

Intercultural Couples' Stress: Impact of Dyadic Coping on Relationship Satisfaction

by

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ABSTRACT

Intercultural couples -partners from two different countries- may face increased levels of stress within their relationship (internal stress). Internal stress can negatively impact relationship satisfaction, whereas developing healthy ways to cope (dyadic coping; DC) can lower stress levels and improve relationship satisfaction (e.g., Bodenmann, 2005). Specifically, it may be important for partners to perceive that their partner as supporting them during times of stress through engaging in DC. This study examined whether intercultural couples experience internal stress and what effects, if any, perceived partner engagement in DC had on their reported relationship satisfaction. Cross-sectional data was gathered from 85 couples and was analyzed using Actor-Partner Interdependence Models (APIMs; Kenny & Cook, 1999). Separate APIMs were conducted to examine the association between the independent variables (perceived partner engagement in: positive DC, negative DC, delegated DC, and supportive DC) and the outcome variables of internal stress and relationship satisfaction, while controlling for years each partner lived in their country of birth, average and differences on identification with individualism-collectivism values and behaviors, and if partners did or did not identify as the same race and/or ethnicity. Additionally, APIMs of internal stress on relationship as moderated by perceived partner positive and negative DC were conducted. Results showed significant associations of all independent variables on internal stress and relationship satisfaction. There were no significant interactions between internal stress and DC on relationship satisfaction. Implications for relationship researchers and mental health professionals working with intercultural couples are discussed.

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CHAPTER 1

PROBLEM IN PERSPECTIVE

Reported levels of stress in the United States are slowly decreasing, however, these levels are still higher than what is considered healthy according to the recent American Psychological Association's report on stress in America (APA, 2015). Stress has been shown to have negative effects on both individual (Lazarus, 1999) and relational (Randall & Bodenmann, 2009) well-being. Specifically, stress can impact one's romantic relationship by minimizing the time partners spend together and lowering communication quality (Bodenmann, 2005). However, not all couples may experience the negative effects of stress to the same degree, especially if they are coping with stress in a healthy and supportive manner, specifically by engaging in dyadic coping (Bodenmann, 2005). Intercultural couples -partners from two different countries- may face more stress due to their cultural differences, which may account for their higher divorce rates than intracultural couples (Fu, Tora, & Kendall, 2001), need for more adjustment to the relationship in many areas, with communication being one example (Bhugra & De Silva, 2000), and creation of a new cultural code within the dyad (Crippen & Brew, 2013).

One factor accounting for the increased rates of stress in intercultural couples is the unique task they face in accommodating to each other's cultural ideas and beliefs (Bhugra & De Silva, 2000; Bustanmante et al., 2011; Hsu, 2001). For example, partners may have different cultural expectations about how much each partner's family should be involved in their decisions and life (Biever et al., 1998; Bustanmante et al., 2011; Crippen & Brew, 2013; Hsu, 2001; McGoldrick & Preto, 1984; Seshadri & Knudson-Martin, 2013), which could be a reflection of different individualistic versus collectivistic cultural

orientations (Triandis, 1988). Irrespective of these differences, partners are encouraged to work together to come to a solution that respects each partner's cultural heritage (Hsu, 2001).

As culture is a broad statement that encompasses many factors such as “beliefs, values, and behaviors, and is often associated with race, ethnicity, religion, and other factors” (Hsu, 2001, p. 225), defining who comprises an “intercultural couple” has been challenging for many researchers (for a discussion see Sullivan & Cottone, 2006). Prior research studies that have focused on intercultural couples have included partners who are characterized “by greater differences between partners in a wider variety of areas, with race, religion, ethnicity, and national origin being the primary factors” (Sullivan & Cottone, 2006, p. 222). However, to date, a majority of literature has ignored intercultural couples wherein both partners may identify as a similar race, but come from different cultural backgrounds. This would include, for example, partners that both identify as Asian, but one partner is from the U.S. and the other is from China. Couples who have racial differences as well as cultural differences, tend to attribute differences within their relationship to culture, more than to race or ethnicity (Seshadri & Knudson-Martin, 2013). Additionally, cultural differences and racial and/or ethnic differences may not always present the same challenges (Hyejin, Prouty, & Roberson, 2012). As such, it may be important to control for differences in race and/or ethnicity among intercultural couples. For the purpose of this study, intercultural couple will be defined as two partners who may or may not be racially and ethnical similar, but originally come from two different nations.

Marriages between intercultural partners are growing in the United States (Pew Research Center, 2012). However, as noted before, stress can have deleterious effects on intercultural couples' relationship satisfaction and relationship longevity (Bustanmante et al., 2011; Crippen & Brew, 2013; Hsu, 2001; Fu et al., 2001; Seshadri & Knudson-Martin, 2013). Given this, it is important for relationship researchers and clinicians working with couples to understand how intercultural partners cope together with stress. The goal of this study is to understand the types of stressors intercultural partners experience and how they perceive their partner helping them to cope with these stressors. Specifically, this study aims to identify how intercultural couples cope with stress in the context of their relationship (dyadic coping; Bodenmann, 2005) and understand what impact, if any, dyadic coping behaviors may have on partners' reported relationship satisfaction.

Intercultural Couples' Stress

Previous research on couples, who may or may not identify as intercultural, has identified that stress can originate from outside (external) or inside (internal) the dyad (Randall & Bodenmann, 2009). External stressors, while they may be faced by the couple together, involve things outside the relationship, such as each partner's career or conflicts with neighbors or family members. Internal stress focuses more on conflicts within the relationship and between partners (Bodenmann, 2005). For the purpose of this study, only internal stress will be examined as some research has shown internal stress has a greater impact on relationship satisfaction among romantic partners (Bodenmann, Ledermann, & Bradbury, 2007). Additionally cultural differences between partners may play a bigger role within the relationship as suggested by a case study with an intercultural couple

(Hyejin, Prouty, & Roberson, 2012) and interviews with intercultural couples (Crippen & Brew, 2013). Specifically, the authors argue that cultural differences can affect how partners communicate and interact with each other, which raises tension within the couple (Crippen & Brew, 2013; Hyejin, Prouty, & Roberson, 2012). While research on dyadic coping among intercultural couples is limited (for exceptions see Falconier, Randall, & Bodenmann, 2016), previous research on intercultural couples and stress suggests that some sources of internal stress may include: different attitudes concerning their relationship and life, different habits of partners, insufficient behavior of partners, and unsatisfactory distribution of household duties and responsibilities (Bodenmann, 2005).

While some couples, intercultural or otherwise, may have different attitudes related to their relationship, intercultural couples may have more differences because of their cultural differences and expectations (Hsu, 2001). One of the major areas for intercultural couples is disagreement about rituals, customs, and celebrations of holidays or other important events (Crippen & Brew, 2013). Intercultural couples may also place different levels of importance on how to express affection, both privately and publically (Biever et al., 1998; McGoldrick & Preto, 1984). Additionally, intercultural couples may face internal stress related to unsatisfactory distribution of household duties and responsibilities (Bustanmante et al., 2011; Crippen & Brew, 2013; Falconier, 2013; Seshadri & Knudson-Martin, 2013). Intercultural couples may disagree on who will be primarily responsible for handling finances and supporting the family financially (Crippen & Brew, 2013; Seshadri & Knudson-Martin, 2013), cooking and cleaning (Bustanmante et al., 2011; Crippen & Brew, 2013; Seshadri & Knudson-Martin, 2013),

and taking care of the children (Bustamante et al., 2011; Crippen & Brew, 2013). Taken together, these areas of stress may be associated with partners' gender role expectations (Bustamante et al., 2011).

Couples may also experience stress due to partner's insufficient communication (Bodenmann, 2005). Intercultural couples may deal with stress in different ways from their partner because of cultural norms (Biever et al., 1998) or have different ideas of how to handle arguments (McGoldrick & Preto, 1984). Additionally, if their shared language is not one or both of the partner's first language, they might face communication difficulties through the nuance of words (Biever et al., 1998; Bustamante et al., 2011; Bhugra & De Silva, 2000; Crippen & Brew, 2013; Hsu, 2001) and nonverbal gestures and cues (Bhugra & De Silva, 2000).

A unique area of stress for intercultural couples involves stereotypical beliefs and social stigmas. Partners may enter the relationship with preconceived notions of how their partner will act according to cultural stereotypes. By expecting their partner to act in a certain way, they may be placing unrealistic and insensitive expectations upon their partner (Hsu, 2001). For example, partners may have different ideas about sex expectations (Biever et al., 1998; McGoldrick & Preto, 1984). Intercultural couples may also differ in their time orientation such as, how long each partner spends on personal activities in relation to family time or what time is appropriate to arrive at an event (McGoldrick & Preto, 1984; Seshadri & Knudson-Martin, 2013). Partners may also have different expectations for appropriate social behavior in general (Biever et al., 1998; Bustamante et al., 2011; McGoldrick & Preto, 1984).

Previous research suggests that couples may still experience stress years after the stressor occurred. For example, in a study examining stress of Latino couples, couples experienced stress related to immigration, even up to 13 years after they had immigrated and had been living in the United States (Falconier et al., 2013). Other research with couples who may or may not identify as intercultural has suggested that chronic stressors (e.g., stress over the last 12 months) may have a greater impact on relationship satisfaction (Bodenmann, 2005). This suggests it may be important to examine stress over time in intercultural couples' relationships. For the purpose of this study, while cross-sectional data will be collected, participants will be asked about stress within their relationship over the last 12 months.

Cultural differences among intercultural partners. Researchers have aimed to understand the cultural differences among intercultural couples with a number of psychological constructs. One of the most frequently examined constructs is individualism and collectivism orientation (Triandis, 2001). Broadly defined, individualism and collectivism refer to a cultural construct in which individuals from collectivist cultures may be more “interdependent within their in-groups (family, tribe, nation, etc.)” (Triandis, 2001, p. 909) whereas individuals from individualistic cultures may be “autonomous and independent from their in-group” (Triandis, 2001, p. 909). Partners with collectivistic orientations may place more emphasis on the good of the relationship, rather than on their individual needs. Partners with collectivistic orientations may also be more concerned with maintaining relationships and may want to avoid conflict (Kim & Kitani, 1988; Triandis, 2001). Conversely, partners with individualistic orientations may be more likely to focus on their individual goals and priorities. Partners

with individualistic orientations may base their behavior more on their own feelings, rather than the norms established by the group (Kim & Kitani, 1988; Triandis, 2001). It could be expected that couples who differ in terms of identification with individualistic and collectivistic beliefs and values may experience stress. Specifically, when facing a stressor, partners from more collectivistic cultures may be more willing to engage in strategies that preserve the relationship (Triandis, 2001), such as compromising or mediation (Ting-Toomey & Korzenny, 1991; Triandis, 2001). Conversely, partners from individualistic cultures may engage in more discussion and problem solving when facing arguments (Ting-Toomey & Korzenny, 1991). In a study examining marriages between partners wherein one identified more with an individualistic culture and the other identified more with a collectivistic culture, both partners reported that knowing cultural differences may be contributing to how they were handling the stressor encouraged them to speak openly about their cultural beliefs related to the situation (Hayashi, 2010). Although there is a dearth of research investigating couples in which one partner identifies as from an individualistic culture and the other from a collectivistic culture, prior research findings suggest that it is important to control for differences in identification with individualistic or collectivistic values and behaviors as if partners identify differently (Hayashi, 2010) as this may impact the degree of stress they experience and their subsequent coping behaviors.

Coping with Stress: The Systemic-Transactional Model

Stress is typically thought of as an individual phenomenon, wherein one person is affected by a stressful event (Hill, 1958). Expanding upon Lazarus and Folkman's (1984) stress theory that posits situations only become stressful once an individual subjectively

appraises it as being stressful, researchers have begun to examine stress as a dyadic construct (Bodenmann, 1995, 2005). According to the Systemic Transactional Model (STM; Bodenmann, 1995, 2005), experiences of stress and coping are considered dyadic constructs that affect both partners in a romantic relationship (Bodenmann, 1995, 2005). The notion of dyadic stress takes into consideration the interdependence between partners, such that the experience of stress for one partner can spill-over into the relationship causing stress for both partners (Neff & Karney, 2007), because both partners appraise and respond to the stressful situation together (Bodenmann, 2005; see Appendix A for conceptual models). The STM has been applied to couples' relationships across the world and is unique in that it views culture as part of the contextual factors that may affect the coping process (Falconier, Randall, & Bodenmann, 2016). The STM has been used to understand how couples cope with stress in a variety of contexts, such as dealing with minor stressors like school and work stress (e.g., Kardatzke, 2010), as well as major stressors such as coping with a partner's chronic illness (e.g., Berg & Upchurch, 2007).

Coping with Stress: Dyadic Coping

Based on the STM (Bodenmann, 1995), dyadic coping (DC) describes how romantic partners cope with stress (Bodenmann, 2005). Certain types of DC have been shown to be effective in dealing with stress between partners by increasing relationship satisfaction (Falconier et al., 2015), improving communication between partners (Bodenmann, 2005), improving marital quality among married couples, and increasing feelings of "togetherness" (Bodenmann, Pihet, & Kayser, 2006). Intercultural couples may face higher levels of stress than partners from the same culture (Biever et al., 1998;

Bustanmante et al., 2011; Crippen & Brew, 2013; Hsu, 2001), which can lead to decreased relationship satisfaction (Bodenmann et al., 2007). Since DC has been shown to affect stress between partners, it is important to understand how intercultural couples perceive and cope with stress, both positively and negatively (Appendix B).

Positive dyadic coping (DC). Positive DC generally refers to when one partner helps their partner cope with a stressor in healthy ways (Bodenmann, 2005). Three types of positive DC have been identified in the literature: supportive (problem- and emotion-focused) DC, delegated DC, and common (problem- and emotion-focused) DC. Generally, problem-focused DC refers to coping directly with the actual stressor, while emotion-focused DC refers to coping with emotions related to the stressor. Partners using supportive DC may help each other by giving advice or suggesting solutions, expressing solidarity, being empathic, understanding, and supportive, and reframing the situation. Delegated DC describes when one partner tries to help the other by assuming a responsibility to help reduce their partner's stress levels. Delegated DC also occurs when partners directly asks their partner for support. Common DC refers specifically to when partners are coping together with stress, such as problem-solving, seeking additional information, and sharing their commitment to each other and relaxing together. Engagement in DC allows partners to work though the problem together or to at least reduce their stress level. Couples who engage in positive DC work together to support each other, find solutions to the stressor, and help to lower each other's stress level (Bodenmann, 2005).

While previous research on intercultural couples engaging in DC is limited, previous research on intercultural couples has shown intercultural couples using elements

of positive DC when facing internal stress (Bustanmante et al., 2001; Hsu, 2001; Seshadri & Knudson-Martin, 2013; Silva et al., 2012). For example, intercultural couples – partners representing two different nationalities with or without differences in race- who were able to view their differences in ideas, values, or opinions as a positive attribute to the relationship by being flexible, respectful, and understanding of the other’s cultural background, were able to see that their cultural differences were less important than who their partner was as a person. They tended to view cultural differences as an attraction and a tool through which to learn more and support each other (Bustanmante et al., 2001; Hsu, 2001; Seshadri & Knudson-Martin, 2013; Silva et al., 2012). Overall, these steps taken by intercultural couples to increase each partner’s awareness and understanding of the other partner’s cultural background to support each other fits with a positive DC approach.

Negative dyadic coping. Negative DC generally refers to partners coping in unhealthy ways and can take one of three forms: hostile, ambivalent, and superficial (Bodenmann, 2005). When facing internal stress, partners using a hostile DC approach may minimize the stressful situation or their partners’ feelings, mock their partner, refuse to take an interest in their partner’s stress, or distance themselves from the partner. Ambivalent DC refers to situations when partners do not support each other willingly, but may believe the partner should be able to handle the stress on his/her own. Superficial DC describes how partners show support without really meaning it by not being sincere, empathic, or not actively listening (Bodenmann, 2005). While negative DC has not been measured specifically among intercultural couples previously, behaviors associated with negative DC have been shown. For example, in one study examining couples with

differences in racial identification, partners engaged in more minimizing of their partner's problems when the problems did not seem as important to the other partner from their cultural standpoint (Leslie & Letiecq, 2004).

Positive and negative DC have been examined in three ways: the way the individual engages in DC, the way the individual perceives their partner as engaging in DC, and the way the couple engages in DC together. For the purpose of this study, perceived partner engagement in types of DC will be used as previous research has suggested that perceived partner DC shares a stronger association with relationship satisfaction than individual coping by oneself (Bodenmann, 2000; Falconier et al., 2015). Specifically, how partners believe their partner is helping them to cope with stress may have more impact on relationship satisfaction than how the individual is coping with stress (Falconier et al., 2015). By looking at perceived partner engagement in DC, results will highlight how partner A's perceptions of partner B's engagement in DC, and vice versa, can affect reported internal stress levels and relationship satisfaction. As this study will only examine perceived partner engagement in DC, only supportive and delegated DC will be examined, as common DC refers specifically to how partners are coping together and does not include an aspect of perceived partner engagement.

Impact of dyadic coping on relationship satisfaction. Engaging in positive DC when facing internal stress has been associated with greater relationship satisfaction in cross-sectional and longitudinal studies, whereas engaging in negative DC has been associated with less relationship satisfaction (Bodenmann, 2005; Bodenmann, Pihet, & Kayser, 2006; Falconier et al., 2015; Hinnen et al., 2008; Papp and Witt, 2010). Engaging in positive DC can result in more communication, positive reframing, and lower stress

levels, which in turn, increase relationship satisfaction (Bodenmann, 2005). In a meta-analysis examining dyadic coping across various types of couples, including those who may or may not identify as intercultural, it was found that dyadic coping and relationship satisfaction have a significant relationship, regardless of the methodology of the study (Falconier et al., 2015).

Previous research found that intercultural couples who had higher levels of communication about their cultural beliefs (Hsu, 2001; Silva, et al., 2012), reframed their different cultural beliefs (Seshadri & Knudson-Martin, 2013), and communicated openly about how each partner dealt with stress (elements of positive DC) reported greater relationship satisfaction (Hsu, 2001; Silva et al., 2012). The authors posit that these positive effects were due to the couples realizing stress came from cultural differences, not from the relationship itself (Hayashi, 2010; Hsu, 2001; Hyejin et al., 2012; Sheshadri & Knudson-Martin, 2013; Silva et al., 2012). Conversely, intercultural couples who do not explore each other's cultural beliefs or refuse to honor the other partner's culture (elements of negative DC) when dealing with stress, may experience lower relationship satisfaction (Fu et al., 2001; Hsu, 2001). In sum, while elements of DC have been studied in intercultural couples, such as reframing (Seshadri & Knudson-Martin, 2013) and ignoring or minimizing problems (Fu et al., 2001; Hsu, 2001), to our knowledge there is no study examining how intercultural couples may perceive their partners engaging in DC when facing internal stress. Examining the extent to which intercultural couples perceive their partner engaging in DC and its potential impact on relationship satisfaction is an important area for future research due to the higher likelihood of divorce in these couples (Fu et al., 2001; Hsu, 2001).

Present Study

The goal of the present study was to examine how intercultural couples -partners from two different countries- perceive their partners engaging in DC when facing internal stress in their relationship and what effects, if any, this may have on reported relationship satisfaction. Specifically, the aim of this study was to examine the following research questions (RQ) and hypotheses (H):

RQ 1: What are the reported levels of internal stress for intercultural couples?

RQ 2: To what extent do intercultural couples perceive their partner as engaging in dyadic coping?

H2a: Intercultural couples who perceive their partner engaging in positive dyadic coping will report lower levels of stress.

H2b: Intercultural couples who perceive their partner engaging negative dyadic coping will report higher levels of stress.

RQ 3: We aim to replicate prior research that has shown a positive association between positive DC and relationship satisfaction (e.g., Falconier, Jackson, Hilpert, & Bodenmann, 2015). Specifically, it is hypothesized:

H3a: Intercultural couples who perceive their partner as engaging in positive dyadic coping will report higher relationship satisfaction whereas, those who report higher perceived partner engagement in negative dyadic coping will report lower relationship satisfaction.

H3b. Dyadic coping will moderate the relationship between internal stress and relationship satisfaction among intercultural couples. Specifically, internal stress will not have as great of impact on relationship satisfaction

when partners perceive more partner engagement in positive dyadic coping. The opposite is predicted for negative dyadic coping, such that internal stress will have a stronger impact on relationship satisfaction when partners perceive more partner engagement in negative dyadic coping.

CHAPTER 2

METHOD

Recruitment and Participants

Participants were recruited from across the United States via Listservs (e.g., university counseling programs Listservs), Facebook (e.g., university and community cultural groups and clubs), distribution of flyers at and emails to cultural centers and events (e.g., Christkindlmarkt and Irish Heritage Celebration), and at a large southwestern university. Participants had to meet the following criteria to participate: (1) over the age of 18, (2) partners were born in two different countries, (3) were in a heterosexual relationship with their current partner for at least 6 months, (4) self-identify as an intercultural couple, and (5) both partners were willing to participate.

One hundred and fifty-seven interested couples contacted the researcher and of them, 41 couples did not meet screening requirements. Data were collected from the remaining 116 couples, and of this number, 31 couples were removed from final analyses due to incomplete data (i.e., only one partner completed the survey). The final sample was comprised of 85 couples ($n = 170$ individuals). Ages ranged from 18 to 79 years old ($M_{men} = 35.21$, $SD = 13.38$, $M_{women} = 32.14$, $SD = 12.37$).

In this sample, 61.8% of participants identified as White/European American, 16.5% identified as Asian/Asian-American, 11.2% identified as Hispanic/Latino(a), 8.2% as other, and 2.4% identified as Black/African-American. Thirty-eight couples (44.71%) reported they identified as the same race or ethnicity, and 47 (55.29%) reported partners identified as different races and ethnicities (See Table 1). Overall, the sample was well educated with 38.2% of participants reporting the highest education they completed was a

bachelor’s degree, 31.8% completed a graduate or professional degree, 16.5% completed some college, 6.5% of participants reported having a high school diploma or equivalent, 4.7% an associate’s degree, and 2.4% a vocational or technical school degree. For yearly household income, 27.1% reported earning \$0-\$25,000 per year, 19.4% reported earning \$25,000-\$50,000 per year, 11.8% reported earning \$50,000-\$75,000 per year, 18.2% reported earning \$75,000-\$100,000 per year, 12.9% reported earning \$100,000-\$150,000 per year, and 10.0% reported earning greater than \$150,000 per year. Participants reported their religious identification as: 34.1% Christian, 24.1% none, 13.5% atheist, 10.0% agnostic, 9.4% other, 4.1% Muslim, 2.4% Jewish, 2.4% Hindi, and 0.0% Buddhist.

Table 1

Frequencies for Racial and Ethnic Identification by Couple

Partner 1 Racial/Ethnic Identification	Partner 2 Racial/Ethnic Identification	Number of Couples
White/European-American	White/European-American	32
	Asian/Asian-American	16
	Hispanic/Latino(a)	13
	Other	11
Asian/Asian-American	Asian/Asian-American	3
	Hispanic/Latino(a)	3
	Other	3
Black/African-American	Black/African-American	1
	Hispanic/Latino(a)	1
	White/European-American	1
Hispanic/Latino(a)	Hispanic/Latino(a)	1
TOTAL		85

The median time couples reported knowing their partner was 4 years (*range* = 6 months to 35 years), and being in a relationship with their partner for 3 years (*range* = 6 months to 34 years). Most couples (50.6%) reported being married, 26.5% were in a committed relationship and not living together, 20.6% were in a committed relationship and living together, 2.4% were engaged and living together, and no couples reported

being engaged and not living together. Among married couples, the median time for being married was 5 years (*range* = 1 month to 33 years). Forty-nine (57.65%) couples reported having children ($x = 3$ children; *range* = 1 to 7 children). See Table 2 for all descriptive statistics reported by gender.

Table 2

Descriptive Statistics for All Study Variables

Variable	Men	Women
Racial/Ethnic Identification		
Asian/Asian-American	10.6%	22.4%
Black/African-American	1.2%	3.5%
Hispanic/Latino(a)	11.8%	10.6%
White/European American	63.5%	60.0%
Other	12.9%	3.5%
Education Level		
High School Diploma or Equivalent	8.2%	4.7%
Vocational/Technical School	2.4%	2.4%
Associate's degree	3.5%	5.9%
Some College	18.6%	14.1%
Bachelor's Degree	37.6%	38.8%
Graduate or professional degree	29.4%	34.1%
Yearly Household Income		
\$0-\$25,000	27.1%	27.1%
\$25,000-\$50,000	17.6%	21.2%
\$50,000-\$75,000	12.9%	10.6%
\$75,000-\$100,000	20.0%	16.5%
\$100,000-\$150,000	11.8%	14.1%
Greater than \$150,000	10.6%	9.4%
Religion/Faith		
Agnostic	10.6%	9.4%
Atheist	20.0%	7.1%
Christianity	32.9%	35.3%
Judaism	1.2%	3.5%
Islam	7.1%	1.2%
Hinduism	3.5%	1.2%
None	18.8%	29.4%
Other	5.9%	12.9%
Children		
Have Children	29.4%	28.2%
Number of Children	X = 3	X = 3
Length of Time Living in the US		
Other Birth Country ^a	X = 13.81 years	X = 12.26 years
Length of Time Living in Birth Country		
US-Born ^b	X = 37.97 years	X = 30.98 years
Other Countries ^a	X = 19.58 years	X = 17.93 years

Note. ^a Refers to participants who indicated their country of birth was a country other than the United States. ^b Refers to participants who indicated their country of birth was the United States.

Seventy-three (85.88%) couples had one partner who was born in the United States, while both partners in the remaining 12 (14.12%) couples were from outside the United States. On average, participants who were born in a country other than the United States reported living in their country of birth for 18.85 years ($SD = 9.22$, median = 20 years, range = 1 month to 42 years), and in the United States for an average of 13.12 years ($SD = 11.44$ years, median = 10 years, range = 0 to 50 years). The most “intercultural couple” status for couples was where one partner came from the United States and the other from Germany ($n = 14$ couples; see Table 3).

Table 3

Frequencies for Country of Birth by Couple

Partner 1 Birth Country	Partner 2 Birth Country	Number of Couples
United States	Germany	14
	Mexico	7
	United Kingdom	6
	India	4
	China	3
	France	3
	Philippines	3
	Australia	2
	Brazil	2
	El Salvador	2
	Pakistan	2
	South Africa	2
	Switzerland	2
	Taiwan	2
	Turkey	2
	Afghanistan	1
	Bosnia Herzegovina	1
	Canada	1
	Colombia	1
	Dominican Republic	1
	Estonia	1
	Ireland	1
	Israel	1
	Kazakhstan	1
	Malaysia	1
	Peru	1
	Poland	1
	Singapore	1
	Spain	1

	Ukraine	1
	Venezuela	1
	Vietnam	1
India	Brazil	1
	Germany	1
	Mexico	1
Taiwan	Iran	1
	Philippines	1
Australia	Czech Republic	1
Canada	Switzerland	1
China	Malaysia	1
Germany	Albania	1
Japan	Pakistan	1
Saudi Arabia	Turkey	1
Trinidad & Tobago	Vietnam	1
<hr/>		
	TOTAL	85

Procedure

Interested couples contacted the researcher via email and were provided with an electronic copy of the informed consent (see Appendix L). Upon consent, couples were provided with a unique ID (e.g., female 001, male 501) and sent a copy of the screening questionnaires via a secure website, which took approximately 2 minutes to complete. Couples who met the screening requirements were then sent the research questionnaire, which contained the research questionnaire (described below), which took approximately 30 minutes to complete. Following completion, participants had the opportunity to enter into a drawing for one of five \$30 gift cards and one of eighty \$25 gift cards to Amazon. Payment was distributed upon completion of data collection.

Measures

Screening. Participants were screened to ensure they meet requirements for this study (Appendix E).

Research questionnaire. Participants were asked general demographic questions related to: age, sex, race/ethnicity, relationship status, level of education, income, religious affiliation, how long they have known their partner, how long they have been in

a romantic relationship with their partner, if married, how long they have been married, if they have any children and if so, the number of children, country of birth, years lived in their country of birth, years living in the United States, and their cultural heritage (Appendix F).

Internal stress. Partners' internal stress was measured with the Multidimensional Stress Questionnaire for Couples (MDS-Q; Bodenmann, Schär, & Gmelch, 2008; Appendix G). The MDS-Q is a 10-item scale on a 4-point Likert scale ranging from 0: *Not Stressful At All* to 3: *Very Stressful*. As this study focused on internal stress across time, the subscales of internal stress and chronic stress –stress within the last 12 months– of the MDS-Q were used. The scales ask how stressful certain situations (e.g., “difference of opinion with your partner”) have been for the couple in the past 12 months. A higher score shows more stress within the dyad. The reliability of the MDS-Q was acceptable in this sample (*Cronbach's* $\alpha = .86$ for men and $\alpha = .87$ for women).

Dyadic coping (DC). Partner's DC was measured with the English version (Randall et al., 2015) of the Dyadic Coping Inventory, which was originally constructed in German (DCI; Bodenmann, 2008; Appendix H). The DCI is a 37-item scale on a 5-point Likert scale from 1: *Not at All/Very Rarely* to 5: *Very Often*. Examples of items include “I let my partner know that I appreciate his/her support, advice, or help” and “My partner shows empathy or understanding”. To create a measure of positive DC, the mean of the subscales, supportive DC (problem- and emotion-focused) and delegated DC was used (Papp & Witt, 2010). Negative DC was measured with the subscale of negative DC. The subscales of stress communication, supportive DC, delegated DC, and negative DC are rated in both relation to oneself and one's partner (e.g., “I ask my partner to do things

for me when I have too much to do” and “My partner asks me to do things for him/her when he/she has too much to do”). As noted, only the perceptions of partner DC were be used for this study (i.e., questions 5-15, excluding number 9; see Appendix H). A higher score on the DCI indicates more use of dyadic coping strategies. In this sample, reliability was acceptable for the overall scale and subscales (see Table 4).

Individualism-Collectivism identification. The Individualism-Collectivism Interpersonal Assessment Inventory (ICIAI; Matsumoto et al., 1997; Appendix I) was used to measure each partner’s cultural orientation. The ICIAI has 19 items on a 7-point Likert scale from 0: *Not at All Important* to 6: *Very Important*. Items are examined in relation to the importance of one’s values and behaviors toward people in the person’s life (e.g., family, friends, co-workers, and strangers). Higher scores indicate more identification with a collectivist orientation. For the purpose of this study, only values and behaviors toward one’s family were examined to reduce the number of questions for participants to answer and previous research has suggested people are more likely to act in accordance with their individualism-collectivism orientation when interacting with family (Matsumoto et al., 1997). Sample items include: “follow norms established by them” and “respect them”. The ICIAI displayed good reliability (values: *Cronbach’s* $\alpha = .79$ for men and $\alpha = .92$ for women; behaviors: *Cronbach’s* $\alpha = .84$ for men and $\alpha = .91$ for women) in this sample.

Relationship satisfaction. Relationship satisfaction was measured with the Relationship Assessment Scale (RAS; Hendrick, Dicke, & Hendrick, 1998; Appendix J). This scale measures how a “person feels about his or her relationship at this moment in time” (Hendrick et al., 1998, p. 137). The RAS is a 7-item questionnaire with a 6-point

scale. A higher score on the RAS indicates higher relationship satisfaction. Sample questions include: “How well does your partner meet your needs?” and “How much do you love your partner?”. Two items are reversed scored. The RAS showed good reliability in this sample; *Cronbach's* $\alpha = .85$ for men and $\alpha = .88$ for women.

Data Analysis

Dyadic data has sources of interdependence, due to partners' responses being correlated (Kenny, Kashy, & Cook, 2006). To account for sources of interdependence between partners, multilevel modeling procedures (MLM; Kenny & Cook, 1999) for distinguishable dyads was used in SAS Proc Mixed Version 9.3 (SASInstitute, 2011), specifically the Actor-Partner Interdependence Model (APIM; Kenny & Cook, 1999). Two separate MLM were tested for each criterion variable (relationship satisfaction and internal stress): one for positive DC and one for negative DC. As positive DC consists of a composite score of supportive DC (emotion- and problem-focused) and delegated DC, to further examine the unique effects by each, two additional models were run: one for supportive DC and one for delegated DC. The independent variables (positive DC, negative DC, internal stress, delegated DC, emotion- and problem-focused DC) and moderators (positive and negative DC) were grand mean centered prior to analyses. Grand mean centering is common when using MLM to allow easier interpretation and account for interdependence among partners (Wu, 2004).

Control variables. In conducting the analyses, it was important that variables that may confound the results were held constant across the models. For the purpose of our study, these variables include: (1) how long participants have lived in their country of birth, (2) difference and average scores based on individualism-collectivism orientation,

and (3) each partner's race and ethnic identity. How long participants lived in their country of birth was held constant to control for variation among how long participants were exposed to their birth country's culture. Difference and average scores based on individualism-collectivism orientation were controlled for as prior research findings suggest if partners identify differently this may impact the degree of stress they experience and their subsequent coping behaviors (Hayashi, 2010). The difference score (male partner's score minus female partner's score) and the average score (male partner's score plus female partner's score divided by two) were calculated as a means of control for individualism-collectivism orientation (for a review of this statistical method see Kashy & Kenny, 2000). Men reported higher individualism-collectivism orientations for both values and behaviors, but this difference was not significant (see Table 4). Finally, each partner's racial and ethnic identity was held constant, by creating a dummy variable if partners did or did not identify as the same race or ethnicity, as previous research has suggested that racial and/or ethnic differences may be distinct from cultural differences and intercultural partners may consider differences due to culture more prominent than differences due to race or ethnicity (Hyejin, Prouty, & Roberson, 2012; Seshadri & Knudson-Martin, 2013). By controlling for these variables, results can be generalized to intercultural couples independent of their standing on these variables.

Descriptive Statistics

Descriptive statistics, mean differences, and reliabilities across genders are shown in Table 4 below.

Table 4

Descriptive Statistics, Reliabilities, and Mean Differences for all Study Variables

	Men			Women			t-test
	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	<i>A</i>	<i>p</i>
<i>Dyadic Coping</i>							
Emo-Focused SDC ^a	4.17	.83	.85	4.11	1.01	.85	.63
Prob-Focused SDC ^a	3.53	.96	.74	3.79	.99	.84	.04
Delegated DC ^a	3.39	.86	.82	3.61	1.01	.77	.08
Positive DC ^a	3.70	.71	.84	3.85	.78	.80	.10
Negative DC ^a	1.80	.76	.71	1.81	.77	.75	.92
Internal Stress ^b	.80	.57	.86	.82	.61	.87	.73
Rel. Sat ^c	4.28	.63	.85	4.28	.67	.88	.96
Ind-Coll Values ^c	3.69	.79	.86	3.53	1.05	.92	.31
Ind Coll Beh ^c	3.56	.84	.88	3.37	1.01	.91	.18
Years Birth Country	26.29	14.30		24.30	12.91		.63

Note. *Emo* = Emotion, *SDC* = Supportive Dyadic Coping, *Prob* = Problem, *DC* = Dyadic Coping, *Rel. Sat.* = Relationship Satisfaction, *Ind-Coll* = Individualism-Collectivism, *Beh* = Behavior. Matched *t-test* used to test for differences between men and women. Scaling on Likert Scale: 1-5^a, 0-3^b, 1-7^c. Bold signifies significantly higher score.

Results (i.e., partner's mean scores) show that participants reported average to high levels of positive dyadic coping and average to low levels of negative DC for both genders. In regard to RQ1 ("what are the reported levels of internal stress for intercultural couples?"), overall participants reported low levels of internal stress as the mean score for both men and women was below one on a zero to three scale, and a higher score indicates

more internal stress. Participants in this study reported average to high levels of relationship satisfaction, when examining their mean scores on the RAS. All scales and subscales showed acceptable to good internal consistency ranging from 0.71 to 0.93. Significant inter-correlations among the scales ranged from (-0.71 < r > 0.88) for both genders (see Table 5 below). There was a significant difference between men and women for problem-focused SDC ($p < 0.05$), with women reporting higher perceived partner engagement in problem-focused SDC.

Table 5

Correlations for Men and Women on Study Variables

	1	2	3	4	5	6	7	8	9	10
1. Emo-Focused SDC		.47**	.43**	.78**	-.57**	-.33**	.48**	.04	.08	-.20
2. Prob-Focused SDC	.44**		.51**	.84**	-.41**	-.24*	.40**	.05	.11	-.14
3. Delegated DC	.33**	.39**		.82**	-.34**	-.24*	.49**	.12	.15	-.11
4. Positive DC	.77**	.79**	.75**		-.54**	-.33**	.56**	.08	.14	-.20
5. Negative DC	-.66**	-.55**	-.37**	-.69**		.44**	-.45**	.10	.03	.18
6. Internal Stress	-.54**	-.48**	-.43**	-.63**	.63**		-.71**	.15	-.02	-.05
7. Rel. Sat.	.53**	.47**	.44**	.62**	-.52**	-.70**		.01	.13	.04
8. Ind-Coll Values	.22*	.08	.14	.19	-.11	-.10	.17		.81**	-.25*
9. Ind-Coll Beh.	.35**	.19	.14	.29**	-.24*	-.20	.29**	.88**		-.24*
10. Years Birth Country	-.05	-.16	-.07	-.12	.18	.16	-.21	-.30**	-.34**	

Note. *Emo* = Emotion, *SDC* = Supportive Dyadic Coping, *Prob* = Problem, *DC* = Dyadic Coping, *Rel. Sat.* = Relationship Satisfaction, *Ind-Coll* = Individualism-Collectivism, *Beh* = Behavior. Men's correlations are presented above the diagonal and women's correlations are presented below the diagonal. * = 0.05, ** = 0.01

Associations between Positive DC and Internal Stress (H2a)

Positive DC. A MLM was conducted to examine the association between perceived partner engagement in positive DC and levels of internal stress (see Table 6). There was a significant association between of perceived partner engagement in positive DC and internal stress, $F(1, 78) = 62.06, p < 0.001$ when controlling for the variables

described above (i.e., years living in birth country, average and difference scores on measures of individualism-collectivism values and behaviors and race/ethnicity)¹.

Specifically, results suggest that partners who reported their partner engaging in more positive DC reported experiencing less internal stress ($b = -0.38, p < 0.001$).

Table 6

Results of MLM of Positive DC on Internal Stress

Fixed Effects	<i>df</i>	<i>b</i>	<i>Standard error</i>	<i>F</i>
Intercept		0.46	0.33	
<i>Controls</i>				
Diff Ind-Coll Values	1,81	0.08	0.05	2.37
Diff Ind-Coll Behaviors	1,81	-0.02	0.05	0.11
Avg Ind-Coll Values	1,79	0.29	0.14	4.29*
Avg Ind-Coll Behaviors	1,78	-0.19	0.13	0.15
Years Birth Country	1,78	<0.01	<0.00	0.95
Same Race	1,81	-0.12	0.09	0.17
<i>Independent Variable</i>				
Positive DC	1,78	-0.38	0.05	62.06***

Note. DC = Dyadic Coping, *Diff* = Difference, *Ind-Coll* = Individualism-Collectivism, *Avg* = Average, *Same Race* = Dummy Code of if Participants Identified as the Same or Difference Race/Ethnicity, * = $p < 0.05$, *** = $p < 0.001$

Subscales of positive DC. As discussed previously, since positive DC consists of a composite score of supportive and delegated DC, to further examine the unique effects by each, two additional models were run: one for supportive DC and one for delegated DC (see Table 7). To examine supportive DC, analyses were conducted on perceptions of partner emotion-focused and problem-focused DC. There was a significant effect of emotion-focused DC, $F(1, 79) = 12.70, p < 0.001$, where partners who reported more perceived partner engagement in emotion-focused DC, reported less internal stress ($b = -$

¹ Including the controls in the model did not significantly affect the results, and as such, they were retained in the model. All reported significant findings were also found when controlling for relationship length in addition to the controls discussed previously.

0.20, $p < 0.001$). Additionally, there was a significant effect of perceived partner engagement in problem-focused DC, $F(1, 79) = 9.94$, $p < 0.01$, indicating that partners who reported more perceived partner engagement in problem-focused DC reported less internal stress ($b = -0.13$, $p < 0.01$). There was a significant main effect of perceived partner delegated DC on internal stress, $F(1, 80) = 21.61$, $p < 0.001$, such that partners who reported more perceived partner engagement in delegated DC reported less internal stress ($b = -0.20$, $p < 0.001$).

Table 7

Results of MLM of Supportive and Delegated DC on Internal Stress

Fixed Effects	<i>df</i>	<i>b</i>	<i>Standard error</i>	<i>F</i>
Intercept		0.67*	0.31	
<i>Controls</i>				
Diff Ind-Coll Values	1, 81	0.08	0.05	2.37
Diff Ind-Coll Behaviors	1, 81	-0.03	0.05	0.38
Avg Ind-Coll Values	1,79	0.25	0.15	2.75
Avg Ind-Coll Behaviors	1,79	-0.19	0.13	2.22
Years Birth Country	1,79	<-0.01	<0.00	0.10
Same Race	1, 81	-0.12	0.09	2.07
<i>Independent Variable</i>				
Emotion-Focused DC	1,79	-0.20	0.05	12.70***
Problem-Focused DC	1,79	-0.13	0.04	8.94**
Intercept		0.52	0.31	
<i>Controls</i>				
Diff Ind-Coll Values	1,81	0.07	0.06	1.64
Diff Ind-Coll Behaviors	1, 81	-0.01	0.06	0.01
Avg Ind-Coll Values	1,80	0.39	0.15	6.42*
Avg Ind-Coll Behaviors	1,80	-0.31	0.14	4.69*
Years Birth Country	1,80	<0.01	<0.00	0.00
Same Race	1, 81	-0.15	0.09	2.81
<i>Independent Variable</i>				
Delegated DC	1,80	-0.20	0.04	21.61***

Note. DC = Dyadic Coping, *Diff* = Difference, *Ind-Coll* = Individualism-Collectivism, *Avg* = Average, *Same Race* = Dummy Code of if Participants Identified as the Same or Difference Race/Ethnicity, * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$

Associations between Negative DC and Internal Stress (H2b)

A MLM was conducted to examine the association between perceived partner negative DC and levels of internal stress (see Table 8). There was a significant effect of negative DC on internal stress, $F(1, 80) = 71.93, p < 0.001$. Overall, partners who reported their partner engaged in more negative DC reported more internal stress ($b = 0.40, p < 0.001$).

Table 8

Results of MLM of Negative DC on Internal Stress

Fixed Effects	<i>df</i>	<i>b</i>	Standard error	<i>F</i>
Intercept		0.85**	0.28	
<i>Controls</i>				
Diff Ind-Coll Values	1, 81	0.09	0.05	2.98
Diff Ind-Coll Behaviors	1, 81	-0.05	0.05	0.89
Avg Ind-Coll Values	1,80	0.12	0.13	0.43
Avg Ind-Coll Behaviors	1, 81	-0.11	0.14	2.60
Years Birth Country	1,80	<-0.01	<0.00	0.71
Same Race	1,80	-0.13	0.08	0.74
<i>Independent Variable</i>				
Negative DC	1,80	0.40	0.05	71.93***

Note. DC = Dyadic Coping, Diff = Difference, Ind-Coll = Individualism-Collectivism, Avg = Average, Same Race = Dummy Code of if Participants Identified as the Same or Difference Race/Ethnicity, ** = $p < 0.01$, *** = $p < 0.001$

Associations between DC and Relationship Satisfaction (H3a)

Positive DC. A MLM was conducted to examine the association between perceived partner positive DC and levels of relationship satisfaction (see Table 9). There was a significant effect of perceived partner positive DC on relationship satisfaction, $F(1, 78) = 65.89, p < 0.001$. Overall, partners who reported their partner engaged in more positive DC reported more relationship satisfaction ($b = 0.45, p < 0.001$).

Table 9

Results of MLM of Positive DC on Relationship Satisfaction

Fixed Effects	<i>df</i>	<i>b</i>	<i>Standard error</i>	<i>F</i>
Intercept		4.51***	0.39	
<i>Controls</i>				
Diff Ind-Coll Values	1,81	-0.06	0.06	1.13
Diff Ind-Coll Behaviors	1,81	0.01	0.06	0.05
Avg Ind-Coll Values	1,78	-0.31	0.16	3.71
Avg Ind-Coll Behaviors	1,78	0.25	0.13	3.89
Years Birth Country	1,78	<-0.01	<0.00	0.02
Same Race	1,81	0.03	0.10	0.10
<i>Independent Variable</i>				
Positive DC	1,78	0.45	0.06	65.89***

Note. DC = Dyadic Coping, *Diff* = Difference, *Ind-Coll* = Individualism-Collectivism, *Avg* = Average, *Same Race* = Dummy Code of if Participants Identified as the Same or Difference Race/Ethnicity, *** = $p < 0.001$

Components of positive DC. As with testing for H1, two additional MLM were conducted to examine the components of positive DC: supportive DC and delegated DC (see Table 10). For supportive DC, there were significant effects for both perceived partner emotion-focused, $F(1, 79) = 17.12, p < 0.001$, and perceived partner problem-focused DC, $F(1, 79) = 14.47, p < 0.001$. Partners who reported more perceived partner engagement in emotion-focused ($b = 0.21, p < 0.001$) and problem-focused DC ($b = 0.18, p < 0.001$) reported more relationship satisfaction. For perceived partner delegated DC, there was a significant effect, $F(1, 80) = 35.04, p > 0.001$, which indicated that couples who felt their partners engaged in more delegated DC experienced more relationship satisfaction ($b = 0.26, p < 0.001$).

Table 10

Results of MLM of Supportive and Delegated DC on Relationship Satisfaction

Fixed Effects	<i>df</i>	<i>b</i>	<i>Standard error</i>	<i>F</i>
Intercept		4.24***	0.37	

<i>Controls</i>				
Diff Ind-Coll Values	1,81	-0.06	0.06	0.88
Diff Ind-Coll Behaviors	1,81	0.03	0.07	0.17
Avg Ind-Coll Values	1,79	-0.24	0.16	2.09
Avg Ind-Coll Behaviors	1,79	0.26	0.13	3.68
Years Birth Country	1,79	<0.01	<0.00	0.07
Same Race	1,81	0.04	0.10	0.15
<i>Independent Variable</i>				
Emotion-Focused DC	1,79	0.21	0.05	17.12***
Problem-Focused DC	1,79	0.18	0.05	14.47***
Intercept		4.44***	0.32	
<i>Controls</i>				
Diff Ind-Coll Values	1,81	-0.04	0.06	0.47
Diff Ind-Coll Behaviors	1,81	<-0.01	0.07	0.02
Avg Ind-Coll Values	1,80	-0.40	0.17	5.56*
Avg Ind-Coll Behaviors	1,80	0.37	0.15	6.31*
Years Birth Country	1,80	<-0.01	<0.00	0.10
Same Race	1,81	0.07	0.10	0.43
<i>Independent Variable</i>				
Delegated DC	1,80	0.26	0.04	35.04***

Note. DC = Dyadic Coping, Diff = Difference, Ind-Coll = Individualism-Collectivism, Avg = Average, Same Race = Dummy Code of if Participants Identified as the Same or Difference Race/Ethnicity, * = $p < 0.05$, *** = $p < 0.001$

Negative DC. A MLM was conducted to examine the association between perceived partner negative DC and levels of relationship satisfaction (see Table 11). There was a significant effect of perceived partner negative DC on relationship satisfaction, $F(1, 80) = 33.62, p > 0.001$. Partners who reported their partner engaged in more negative DC reported less relationship satisfaction ($b = -0.34, p < 0.001$).

Table 11

Results of MLM of Negative DC on Relationship Satisfaction

Fixed Effects	df	b	Standard error	F
Intercept		4.07***	0.37	
<i>Controls</i>				
Diff Ind-Coll Values	1,81	-0.05	0.06	0.77
Diff Ind-Coll Behaviors	1,81	0.03	0.06	0.22
Avg Ind-Coll Values	1,80	-0.18	0.18	0.99
Avg Ind-Coll Behaviors	1,80	0.24	0.15	2.65

Years Birth Country	1,80	<0.01	<0.00	0.01
Same Race	1,81	0.05	0.10	0.23
<i>Independent Variable</i>				
Negative DC	1,80	-0.34	0.06	33.62***

Note. DC = Dyadic Coping, *Diff* = Difference, *Ind-Coll* = Individualism-Collectivism, *Avg* = Average, *Same Race* = Dummy Code of if Participants Identified as the Same or Difference Race/Ethnicity, *** = $p < 0.001$

Associations between Stress and Relationship Satisfaction as Moderated by DC

(H3b)

Internal stress. To test the effects of internal stress on relationship satisfaction and possible moderations by positive and negative DC, three MLMs were conducted. The first examined the effect of internal stress by itself on relationship satisfaction, $F(1, 80) = 134.24, p < 0.001$. Couples who reported more internal stress reported less relationship satisfaction ($b = -0.71, p < 0.001$; see Table 12).

Table 12

Results of MLM of Internal Stress on Relationship Satisfaction

Fixed Effects	<i>df</i>	<i>b</i>	<i>Standard error</i>	<i>F</i>
Intercept		4.11***	0.31	
<i>Controls</i>				
Diff Ind-Coll Values	1,81	0.01	0.05	0.06
Diff Ind-Coll Behaviors	1,81	-0.01	0.05	0.04
Avg Ind-Coll Values	1,80	-0.11	0.14	0.67
Avg Ind-Coll Behaviors	1,80	0.18	0.12	2.29
Years Birth Country	1,80	<-0.01	<0.00	0.19
Same Race	1,81	-0.05	0.09	0.32
<i>Independent Variable</i>				
Internal Stress	1,80	-0.71	0.06	134.25***

Note. DC = Dyadic Coping, *Diff* = Difference, *Ind-Coll* = Individualism-Collectivism, *Avg* = Average, *Same Race* = Dummy Code of if Participants Identified as the Same or Difference Race/Ethnicity, *** = $p < 0.001$

Positive DC as a moderator between internal stress and relationship

satisfaction. In the next model, internal stress, perceived partner positive DC, the

interaction between internal stress and perceived partner positive DC on relationship satisfaction was examined (see Table 13). There was significant main effects for internal stress, $F(1, 76) = 79.61, p < 0.001$, and perceived partner positive DC, $F(1, 76) = 23.75, p < 0.001$ on relationship satisfaction. However, the interaction was not significant, $p > 0.05$. Couples who reported more internal stress reported less relationship satisfaction ($b = -0.56, p < 0.001$) and partners who reported their partner engaged in more positive DC reported more relationship satisfaction ($b = 0.28, p < 0.01$). These findings are consistent with the other results in this study, as noted above. As there was no significant interaction between perceived partner positive DC and internal stress on relationship satisfaction, no further analyses were conducted to examine the components of positive DC (i.e., supportive and delegated DC).

Table 13

Results of MLM of Positive DC as a Moderator on Relationship Satisfaction

Fixed Effects	<i>df</i>	<i>b</i>	<i>Standard error</i>	<i>F</i>
Intercept		4.29***	0.30	
<i>Controls</i>				
Diff Ind-Coll Values	1,81	-0.02	0.05	0.17
Diff Ind-Coll Behaviors	1,81	0.01	0.05	0.07
Avg Ind-Coll Values	1,76	-0.11	0.13	0.67
Avg Ind-Coll Behaviors	1,76	0.11	0.11	1.02
Years Birth Country	1,76	<0.01	<0.00	0.00
Same Race	1,81	-0.04	0.08	0.22
<i>Independent Variable</i>				
Internal Stress	1,76	-0.56	0.06	79.61***
Positive DC	1,76	0.28	0.06	23.75***
<i>Interaction</i>				
Pos DC x Internal Stress	1,74	0.01	0.06	0.24

Note. DC = Dyadic Coping, *Diff* = Difference, *Ind-Coll* = Individualism-Collectivism, *Avg* = Average, *Same Race* = Dummy Code of if Participants Identified as the Same or Difference Race/Ethnicity, *Pos* =Positive, *** = $p < 0.001$

Negative DC as a moderator between internal stress and relationship

satisfaction. The final analysis examined internal stress, perceived partner negative DC, the interaction between internal stress and perceived partner negative DC, on relationship satisfaction (see Table 14). There was a significant main effect of internal stress, $F(1, 78) = 78.65, p < 0.001$. Couples who reported more internal stress reported less relationship satisfaction ($b = -0.66, p < 0.001$). There was also a significant main effect of perceived partner negative DC, $F(1, 78) = 4.35, p < 0.05$, where partners who reported their partner engaged in more negative DC reported less relationship satisfaction ($b = -0.12, p < 0.05$). However, the interaction between perceived partner negative DC and internal stress was not significant, $p > 0.05$. This finding was consistent with previously conducted analyses as noted above.

Table 14

Results of MLM of Negative DC as a Moderator on Relationship Satisfaction

Fixed Effects	<i>df</i>	<i>b</i>	<i>Standard error</i>	<i>F</i>
Intercept		4.07***	0.32	
<i>Controls</i>				
Diff Ind-Coll Values	1,81	<-0.01	0.05	0.00
Diff Ind-Coll Behaviors	1,81	0.01	0.05	0.02
Avg Ind-Coll Values	1,78	-0.08	0.14	0.35
Avg Ind-Coll Behaviors	1,78	0.15	0.12	1.67
Years Birth Country	1,78	<-0.01	<0.00	0.11
Same Race	1,81	-0.04	0.08	0.23
<i>Independent Variable</i>				
Internal Stress	1,78	-0.66	0.07	78.65***
Negative DC	1,78	-0.12	0.06	4.35*
<i>Interaction</i>				
Neg DC x Internal Stress	1,78	0.10	0.08	1.60

Note. DC = Dyadic Coping, *Diff* = Difference, *Ind-Coll* = Individualism-Collectivism, *Avg* = Average, *Same Race* = Dummy Code of if Participants Identified as the Same or Difference Race/Ethnicity, *Neg* = Negative, ** = $p < 0.01$, *** = $p < 0.001$

The goal of this study was to examine how intercultural couples - partners from two different countries - perceive and cope with internal stress and what impact, if any, this may have on partners' reported relationship satisfaction. This study was one of the first to examine how perceived partner engagement in positive and negative dyadic coping is associated with internal stress and relationship satisfaction among intercultural couples. Additionally, this study examined a possible moderating relationship of positive and negative dyadic coping between internal stress and relationship satisfaction among intercultural couples.

Stress and Dyadic Coping

Overall, intercultural couples in this study reported low levels of internal stress as measured by the MDS-Q (Bodenmann, Schär, & Gmelch, 2008). These results were interesting given prior research that has suggested intercultural couples may face higher levels of stress when compared to partners from the same culture due to their cultural differences (Bustanmante et al., 2011; Crippen & Brew, 2013; Hsu, 2001; Fu et al., 2001; Seshadri & Knudson-Martin, 2013). Differences in these findings may be a result of the types of internal stress that were measured, as the MDS-Q does not specifically ask about cultural-related stressors. For example, it may be that internal stress was measured in general categories (e.g., "difference of opinion with your partner", "disturbing habits of your partner"), whereas intercultural couples may face internal stress more related to their cultural differences, such as communication difficulties due to language differences. Additionally, it could be that intercultural couples experiencing a large amount of stress

may not have wanted to participate the study due to the discord within their relationship. Importantly, to date, there are no reported quantified levels of internal stress among intercultural couples. As such, it is unclear if the reported levels of internal stress as reported for participants in this study are low, average, or high. Future research is needed to further examine internal stress levels among intercultural couples and the types and effects of stressors they may face.

There were no significant differences between males and females in stress levels or elements of DC, except for women reporting slightly higher perceived partner engagement in problem-focused DC. The data suggested an inverse association between perceived partner positive DC and internal stress, indicating that partners who felt their partner engaged in positive DC reported less internal stress, which is in accordance with prior research on couples who may or may not identify as intercultural (e.g., Bodenmann, 2005). These findings also support previous research involving intercultural couples (e.g., Bustanmante et al., 2001; Hsu, 2001; Seshadri & Knudson-Martin, 2013; Silva et al., 2012), in which elements of positive dyadic coping were found to reduce stress levels. The same pattern held for the sub-components of positive DC, supportive (emotion- and problem-focused) and delegated DC, which adds further support to the importance of positive DC in intercultural couples to reduce internal stress. Specifically, results suggest the importance of partners feeling like their partner is taking their stress seriously and coping with them, which has been found in previous studies (Falconier et al., 2015).

Results suggested a positive linear association between internal stress and perceived partner negative DC, whereas greater perceived partner engagement in negative DC was associated with greater internal stress. This finding fits with previous

research investigating DC among couples that may or may not identify as intercultural (e.g., Bodenmann, 2005) and gives support to research involving intercultural couples (e.g., Seshadri & Knudson-Martin, 2013) that indicated elements of negative DC was associated with more discord between partners. As such, it suggests the need for intercultural couples to avoid engaging in negative DC.

While previous studies have examined elements of both positive and negative DC among intercultural couples (e.g., Bustanmante et al., 2001; Hsu, 2001; Seshadri & Knudson-Martin, 2013; Silva et al., 2012), no previous study has specifically examined DC in intercultural couples and DC's association with internal stress. This study highlights that intercultural couples may engage in positive and negative DC and that DC may relate to their internal stress levels. Additionally, as this study controlled for numerous variables (i.e., if partners identified as the same race, average and difference scores between partners on identification with individualism-collectivism values and behaviors, and years each partner lived in their birth country), results suggest that intercultural couples' internal stress levels may be lower, independent of partners' standing on these control variables, if they perceive their partner to be engaging in positive DC and not in negative DC. Future research should continue to examine DC in intercultural couples in relation to internal stress and may focus on the specific internal stressors faced by intercultural couples and how they may be associated with DC.

While the above mentioned variables were used as control variables, there was a significant association between some control variables and the criterion variable of internal stress in certain models. Since there were significant associations between some of the control variables and the dependent variable, it suggests controlling for them may

be important as they may influence the criterion variable independent of the other variables. There was a significant association between the average score of identification with collectivistic values among partners when examining the effects of perceived partner positive DC and perceived partner delegated DC on internal stress. Specifically, intercultural couples who reported higher average identification with collectivistic values reported more internal stress in both models. There was also a significant association between the average score of identification with collectivistic behaviors among partners when examining the effects of perceived partner delegated DC on internal stress, where intercultural who reported higher average engagement in collectivistic behaviors reported less internal stress.

As a collectivist orientation typically entails looking toward the benefit of the group, rather than the individual (Kim & Kitani, 1988), it could be expected that a higher identification with collectivistic values and engagement in collectivistic behaviors would result in less stress as partners would be working toward the benefit of the dyad instead of the individual. However, it is interesting that collectivistic values were associated more internal stress, while collectivistic behaviors were associated with less internal stress. It could be that partners who identify with collectivistic values may want to avoid conflict to protect the stability of the group (Ting-Toomey & Korzenny, 1991) and therefore, partners who identify strongly with collectivistic values may not feel the need to become involved in their partner's stress and cope with them to avoid potential conflict.

Additionally, previous research has suggested that if partners hold strongly to their cultural beliefs to the point of minimizing or ignoring the other partner's cultural beliefs, partners may feel rejected and this could lead to more discord between partners (Fu et al.,

2001; Hsu, 2001). For collectivistic behaviors, it could be that as DC focuses on the interdependence of partners' coping resources, and that collectivistic behaviors tend to be for the benefit of the group (Kim & Kitani, 1988), the increase in relationship satisfaction may be related to that partners are acting in ways that help their partner to feel supported.

Overall, these results may suggest that cultural behaviors and values may be interpreted differently by intercultural partners (Bustamante et al., 2011). It could be that collectivistic behaviors resulted in less internal stress because of the apparent benefit to and focus on the couple, especially in relation to delegated DC which describes partners assuming responsibilities to help each other (Bodenmann, 2005). The benefit to the dyad under collectivistic values may be more difficult to interpret. These findings suggest the importance of partners explaining their own cultural behaviors and values and understanding their partner's cultural behaviors and values, which has been found in previous research (e.g., Hsu, 2001; Hyejin et al, 2012), but it may be especially important for cultural values. However, research on this topic is limited and should be explored in future research.

Stress, Dyadic Coping, and Relationship Satisfaction

Overall, intercultural couples reported high levels of relationship satisfaction. However, this result should be interpreted with caution as this sample consisted of self-report findings. The findings showed a positive linear association between perceived partner engagement in positive DC and relationship satisfaction, so that as perceived partner engagement in positive DC increased so did relationship satisfaction. The same pattern was shown for perceived partner supportive DC, both emotion- and problem-focused DC, and delegated DC. Again this fits with previous research on DC among

couples that may or may not identify as intercultural (e.g., Bodenmann, 2005; Bodenmann & Cina, 2006; Bodenmann, Pihet, & Kayser, 2006; Bodenmann et al., 2007) and provides for support for research with intercultural couples that indicated elements of positive DC is associated with increased relationship satisfaction (e.g., Hsu, 2001; Seshadri & Knudson-Martin, 2013; Silva et al., 2012). For intercultural couples, past research has suggested that elements of positive DC, such as discussing cultural differences openly and how each partner copes with stress, have been shown to increase relationship satisfaction as partners realize stress is from differences in viewpoints, not the relationship itself (Hayashi, 2010; Hsu, 2001; Hyejin et al., 2012; Sheshadri & Knudson-Martin, 2013; Silva et al., 2012;). This suggests using positive DC as a way to explore cultural differences and coping mechanisms may be especially beneficial for intercultural couples to improve their relationship satisfaction, in addition to the overall benefit of engaging in positive DC on relationship satisfaction.

In line with previous research on couples (e.g., Bodenmann, 2005), participants in this study reported that higher perceptions of partner engagement in negative DC resulted in lower relationship satisfaction. This also supports research with intercultural couples that suggested engagement in elements of negative DC is associated with lower relationship satisfaction (Fu et al., 2001; Hsu, 2001; Heller & Wood, 2000). As such, it may be important for intercultural couples to be able to identify when they feel their partner is engaging in negative DC so they can discuss and change the way the partner is providing support to increase relationship satisfaction.

While positive and negative DC have been shown to moderate the association between stress and other outcome variables including relationship satisfaction (e.g.,

Bodenmann et al., 2010; Falconier et al., 2013) among romantic partners, neither type of perceived partner DC moderated the association between internal stress and relationship satisfaction in this sample of intercultural couples. It could be that this was not found in this study due to the overall high levels of relationship satisfaction and low internal stress. It may also be that perceived partner engagement in DC may not moderate the association between internal stress and relationship satisfaction. Future research should examine how other types of DC, such as self-engagement or common, may moderate the association between internal stress and relationship satisfaction. Couples who reported more internal stress did report less relationship satisfaction, which fits with previous research (e.g., Bodenmann, 2005; Falconier et al., 2013). Despite the lack of moderation effects of positive and negative DC on relationship satisfaction, these findings could suggest the need for intercultural couples to develop healthy coping strategies when facing stress.

As discussed previously, while some studies have examined elements of both positive and negative DC among intercultural couples and how it relates to relationship satisfaction (e.g., Fu et al., 2001; Hsu, 2001; Heller & Wood, 2000), this study is one of the first to specifically examine DC in intercultural couples and the association with relationship satisfaction. This study highlights that intercultural couples may engage in positive and negative DC and that partner perceptions of DC may relate to relationship satisfaction. Additionally, as this study controlled for numerous variables (i.e., if partners identified as the same race, average and difference scores between partners on identification with individualism-collectivism values and behaviors, and years each partner lived in their birth country), results suggest that intercultural couples, independent

of partners' standing on these control variables, may benefit from perceiving their partner is engaging in positive DC, and not engaging in negative DC, to improve their relationship satisfaction. Future research should continue to examine the association between relationship satisfaction and DC, specifically on how different elements of DC may be associated with relationship satisfaction and how this may change over time. Additionally, future studies should continue to examine any possible moderating effects of DC on relationship satisfaction, especially examining different aspects of dyadic coping, such as partner's perceptions of their dyadic coping behavior when their partner is stressed.

As discussed above while some variables were entered as controls, some did show a significant relationship with the dependent variable of relationship satisfaction in certain models. When examining perceived partner delegated DC, intercultural couples who reported, on average, more engagement in collectivistic behaviors reported more relationship satisfaction. In the same model, intercultural couples who reported, on average, more identification with collectivistic values reported less relationship satisfaction. Again this difference could be related to perceptions of values and behaviors. The association between identification with collectivistic values and lower relationship satisfaction, could again be related to partners holding onto their cultural beliefs at the expense of their partner's beliefs, which could negatively impact relationship satisfaction (Fu et al., 2001; Hsu, 2001). Higher engagement in collectivistic behaviors and more relationship satisfaction when examining delegated DC may be related again to how delegated DC describes partners helping each other by assuming responsibilities how and collectivistic behaviors are for the benefit of both partners (Kim & Kitani, 1988). Since

collectivistic behaviors was associated with both more relationship satisfaction and less internal stress, it could be that intercultural couples would benefit especially from DC strategies as these strategies overlap with typical collectivistic behaviors as for both the focus is on the collective (i.e., the dyad) instead of the individual. Again, this finding suggests the importance of intercultural couples using positive DC to explore and understanding cultural behaviors and values between partners.

Limitations

It is important to note limitations of this study. First, generalizability may be limited due to the sample collected. While an effort was made to sample couples from varied locations and cultural backgrounds, in a majority of the couples, one partner was from the United States and most couples were living in the U.S. This may limit the generalizability of the results to intercultural couples living in the U.S. and couples in which one partner is from the U.S. Additionally, a majority of participants identified as White/European-American and had earned a bachelor's degree or higher, which may further limit generalizability to White well-educated intercultural couples. As noted before, there are many ways to define "intercultural" so results from this study may not apply to all intercultural couples, such as those who may be from the same country, but still have differences in cultural areas. This study controlled for differences in race and/or ethnicity and previous research has suggested that racial and/or ethnic differences do not affect couples in the same way as cultural differences (Hyejin, Prouty, & Roberson, 2012). Future research should examine the different types of stressors, such as power and privilege differences, faced by couples who may not identify as the same race and/or ethnicity. Consideration should also be given to how aspects of culture (e.g., religion,

language, values, race and ethnicity) of each partner may interact. Intercultural couples who identify more or less with different aspects of culture may face stress and cope differently.

Second, this study only examined perceived partner engagement in specific types of DC (i.e., positive, supportive, delegated, and negative DC) when facing internal stress over a 12-month period. Previous research has suggested these may be important areas to examine (Bodenmann, Ledermann, & Bradbury, 2007; Falconier et al., 2015), but other stressors (e.g., external and short-term) and types of DC (e.g., common DC) should be examined among intercultural couples to understand better the types of stressors faced by and coping strategies used by intercultural couples. Stressors that may be more related to cultural factors, such as language differences and endorsement of prescribed gender role beliefs (Bustamante et al., 2011), should be examined in future research. Common DC may be an important area to specifically examine since the findings of this study indicated that higher identification with collectivistic behaviors resulted in more relationship satisfaction and common DC entails the couple coping together.

Next, these data are cross-sectional and involved a non-clinical population, which may limit findings across time and situations, such as instances where intercultural couples may be facing a significant stressors or life change and may be seeking mental health services. Additionally, this study relied on self-report data, which may be biased (van de Mortel, 2008). To examine further the research questions and hypotheses posited in this study, a longitudinal design should be conducted. Such a study could investigate internal stress and relationship satisfaction over time more accurately by, for example, asking participants to complete daily diaries about their relationship satisfaction and

stress levels, which has been used previously with dyads (e.g., Rosen et al., 2014). As findings from this study seem to indicate that individualism-collectivism values and behaviors may be an important factor in internal stress and relationship satisfaction, a future longitudinal study could also examine how intercultural couples incorporate each partner's cultural heritage into the dyad to form a joint cultural code, which has been identified in previous research (e.g., Crippen & Brew, 2013). Future studies should also examine what impact, if any, the length of the relationship has on stress experienced and coping strategies used.

Finally, while the measures used showed good reliability in this sample, the questions asked may not fully capture the internal stressors faced by intercultural couples and the ways they cope. Different measures examining stress, coping, and relationship satisfaction should be used in future studies. While efforts were made to pick measures that avoided colloquial American English to minimize potential confusion among participants whose first language was not English, it is possible some participants may have interpreted questions differently. Additionally, while the MDS-Q has been used in previous studies (e.g., Falconier, Nussbeck, et al., 2015; Meuwly et al., 2013) and showed acceptable reliability in this sample, there is no study examining its psychometric properties. Future research should aim to replicate these findings with different instruments measuring stress.

Implications and Conclusion

Intercultural couples may experience internal stress, which can have negative impacts on relationship functioning (Bodenmann, 2005; Bustanmante et al., 2011; Crippen & Brew, 2013; Fu et al., 2001; Hsu, 2001; Seshadri & Knudson-Martin, 2013).

Maintaining a healthy relationship with one's romantic partner is important, especially when facing stress, as relationship quality can impact several areas of well-being such as physical (e.g., Shmaling & Goldman-Sher, 2000) and mental (e.g., McShall, 2015) health. This research suggests the importance of intercultural couples perceiving that their partner is engaging in positive DC techniques, such as supporting each other and communicating, as it may be associated with lower levels of internal stress levels and higher relationship satisfaction.

While this research was exploratory in nature, the findings may have practical implications, especially for intervention programs focused on preventing and alleviating stress between partners, such as the Couples Coping Enhancement Training (CCET; Bodenmann & Shantinath, 2004). The CCET focuses on developing six areas for couples in order to improve relationship satisfaction: knowledge of stress and coping, improvement of individual coping, enhancement of dyadic coping, exchange and fairness in the relationship, improvement of marital communication, improvement of problem-solving skills (Bodenmann & Shantinath, 2004). Findings of this study add to the importance of teaching dyadic coping skills in programs such as the CCET. Additionally, as dyadic coping has been shown to be effective in treatment of relationship distress (Randall et al., 2010), these results suggest dyadic coping may be helpful for intercultural couples struggling with coping with stress in their relationship in general. For mental health professionals working with intercultural couples, highlighting the importance of positive DC, especially for each partner to perceive that they are being supported by their partner, may be helpful in alleviating internal stress. For example, counselors working with intercultural couples could teach their clients positive DC strategies, such as being

empathic towards each other and helping each other to engage in problem-solving, to help reduce their internal stress levels and increase their relationship satisfaction. Although positive DC did not moderate the association between internal stress and relationship satisfaction in this sample, mental health professionals are encouraged to be aware of the effect of positive and negative DC on internal stress and relationship satisfaction, which has been found in this and previous research (Falconier, Randall, & Bodenmann, 2016).

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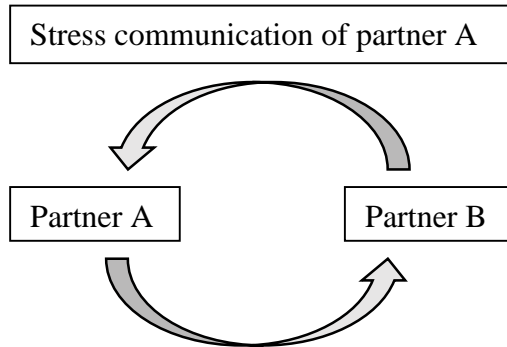
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APPENDIX A
SYSTEMIC-TRANSACTIONAL MODEL

Bodenmann, 2000



1. Stress contagion (both partners become stressed)
2. Partner B ignores partner A's stress
3. Partner B also starts stress communication and does not respond to partner A's stress
4. Dyadic coping

APPENDIX B

FORMS AND DEFINITIONS OF DYADIC COPING IN COUPLES

Forms of Dyadic Coping	Definition
<i>Positive Dyadic Coping</i>	
Problem-focused supportive DC	Partners give advice related to the stressful event.
Emotion-focused supportive DC	Partners help to reframe the stressful event.
Delegated DC	Partners help by assuming responsibilities.
Problem-focused common DC	Partners look for solutions to the stressor together.
Emotion-focused common DC	Partners share their feelings related to the stressful event.
<i>Negative Dyadic Coping</i>	
Hostile DC	Support is given in a negative way.
Ambivalent DC	Support is given unwillingly.
Superficial DC	Support is given insincerely.

Note: DC = dyadic coping, (Bodenmann, 2005)

APPENDIX C
SCREENING QUESTIONNAIRE

1. Have you and your partner been in a romantic heterosexual relationship together for at least 6 months?
 1. Yes
 2. No
2. Do you consider you and your partner to be an intercultural couple?
 1. Yes
 2. No
3. Are you and your partner from two different nations? (ex: Partner A is from America, Partner B is from France)
 1. Yes
 2. No
4. Which best describes your racial/ethnic background?
 1. Asian/Asian-American
 2. Black/African-American
 3. Hispanic/Latino(a)
 4. Native American or Pacific Islander
 5. White/European-American
 6. Other (please specify)_____

APPENDIX D
DEMOGRAPHIC QUESTIONS

1. How old are you?
 1. ____ years
 2. ____ months
2. What is your sex?
 1. Male
 2. Female
 3. Other (please specify) _____
3. Which best describes your racial/ethnic background? (mark one or more):
 1. Asian/Asian-American
 2. Black/African-American
 3. Hispanic/Latino(a)
 4. Native American or Pacific Islander
 5. White/European-American
 6. Other (please specify) _____
4. What is your relationship status?
 1. In a committed relationship – not living together
 2. In a committed relationship – living together
 3. Engaged – not living together
 4. Engaged –living together
 5. Married
5. What is the highest level of education you have completed?
 1. Less than high school
 2. High school diploma or equivalent (e.g. GED)
 3. Vocational/technical school
 4. Associate's degree
 5. Some college
 6. Bachelor's degree
 7. Graduate or professional degree (e.g. MA, Ph.D., MD, JD)
6. What is your typical yearly household income before taxes?
 1. \$0-\$25,000
 2. \$25,000-\$50,000
 3. \$50,000-\$75,000
 4. \$75,000-\$100,000
 5. \$100,000-\$150,000
 6. Greater than \$150,000
7. With what religious faith do you identify?
 1. Agnostic
 2. Atheist
 3. Christianity
 4. Judaism
 5. Islam
 6. Buddhism
 7. Hinduism
 8. Other (please specify) _____
8. How long have you and your partner known each other?

1. ____ years
2. ____ months
9. How long have you and your partner been in a romantic relationship together?
 1. ____ years
 2. ____ months
10. If you are married to your partner, how long have you been married?
 1. ____ years
 2. ____ months
11. Do you and your partner have any children?
 1. Yes
 2. No
12. How many children do you have?
 1. _____
13. Are any of these children from a relationship(s) other than your current relationship?
 1. Yes
 2. No
14. If any of your children are from a previous relationship(s), do they live with you 50% or more of the time?
 1. Yes
 2. No
15. In which country were you born?
 1. _____
16. How long have/did you live in your birth country?
 1. ____ years
 2. ____ months
17. If your birth country was a country other than the United States, how long have you lived in the United States?
 1. ____ years
 2. ____ months
18. Which national cultural heritage do you mainly identify with? (ex: American, German, Chinese)
 1. _____

APPENDIX E
MULTIDIMENSIONAL STRESS SCALE

MDSQ; Bodenmann, 2007

Response Options

0: Not at All

1: Slightly

2: Average

3: Very Much

How stressful/straining are the following situations within your relationship during the last 12 months? This concerns stress which is connected to your partner.

1. Difference of opinion with your partner (conflicts, disputations)
2. Different attitudes concerning relationship and life (different goals, needs, and views)
3. Disturbing habits of the partner (e.g. manners, carelessness, inattentiveness, etc.)
4. Difficult personality of the partner (e.g. temper, intelligence, reliability, honesty, etc.)
5. Difficult behavior of the partner (e.g. smoking, consumption of drugs or alcohol, excessive TV watching or eating, etc.)
6. Insufficient behavior of the partner (poor communication, problem solving, coping with stress, etc.)
7. Strong restrictions through the relationship (too little liberty, too much closeness, hemming each other in, etc.)
8. Too much distance to the partner (too little closeness, little time for each other, too little exchange and intimacy, no common hobbies, and interests, etc.)
9. Unsatisfactory distribution of duties and responsibilities (e.g. household, child care, employment, etc.)
10. Neglect on the part of the partner (too little attention, affection, sexuality)

APPENDIX F
DYADIC COPING INVENTORY

Response Options

1. Very Rarely
2. Rarely
3. Sometimes
4. Often
5. Very Often

This section is about how you communicate your stress to your partner.

1. I let my partner know that I appreciate his/her practical support, advice, or help.
2. I ask my partner to do things for me when I have too much to do.
3. I show my partner through my behavior when I am not doing well or when I have problems.
4. I tell my partner openly how I feel and that I would appreciate his/her support.

This section is about what your partner does when you are feeling stressed.

5. My partner shows empathy and understanding to me.
6. My partner expresses that he/she is on my side.
7. My partner blames me for not coping well enough with stress.
8. My partner helps me to see stressful situations in a different light.
9. My partner listens to me and gives me the opportunity to communicate what really bothers me.
10. My partner does not take my stress seriously.
11. My partner provides support, but does so unwillingly and unmotivated.
12. My partner takes on things that I normally do in order to help me out.
13. My partner helps me analyze the situation so that I can better face the problem.
14. When I am too busy, my partner helps me out.
15. When I am stressed, my partner tends to withdraw.

This section is about how your partner communicates when he/she is feeling stressed.

16. My partner lets me know that he/she appreciates my practical support, advice, or help.
17. My partner asks me to do things for him/her when he has too much to do.
18. My partner shows me through his/her behavior that he/she is not doing well or when he/she has problems.
19. My partner tells me openly how he/she feels and that he/she would appreciate my support.

This section is about what you do when your partner makes his/her stress known.

20. I show empathy and understanding to my partner.
21. I express to my partner that I am on his/her side.
22. I blame my partner for not coping well enough with stress.
23. I tell my partner that his/her stress is not that bad and help him/her to see the situation in a different light.

24. I listen to my partner and give him/her space and time to communicate what really bothers him/her.
25. I do not take my partner's stress seriously.
26. When my partner is stressed I tend to withdraw.
27. I provide support, but do so unwillingly and unmotivated because I think that he/she should cope with his/her problems on his/her own.
28. I take on things that my partner would normally do in order to help him/her out.
29. I try to analyze the situation together with my partner in an objective manner And help him/her to understand and change the problem.
30. When my partner feels he/she has too much to do, I help him/her out.

This section is about what you and your partner do when you are both feeling stressed.

31. We try to cope with the problem together and search for ascertained solutions.
32. We engage in a serious discussion about the problem and think through what has to be done.
33. We help one another to put the problem in perspective and see it in a new light.
34. We help each other relax with such things as massage, taking a bath together, or listening to music together.
35. We try to cope with stress by being affectionate with each other and making love.

This section is about how you evaluate your coping as a couple.

36. I am satisfied with the support I receive from my partner and the way we deal with stress together.
37. I find that, as a couple, the way we deal with stress together is effective.

APPENDIX G
INDIVIDUALISM-COLLECTIVISM INTERPERSONAL ASSESSMENT
INVENTORY

Response Options

- 0. Not at All Important
- 1.
- 2.
- 3.
- 4.
- 5.
- 6. Very Important

This is questionnaire about your values and behaviors when interacting with others. We would like to ask you about your values and behaviors when interacting your family. By family, we mean only the core, nuclear family that was present during your growing years, such as your mother, father, and any brothers or sisters. Do not consider other relatives such as aunts, uncles, grandparents, cousins, etc. as your family here unless they actually lived with you while you were growing up.

In this section, tell us about the values you have when interacting with your family. Values are *concepts or beliefs about desirable end states or behaviors that guide our selection of behaviors and evaluation of events*. Use the following rating scale to tell us how important each of the following is as a value to you.

- 1. To comply with direct requests from them
- 2. Maintain self-control toward them
- 3. To maintain status differences between you and them
- 4. Share credit for their accomplishments
- 5. Shame blame for their failures
- 6. Respect and honor their traditions and customs
- 7. Be loyal to them
- 8. Sacrifice your goals for them
- 9. Sacrifice your possessions for them
- 10. Respect them
- 11. Compromise your wishes to act in unison with them
- 12. Maintain harmonious relationships with them
- 13. Nurture or help them
- 14. Maintain a stable environment (e.g., maintain the status quo) with them
- 15. To accept your position or role among them
- 16. Exhibit "correct" manners and etiquette toward them, regardless of how you really feel
- 17. Exhibit "correct" emotions toward them, regardless of how you really feel
- 18. Be like or similar to them
- 19. Accept awards, benefits, or recognition based only on age or position rather than merit from them
- 20. Cooperate with them

21. Communicate verbally with them
22. “Save face” for them
23. Follow norms established by them
24. To identify yourself as a member of this group

In this section, tell us about your actual behaviors when interacting with your family. That is, we want to know *how often you actually engage in each of the following when interacting with your family*. Use the following rating scale to tell us how important each of the following is as a value to you.

1. To comply with direct requests from them
2. Maintain self-control toward them
3. To maintain status differences between you and them
4. Share credit for their accomplishments
5. Shame blame for their failures
6. Respect and honor their traditions and customs
7. Be loyal to them
8. Sacrifice your goals for them
9. Sacrifice your possessions for them
10. Respect them
11. Compromise your wishes to act in unison with them
12. Maintain harmonious relationships with them
13. Nurture or help them
14. Maintain a stable environment (e.g., maintain the status quo) with them
15. To accept your position or role among them
16. Exhibit “correct” manners and etiquette toward them, regardless of how you really feel
17. Exhibit “correct” emotions toward them, regardless of how you really feel
18. Be like or similar to them
19. Accept awards, benefits, or recognition based only on age or position rather than merit from them
20. Cooperate with them
21. Communicate verbally with them
22. “Save face” for them
23. Follow norms established by them
24. To identify yourself as a member of this group

APPENDIX H

RELATIONSHIP ASSESSMENT SCALE

1. How well does your partner meet your needs?
 1. Poorly
 2. –
 3. Average
 4. –
 5. Extremely Well
2. In general, how satisfied are you with your relationship?
 1. Unsatisfied
 2. –
 3. Average
 4. –
 5. Extremely Satisfied
3. How good is your relationship compared to most?
 1. Poor
 2. –
 3. Average
 4. –
 5. Excellent
4. How often do you wish you had not gotten into this relationship?
 1. Never
 2. –
 3. Average
 4. –
 5. Very Often
5. To what extent has your relationship met your original expectations?
 1. Hardly at All
 2. –
 3. Average
 4. –
 5. Completely
6. How much do you love your partner?
 1. Not Much
 2. –
 3. Average
 4. –
 5. Very Much
7. How many problems are there in your relationship?
 1. Very Few
 2. –
 3. Average
 4. –
 5. Very Many

APPENDIX I

IRB APPROVAL LETTER

APPROVAL: EXPEDITED REVIEW

Ashley Randall
 CLS - Counseling and Counseling Psychology
 480/727-5312
 Ashley.K.Randall@asu.edu

Dear Ashley Randall:

On 5/19/2015 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Intercultural Couples' Stress: Impact of Dyadic Coping on Relationship Satisfaction
Investigator:	Ashley Randall
IRB ID:	STUDY00002710
Category of review:	(7)(b) Social science methods, (7)(a) Behavioral research
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • Intercultural Couples_Recruitment Duties.pdf, Category: Recruitment Materials; • Intercultural Couples_Measures.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • InterculturalCouple_RecruitmentFlyer (1).pdf, Category: Recruitment Materials; • Intercultural Couples Stress_IRB Application_Final.docx, Category: IRB Protocol; • Intercultural Couples Stress_Consent_Final (2).pdf, Category: Consent Form; • Intercultural Couples Stress_MasterList.pdf, Category: Recruitment Materials;

The IRB approved the protocol from 5/19/2015 to 5/18/2016 inclusive. Three weeks before 5/18/2016 you are to submit a completed Continuing Review application and required attachments to request continuing approval or closure.

If continuing review approval is not granted before the expiration date of 5/18/2016 approval of this protocol expires on that date. When consent is appropriate, you must use final, watermarked versions available under the "Documents" tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Jennifer Holzapfel

APPENDIX J
INFORMED CONSENT

Title of research study: Intercultural Couples' Stress: Impact of Dyadic Coping on Relationship Satisfaction

Investigator: Jenny Holzapfel (PI) and Ashley K. Randall, Ph.D. (Faculty PI)

Why am I being invited to take part in a research study?

We invite you to take part in a research study because you are over the age of 18, in a heterosexual romantic relationship with your partner for at least 6 months, and self-identify as being part of an intercultural couple. Additionally, you and your partner both come from two different nationalities.

Why is this research being done?

The purpose of the research is to gain a better understanding of how romantic partners from different cultural backgrounds cope with stress in their relationship. We are interested in understanding intercultural couples' coping strategies when facing stress and how this may or may not affect their reported relationship satisfaction.

How long will the research last?

This study will take place in 2 parts: (1) screening survey and (2) research survey. We expect that individuals will spend 5 minutes completing the screening survey, and 30 minutes completing the research survey.

How many people will be studied?

We expect about 60 couples (120 individuals) will participate in this research study.

What happens if I say yes, I want to be in this research?

You will be sent several electronic questionnaires to complete independent of your partner in this study. You will first complete a screening survey to ensure that you and your partner meet the requirements for this study. You will then be asked to complete a research survey, which should take no more than 30 minutes to complete and asks you to answer demographic questions and complete several questionnaires. After completion of the research survey, you can decide to submit your name into a drawing for one of five \$30 Amazon gift cards and one of eighty \$25 Amazon gift cards. Winners will be notified at the end of data collection (anticipated December 2015-January 2016).

What happens if I say yes, but I change my mind later?

You can leave the research at any time it will not be held against you.

Is there any way being in this study could be bad for me?

There are no known risks from taking part in this study, but in any research, there is some possibility that you may be subject to risks that have not yet been identified.

Will being in this study help me in any way?

We cannot promise any benefits to you or others from your taking part in this research. However, some participants may find it helpful to answer questions about how they cope together with their partner.

What happens to the information collected for the research?

All information from this study will be held confidential. Only the Primary Investigators will have access to your online responses to survey items. You will not be asked to provide any personal information, except for the information that is required for sending compensation (First Name, Last Name, and Email Address). To protect your anonymity, you will be assigned a unique ID number so that no one will be able to know who provided what responses to items on the survey. De-identified data may be shared with other researchers.

The aggregated results of this research study may be used in reports, presentations, and publications, but the researchers will not use any identifying information in these reports.

Who can I talk to?

If you have any questions concerning the research study, please contact the research team at: (Primary Investigator: Jenny Holzapfel, or Faculty Primary Investigator, Dr. Ashley K. Randall). This research has been reviewed and approved by the Social Behavioral IRB. You may talk to them at (480) 965-6788 or by email at research.integrity@asu.edu if:

5. Your questions, concerns, or complaints are not being answered by the research team.
6. You cannot reach the research team.
7. You want to talk to someone besides the research team.
8. You have questions about your rights as a research participant.
9. You want to get information or provide input about this research.

This form explains the nature, demands, benefits and any risk of the project. By checking the box below you agree knowingly to assume any risks involved. Remember, your participation is voluntary. You may choose not to participate or to withdraw your consent and discontinue participation at any time without penalty or loss of benefit. In checking the box below, you are not waiving any legal claims, rights, or remedies. A copy of this consent form can be sent to you upon request.

I have read the CONSENT FORM above and agree with all the terms and conditions. I acknowledge that by completing the survey, I am giving permission for the investigator to use my information for research purposes. Additionally, you are also allowing other researchers access to your de-identified data (upon approval by the PIs, Jenny Holzapfel and Ashley K. Randall, Ph.D., Faculty Supervisor).