors, it may be that men have larger decreases in positive affect compared to women because of the social role women may play in the family. According to the sex-role hypothesis, women may be more likely to do emotion work in their families compared to men (Barnet & Baruch, 1987). Moreover, women are often the caregivers in their family, and research has suggested that adult women are more likely to care for their parents or others more often than men (Friedmann & Buckwalter, 2014). As such, women may be more familiar or experienced with their family related issues that may dampen the effect of family related network stressors. For men, the comparative lack of familiarity in such social and caregiving roles may leave them more reactive to such network stressors when they occur. Additionally, men have smaller social networks than women and, on average, men’s close social networks include family more than any other type of contact (Depner & Ingersoll, 1982). It may be that when a network stressor does occur it is more novel for men

because of their smaller social networks compared to women' expansive and possible regular engagement in their social networks. This novelty may result in larger decreases in SRPA compared to women.

Network stressors had the fewest reports over the eight days with 760 total daily network stressors occurring. When expanding network stressors into stressor characteristics, there were only 114 resolved non-family related stressors. Further differentiating by gender results in even smaller cell sizes. Because of this, it is important to note that analyses focusing on network stressors should be interpreted with caution. Running multi-level models with cell sizes (subsamples of each category) of 50 or less can often lead to compromised power to detect reliable interactions (Maas & Hox, 2005).

Further, gender moderated the interaction between who was involved and resolution status on SRNA for avoided arguments. Interestingly, for women, resolution was particularly strong for non-family involved avoided arguments and that for unresolved avoided arguments in particular the family effect was strongest for women. Women may have richer and closer relationships (Depner & Ingersoll, 1982) and may perceive there to be more at stake when experiencing issues in their social relationships (Antonucci, 2001; Belle, 1991). Because of these differing social relationship qualities, it may be that women are more invested in these non-family relationships. This investment (Rusbult, et al., 1991) may result in higher levels of SRNA when an unresolved avoided argument occurs. Additionally, a meta-analysis of gender differences in rumination suggests that women are more likely to ruminate and brood over events that occur when compared to men (Johnson & Whisman, 2013; Nolen-Hoeksama, et al., 1999). Thus, it may be that women are simply more likely to ruminate about their unresolved avoided

arguments with non-family compared to men thus increasing their response to the unresolved avoided argument.

6.5 Age Differences in the Effects of Stressor Characteristics on SRA

Research questions 5a, 5b, and 5c were as follows: “*Does age moderate the associations between who is involved and stressor related affect?*”, “*Does age moderate the associations between resolution and stressor related affect?*”, and “*Does age moderate the interaction between who is involved, resolution, and stressor-related affect?*” There was partial evidence for research question 5a suggesting that age moderated the effect of who was involved on SRPA for network stressors – particularly for older adults compared to younger. There was no support to suggest age differences in resolution status for either SRNA or SRPA (RQ5b). Further, there was some evidence to suggest that age moderated the interaction between who was involved and resolution status for SRNA on avoided arguments (RQ5c). The interaction suggested the effect of resolution on SRNA associated with family-involved avoided arguments was different for the relatively younger and older adults.

For younger adults, network stressors decreased SRPA regardless of who was involved; however, for older adults, non-family involved network stressors significantly decreased SRPA while family-involved network stressors did not. For older adults, their social convoy’s may be disproportionately made-up of non-family (Fung, Stoeber, Yeung, & Lang, 2008). The effect of these non-family involved network stressors on SRPA may be stronger for older adults because the importance of these connections, particularly in the context of the network stressors. Often times, older adults lose members in their social network through death, while younger individuals do not (He, Sengupta, Velkoff, & DeBarros, 2005; Johnson & Troll, 1992). It may be

that the associations with SRPA for network stressors are exacerbated for older adults because of the potential threat to someone in the social network.

Additionally, there were age differences when exploring the interaction between who was involved and resolution status on SRNA for avoided arguments. For younger individuals, the effect of resolution on avoided arguments involving family was negative, suggesting that unresolved avoided arguments were associated with larger increases in SRNA compared to resolved avoided arguments. For older adults, however, resolved family avoided arguments were associated with larger increases in SRNA compared to unresolved avoided arguments. Analyses of such higher-order interactions, even with the larger sample size, increases the risk of type I error rates (Maas & Hox, 2005). When expanding avoided arguments into stressor characteristics, there were only 261 unresolved non-family related stressors. Further differentiating by age results in even smaller cell sizes. Because of this, while interpretation is possible, it may not be appropriate as the small sample sizes influence the robustness of the higher-order interactions. The interpretation provided should be used with caution.

6.6 The Importance of Type of Daily Stressors

Clearly, and in line with previous literature (Almeida, 2005; Almeida, Stawski, & Cichy, 2011; Stawski, Sliwinski, Almeida, & Smyth, 2008), not all daily social stressors are created equal. Importantly, this study found that influences on SRA and modulation by stressor characteristics did not reveal comparable patterns across the three types of daily social stressors. For example, while arguments showed interactions between stressor characteristics for predicting SRNA, there were no interactions with the individual difference characteristics like there was for avoided arguments and network stressors. Qualitatively, arguments, avoided arguments, and network stressors represent different stressor experiences. The type of daily social stressor

experienced provides nuanced information into potentially differential associations with health and well-being. Thus, as previous research has suggested (Almeida et al., 2011), it is important to disambiguate daily stressors to understand their unique characteristics and influences.

6.7 Asymmetric SRNA and SRPA Results

Each hypothesis predicted a significant increase in SRNA and a significant decrease in SRPA that was moderated by the daily stressor characteristics. Contrary to expectations, SRPA was not related to all characteristics. Previous research has been mixed on the associations with daily stressors and SRPA (Rocke, et al., 2009; Stawski et al., 2008; Watson, 1988). SRPA has multifaceted associations with daily stress processes and this study was an attempt to explore *what* may be related to these mixed associations. Further, the different pattern of results observed for SRNA and SRPA complements previous literature and theoretical models suggesting that NA and PA are separate constructs (Watson, Clark, & Tellegen, 1988) with unique contributions to daily stress research. Importantly, the lack of focus on SRPA in the field is concerning as over a decade ago Zautra and colleagues (2005) discussed SRPA as a missing piece to stressor-related research. This line of thinking should be extended to more constructs outside of the daily stress literature (e.g., the role of positive and negative affect in self-regulation; Tice, Baumeister, & Zhang, 2004) and should be critically explored with relation to other types of daily stressors (e.g., work, home overloads), to better understand (in)congruence of daily stressor-affect associations.

6.8 Limitations

Several limitations of this study should be acknowledged when considering the results of this study. First, this study combined multiple options of who was involved into two categories – family and non-family. While this maintained larger cell sizes for statistical power, it glossed

over the nuance of who, specifically, was involved in the stressor. For example, a spousal argument may increase levels of SRNA more than an argument with a pet. Thus, this study is limited in its ability to speak about nuances regarding which particular family or non-family member of the respondent's social network for differentiating associations with SRA.

Second, resolution status was a one-item, one-time point measure, simply asking, "Has this stressor been resolved?" Little is known about what individuals mean when they classify a stressor as resolved or unresolved. As this study provided a subjective qualification of stressor resolution, each individual may consider resolution as something different. For example, one person may define arguments resolved when the actual argument has ended, even if the affective impact is still felt. Another person, however, may consider resolution achieved when they are no longer experiencing affective impact from the event. Further, because resolution was only provided for at one point in the day (i.e., end-of-day), this study could not explore the progression of resolution in a temporal space and thus cannot explore time-dependent stress processes at a more micro-level.

Skip logic developed in the NSDE II additionally may have limited the scope of results. Within the study, the stressor characteristics were only assessed if an individual reported daily stressors of a minimum severity level. Thus, this skip logic yields an incomplete picture of the range of daily stressors people experience for understanding the importance of these stressor characteristics. Lastly, while a representative sample of the United States, MIDUS and NSDE are focused on midlife. The distribution of age is normal, meaning data from relatively younger and older adulthood respondents was comparatively sparse. Further, focused age range of MIDUS and NSDE makes it difficult to generalize to other cohorts (Roscow, 1978; Ryder, 1997), generations (Mannheim, 1997), and periods of life other than midlife.

6.9 Implications and Future Directions

Implications. The findings of this study indicate that daily stressor-affect associations depend on both characteristics the individual is (e.g., age and gender) and the stressor experienced (e.g., type, who is involved, resolution status). Interventions and initiatives that focus on daily stress as a risk or vulnerability factor for health may benefit from this study by considering both *who* and *what* to target to mitigate the impact of daily stressors. For instance, based on the current results, females and older individuals appear to have significantly greater SRNA on days when they encounter unresolved, non-family arguments. This may represent a candidate constellation of characteristics associated with increased daily stressor-related health vulnerabilities. Moreover, the results of this study suggest a necessity for the joint consideration of person- and context- centered approaches to interventions and initiatives when focusing on daily stressors. Further, results from this study suggest that the subjective indication of resolution does not equate to the absence of a significant affective reaction. Thus, it may be that complementary strategies for facilitating resolution and downregulation of affect despite resolution or who is involved are candidate pathways for mitigating daily social stressor-affect associations.

As previously noted, this study is one of few that examines how both *who* the individual is and *what* they are experiencing may influence daily stressor – affect associations in conjunction. It is important to note that Almeida’s (2005) DSPM states that the individual difference characteristics, age and gender, are termed resilience and vulnerability factors. Often, research equates age and gender as these resilience or vulnerability factors (Charles et al., 2009; Charles, 2010; Almeida, 2005), however, this study indicates that these individual difference characteristics do not have symmetric associations with daily stress processes across type of

stressor, resolution status, and who is involved. Thus, it is imperative to acknowledge the differences between individual difference characteristics on daily stressor-affect associations that are moderated by what the stressor characteristics in order to ascertain a comprehensive understanding of how daily stress might influence health and well-being. Moreover, previous research has utilized aggregate indices for daily stress, focusing on whether the daily stressor has occurred or not. As this study suggests, research doing this aggregation may miss important nuanced information about defining factors of daily stressors (e.g., who is involved and resolution status) that modify the effects of stressor-affect associations.

Future directions. The goal of this study was to examine the characteristics of daily social stressors, individual difference characteristics, and the associations these characteristics have with SRA. This study provides novel evidence to suggest reducing daily social stressors to an index indicating whether any stressor, or other reductionist indices ignores potentially important information about daily stressors, daily stress processes, and individual differences therein (see also Stawski et al., 2019). Instead, each type of daily social stressor provides nuanced information important to understanding the effects of daily social stressors on SRA.

From the theoretical perspective of Bronfenbrenner (2005), it is imperative to explore associations between the individual and the environment (person x context). As previously mentioned, *who* and *what* are not mutually exclusive dimensions in the context of daily stressor-affect associations. This research was a first step in examining individual difference characteristics of the individual and the context of the daily stressor environment to explain changes in SRA; however, there is more work to be done. Importantly, the variety of associations suggested that daily stress is multidimensional and complex. Had the experience of each daily social stressor been the same, results would have shown comparable levels of SRA. Thus, it is

essential for future research to continue exploring such associations to produce a more fine-grained account of *who* and *what* makes some daily stressors more potent to changes in SRA.

This study focused on the individual difference characteristics age and gender that influence associations between stressor-affect associations; however, as seen in the DSPM, there are a number of resilience and vulnerability factors that may influence stressor-affect associations (Almeida, 2005). Additionally, the “feedback loop” seen in the model, suggests that there may be bidirectional relationships between both the *who* and the *what* of daily stressor-affect associations. Particularly, future research should explore how an array of individual difference characteristics such as race, income, health conditions, may both affect stressor-affect associations and be affected by stressor-affect associations.

Moreover, this study begins to elucidate *what* makes some daily social stressors more potent than others. For some types of daily social stressors, who was involved exacerbated SRNA. However, future work should expand this research to explore more than just family and non-family involved daily social stressors; instead, a focus should be on exploring daily social stressors with particular individuals (e.g., spouse, colleague, pastor). Additionally, exploring what makes who is involved potent, whether it is the quality of the relationship with a social network member, the frequency of contact, or other characteristics in the social network that may modify the associations.

As resolution status showed an effect on some of the daily social stressors, a more thorough examination into resolution should be explored. It may be that resolution is part of the coping process or it may be a proxy for regulatory processes. No research to date, however, has explored these possibilities. Additionally, because resolution seems to decrease the associations between arguments and SRA and avoided arguments SRNA, it may be that certain types of daily

stressors may be more influential and candidate targets for intervention to reduce daily stress effects on long-term health and well-being (Smyth, et al., 2018). While the status of resolution and the effect it has on SRA is an important one, resolution did not fully suppress the effect of stressor exposure. Resolution may be qualitatively defined differently on an individual level, or it may be a part of the coping process. Future research should explore the meaning and utility of resolution in other areas of health and well-being.

Importantly, as previously noted, resolution status did not completely mollify the effect of daily stressors on SRA. Future research should explore the effects of resolution status on next day SRA in order to ascertain the extent to which resolution status affects well-being. It may be that unresolved daily stressors impart larger associations on SRA the next day compared to resolved daily stressors. Reactions to daily stress may mediate the effects of stress on health (Cacioppo, 1998); research has suggested that these reactions, when they linger into the next day are associated with greater chronic conditions up to ten years later (Leger, Charles, & Almeida, 2018). It is imperative to explore what characteristics of daily stressors may exacerbate these associations.

Additionally, as severity of daily stressors is associated with SRA (Scott, Sliwinski, & Blanchard-Fields, 2013), it will be important in future work to explore the associations between resolutions status, who is involved, and how severe the daily social stressor was reported to be and further, how these associations influence short-term and long-term health and well-being outcomes. In conjunction with severity, research should expand to a more qualitative view of daily stressor types in order to understand what in the daily stressor is occurring. For example, a member in an individuals' social network dying, versus having financial trouble. This may

provide researchers the ability to compare daily social stressors comprised of different characteristics.

Future research should explore the associations between type of stressor, who is involved, resolution status, and SRA to an ecological momentary assessment space. While the current study provides a nuanced understanding of the daily stress processes through same day stressor characteristics and SRA, ecological momentary assessments of daily social stress processes and their characteristics may allow for a more apt understanding of the duration of these processes, and the influence on SRA directly following the encounter and sometime afterward. Thus, future directions should explore the next day associations on affective reactivity in order to ascertain next day and longer-term associations that may influence health and well-being.

Finally, research has suggested that affective responses to daily stress is a catalyst that is associated with worse health and well-being outcomes both short-term and long-term (Bolger et al., 1989; Charles et al., 2013; Grzywacz et al., 2004; Mroczek et al., 2015; Piazza et al., 2013; Sliwinski et al., 2006; Stawski et al., 2019). While this research provides a first step in examining the relation between the characteristics of stressors and affect, research should additionally pursue the possible moderating effect between daily stressor characteristics, daily stressors, and health and well-being outcomes. Particularly of interest may be chronic health symptoms, mental health, and cognitive health as research has suggested daily stress impacts these outcomes (Charles et al., 2012; Piazza et al., 2012; Stawski et al., 2019).

CHAPTER 7: CONCLUSION

Previous research has emphasized the importance of daily stress processes for health and well-being (Almeida, 2005; Kanner et al., 1981; Stawski et al., 2008). Clearly, daily stress has an impact on both short-term and long-term health and well-being outcomes (Bolger et al., 1989; Stawski et al., 2019; Grywacz et al., 2004; Mroczek et al., 2015); however, few studies examine the characteristics that make these daily stressors potent to outcomes. The current study expanded the literature on daily stress to consider how characteristics of daily social stressors and individuals interact to predict daily affect. Overall, results suggested that type of stressor, who is involved and resolution status matter – but associations varied for each characteristic. Additionally, gender- and age-interactions with stressor characteristics predicting SRA were stressor-specific, not generalizable across daily social stressors as previously suggested. This study provides a nuanced exploration to relatively understudied characteristics contributing to daily stress processes. The findings in this study articulate the unique contribution of diverse daily social stressors and their characteristics on SRA.

It is particularly important to acknowledge is that daily social stressors are not created equal, in type of stressor, in who is involved, or in resolution status. This study is novel by examining the role of non-family in addition to family-involved daily social stressors, and the first to explore the role of resolution status daily social stressor-affect associations. For some daily social stressors these characteristics may be more potent – thus articulating *what* makes some daily social stressors more potent. For some of these characteristics, however, *who* encountered these daily social stressors can also modulate these associations. Notably, *who* and *what* matter, as does their intersection. This study provided evidence to explain who may be more reactive to what daily social stressors; however, more research is necessary to explore the

multifaceted area of daily stress and their characteristics. Future research should focus on understanding the meaning behind daily stressor characteristics and qualifying how these meanings may vary by person and context.

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Appendix A.
Measures

Negative Affect.

Note: These questions were asked via telephone interview.

The next questions are about your mood today.

How much of the time today did you feel RESTLESS OR FIDGETY?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel NERVOUS?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel WORTHLESS?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time were you so SAD that nothing could cheer you up?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel that EVERYTHING was an EFFORT?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel HOPELESS?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time

0. None of the time

How much of the time today did you feel LONELY?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel AFRAID?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel JITTERY?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel IRRITABLE?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel ASHAMED?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel UPSET?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel ANGRY?

4. All of the time

- 3. Most of the time
- 2. Some of the time
- 1. A little of the time
- 0. None of the time

How much of the time today did you feel FRUSTRATED?

- 4. All of the time
- 3. Most of the time
- 2. Some of the time
- 1. A little of the time
- 0. None of the time

Positive Affect.

Note: These questions were asked via telephone interview.

How much of the time today did you feel in good spirits?

- 4. All of the time
- 3. Most of the time
- 2. Some of the time
- 1. A little of the time
- 0. None of the time

How much of the time today did you feel cheerful?

- 4. All of the time
- 3. Most of the time
- 2. Some of the time
- 1. A little of the time
- 0. None of the time

How much of the time today did you feel extremely happy?

- 4. All of the time
- 3. Most of the time
- 2. Some of the time
- 1. A little of the time
- 0. None of the time

How much of the time today did you feel calm and peaceful?

- 4. All of the time
- 3. Most of the time
- 2. Some of the time
- 1. A little of the time
- 0. None of the time

How much of the time today did you feel satisfied?

- 4. All of the time
- 3. Most of the time

2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel full of life?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel close to others?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel like you belong?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel enthusiastic?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel attentive?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel proud?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel active?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

How much of the time today did you feel confident?

4. All of the time
3. Most of the time
2. Some of the time
1. A little of the time
0. None of the time

Daily Inventory of Stressful Experiences.

Note: These questions were asked via telephone interview.

Interviewer: The next questions are about stressful experiences that may have happened to you since (this time/we spoke) yesterday.

First, did you have an argument or disagreement with anyone since (this time/we spoke) yesterday?

1. Yes
2. No → Skip to next probe question

Since (this time/we spoke) yesterday, did anything happen that you COULD have argued about but you decided to LET PASS in order to AVOID a disagreement?

1. Yes
2. No → Skip to next probe question

Since (this time/we spoke) yesterday, did anything happen at work or school (other than what you've already mentioned) that most people would consider stressful?

1. Yes
2. No → Skip to next probe question

Since (this time/we spoke) yesterday, did anything happen at home (other than what you've already mentioned) that most people would consider stressful?

1. Yes
2. No → Skip to next probe question

Many people experience discrimination on the basis of such things as race, sex, or age. Did anything like this happen to you since yesterday?

1. Yes
2. No → Skip to next probe question

Since (this time/we spoke) yesterday, did anything happen to a close friend or relative (other than what you've already mentioned) that turned out to be stressful for YOU?

3. Yes
4. No → Skip to next probe question

Did anything ELSE happen to you since (this time/we spoke) yesterday, that people would consider stressful?

1. Yes
2. No → Skip to next probe question

Who is Involved

Note: These questions were asked via telephone interview.

Regarding Argument:

Think of the most stressful disagreement or argument you had since (this time/we spoke) yesterday. Who was that with? [Choose one only. If necessary: "Who was the most stressful disagreement with?"]

1. Spouse or Partner (include ex-)
2. Child or grandchild (include step-)
3. Parent (include step-)
4. Sibling (include step-)
5. Other relative (include in-laws)
6. Friend
7. Neighbor
8. Coworker or Fellow student
9. Boss or Teacher
10. Employee or Supervisee
11. Other (specify)
12. Stranger
13. Religious group member (including minister)
14. Self-Help group (AA, therapist, counselor)
15. Client/Patient/Customer
16. Groups
20. Landlord/Realtor
21. Family (General)
22. Pets
23. Doctors/Nurses/Health Professionals
24. Home related people/companies (repairment, contractors, utilities)
25. No one else involved.

Regarding Avoided Argument:

Think of the most stressful incident of this sort. Who was the person you decided not to argue with?

1. Spouse or Partner (include ex-)

2. Child or grandchild (include step-)
3. Parent (include step-)
4. Sibling (include step-)
5. Other relative (include in-laws)
6. Friend
7. Neighbor
8. Coworker or Fellow student
9. Boss or Teacher
10. Employee or Supervisee
11. Other (specify)
12. Stranger
13. Religious group member (including minister)
14. Self-Help group (AA, therapist, counselor)
15. Client/Patient/Customer
16. Groups
20. Landlord/Realtor
21. Family (General)
22. Pets
23. Doctors/Nurses/Health Professionals
24. Home related people/companies (repairment, contractors, utilities)
25. No one else involved.

Regarding Network Stressor:

Think of the most stressful incident of this sort. Who did this happen to?

[If necessary: What relation is this person to you?]

[If necessary: Who did the MOST STRESSFUL incident of this sort happen to?]

1. Spouse or Partner (include ex-)
2. Child or grandchild (include step-)
3. Parent (include step-)
4. Sibling (include step-)
5. Other relative (include in-laws)
6. Friend
7. Neighbor
8. Coworker or Fellow student
9. Boss or Teacher
10. Employee or Supervisee
11. Other (specify)
12. Stranger
13. Religious group member (including minister)
14. Self-Help group (AA, therapist, counselor)
15. Client/Patient/Customer
16. Groups
20. Landlord/Realtor
21. Family (General)
22. Pets
23. Doctors/Nurses/Health Professionals

24. Home related people/companies (repairment, contractors, utilities)
25. No one else involved.

Severity.

How stressful was this for you?

3. Very
2. Somewhat
1. Not Very
0. None at all → Skip to next stressor probe.

Resolution.

Is the issue resolved?

1. Yes
2. No